M3 Application Foundation User Guide

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About this Guide

Intended Audience

M3 Business Engine User Documentation provides guidance for end users and consultants regarding understanding basic concepts and using key processes in M3 Business Engine. Further information about the available programs and functionalities is available as field help texts.

Document Structure

M3 Business Engine User Documentation is a task-oriented documentation, providing descriptions on performing specific procedures, defining settings and running specific, step-by-step procedures. To some extent, this documentation set also contains conceptual documents, providing background information or describing requirements and how they are matched in M3 Business Engine.

The following table provides a brief overview of the most common sections that appears in this document.

Introduction	Briefly describes what kind of information the document provides.
Outcome	Describes the consequence of a process completed or a concept run.
Uses	Explains how the results can be used.
How the System is Affected	Describes, if applicable, any changes that have been implemented in M3.
Before you start	Describes the prerequisites of a process or a concept.
Parameters to Set	Lists all relevant parameters with a detailed explanation.
Description	Describes, if applicable, the concept or the purpose of the concept and when and how it is run.
Outline	Provides an overview (often as a flow chart) of the activities in the process.
Activity Description	Describes all the activities above and provides a summary of when, where and how to carry them out.
Follow these steps	Describes, if applicable, how to carry out a settings instruction.
See Also	Lists other documents that contain relevant information.

More Information

Information and help about accessing and using M3 Business Engine User Documentation as an Infocenter is available as InfoCenter help.

Access the help by clicking the question mark in the top right corner after deploying the Infocenter.

Related product documentation is available on the Infor Xtreme portal.

- You can find documentation posted to the product records on the Download Products page. Look here first for installation guides and release notes.
- You can browse or search for product documentation on the Documentation page.

For questions or feedback, contact Infor Xtreme Support.

System Administration

1

API Security

This document describes the M3 application programming interface (API) authentication and security model. It also gives recommendations on how to configure and set up the environment for access via APIs.

Introduction

An API is an interface to an M3 program that allows an external application program to execute transactions to upload or download specific data, activate certain procedures etc.

M3 API implementation

When M3 API technique is used to access M3 software, user credentials must follow the initial log-on.

In all MI programs, users are restricted to the companies to which they can have access. Different MI programs within different application areas can also have restrictions on the field level and restrictions on facility, warehouse, and so on.

M3 users can be restricted in their use of MI programs and their transactions by means of program 'Function. Connect API Authority' (SES005).

Follow these steps

1. The first step in using transaction authority is to configure a parameter named boot.api.authorization which is located in the properties file. It must be set to 1 if the authorization should be activated and makes use of transaction authority or not. This is a simple ON or OFF parameter that is passed either in the configuration file or as a parameter on the command line when starting.
2. Open 'Function. Connect API Authority' (SES005).
3. In (SES005), add users that will have the authority to use M3 API transactions.

   The default behavior when running in authorization mode is to not allow any MIs or transactions.

4. Specific program and transactions that will be allowed for a particular user can be specified. Both program and transactions are possible to prompt to retrieve their values.

   To simplify entry, all transactions for the current program can be retrieved.

   Then, remove the transactions that are not relevant.

5. Also it is possible to allow all transactions in a program by entering the value *ALL for a certain user.

   Furthermore, a user access to all programs and all transactions can be allowed by entering *ALL on program level.

Interaction with M3 API can occur using two different techniques. The traditional way is through a client component running sockets communication according to a proprietary protocol. Later, communication through web services has been introduced. The web services allow for HTTP/HTTPS communication and the Rest protocol.

The client component communicates on open channels and is preferably used within an internal network. The Java version of the client interfaces also supports SSL communication and authentication through certificates. Client component communication cannot be used in a Multi tenant Cloud context.

The web services HTTP part likewise communicate on open channels. Using HTTP is therefore also suited only for internal networks. HTTPS should be used if access is required from external sources. In a Multi tenant Cloud context, HTTPS is required.

User authentication

Users of M3 API must be registered in M3 using the program MNS150.

User authentication is carried out through the mechanism chosen for the environment in which execution takes place.

There are two types of user profiles in relation to M3 API. The type used depends mainly on how the client applications are designed.

- Users can be working from their workstations with client applications that access the M3 application server directly. They log on as they usually do with their M3 application credentials.
- Users access the client application from an intermediate server such as a web server. They never log on to the M3 application server. Instead, the application logs on using a shared user profile specially created for this purpose. Examples of such an application are M3 WebShop or the M3 API SOAP Server.

M3 users are authenticated by the mechanism for the platform they use. User profiles using M3 API must be defined in the usual way for M3 users.

Shared user profiles used from server applications should, if possible, be defined so that they cannot log on to the application server using interfaces like M3 Explorer, Telnet, or FTP. In iSeries this is done by *SIGNOFF in the initial menu.

See also

"M3 Business Engine Auto Start Job Descriptions" on page 108

"M3 Business Engine Administrator's Guide for Batch Jobs and Job Queues" on page 82

"M3 Business Engine Administrator's Guide for Job Scheduler" on page 73

"M3 Business Engine Administrator's Guide for Document and Media Management" on page 88

M3 Business Engine Administrator's Guide for Archive and Delete Transactions

This document describes the archive and delete functionality in M3 Business Engine.

Introduction

An archive is a collection of records from computer files that have been packaged together for backup, to transport to some other location, for saving away from the computer so that more hard disk storage can be made available, or for some other purpose.

An archive can include a simple list of files or files organized under a directory or catalog structure.

What Is Deletion?

Deletion is the permanent removal of computer files from the computer or hard disk.

General Background Regarding M3 Business Engine and Disk Space Usage

Tables containing transactions tend to grow fast. This is due to the nature of the business and the setup of the M3 Business Engine system. M3 Business Engine uses a database where indexed tables are used. Almost each one of these tables has several indexes connected to it, which also takes up disk space. Sometimes, a single index can use 30-40 percent of the disk space volume of its related table, all depending on how the access path is specified. And, if a table contains deleted records, its indexes will still contain access information for those deleted records.

Important Considerations

Testing

If you are archiving for the first time, it is recommended that you test the archiving first in a separate test database (a copy of the production database).

Operational and System Requirements

You should consult your responsible system operator, since this routine requires knowledge of how database schemas are saved and cleared. If many transactions and records are expected to be archived in a run, the system operator should ensure that the disk usage is not too high before the archiving begins, since it will not be reduced until the archiving schemas are cleared. If the server has enough disk space available, previously performed archives can be restored to the archiving schema before the archiving job is started. Then new data will be added to the existing tables, and the archive function works faster since the files do not have to be created.

Permanent Changes Resulting from Archiving

It is important to understand that after you archive, you will not be able to perform certain functions, view certain information, and restore the information using a standard M3 Business Engine function.

The following are examples of actions that will not be possible:

- Copy invoices for orders that have been archived
- Re-create sales statistics for archived orders
- Re-create balance key information for ledger information that was archived
- View M3 BE Finance Management details from standard inquiry functions (instead the archived transactions can now be viewed from the 'Information Browser. Open' (CMS100))

New Fields in Table

New fields might be added to a table that already exists in the archiving schema. If you want to archive more records in this table, you must move the previously archived transactions to another schema and remove the table from the archive schema before you do the new archiving.

Suggested M3 Business Engine Archiving and Deletion Workflow

This chapter describes the workflow for any of the archiving and deletion functions in M3 Business Engine.

Workflow

1 Enter or check the archiving library (schema) in function AMS010

The following validations are done against the archiving library name:

- The archiving library must exist
- The archiving library is not allowed to be any of the 'Production libraries'

Important: The 'Production library' is defined in the M3 BE Java properties file under the heading '# Schema (library) settings'.

Example:

Schema (library) settings

db.con.libListStrategy=2

db.con.libraryList=MVXvDTeeee, MVXvDTeeee, MVXvDTeeee,MVXvDTeeee,

db.con.defaultschema=MVXvDTeeee

Platform specifics:

For the platforms Windows, Sun Solaris and AIX/Oracle: The archive library MVXARCH is as previously automatically created. If specific archive libraries should be used per archiving function, they must be manually created by a Database administrator.

For the platform System i/IBM i: The archive libraries must, just as before, always be manually created by a Database administrator, The default library (usually MVXARCH) must be specified in CRS799, before generating records in AMS100.

2. Check functions per table in MNS120

   Check which archiving function to use by per table in MNS120.

3. Define records in AMS100

   Define the archiving set-up in AMS100. AMS100 is described in detail in the next chapter.

4. Create M3 BE Control Reports

   Run the M3 control report relevant to the archiving function being processed this will be used to ensure that the stored table values before and after the archive are consistent

5. Run the archive functions

   Make your selections in the routine's start panel. These functions will submit a batch job. Afterwards, check the printed receipt to verify that the selected function has worked as expected.

6. Check status in AMS300 and AMS310

   Check the status of the archiving functions in the programs AMS300 and AMS310.

7. Housekeeping and storage of the archived transactions

   Save the M3 BE database and archiving schema (library) to suitable media. Clear/delete the archiving schema (library) from disk.

8. Re-run M3 BE Control reports

   Run reports and compare them to the preliminary reports in step 4 above.

Archiving Toolbox (AMS100)

The function 'Archiving. Open Toolbox' (AMS100) is a program where all archiving functions can be managed.

Here you can:

- List with all archiving functions, the list is generated with Function key F14
- View status per function, 00 = Function is not running, 20 = Function is running
- View next scheduled run date/time, this is information taken from SHS010
- Use Function key F15 to mass update settings on Archiving functions
- Use options to:
  - Reset statuses if a job ends abnormally (option 7)
  - Run specific function (option 9)
  - Display function log (option 11)
  - Display included tables (option 21)

Archiving Policy

The purpose of the archiving policy is to prevent accidental archiving of periods that are recent and need to be and remain in the live environment. The policy is defined as a number of periods back in time, calculated from the current period, during which archiving is not allowed. It is checked against the type of date used by the specific archiving program, such as the invoice date or accounting date. The number of periods is defined in program 'Archiving. Open Toolbox' (AMS100). The policy rule always using Period type 1 (see CRS910) to calculate back from the archiving date(s) entered in the individual archiving function.

For example: The archiving policy is set to 36 periods (months). If the current date is February 25, 2012, you cannot archive transactions with a date later than January 31, 2009.

Archiving Function Log

Every archiving run is logged and given a unique archiving run number. Example of information that is logged:

- Start and end date/time
- Selection on dates and division
- Name of user starting the archiving run.

The archiving function log is displayed in 'Archiving Log. Open' (AMS300).

Archiving Record Log

For every archiving run, a detail record log can also be created. The following information is logged per table:

- Number of records in the table at archiving start in production library/schema
- Number of records in the table at archiving end in production library/schema
- Number of archived records (count is done in every archiving program)
- Number of records in the table at archiving start in archiving library/schema
- Number of records in the table at archiving end in archiving library/schema

If an archiving record log should be created is decided by field 'Archiving log table' in (AMS100). The following alternatives are possible:

- 1 = No
- 2 = Yes, but only for the master table
- 3 = Yes, for all archived tables

The archiving record log is displayed in 'Archiving Log Tables. Open' (AMS310).

Archiving Libraries

The archiving libraries are defined in 'Archiving Library. Open' (AMS010) . It is possible to define:

- Status: 10=Preliminary, 20=Active, 90=Blocked
- Object access group, to restrict access to the library

When new archiving libraries are defined, checks are made to ensure that the library exists and it is not a production library.

Every archiving function is connected to a specific archiving library in 'Archiving. Open Toolbox' (AMS100).

Integration to table master

In 'Table. Open' (MNS120) is it possible to see the archiving function per table and open (AMS100) and (AMS310) with related options.

Integration to job scheduler

In 'Archiving. Open Toolbox' (AMS100), it is possible to see if an archiving function is scheduled to be run. The job number, scheduled date and time are displayed on panel E.

If an attempt is made to run an archiving function that is already scheduled, a warning will be displayed. It is however possible to override the warning and run the archiving function even if it is scheduled on a later date.

Archiving Viewer

The archiving viewer, 'Archive Viewer. Open' (AMS200), is a program that displays data from any M3 BE table and archiving library. The data is only presented in the subfile, no detail panels exist.

Authorization checks are performed on different levels in 'Information Browser. Open' (CMS100):

- Program authority - if you are not authorized to run the master program for a specific table, you will not be able see the data in (CMS100)
- Division authority - you can only see data in the divisions where you are allowed to work
- Facility and warehouse authority - for all tables where facility or warehouse exists in the primary key, normal facility/warehouse authority checks are performed
- Object Access Group - all records that have a value in the Object Access Group field will be checked against the Users group for access
- Accounting authority - the setting for access to 'General Ledger. Display Transactions' (GLS210) will be used to check authority for accounting dimensions 1 - 7. The access is set in 'Settings - Access Authority Check' (GLS005).

Information Browser Category

What table and archiving library to retrieve the data from is defined by the Information category in program 'Information Browser Category. Open' (CMS010). By defining an information browser category and use option 'Activate', the 'Inquiry type', 'Panel version' and 'Field group' are automatically created. One standard information browser category per table is created by using function key F14='Standard' in (AMS100).

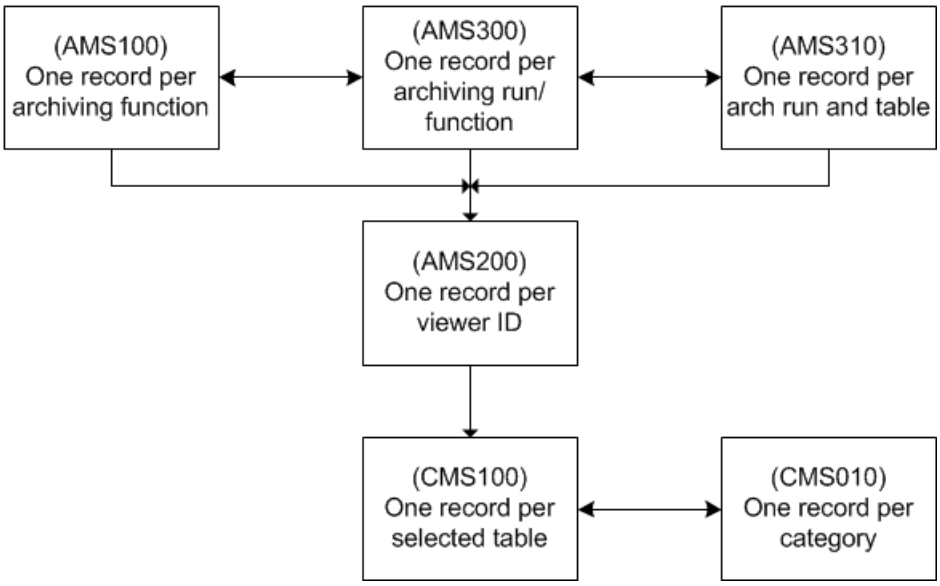
Information Browser

By selecting the information browser category defined in (CMS010) in 'Information Browser. Open' (CMS100), records are displayed for the connected table/archiving library.

Archiving Viewer

Program 'Archive Viewer. Open' (AMS200) is used to start (CMS100). Use option select. By defining a 'Viewer ID', default values for (CMS100) can be set. (AMS200) is started from the menu or from (AMS100), (AMS300) or (AMS310).

Archiving Viewer



One standard 'Viewer ID' per table is created by function key F14='Standard' in (AMS100). Default values that can be set for (CMS100) are Inquiry type, Panel version, Number of filters and Filter field values.

SLS - M3 BE Sales Management

COP - Customer Order Processing

- 'Batch Customer Order. File Transferred' (OIS080)

  This function archives the records in the following tables:

Table	Description (TF=Transaction File, WF=Work File)
OXLINE	TF: Batch order line
OXHEAD	TF: Batch order header
OXCNTR	TF: Batch order, control records
OXADRE	TF: Batch order, addresses
OSYTXH	TF: Batch order, text header
OSYTXL	TF: Batch order, text lines

Table	Description (TF=Transaction File, WF=Work File)
OXCOPY	WF: Copy parameters for batch orders
OXQUOH	TF: Batch order, CO quotation
OXSREB	TF: Manual Supplier Rebate – Batch order line
OXCOLI	TF: Batch order line

Note: Only batch orders in status 90 in 'Batch Customer Order. Open' (OIS275) are included in this archive function.

Note: The soft selection on customer order number in (OIS080) refers to the temporary customer order number, not the final customer order number.

- 'Customer Order. File Deleted' (OIS085)

  The soft selection criteria in (OIS085) are the customer order number, customer number, order date, payer, and customer order type.

  This function archives the records in the following tables:

Table	Description (TF=Transaction File)
OOHEAD	TF: Customer order header
OOQUOH	TF: Quotation order header

Note: Only customer orders in status 90 can be archived. These orders were manually deleted in (OIS100).

- 'Customer Order. File' (OIS090)

  This function archives customer orders.

  Note: The statistics on orders received cannot be recreated in (OSS990) based on the customer order lines if the customer orders are archived. The detailed information tracking for the customer order from a purchase order number will not be available if the customer order line type is 1 or 2. In addition, the detailed information tracking between customer order and invoice number will also not be available after the archiving.

  Customer orders in (OIS100) with a lowest status in the order header of 77 or 79 will be included in the archiving. Customer orders with a lowest status of 66 can also be included in the archiving if invoicing is disabled for the customer order type.

The soft selection criteria in (OIS090) are the invoice date, accounting date, invoice number, customer order number, customer number, payer, delivery date, currency, and customer order type.

This function archives the records in the following tables:

Table	Description (TF=Transaction File)
OOHEAD	TF: Customer order header
OOLINE	TF: Customer order, detail lines
OODOCU	TF: Customer order, documents
OOCHRG	TF: Customer order, charges
OOLICH	TF: Item charges per order line
OOADRE	TF: Customer order, address
OOPINV	TF: Pre-payment invoice
OSYTXH	TF: Order text, header
OSYTXL	TF: Order text, lines
ODHEAD	TF: Delivery customer order, header
ODLINE	TF: Delivery customer order, detail lines
ODDOCU	TF: Delivery customer order, documents
OORESC	TF: Rescheduled customer order lines
OKITDI	MF: Kit discount amt converted to percentage
OCUMOT	MF: Cumulative amounts for order total disc

- 'CO Invoice. File' (OIS095)

  Only invoices that have the lowest status 90 in 'Invoice. Display' (OIS350) are included in this archive function.

  The soft selection criteria in 'CO Invoice. File' (OIS095) are the entry date, invoice number, payer, voucher number, status, accounting date, and filing transaction.

  This function archives the records in the following tables:

Table	Description (TF=Transaction File)
OINVOH	TF: Invoice header
OINVOL	TF: Invoice line

Table	Description (TF=Transaction File)
OINACC	TF: Invoice accounting
OPAYMH	TF: Payments
OPAYMD	TF: Payments details
OINREF	TF: Invoice reference
OOAPMT	WF: Selected cash payments for archival

- 'Bulk Order Batch. Archive' (OIS945)

  Note: Only bulk order batch transactions that have status 90 and Work in progress 0 are included in this archive function.

  The soft selection criteria in 'Bulk Order Batch. Archive' (OIS945) are the bulk order batch origin, customer, message no, blanket agreement no, and start date.

  This function archives the records in the following tables:

Table	Description (TF=Transaction File)
OXBETR	TF: Bulk order - batch entry transactions
OXGRLN	TF: Customer agreement - lines Batch
OXGRPR	TF: Customer agreement - price Batch

- 'Delivery Schedule. Archive' (RSS190) archives customer delivery schedules viewed in (RSS300).

  Records from the following tables are archived:

Table	Description (TF=Transaction File)
ORAHED	TF: Historical delivery schedules, Head
ORAITM	TF: Historical delivery schedules, Item
ORACUM	TF: Historical delivery schedules, Cum
ORADNR	TF: Historical delivery schedules, Del Note
ORAADR	TF: Historical delivery schedules, Addresses
ORAINS	TF: Historical delivery schedules, Instr

SST - Sales Statistics and Performance

- 'Sales Statistics. File' (OSS080)

  The only possible selection in 'Sales Statistics. File' (OSS080) is the 'To invoice date'.

  This function archives the records in the following table:

Table	Description (TF=Transaction File)
OSBSTD	TF: Sales statistics/details

POS - Point of Sales Integration

- 'Sales Ticket Entry. File Transferred' (OPS080)

  The selection criteria in 'Sales Ticket Entry. File Transferred' (OPS080) are Facility, Warehouse, Transaction date and Entry date.

  Note: Only sales ticket entries that have Record status equal to 80 are included in this archive function.

  This function archives the records in the following tables:

Table	Description (TF=Transaction File)
OPSALE	TF: Sales ticket input
OXSALE	TF: Sales ticket stat info
OXSCTR	TF: Sales ticket batch order
OXSERR	TF: Sale ticket control
OPSTAT	TF: Sales ticket control error related

- 'Sales Ticket Financial Info. File Transferred' (OPS090)

  The soft selection criteria in 'Sales Ticket Financial Info. File Transferred' (OPS090) are Facility, Warehouse, Accounting date and Entry date.

  Note: Only sales ticket entries that have Record status equal to 80 are included in this archive function.

  This function archives the records in the following table:

Table	Description (TF=Transaction File)
OPWFIN	TF: Sales ticket finance input

EQM - M3 BE Equipment Quotation Management

'Quotations in EQM. Archive' (QUS080) archives EQM quotation data. The soft selections in 'Quotations in EQM. Archive' (QUS080) are Quotation number, Version, Entry date and Status.

This function archives the records in the following tables:

Table	Description (TF=Transaction File)
QUHEAD	MF: Quotation header
QULINE	MF: Quotation line
QUWARR	MF: Quotation Line Warranty
QUSERV	MF: Quotation Line. Service
QUMAIA	MF: Quotation Line. MAI Agreement
QUFINA	MF: Quotation Line. Financing
QUCAMP	MF: Quotation line promotion
QUADDI	MF: Quotation line miscellaneous
QUCONF	MF: Quotation line configuration
QUTRAD	MF: Quotation Line Trade in
OSYTXH	MF: Text, head
OSYTXL	MF: Text, line

SRV - M3 BE Service Management

SAG - Service Agreements

- 'Service Agreement. File' (SAS090)

  This function archives invoices from service orders, service agreements, and short-term rental agreements.

  The selection criteria in 'Service Agreement. File' (SAS090) are agreement number, customer number, agreement order type and agreement type.

  Records from the following tables are archived:

Table	Description (TF=Transaction File, WF=Work File, MF=Master File)
SAHEAD	TF: Agreement header

Table	Description (TF=Transaction File, WF=Work File, MF=Master File)
SALOCA	TF: Agreement location
SALINE	TF: Agreement line
SADOCU	TF: Agreement documents
SALCHR	TF: Agreement location charges
SAARCO	WF: Selected agreements for archive
SAADRE	TF: Customer address
OSYTXH	MF: Text, header
OSYTXL	MF: Text, line
SALOCA	TF: Agreement location
SAGCON	TF: Contents of an agreement
SPMACT	TF: Preventive maintenance activities
SAHCHR	TF: Agreement header charges
SPMINF	TF: Preventive maintenance information/agreement
SALINE	TF: Agreement line
SAMPSD	TF: Agreement meter price schedule
SAMPSH	SAMPSH
SAHEAD	TF: Agreement header
SARENA	TF: Update/renewal of agreement

SEP - Service Order Processing

- 'Service Order. File' (SOS090)

  This function archives service orders. The selection criteria in 'Service Order. File' (SOS090) are the invoice date, invoice number, service order number, customer number, payer, planned delivery date, currency, and service order type.

  Records from the following tables are archived:

Table	Description (TF=Transaction File, WF=Work File, MF=Master File)
SSHEAD	TF: Service order header
SSJOBH	TF: Service order assignments
SSLINE	TF: Service order, line
SOARCO	WF: Selected order for archive
SJDOCU	TF: SO assignments document
OSYTXH	MF: Text, header
OSYTXL	MF: Text, line
SDLOCA	TF: Delivery service order, locations
SSLIND	TF: Service order line meter invoice
SDLINE	TF: Delivery service order, line
SJOCHR	TF: SO assignment charges
SDHEAD	TF: Delivery service order, header
SSOCHR	TF: Service order header charges
SSADRE	TF: Service order, address
SDOADR	TF: Distribution order addresses
SEXCHG	TF: Exchanges of items
SKTCVA	TF: Selected var. codes per order
SOMAIL	TF: Service order e-mail
SSCURP	TF: Customer reply
SSLICH	TF: Item charges per SO line
SSLIXX	TF: Service order line, extension

- 'SO Invoice. File' (SOS095)

  This function archives invoices for service orders, service agreements, and rental agreements.

  The selection criteria in 'SO Invoice. File' (SOS095) are the entry date, invoice number, payer, voucher number, status, and accounting date.

  Records from the following tables are archived:

Table	Description (TF=Transaction File, WF=Work File)
OINVOH	TF: Invoice header
OINVOL	TF: Invoice, line
SSARIV	WF: Selected invoices for archive
SINACC	TF: Invoice accounting
SLICHW	TF: Item charges per SO line
OINVTX	TF: Invoice, line
STAGHT	TF: Rental Invoice display/credit
STAGHH	TF: Rental Invoice display/credit – head
STAGHL	TF: File to hold rental agreement lines inv
STAGHD	HF: File to hold rental agreement details
STHCHR	HF: Hist of rental agreem head charges
STHLCH	HF: Item charges per rental line – history
SSYTXL	MF: Text line
SSYTXH	MF: Text head
OINREF	TF: Invoice, reference

RTM - M3 BE Rental Management

Rental Agreements

'Rental Agreement. Archive' (STS090)

The rental industry often has high volumes of transactions (rental agreements and invoices). Therefore, archiving is necessary to achieve maximum disk usage and data protection. (STS090) is used to retrieve and archive rental agreements. This will be run as a batch job. (STS090) archives processed rental agreements and related service orders used for invoicing. Archiving of rental invoices and rental history are performed in (SOS095).

The following function keys in (STS090) can be used to access related archive programs for distribution orders, purchase orders, service agreements, and service orders:

- F14 - File SO (SOS090)
- F15 - File SO Invoice (SOS095)
- F16 - File PO (PPS920)
- F17 - File R/D Order (MMS185)

- F18 - File Rental stat (STS095)
- F19 - File Serv Agr (SAS090)

All rental agreements and related rental tables that have agreement status 99 or 89 for quotations will be archived.

If the setting 'Prt changes' is set to 1, a list will be produced for all records that will be archived.

An object access check will be performed for the facility.

This function archives the records in the following tables:

Table	Description (TF=Transaction File, WF=Work File, MF=Master File)
STAGHE	TF: Agreement header
STAGLI	TF: Agreement line
STADCH	TF: Additional charge per agreement line
STAGDN	TF: Stand down period
STLIDE	TF: Rental details
STLIDO	TF: Documents per agreement line
STLICH	TF: Item charge per rental line
STOCHR	TF: Rental agreement header charge
STMPSH	TF: Rental agreement meter price schedule
STEXCH	TF: Rental exchange string
SSHEAD	TF: Service order header
SDHEAD	TF: Delivery service order, header
SSJOBH	TF: Service order assignments
SJDOCU	TF: SO assignment documents
SSLINE	TF: Service order, line
SSLIXX	TF: Service order line, extension
SSLICH	TF: Item charges per SO line
SSOCHR	TF: Service order head charges
SDLINE	TF: Delivery service order, line
SSYTXH	MF: Text, header
SSYTXL	MF: Text, line

Table	Description (TF=Transaction File, WF=Work File, MF=Master File)
OSYTXH	MF: Text, line
OSYTXL	MF: Text, header

When you archive rental agreement in (STS090), you can print a report. The distribution order, purchase order, requisition order, and service agreement type will be retrieved from the rental order type and displayed on the report to facilitate easier archiving of related orders.

'Rental Statistics. Archive' (STS095)

(STS095) archives data from the STUTIL table. The selection fields for the From/To period are mandatory in (STS095). If the setting 'Prt changes' is set to 1, a list will be produced for all records that will be archived. An object access check will be performed for the facility.

This function archives the records in the following tables:

Table	Description (TF=Transaction File, MF=Master File)
STUTIL	TF: Rental utilization statistics
SSYTXH	MF: Text, header
SSYTXL	MF: Text, line

FIC - M3 BE Financial Controlling

CAC - Cost Accounting

- 'Internal Account Entry. File' (CAS970)

  This function archives internal accounting entries.

  Note: Internal account entries with an error code of blank, 0 or 9 can be archived. Internal account entries with an error code of blank must have been transferred to general ledger to be included.

  Soft selections can be made on 'Accounting/Transaction date' and on internal account entries with error code 3. The Accounting/Transaction date field indicates the date up to which internal transactions are archived. The date refers to either the accounting date or the transaction date, depending on the type of transaction. A combination of accounting date and transaction date is used for all transactions that have been transferred to the general ledger, that is, both these dates may not be later than the date selected for the archiving. For transactions with error status 0, 3 or 9, the date used is the transaction date. The latter is also used if the company does not use the M3 General Ledger module.

  This function archives the records in the following tables:

Table	Description (TF=Transaction File)
CINACC	TF: Internal accounting entry
CRACTR	TF: Various accounting transactions

- 'Average Cost History. Archive' (CAS975)

  This function archives average cost history transactions.

  Soft selections can be made on Transaction date, Facility and Item. The Accounting/Transaction date field indicates the date up to which internal transactions are archived. The date refers to either the accounting date or the transaction date, depending on the type of transaction. A combination of accounting date and transaction date is used for all transactions that have been transferred to the general ledger, that is, both these dates may not be later than the date selected for the archiving. For transactions with error status 0, 3 or 9, the date used is the transaction date. The latter is also used if the company does not use the M3 General Ledger module.

  This function archives the records in the following tables:

Table	Description (TF=Transaction File)
FCAAVP	TF: Average cost history
FCAAVC	TF: Average cost history - Attribute cost

- 'Order Costing. File' (CAS980)

  This function archives order costing transactions. Selections are made on 'Finish date'.

  Note: Order costing must have Status 1 or 3 in (CAS310) to be included.

  This function archives the records in the following tables:

Table	Description (TF=Transaction File)
CPOHED	TF: Order Costing head
CPOMAT	TF: Order Costing Material lines
CPOOPE	TF: Order Costing Operation lines
CPOPRO	TF: Order Costing Product cost
CPOCOA	TF: Order Costing Material components
CPOCOS	TF: Order Costing Semi finished material
CPOCOM	TF: Order Costing Operation components

TAC - Time Accounting

'Time Report. File' (TAS800) is the function that archives time accounting transactions. Selections are made on Employee ID, Time report number and Change date.

This function archives the records in the following tables:

Table	Description
OTHEAD	Time accounting transactions - header
OTTRAN	Master file for time acc transactions

PCO - Product Costing

'Product Costing. Archive/Delete' (PCS270) is the function that archives or deletes product costings. Use setting 'Archive/delete' on panel (PCS270/E) to incdicate if the records will be deleted. The valid alternatives are:

- 1 = Archive
- 2 = Deletion

If Alternative 1 is selected, the costing records will be also be deleted after archiving is completed.

Important: If you select alternative 1 in the Archive/delete field, the values are archived before they are deleted. The only exception is unanswered costing warnings; they can only be deleted, not archived.

The setting 'Deletion scope' has the following valid alternatives:

- 1 = Unanswered costing warnings and saved costing data from the product structure. (MCCWAR, MCBOMS, MCCMAT, MCCSEM, MCROUS, MCCOPE, MCHEAS)
- 2 = Same as alternative 1, with the addition of the total per costing component on all levels. (MCCOMA, MCCOML, MCCOPU)
- 3 = Same as alternative 2, with the addition of the total amount record for the costing ID. This is the amount displayed in (PCS300/E). (MCHEAD)

If you select alternative 1, you can still display the costing model with its costing component values in (PCS300). However, no information on the product structure used as input for the costing is available.

If you select alternative 2, you can display the costing model head with its total cost in (PCS300) but no other data is available.

If you select alternative 3, all costing model values are deleted.

FIM - M3 BE Financial Accounting

ARL - Accounts Receivable

The 'General Ledger. File' (GLS800) function reduces the number of fully paid and reconciled transactions in Accounts Receivable and General Ledger.

It is recommended that you produce the following reports before starting the archiving routines, since they are necessary for checking and reconciling the archive:

- 'Accounts Receivable. Print' (ARS500) layout 1 and 2
- 'Customer Balance List' (ARS525)

After the archiving is completed, you should produce the same reports and compare them to the reports produced before the archiving.

Summary invoice in Accounts Receivable

To replace the archived invoices, new summary invoices will be created in Accounts Receivable with breaks at the following fields:

- Year
- Payer number
- Customer number
- Accounting dimension 1
- Currency code

The new summary invoices will have the accounting dates, invoice dates, and due dates according to the following logic:

- Equal to the last date of the selected To period (specified when starting archiving)
- If original invoice year is not the same year as the To period, the last date of the original invoice year will be used.

Summary voucher in General Ledger

To replace the archived GL transactions, a new summary voucher will be created in General Ledger with breaks at the following fields:

- Year

Note: Only General Ledger transactions with transaction codes 10 (Customer invoices - AR) and 20 (Payments received - AR) are included in the archiving of Accounts Receivable.

Audit trail

By selecting parameter 'Print changes' in GLS830/E, you can produce a complete report (GLS807PF) of the invoices that were archived. All archived invoices will also be updated with Accounts Receivable information category 234, which contains the voucher number of the summary voucher.

Prerequisites:

- Create a voucher number series for archiving (CRS410)

- Number series - Series Type 55, Number Series A (CRS165) must be defined
- FAM function AR71 Filing accounts receivable (CRS405) must be defined

Hard selections

Only accounts receivable invoices that are paid (the outstanding amount is 0) are included in this archive function.

Soft selections

At least one filing type connected to filing category 3 must be defined in (GLS830).

A filing template can be connected to each filing type. This makes it possible to only select specific customers. You can also define whether penalty interest invoicing must be done prior to archiving.

Note: If the setting 'Complete automatic' in (GLS830) is set to 1, the archiving will be performed, and summary invoices will be created. If this parameter is set to 0, the archiving process will stop when the status of the filing run is 3 or 4 (depending on whether you selected 'Print changes' or not). This means that everything will be written to the archiving library, and the invoices will be deleted from the production library. In this case, FGLEDG and FSLEDG in the production library will not be updated with summary invoices. Therefore, the balance on accounts will not be the same as before.

The filing run will remain in the subfile in (GLS800/B) where you can either delete it, or decide to create summary invoices at a later point.

When you submit (GLS800), you must enter a 'To period'. Only invoices that have both the invoice (transaction code 10) and the payment (transaction code 20) before the last day in the entered 'To period' will be selected.

Process and restart

The archiving is started in (GLS800) by using the Select option for the filing type. After the job is submitted to batch, the archiving status will indicate the process. The following statuses are valid:

- 01 = Query created
- 02 = Work table FGL806 created
- 03 = Work table FGL807 created
- 04 = Printout GLS807PF completed
- 05 = Work table FCR040 created
- 06 = GLS040 started
- 07 = GLS040 finished, FCR040 deleted
- 08 = Work tables deleted, archiving completed

If the job for any reason ends abnormally, it can be restarted by selecting the Restart option in (GLS800). If the status is 06 or 07 it must be restarted from (GLS047).

This function archives the records in the following tables:

Table	Description (TF=Transaction File, MF=Master File)
FSLEDG	TF: Sales ledger
FSLEDX	TF: Sales ledger, extra information
FGLEDG	TF: General ledger
FSCASH	TF: Cash discount terms
CSYTXH	MF: Text, header
FSYTXH	MF: Text header

Impact on Other files and processes

As the balance file/table FSLBAL can be regenerated from the detail accounts receivable table FSLEDG that is now subject to archiving, then consideration must be given to any future deletes/rebuilds of records in the customer balance file.

APL - Accounts Payable

The 'General Ledger. File' (GLS800) function reduces the number of transactions in Accounts Payable and General Ledger.

It is recommended that you produce the following reports before starting the archiving routines, since they are necessary for checking and reconciling the archive:

- Accounts Payable. Print (APS500), layout 1 and 2
- AP Supplier Balance List (APS225)

After the archiving is completed, you should produce the same reports and compare them to the reports produced before the archiving.

Summary invoice in Accounts Payable

To replace the archived invoices, new summary invoices will be created in Accounts Payable with breaks at the following fields:

- Year
- Payee number
- Supplier number
- Accounting dimension 1
- Currency code

The new summary invoices will have accounting dates, invoice dates, and due dates according to the following logic:

- Equal to the last date of the selected To period (specified when starting archiving).
- If original invoice year is not the same year as the To period, the last date of the original invoice year will be used.

Summary voucher in General Ledger

To replace the archived General Ledger transactions, a new summary voucher will be created in General Ledger with breaks at the following fields:

- Year

Note: Only General Ledger transactions with transaction codes 40 (Supplier invoices - AP) and 50 (Payments - AP) are included in the archiving of Accounts Payable.

Audit trail

By selecting 'Print changes' in (GLS830/E), you can produce a complete report (GLS812PF) of the invoices that were archived. All archived invoices will also be updated with Accounts Payable information category 422, which contains the voucher number of the summary voucher.

Prerequisites

- Create a voucher number series for archiving (CRS410)
- Number series - series type 65, number series A (CRS165) must be defined
- FAM function AP71, Filing accounts receivable (CRS405) must be defined

Hard selections

Only Accounts Payable invoices that are paid (the outstanding amount is 0) are included in this archive function.

Soft selections

At least one filing type connected to filing category 4 must be defined in program (GLS830). A filing template can be connected to each filing type.

Note: If the setting 'Complete automatic' in (GLS830) is set to 1, the archiving will be performed, and summary invoices will be created. If this parameter is set to 0, the archiving process will stop when the status of the filing run is 3 or 4 (depending on whether you selected 'Print changes' or not). This means that everything will be written to the archiving library, and the invoices will be deleted from the production library. In this case, FGLEDG and FSLEDG in the production library will not be updated with summary invoices. Therefore, the balance on accounts will not be the same as before.

The filing run will remain in the subfile in GLS800/B where you can either delete it, or decide to create summary invoices at a later point.

When you submit (GLS800), you must enter a 'To period'. Only invoices that have both the invoice (transaction code 40) and the payment (transaction code 50) before the last day in the entered 'To period' will be selected.

Process and restart

The archiving is started in (GLS800) by using the Select option for the filing type. After the job is submitted to batch, the archiving status will indicate the process. The following statuses are valid:

- 11 = Query created
- 12 = Work table FGL809 created

- 13 = Work table FGL812 created
- 14 = Printout GLS812PF completed
- 15 = Work table FCR040 created
- 16 = GLS040 started
- 17 = GLS040 finished, FCR040 deleted
- 18 = Work tables deleted, archiving completed

If the job ends abnormally, it can be restarted by using the Restart option in (GLS800). If the status is 16 or 17, the job must be restarted from (GLS047).

This function archives the records in the following tables:

Table	Description (TF=Transaction File, MF=Master File)
FPLEDG	TF: Purchase ledger
FPLEDX	TF: Purchase ledger, extra information
FGLEDG	TF: General ledger
FPCASH	TF: Cash discount terms
FPAPCD	TF: Supplier invoice approval distribution
FPLLOG	TF: Purchase ledger log file
CSYTXH	MF: Text, header
FSYTXH	MF: Text header
FSYTXL	MF: Text line
CSYTXL	MF: Text, line

Impact on other financial tables and processes

As the balance file/table FPLBAL can be regenerated from the detail accounts receivable table FPLEDG that is now subject to the archiving process, then consideration must be given to any future deletes/rebuilds of records in the Supplier balance file.

GLR - General Ledger

The 'General Ledger. File' (GLS800) function reduces the number of transactions in the General Ledger. It is recommended that you produce the following reports before starting the archiving routines, since they are necessary for checking and reconciling the archive:

- General Ledger. Print (GLS525)
- General Ledger. Print Balance Lists (GLS510) report type 1 and 2
- General Ledger. Print Statement of Income (GLS520)

After the archiving is completed, you should produce the same reports and compare them to the reports produced before the archiving.

Summary voucher in General Ledger

To replace the archived General Ledger transactions, a new summary voucher will be created in the General Ledger with breaks at the following fields:

- Year

The accounting dimensions on which the summary voucher should be aggregated are determined by the 'Filing level' field for every filing type in (GLS830).

Example of General Ledger transactions to archive:

Dim 1	Dim 2	Dim 3	Dim 4	Dim 5	Dim 6	Dim 7	Amount
3010	100	1000					-3000.00
3010	100	2000					-4000.00
3010	200	3000					-5000.00
3010	200	4000					-6000.00
3010	300	5000					-7000.00
3010	300	6000					-8000.00
3020	400	7000					-9000.00

Result when aggregating on dimensions 1 and 2:

Dim 1	Dim 2	Dim 3	Dim 4	Dim 5	Dim 6	Dim 7	Amount
3010	100						- 7000,00
3010	200						-11000.00
3010	300						-15000.00
3020	400						-9000.00

Result when aggregating on dimension 1:

Dim 1	Dim 2	Dim 3	Dim 4	Dim 5	Dim 6	Dim 7	Amount
3010							-33000.00
3020							-9000.00

The period to which the summary voucher should be posted is determined by the 'Balance per period' field for every filing type in (GLS830). The valid alternatives are:

- 0 = Posted balance per period
- 1 = Only at the last period covered.

Example of transactions to archive:

Date	Amount
1999-09-01	-3000,00
1999-09-15	-4000,00
1999-09-30	-5000,00
1999-10-15	-6000,00
1999-10-22	-7000,00
1999-11-30	-8000,00
1999-12-15	-9000,00

Result when posting balances per period:

Date	Amount
1999-09-30	-12000,00
1999-10-31	-13000,00
1999-11-30	-8000,00
1999-12-31	-9000,00

Result when posting balances at end of period:

Date	Amount
1999-12-31	-48000,00

Audit trail

By selecting 'Print changes' in (GLS830/E), you can produce a complete report (GLS802PF) of the General Ledger transactions that were archived. All archived General Ledger transactions will also be updated with General Ledger information number 095, which contains the voucher number of the summary voucher.

Prerequisites

- Create a voucher number series for archiving (CRS410)
- FAM function GL71, General Ledger archiving (CRS405) must be defined

- Use function (GLS885) to create a 'Hard Close' of the Financial Years to be archived
- Run (GLS940) to ensure Balance File and General Ledger are synchronised, again for the financial periods being archived

Hard selections

First, dimension 1 accounts must be defined for archiving. This is done in (CRS630).

Soft selections

At least one filing type connected to filing category 1 (Balance accounts) or 2 (Profit and Loss accounts) must be defined in (GLS830).

A filing template can be connected to each filing type. This enables you to distinguish between different accounts to be archived at different times, For example, you archive all your cash accounts first, and later (or less frequently) you might archive your long-term debts.

This function archives the records in the following tables:

Table	Description
FGLEDG	TF: General Ledger
FGLEDX	TF: General Ledger, extra information

Impact on other financial tables and processes

As the balance file/table FBAVAL can be regenerated from the detail general ledger file FGLEDG that is now subject to the archiving process, then consideration must be given to any future deletes/rebuilds of records in the General Ledger balance file.

MAN - M3 BE Manufacturing

MOP - Manufacturing Order Processing

'File Manufacturing Order' (PMS190) is used to archive manufacturing orders.

Note: Only manufacturing orders in status 90 and that have costing performed (PCDO) set to 9 will be archived.

Selections for the archiving is made on panel (PMS190/E)

This function archives the records in the following tables:

Table	Description (TF=Transaction File, WF=Work File)
MWOCPN	TF: Co-product per operation number
MWODAY	TF: Operation time per day
MWOHED	TF: Work order header

Table	Description (TF=Transaction File, WF=Work File)
MWOHEH	TF: Work order header
MWOHES	TF: Work order header
MWOMAA	TF: Alt. material - manufacturing order
MWOMAT	TF: Work order materials
MWOOPE	TF: Work order operations
MWOOPS	TF: Routing operation activity description
MWOOP1	TF: MO operations appendix
MWOPHA	TF: Work order used phantoms
MWOPOL	TF: Work order production lots
MWOPTR	TF: Operation transaction
MWORCO	TF: Rate compensators per material
MWQIRS	TF: MO inspection results
MWRREM	TF: MO reporting remarks
MWTOTR	TF: Manufacturing order tool transactions
MWOSPL	TF: Work order head, split
MSYTXL	MF: Text line
MSYTXH	MF: Text head
MWOPTS	TF: Cumulative operation transactions
MWOPREL	TF: Process order relation

For the deletion of production statistics, see to 'PST - Production Statistics' (PMS390), parameter 1-5. For Laboratory and Inspection Control, see the archiving routine for MOP - Manufacturing Order Processing.

ATM - M3 BE Attribute Management

ATC - Attribute Control

'Attribute. Delete Not Used' (ATS990) cannot archive any records. Only deletion is possible. If a record is found in any of the files 'Locations' (MITLOC), 'Stock transactions detailed' (MITTRA), or 'Lot master' (MILOMA), the record will not be deleted.

(ATS990) deletes records from the following tables:

Table	Description
MIATTR	TF: Item attribute file
MOATTR	TF: Requirement order attribute file
MSYTXH	MF: Text header
MSYTXL	MF: Text line

'Attributes. File' (ATS640) archives records from the same tables. Selections can be made on Creation date, Stock attribute and Order attribute.

PCR - Product Configurator

'Configuration Simulation. File' (PDS640) is used for archiving of configurations and simulations. Only configurations and simulations with an earlier finish date than entered in program 'Config & Simulation. File' (PDS640) are included in this archive function.

Records from the following tables are archived:

Table	Description
MPDCHF	MF: Configuration header
MPDCDF	MF: Configuration details
MPDCDM	MF: Configuration drawing measurement
MPDCDX	MF: Configuration not closed item matrix
MPDSDM	TF: Simulation design main
MPDSIH	TF: Simulation product
MPDSIM	TF: Simulation material
MPDSIO	TF: Simulation operation
MPDCHG	TF: Simulation change
MSYTXH	MF: Text header
MSYTXL	MF: Text line
MPDSIS	TF: Simulation product file
MPDCDL	MF: Configuration detail file loops

MAI - M3 BE Maintenance

MCO - Maintenance Customer Order Processing

'Maintenance Customer Order. File' (COS090) archives maintenance customer order information. Only maintenance customer orders in status 60 or higher can be archived.

Soft selections can be made on the invoice date, invoice number, customer order number, customer number, and payer.

Records from the following tables are archived:

Table	Description
ACUORL	TF: Order line
ACUORH	TF: Order header
ACUORD	TF: Order documents
ACUORC	TF: Order charges
ACUORA	TF: Customer order, address
ACUIVH	TF: Order invoice header
ACUIVL	TF: Order invoice lines
ACUIVR	TF: Invoice line reference
ACUINV	TF: Order invoice transactions
ACUORP	TF: Pre-payment invoice
OSYTXL	MF: Text, line
OSYTXH	MF: Text, head

WOP - Work Order Processing

'Work Order. File' (MOS190) archives maintenance work order information. Only work orders with status equal to or greater than 90 can be archived.

Soft selections can be made on the actual finish date, reference order number, facility, product number, work order number, and responsible.

Records from the following tables are archived:

Table	Description
MMOPHA	TF: Work order used phantoms
MMORCO	MF: Rate compensators per material

Table	Description
MMOCPN	TF: Co-product per operation number
MMOOPS	MF: Routing operation activity description
MMOOPE	TF: Work order operations
MMOMAT	TF: Work order materials
MMOHED	TF: Maintenance order header
MMOPTR	TF: Operation transaction
MMONET	PF: Order headers network planning
MSYTXH	MF: Text header
MSYTXL	MF: Text line
MWOPLA	TF: Service history
MMQIRS	TF: WO Inspection results
MMRREM	TF: WO reporting remarks
CPOCAW	TF: Post calculation maintenance
MBCHED	TG: WO head statistics
MBCMAT	TF: MO material statistics
MBCOPE	TF: MO operation statistics
MMODAT	MF: Equipment break down info
MMOMAA	TF: Alt. Material – Maintenance Order
MMOSPE	TF: Maintenance order head several individual
MMTOTR	MF: Work order tool transactions
MOOPPS	MF: Operation plan schedule
MOPERM	TF: WO permits
MWOPLW	MF: Service history – WO
MOTOOL	MF: Tool transactions
MMOOPP	MF: Routing operation activity, permit lines
MMOOEM	TF: Work order OEM operation

PJM - M3 BE Project Management

PJP - Project Processing

The command 'POS408' starts 'Project. File' (POS400) to archive project order transactions.

A project order can be archived when all processing in relation to the project is completed and the project is closed (recognized) or cancelled. (POS408) will archive orders between status 80 and 99, as shown in (POS100). The From and To libraries are entered in (CRS799).

Soft selections can be made on the project number.

Records from the following tables are archived:

Table	Description
BCUPRJ	MF: Customers per quotation
BINACC	TF: Invoice Accounting
BMAILE	MF: Mail type per project element
BMOOPO	MF: Maintenance order proposal
BMPLAN	MF: Material planning
BMPLAX	TF: Non connected material orders
BPACTO	MF: Follow-up per element, account interval, total
BPBFTY	MF: Budget types/budget item
BPBUAC	WF: Direct accounting from PJM
BPBUBC	MF: Period budget/forecast per budget type
BPBUFO	MF: Budget and forecast lines
BPBUVE	MF: Budget version
BPCAPA	MF: Resources per project element
BPCHBU	MF: Budget changes per change number
BPCHGO	MF: Changing order
BPCHRG	MF: Project charges
BPCRPC	MF: Follow-up per element, cost/revenue, budget category
BPCRPE	MF: Follow-up per element, cost/revenue, budget type
BPCRTO	MF: Follow-up per element, cost/revenue, total
BPCUOR	MF: Customer order
BPCUPV	MF: Currency per project/costing

Table	Description
BPCUPY	MF: Payers per project
BPDOCU	MF: Project documents
BPELAD	MF: Project element description per language
BPELCO	MF: Element connection
BPERAC	MF: Accrual accounting outcome, accounting 1-7
BPEROU	MF: Accrual accounting outcome
BPFOVE	MF: Forecast version
BPGSTR	MF: GST per activity
BPIDPC	MF: Follow-up per element, budget component
BPIDPE	MF: Follow-up per element, budget component
BPIDPR	MF: Budget item prices per project
BPIDTO	MF: Budget/forecast per budget item
BPINDE	MF: Transaction for detailed invoicing
BPINHE	MF: Invoice header
BPINLN	MF: Invoice line
BPITEM	MF: Project order items per partner
BPMOPO	MF: Manufacturing order proposal
BPOCHK	MF: Checklist line/project element
BPOHEL	MF: Overheads per costing version
BPPCLI	MF: Costing version - lines
BPPCTO	MF: Costing totals
BPPCVE	MF: Costing versions
BPPETC	MF: Follow-up per element and budget category
BPPETO	MF: Follow-up per element and budget type
BPPMPD	TF: Project milestone detail
BPPMPH	TF: Project milestone header
BPPRHI	MF: Project progress history

Table	Description
BPPRPR	MF: Project progress proposal
BPPUOR	MF: Purchase order proposal per activity
BPREDE	MF: Readiness degree
BPROJH	MF: Information version
BPROJI	MF: Information values
BPROJS	MF: Project structure
BPRPRD	MF: Activity time per day
BPRPRE	MF: Activity time
BPSETH	MF: Settlement proposal – header
BPSETP	MF: Settlement transactions/project - lines
BPSETT	MF: Settlement transactions/project status
BPTASK	MF: Project tasks
BPTOPS	MF: Project task elements
BPTPLI	MF: Time planning lines
BPTPVE	MF: Time planning version
BQUREP	MF: Quotation reply per customer
BSASTD	HF: Order sales statistic/details
BSETGL	MF: Project settlement - outcome from GL
BSETHI	MF: Settlement history
BSETST	MF: Settlement status
BSQNUM	MF: Sequence number
CSYTXH	MF: Comments - header
CSYTXL	MF: Comments - lines
OSYTXH	MF: Comments - header
OSYTXL	MF: Comments - lines

Important: The tracking of detailed information on a project from a project order invoice will not be available after the archiving. Also, the detailed information on a project that is directly linked to an order such as a purchase order or customer order will not be available.

PJQ - Project Quotations

The command 'POS409' starts 'Project. File' (POS400) to archive project quotation transactions. A project quotation can be archived when all processing in relation to the quotation is completed. (POS409) will archive quotations with a status between 80 and 99, as shown in (POS100). The From and To libraries are entered in (CRS799).

Soft selections can be made on the project number in (POS400/E).

Records from the same tables as for command 'POS408' (see section PJP - Project Processing) are archived.

Important: The tracking of detailed information on a project quotation will not be available after the archiving.

'Project Invoices. File' (POS095) archives invoices for project orders. The selection criteria in (POS095) are the entry date, invoice number, payer, voucher number, status, and accounting date.

Records from the following tables are archived:

Table	Description
OINVOH	TF: Invoice header
OINVOL	TF: Invoice, line
BINACC	TF: Invoice accounting
OINREF	TF: Invoice reference
OPAYMH	TF: Payments
OPAYMD	TF: Payments
OINVTX	TF: Invoice, line

SCE - M3 BE Supply Chain Execution

DOP - Distribution Order Processing

'Requisition/Distribution Order. File' (MMS185) archives fully processed requisition orders and distribution orders. The orders must be fully processed (low and high status = 99) and all corresponding stock-transactions (records in MITTRA) must be recorded, in other words the accounting number should be greater than zero.

Several selections can be applied in (MMS185/E), for example order number, transaction date, order type, transaction type, facility and warehouse.

This function archives the records in the following tables:

Table	Description
MGHEAD	TF: Stock transaction, header
MGLINE	TF: Stock transaction, detail
MGDADR	TF: Stock transaction, delivery address
MGLLOG	TF: Transaction line change log
MDOPLA	TF: Planning proposal archived
MSYTXL	MF: Text line
MSYTXH	MF: Text head

WIS - Inventory Statistics

'Item Statistics. File' (MMS280) archives records from the MITSTA table. Note that the MITSTA table can be rebuilt based on remaining records in the stock transaction history table (MITTRA). Soft selections can be made on warehouses and/or item numbers.

This function archives the records in the following tables:

Table	Description
MITSTA	HF: Stock transaction statistics

WHM - Warehouse Management

- 'Delivery Data. File/Delete' (MWS820) archives or deletes transactions from all transaction files used for outbound deliveries. For further information on Supply Chain Execution/Handling Outbound Goods/Handling Dispatch Flows, refer to the following document:

  If shipments are used, the high and low shipment statuses must be 60 or 90, and all deliveries connected to the shipment must have status 90 or 95. For deliveries that are not connected to any shipment, the status must be 90 or 95.

  Soft selections can be made on for example shipment, delivery number and warehouse.

  This function archives the records in the following tables:

Table	Description	Remark
DCONSI	TF: Shipments	
MHDISH	TF: Deliveries	

Table	Description	Remark
MHDOSL	TF: Delivery lines	
MPTRNS	TF: Packages per delivery	
MFTRNS	TF: Packages – details	
MFTRND	TF: Package – cross reference	
MHPICH	TF: Picking lists	
DDOCUX	TF: Document references	
MHPICA	TF: Picking list address	Can also be deleted (not archived) from (MHS810) with function key F10='Mass delete'.
MHPICL	TF: Picking list header	Can also be deleted (not archived) from (MHS810) with function key F10='Mass delete'.
MHPICD	TF: Picking list detail	Can also be deleted (not archived) from (MHS810) with function key F10='Mass delete'.
MHPICT	WF: Picking list text	Can also be deleted (not archived) from (MHS810) with function key F10='Mass delete'.
DUDHEA	TF: United customs document – header	
DUDLIN	TF: United customs document – details	
MSYTXH	MF: Text header	
MSYTXL	MF: Text lines	

- 'Stock Transaction. File' (MMS195) archives or deletes records in the stock transaction history file.

  Prerequisites:

  - Each record must have an assigned accounting number to be qualified (it is possible to use 9999999 works). Create accounting numbers in (OIS180) and transfer them to (CAS950) (internal accounting).
  - The archiving of stock transactions is not possible if LIFO (last in – first out) is used for inventory evaluation. See parameter 270 in 'Settings - Cost Accounting' (CAS900).

- The On hand balance in MITBAL must be 0 (MMS002/H).
- If you have selected an item with several MITTRA transactions in different statuses, for example one MITTRA record in status 1 - inspection and one in status 2 - approved and one of these statuses does not have an assigned accounting number, then this item will not be included in the archiving.
- 'To Library' (schema for the archive library) must exist in the database. This schema must be enabled for journaling. This must be verified by a system operator.
- Work file 'MMSTFI' must be cleared after an abnormal end. If, for any reason, the archiving job ends abnormally, this work file must be cleared by the system operator before a new archiving job is started.

Note: The archiving will take some time to finish.

Hard selections

Each record must have an assigned accounting number to be qualified. The minimum number of transactions saved will always be sufficient to rebuild the current on-hand balance for each combination of item number and warehouse. This means that for some items there will be an earlier date than the entered transaction date when there are not enough transactions after the transaction date entered.

Soft selections

Several soft selections are available, for example warehouse and item number.

This function archives the records in the following tables:

Table	Description
MITTRA	TF: Stock transaction history
MTRSUB	MF: Sublots transaction history

- Items. Qualify for Filing/Deletion' (MWS810) qualifies, archives, and deletes records from several item related files. For further information on Supply Chain Execution/Handling In house Activities, see

  Hard selections: There are several criteria that must be met, and all of them are tested automatically. The result of the test is stored in a separate log file.

  Several soft selections are available. In addition, there is a separate settings routine (MWS815) that must be updated.

  This function archives the records in the following tables:

Table	Description
MITMAS	MF: Items

Table	Description
MITBAL	MF: Item/warehouse
MITFAC	MF: Item/facility
MITVEN	MF: Item/vendor
MITPOP	MF: Alias numbers
MITAUN	MF: Alternative units
MITALT	MF: Related items
MITLAD	MF: Item description per language
MITMSD	MF: MSDS data
MITMAH	MF: Item/style
MITSMN	MF: Item name free search
MITHAZ	MF: Related items
MITPHR	MF: Risk and protection phrases per item
MTEINF	MF: Custom field information value
MITPCC	MF: Planning calculation control
MITTRA	TF: Stock transactions
MITBSS	MF: Inventory build-up
MWOMAA	TF: Alt Material – Manufacturing order
MPDMAA	MF: Product data alt. material
MRPRAT	MF: Production rates
MSYTXH	MF: Text head
MSYTXL	MF: Text line

WHI - Warehouse Management Interfaces

For upload functions, only messages with status 90 (Executed and finished) can be deleted. You must activate the '235 Filing' field in 'Stock Message Partner. Open' (MMS865). You can select the number of days after a received and executed inventory transaction that a message is archived. This is done in 'Stock Message Partner. Open' (MMS865).

For download functions, the 'Download' field must be 1, which means that the record is processed by the external system and can be deleted. The 'Days before delete' field indicates that the mass

delete function will delete records older than this number of days. This is defined on the P panel for the download programs (MHS800, MHS805, and MHS810).

Note: Transactions for downloading (MHS800, MHS805, and MHS810) are deleted. Transactions for uploading (MMS850, MHS850) are archived in archiving tables. Deletion must be done manually by using SQL (or similar).

- 'Expected Receipt. Display' (MHS800) (download) deletes transactions from all transaction files used for the download of expected receipts. Expected receipts are purchase order, distribution orders, CO returns, manufacturing orders (material put-away). On the (MHS800/B) panel, press F10='Mass delete'.

  Records from the following tables are archived:

Table	Description
MHEXRH	TF: Expected receipts header
MHEXRD	TF: Expected receipts detail

- 'Pre-allocation. Display' (MHS805) (download) deletes transactions from the file used for pre-allocations. On the (MHS805/B) panel, press F10='Mass delete'.

  Records from the following tables are archived:

Table	Description
MHPREA	TF: Pre-allocations file

- 'Picking List. Display' (MHS810) (download) deletes transactions from the files used for downloaded picking lists. On the (MHS810/B) panel, press F10='Mass delete'.

  Records from the following tables are archived:

Table	Description
MHPICA	TF: Picking list address
MHPICL	TF: Picking list header
MHPICD	TF: Picking list detail
MHPICT	WF: Picking list text

- 'Internal Stock Messages' (MMS850) (upload) archives transactions from the files used for internal stock messages. On the (MMS850/B) panel, press F10='Filing'. The transactions tables (MMIHED, MMIINS, and MMIIDE) will be stored in archiving tables (MMAHED, MMAINS, and

MMAIDE). The only way to delete them from the archiving tables is to do it manually by using SQL (or similar).

If you want to restore the transactions in the production tables, select option 21='Execute message'.

Records from the following tables are archived:

Table	Description
MMIHED	TF: Message Interface – received headers
MMIINS	TF: Message Interface – received instructions
MMIIDE	TF: Message Interface – received identities

Archived transactions are displayed in 'Internal Stock Msg. Display Filed' (MMS890). Option 11='Lines' starts (MMS891), where lines (items) are displayed.

- 'Order Init Stock Msg. Manage' (MHS850) (upload) archives transactions from the files used for order initiated stock messages. On the (MHS850/B) panel, press F10='Filing'. The transactions tables (MHIHED, MHIPAC, and MHLIN) will be stored in archiving tables (MHAHED, MHAPAC, and MHALIN). The only way to delete them from the archiving tables is to do it manually by using SQL (or similar).

  If you want to restore the transactions in the production tables, select option 21='Execute message'.

  Records from the following tables are archived:

Table	Description
MHIHED	TF: Received header
MHIPAC	TF: Received packages
MHLIN	TF: Received lines

  Archived transactions are displayed in 'Order Init Stock Msg. Display Filed' (MHS890) option 11='Packages' starts (MHS851), where lines (packages) are displayed.

PUR - M3 BE Procurement

POP - Purchase Order Processing

- 'Filing Purchase Orders' (PPS920) archives purchase orders transactions viewed in (PPS200). Purchase orders can be archived after purchase statistics are created, normally after invoicing. If 'Delivery schedules' is set to 0: Orders between status 75 and 99 in (PPS200) can be archived. It depends on whether the 'Invoice Reporting' parameter on panel (PPS095/J) is set on the assigned purchase order type. If invoice reporting is set to 0 (No), then purchase orders in

status 75 and 99 will be included in the archiving. If the parameter is set to 1 (Yes), purchase orders in status 85 and 99 will be included in the archiving. If 'Delivery schedules' is set to 1: Only orders with status 99 in (PPS200) can be archived.

Soft selections can be made on the order type, receipt date, last invoice date, and whether only purchase orders created via delivery schedules should be selected.

Records from the following tables are archived:

Table	Description
MPHEAD	TF: Purchase order, header
MPLINE	TF: Purchase order, lines
MPLIND	TF: Purchase order line transactions
MPLIRE	TF: Purchase order, line repair
MPPOPA	MF: Purchase order payment table
MPPOEX	MF: Purchase order expediting
MPPOAD	MF: Purchase order address
MPOPLA	TF: Planning proposal archived
MPOEXP	TF: Whole sale calculation order line
MPDEPR	TF: Delivery schedule print
MSYTXH	MF: Text header
MSYTXL	MF: Text line
FGRPCL	TF: Goods receipt line charges
FGRECL	TF: Goods receipt lines
MPARPL	WF: Selected purchase order lines for archive
MPEXOR	MF: PO External reference
CREVTB	MF: Revision table

Important: The tracking of detailed information on the purchase order from a purchase invoice will not be available after the archiving. Also, the tracing for detailed information on a purchase order that is directly linked to a customer order will also not be available after archiving.

- 'Claim. File' (PPS925) archives transactions for claims. The program selects from claims with status 90 in (PPS390). Soft selections can be made on the facility, warehouse, and claim date.

  Records from the following tables are archived:

Table	Description
MPCLAH	MF: Purchase order claim, header
MPCLAL	MF: Purchase order claim, line
MSYTXH	MF: Text header
MSYTXL	MF: Text line

- 'Inspection Result. File' (PPS940) archives quality inspection statistics viewed in (PPS465). Soft selections can be made on the facility, warehouse, and entry date.

  Records from the following tables are archived:

Table	Description
MPQFUH	MF: Quality data for follow up - header
MPQFUT	MF: Quality data for follow up - task
MSYTXH	MF: Text header
MSYTXL	MF: Text line

- 'Supplier Delivery Note. File/Delete' (PPS990) archives supplier delivery note viewed in (PPS360). Soft selections can be made on the warehouse, supplier, and delivery note number.

  Records from the following tables are archived:

Table	Description
PDNHEA	TF: Delivery note, head
PDNLIN	TF: Delivery note, line
PPTRNS	TF: Delivery note, package
PFTRNS	TF: Delivery note, package details

PSS - Supplier Evaluation and Statistics

- 'Purchase Statistics. File' (PPS930) archives purchase statistics transactions viewed in (PPS450). Soft selections can be made on the facility, warehouse, receipt date, order date and minimum number of records to save.

  Records from the following tables are archived:

Table	Description
MPURST	HF: Purchase statistics

- 'Supplier Statistics. File' (PPS935) archives supplier statistics transactions viewed in (PPS440). Soft selections can be made on the period.

  Records from the following tables are archived:

Table	Description
MVENST	HF: Vendor statistics

POB - Purchases Order Batch Entry

' Purchase Order Batch. File' (PPS945) archives purchase order batch transactions viewed in (PPS370). The batch orders must be transferred to Purchased orders (status = 90). Soft selections can be made on PO batch origin, supplier, message no, PO number and order date.

Records from the following tables are archived:

Table	Description
MXBETR	TF: PO batch entry transactions
MXCCST	TF: PO batch accounting strings
MXHEAD	TF: PO head. Batch
MXLINE	TF: PO line. Batch
MXOEXP	TF: PO charges. Batch
MXPOAD	TF: PO address. Batch
MXTEXT	TF: PO text lines. Batch

MSF - M3 Application Foundation

AHR - Ad Hoc Reporting

'Ad Hoc Report Run. Delete' (AHS900) deletes Ad Hoc Report runs viewed in (AHS160). Soft selections can be made on the Report run, User, Ad hoc report group, Ad hoc report, Start date, Finish date and whether only report lines should be deleted.

Records from the following tables are archived:

Table	Description	Remark
CSYRED	Ad hoc report - online display view	
CSYREJ	Ad hoc report run	Only deleted if 'Deletion scop' = 2
CSYRES	Ad hoc report on-line display	

OUT - Output Data. Delete

'Output Data. Delete' (MNS906) deletes output data viewed in (MNS206).

Note: Output jobs that is active in the system can not be archived.

Soft selections can be made on the Printer file, Responsible, Entry date, Entry time, Output status and Server address.

Records from the following tables are archived:

Table	Description	Remark
CCTLSF	Control Stream File	Only if 'Output data' = 1
CSFOUT	Header data to StreamServer	Only if 'Output data' = 1
CCTLSP	Control Stream File - Partner	Only if 'Output data' = 1
CEVTST	Event store	Only if 'Output data' = 1
CBMSTA	M3 Business Message - status	Only if 'Output data' = 1
CBMLOG	M3 Business Message - log	Only if 'Output data' = 1
CBMINH	M3 Business Message - initiator	Only if 'Output data' = 1
CBMINF	M3 Business Message - record field	Only if 'Output data' = 1
CEVTAR	Event store archive	Only if 'Archived event' = 1

See Also

M3 Business Engine Administrator's Guide for Auxiliary Functions (AUX)

This document contains a functional description of the AUX - Auxiliary Functions menu. The functions start different M3 programs and are divided in the following processes:

- Night run
- Periodic Run
- Special Occasion Run

Important: Some of the listed AUX functions include important note and recommendations. Not following these recommendations might risk corrupt data in the database.

The document is intended for business consultants and project managers.

❑ Before you start - Starting Auto Start Job After a Shutdown

If you want to run a batch job for any or the Auxiliary functions with no autojobs, you have to shut down the subsystem for auto start jobs and then start CMNGJOB in the server view.

___1 Shut down the Subsystem for Auto Start Jobs

The subsystem for auto start jobs is called MVXCASJ (subsystem for M3 database updating). Enter the Server View and shutdown Sub:A (MVXCASJ). This stops all auto start jobs that are defined in 'Subsystem. Job. Open' (MNS051) for MVXCASJ.

___2 Start CMNGJOB

Click on Run and the 'Run job' window is displayed. In the Program field enter CMNGJOB (Auto Start Job Driver). Select Auto in the 'Type' field. Click on Run.

Note: To be able to run a batch job, CMNGJOB must run.

___3 Run the Batch Job (AUX-function

Run the batch job. For example if you will recreate allocated balance ids you must run batch job MMS925S1. This batch job is started by function MMS925, on the AUX-menu.

___4 Start the Subsystem for Auto Start Jobs

In the Program field enter CSRVASJ. You can select Batch in the 'Type' field. Click on Run. This starts all auto start jobs, defined for sub system MVXCASJ, that are stopped. All auto start jobs you want the system to run must be defined in 'Subsystem. Job. Open' (MNS051).

Auxiliary functions run in the night run

The following programs are mandatory to run when you run 'Night Run. Start' (CRS999). You don't need to run these programs separately, but if needed, they can be run from the AUX menu.

Before you start If you want to run a batch job with no autojobs, you have to shut down the subsystem for auto start jobs and then start CMNGJOB in the server view. See instructions in **Before you start - Starting auto start job after a shutdown**.

- 'Inventory Record. Delete Out of Stock' (MMS981)

  This function removes the expired records in MITLOC. This function should be run when you want to remove the expired records in MITLOC. The program has no selections.

- 'Material Plan. Re-calculate' (MMS999)

  This is an MRP run that calculates all items that are ready for recalculation i.e. it will calculate all items that has the 'Next calculation date' in the MITPCC table less than or equal to today. This function is always run in the Night run CRS999 and it should therefore normally not be run separately.

- 'Load. Create for Past' (CPS930)

  This function moves all work center loads in past time to the Monday in the current week or in the previous week. Which week is controlled by parameter 'Overdue load' in (CRS786). The function can be selected to run in the night run (CRS999).

- 'Load. Re-create' (CPS990)

  This function recreates the work center load according to existing manufacturing order.

- 'RCCP. Create' (RCS998)

  This function starts the 'RCCP. Create' (RCS998) M3 program.

- 'Restart Interrupted MO Issues PMS065' (PMS998)

  This function starts the 'Restart Interrupted MO Issues PMS065' (PMS998) M3 program. Interrupted MO issues are back flush issues that have not been reported. Normally these issues are reported when exiting the program that trigger the issue, for example PMS050 or PMS070. If the triggering program is not finished in a correct way by using F3=Close or F12=Cancel, PMS065 will not be called and consequently no issues will be reported. When using PMS998, all issues in queue to be reported will be reported. This function is always run in the Night run CRS999 and it should therefore normally not be run separately.

- 'Product. Restart Interruption aft PDS001' (PDS998)

  This function takes care of calculations that normally should be done by submitting the PDS001CL job when exiting the 'Product Structure. Open' (PDS001) M3 program. When a product structure is changed it could affect the lead time of the product, such as change of work center and change of run time. If an item is added as a component in the structure it could affect the items low level code. If PDS001 is not finished in a correct way by using F3=Close or F12=Cancel, PDS001CL

will not be submitted and consequently the lead time and low level codes will not be recalculated. Using this 'Product. Restart Interruption aft PDS001' (PDS998) M3 program will calculate those structures which are in queue to be calculated.

- 'Work Center. Re-create Capacity' (PDS950)

  This function starts the 'Work Center. Re-create Capacity' (PDS950) M3 program.

Running auxiliary functions periodically

The following functions should be run occasionally or periodically in order to keep the size of the database to a minimum and to have valid and correct data.

Before you start If you want to run a batch job with no autojobs, you have to shut down the subsystem for auto start jobs and then start CMNGJOB in the server view. See instructions in **Before you start - Starting auto start job after a shutdown**.

- 'Attribute. Calculate Search Sequence' (ATS995)

  This function should be run periodically.

  Important: The attribute functionality does not depend on whether or not this function is used. It does, however, affect the performance of allocation and stock searches if you have many attributes with several valid values per attribute.

  The function calculates the search sequence in the order attribute file in the following sequence:

  1. Counting the number of different attribute values per item and attribute identity in the stock.

     Once completed, the values are turned into negative and are placed in the search sequence field.
  2. Using this calculation, the search starts to validate the attribute where the most different values exist.

     If you start to validate the attribute, the result will be the least possible number of balance identities.

- 'Attribute. Delete Not Used' (ATS990)

  This function should be run occasionally or periodically in order to keep the size of the database to a minimum.

  The function performs a clean-up of the database with the following activities:

  - Deleting attribute searches

    Attribute searches in the, for example, 'Balance Identity. Display' (MMS060) and 'Balance Identity. Open Toolbox' (MWS060) M3 programs, creates a record attribute with a negative number. These are normally not deleted when the user exits the function and therefore remain in the database. This is done for performance reasons.
  - Deleting not connected attribute records

To do this, the function scans through the attribute files and confirms that each attribute number has a corresponding order. Normally, these records are deleted when an order is deleted, but if the user session is interrupted for any reason, these records will remain in the database.

Important: When this function is run, the attribute records found are deleted - not archived.

- 'Macro Orders. Delete Not Used' (PMS992)

  This function starts the 'Macro Orders. Delete Not Used' (PMS992) M3 program.

- Product. Re-create Lowest Levels (PDS910)

  This function should be run periodically when there are many changes in the product structure.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

Running auxiliary functions when required

The following functions can be run occasionally, e.g. at go live date or in case if some data got corrupt.

Before you start If you want to run a batch job with no autojobs, you have to shut down the subsystem for auto start jobs and then start CMNGJOB in the server view. See instructions in **Before you start - Starting auto start job after a shutdown**.

Auxiliary functions - FOR

- 'MITAFO, MITMDS and MITFFO. Recreate' (FCS950)

  This function re-creates the forecast. MITAFO and MITFFO are re-created from MITDFO and MITMDS from MITDDS. The daily forecast (and MDS) is added to a periodic forecast/demand. The family forecast is also updated (MITFFO). This function should only be used if something has gone wrong and the forecast data is corrupt, not on a routine basis.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

Auxiliary functions - MAP

- 'Material Plan. Re-create' (MMS995)

> **Warning:** Skipping this step will create mismatch in the system between material plan and pre-allocation tables.

This function re-creates the material plan (MITPLO). If there are mismatches between MITPLO and the planning files/tables, such as MMOPLP and MPOPLP, this function can be run.

Important:
- No other user in the system.
- No auto start job activated for the component.
- Max 1 active job allowed for the job queue.
- 'Pre-allocation. Re-crt MITPLO via MPREAL' (MWS930) must be run after you have run MMS995.

  Running MWS930 without using pre-allocations will not cause any harm.

- 'Available to Promise. Re-create (MMS994)

  This function re-creates the ATP. This is however done in the night run (by function MMS912), for all items that need to be calculated (that is those items that have been part of the MRP run). Therefore this function should normally not be run separately. Note that in MMS994 only items that have ATP calculation 1 in the CTP policy will be included.

Auxiliary functions - MCO

- Maint Agrmnt. Re-Create Totals' (COS985)

  This function starts the Maint Agrmnt. Re-Create Totals' (COS985) M3 program.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

Auxiliary functions - MOP

- 'Manufacturing Order. Reset Status' (PMS140)

  This function starts the 'Manufacturing Order. Reset Status' (PMS140) M3 program.

  Status x1 (create MO), x4 (delete MO)means that a autojob should do something to the order. Resetting these orders will delete the orders.

  Status x2 means that someone is locking the MO or that the MO is about to be rescheduled. Resetting these orders will trigger a reschedule of the order.

Important: No other user in the system working with the TO that will be reset.

- 'Restart Interrupted MO Issues PMS065' (PMS998)

  This function starts the 'Restart Interrupted MO Issues PMS065' (PMS998) M3 program.

  The function will activate all pending 'backflush issues'. The same function is part of the night run.

Auxiliary functions - PDA

- 'Material. Recalculate No. of Options' (PDS970)

  This function starts the 'Material. Recalculate No. of Options' (PDS970) M3 program. The function recalculates the number of options that are connected to material lines and operations included in configured product structures.

  Important: No other user in the system working with the structure records.

- 'Structure Sequence Number. Generate' (PDS975)

  This function starts the'Structure Sequence Number. Generate' (PDS975) M3 program. All structure records (operations and material) must have a structure sequence number. PDS975 add a sequence number for all records that do not have such a number.

  Important: No other user in the system working with the structure records.

Auxiliary functions - PJM

- 'Project. Generate Actuals from GLR' (POS990)

  This function re-creates project budget actuals, selective by project. There is also an option to run a comparison with the GL and another option to print the detailed postings by project. Actuals from GLR normally update projects in the auto job POS950.

  Important:
  - Should only be executed when a re-creation of the project follow-up in PJM is requested.
  - Set auto job POS950 in hold.
  - No reporting on project related activities for selected project is allowed while POS990 is active. Examples of activities are project invoicing, transfer of time reports to GLR etc.
  - Work with budget and forecast is not allowed while POS990 is active.

- 'Project. Update Committed' (POS994)

  This function gives the possibility to execute the following:

  - Re-creation of the committed value for In Progress based on outstanding Customer Orders, Purchase Orders and Time Reports. Normally the updates are done in the night job.

Note: It is recommended to use this update if a project follow-up in PJM is requested before the next night job is executed.

- Generation of project messages and due dates. Normally the updates are done in the night job. Infor Recommends using this if project messages are requested before next night job is executed.
- Calculation of Earned Value. Normally the updates are done in the night job. Infor recommends using this if an updated earned value in PJM is requested before next night job is executed.

Auxiliary functions - POP

- 'Item. Update from Purchase Agreement' (PPS950)

  In this function the lead time is updated in MITBAL. The value is retrieved from the agreement.

Auxiliary functions - PRM

- 'Service. Re-create Lowest Levels' (MOS395)

  This function starts the 'Service. Re-create Lowest Levels' (MOS395) M3 program.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

Auxiliary functions - WHM

- 'Reservation. Remove' (MWS950)

  This function delets all reservations in (MWS330) that are no longer valid, that is the reservation valid date is in passed time. This program has no selections.
- 'Balance ID. Reset for MITPCE via MITLOC' (MWS990)

  This function recalculates the number of balance IDs on a location level (MITPCE) and clear the location locks.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'Lead Time. Mass Update' (MMS987)

This function should be run if changes in lead time have been made that concerns many items. For example, if the inspection lead time in 'Goods Receiving Method. Open' (PPS345) or transportation lead time in 'Supplier. Connect Transp Lead Times' (PPS010) has been changed.

- 'Location Replenishment. Re-create' (MMS983)

  This function creates replenishment orders based on on-hand balance and item/location in 'Item. Connect Location' (MMS065). The program has no selections.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'Location Statistic. Re-create' (MMS997)

  This function re-creates the location statistic. This function could be run when something has been changed in how the statistics is measured. The program has no selections.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

  Note: Archived data is not re-calculated.

- 'On-hand. Re-create in MITFAC via MITBAL' (MMS984)

  This function re-creates MITFAC via MITBAL. This function should only be run when facing corrupt quantity on-hand data. Facility and item number can be selected in the run.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'On-hand. Re-create per Function Number' (MMS967)

  This function starts the 'On-hand. Re-create per Function Number' (MMS967) M3 program.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'Pre-allocation. Re-crt MITPLO via MPREAL' (MWS930)

  This function could be run when facing corrupt pre-allocation data on MITPLO. MWS930 can safely be run independently. It should normally be run only for a selected item/warehouse where a problem is known to exist.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'Weight and Volume. Re-create' (MMS996)

  This function recalculates the current volume, weight and fill rate on location level (MITPCE). The program has no selections.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

Auxiliary functions - WOP

- 'Meter Statistics. Re-create' (MOS276)

  This program recreates the Meter statistics file (MROOPS) that can be viewed in program 'Equipment. Display Meter Stats' (MOS275). The statistics is recreated for one individual or operational unit. The origin number is prompted before the generation is started. The program shall normally be password protected(MNS110) Pwd check = 1.

  Before you start Operating cycles exist (MOS270/MROOPC) and Operating Cycle Meters exists in (MOS271/MROOPM).

  The old statistics is cleared and the statistics is totally regenerated from the start from MROOPC and MROOPM.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'As-Built Structure. Re-create' (MOS248)

  This function starts the 'As-Built Structure. Re-create' (MOS248) M3 program. This procedure should be used when the as-build structure or as-build list needs to be re-built. The as-build

structure is essentially a flat file which is used by the System as an efficient way to read the equipment structure (rather than, for example, using the MOS446 structure).

This file can however sometimes become out-of-synchronization and must be rebuilt, if

- the next higher position is changed in MOS445
- the highest position in the structure is changed
- the planning position is changed in MOS440
- a position is deleted

The effects of rebuild that the existing as-build structure as seen in MOS253 is deleted and recreated based on the current structure. This process normally runs quickly although this will be dependent on the number of positions and equipment and machine loading.

This process can be run while users are active, but it may cause performance issues.

Important:

- No other user in the system.
- No auto start job activated for the component.
- Max 1 active job allowed for the job queue.

- 'WO. Restart Interrupted Issues - MOS065' (MOS998)

  This function starts the 'WO. Restart Interrupted Issues - MOS065' (MOS998) M3 program.

  Important:

  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'Master Schedule. Regenerate' (MOS999)

  In Net Change mode, only equipments/positions with continuous net change code = 0 that are due for calculation on the current date or earlier, are processed. Nothing is deleted prior to the calculation. If you consequently use continuous net change = 1, then you will never have any reason to manually launch MOS999 in Net Change mode. MOS999 now runs in Net Change mode every night as part of the night job.

  The Regenerative mode starts with deleting planned work orders, then re-calculating all equipments and positions that are in the result set of the selection criteria of MOS999/E. SRP triggers (table MITPCC) will be re-created wherever missing. This is useful at go-live occasions.

  The following exceptions apply for running 'Master Schedule. Regenerate' (MOS999):

  - Forecast planned work orders (generation reference 62) are never deleted.
  - Removal planned work orders (generation reference 63) are never deleted.
  - Pre-M3 planned work orders (generation reference 64) are never deleted.

- Condition-based maintenance planned work orders (generation reference 67) are never deleted.
- Manually entered planned work orders (generation reference 68) are never deleted.
- Inspection planned work orders (generation reference 69) are never deleted.
- Engineering order planned work orders are never deleted.
- Complaint planned work orders are never deleted.
- Concession planned work orders are never deleted.
- Planned work orders with reference to customer order (reference order category 7) are never deleted.

In addition, a status field has been added to the MOS999/E panel, including what work orders (in status planned) should be deleted. This makes it possible to keep e.g. planned work orders in status 20 (then enter 10 in the MOS999/E status field).

Note: If planned WOs are in status 15, set the status in MOS999/E to value less than 15.

Important:
- No other user in the system.
- No auto start job activated for the component.
- Max 1 active job allowed for the job queue.

Auxiliary functions - FIM

- 'GL Balance File. Start Annual Run' (GLS905)

  By totaling previous transactions to generate opening balances for the next fiscal year from the closing balances of the current year, you increase the system's performance during queries and report generating. This is the only purpose of the annual run in M3. The opening balances are saved in period 00, which you never have to define. Most of the transactions from the previous year should be entered before this is done. However, transactions for the new year can be entered before this activity, and transactions for the previous year can also be entered afterwards. If transactions are entered in a previous year after an opening balance is generated for a new year, that balance is automatically adjusted. If an annual run is not done, the previous opening balance will be added to existing transactions. If no opening balance has been calculated before, all transactions from when the system was configured will instead be totaled to create the opening balance for the new year. You generate the opening balance in 'GL Balance File. Start 'Annual Run' (GLS905) by specifying the year from which the closing balance is retrieved.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'GL Balance File. Update with Outcome' (GLS915)

  This can be done when the balance file does not agree with the general ledger transaction file (FGLEDG), or when a new balance key is to apply to historical values also. You do this in 'GL Balance File. Update with Outcome' (GLS915) for selected period(s) and a range of balance keys. You can chose to delete the balance file entries within that range before transfer to the balance file instead of adding the new values to the current ones. By using period ranges you can limit the number of transactions and perform the update in several runs, if the number of transactions to process is large.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'GL Balance File. Update with Budget' (GLS920)

  You update the balance file with budget values when:

  - the balance file does not agree with the budget transaction file
  - a new balance key is to apply to historical values, or
  - you want to include a new budget, for which the 'Update balance file' check box previously was not selected in 'Budget. Open' (BUS100). You do this in 'GL Balance File. Update with Budget' (GLS920) for the selected budgets, period(s), and a range of balance keys. You can chose to delete the existing balance file entries for those balance keys before the transfer.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'GL Balance File. Delete Records' (GLS930)

  This can be done when:

  - an entire balance keys must be deleted
  - the definition of a balance key or accounting structure is changed
  - the transaction file does not agree with the balance file.

  When transactions are deleted due to any changes, new balance transactions should be created immediately before any new transactions are entered in the system. This is especially important when the current period is deleted and re-created. (As mentioned above, previous transactions may also be deleted when transferring new transactions.) You do this in 'GL Balance File. Delete Records' (GLS930). You can select to delete outcome and/or budget values (for selected budgets) for specific period(s) and a range of balance keys.

Important:
- No other user in the system.
- No auto start job activated for the component.
- Max 1 active job allowed for the job queue.

- 'AR Balance File. Start Annual Run' (ARS910)

  Annual run in AR is used to update the balance file for accounts receivable for a new year. For this, the current year' balance is transferred to opening balance for the next year. The only purpose is to total previous transactions to enhance the performance of the system.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'AR Balance File. Create/Delete' (ARS915)

  The function re-creates the balance file for accounts receivable. The function should only be used when facing corrupt data in the balance file for accounts receivable. Payer, customer, currency and division can be selected in the run.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'AR Invoice Class. Update' (ARS920)

  The function is used to update existing invoice records in the Account Receivable Ledger (table FSLEDG) with an invoice class from the FAM function that was used to create these records.

  The function is run as the last step of the configuration of the financial system for the invoice class functionality and is only required if the use of Invoice class has been activated in 'Settings - General Ledger' (CRS750/F).

  If required, the invoice class can be changed afterwards for specific invoices in 'Customer Invoice. Change' (ARS201). It is possible to run these auxiliary program several times, for example, if an invoice class was missing for a FAM function after the invoice class functionality was activated. Settings required when the function is started:

  - **Accounting Date**

    The field indicates the accounting date from/to which invoice transactions in the sub-ledger should be updated with an invoice class.

- **AR10 FAM function for split invoice**

  The field indicates the detail record of FAM function AR10 from which to default an invoice class to customer invoices that were previously split manually in 'Customer Invoice. Split' (ARS202) and recorded based on FAM function AR65.

  Since the FAM function AR65 has no invoice class field, these invoice records in the Accounts Receivable Ledger (table FSLEDG) must be updated in arrears with an invoice class retrieved from FAM function AR10. Otherwise, these records will not be included as is legally required in the fiscal book report created in 'Sales Book. Print' (ARS610).

- **AR10 FAM function for doubtful invoices**

  The field indicates the detail record of FAM function AR10 from which to default the invoice class to customer invoices that are classified as doubtful debts and transferred to 'Customer Invoice. Process Doubtful' (ARS360) based on FAM function AR90.

  Since the FAM function AR90 has no invoice class field, these invoice records in the Accounts Receivable Ledger (table FSLEDG) must be updated in arrears with an invoice class retrieved from FAM function AR10. Otherwise, these records will not be included as is legally required in the fiscal book report created in 'Sales Book. Print' (ARS610).

Important: It is highly recommended to run this auxiliary program when there are no other users working in M3 Business Engine.

- No other user in the system.
- No auto start job activated for the component.
- Max 1 active job allowed for the job queue.

- 'AP Balance File. Start Annual Run' (APS910)

  Annual run in AP is used to update the balance file for accounts payable for a new year. For this, the current year' balance is transferred to opening balance for the next year. The only purpose is to total previous transactions to enhance the performance of the system.

  Important:

  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

- 'AP Balance File. Create/Delete' (APS915)

  The function re-creates the balance file for accounts payable. The function should only be used when facing corrupt data in the balance file for accounts payable. Payee, supplier, currency and division can be selected in the run.

Important:

- No other user in the system.
- No auto start job activated for the component.
- Max 1 active job allowed for the job queue.

- 'AP Invoice Class. Update' (APS920)

  The function is used to update existing invoice records in the sub-ledger with an invoice class defaulted from the FAM function that was used to create these records.

  To use the auxiliary functions, the invoice class functionality must be activated in the function 'Settings - General Ledger' (CRS750), invoices classes must be entered in the function 'Invoice Class. Open' (CRS409) and connected to the FAM functions in the functions 'FAM Function. Open Details. (CRS406), 'Order Type. Connect FAM Function' (CRS407) and 'FAM Function Exception. Open (CRS412).

  The function is run as the last step of the configuration of the financial system for the invoice class functionality and is only required if the use of Invoice class has been activated in 'Settings - General Ledger' (CRS750/F).

  If required, the invoice class can be changed afterwards for specific invoices 'Acc Payable.Change Sep Invoice' (APS201).

  It is possible to run this auxiliary program several times, for example, if an invoice class was missing for a FAM function after the invoice class functionality was activated.

  Settings required when the function is started:

  - **Accounting Date**

    The field indicates the accounting date from which or to which invoice transactions in the sub-ledger should be updated with an invoice class.

  - **AP FAM function for Split Invoice**

    The field indicates the detail record of FAM function AP10 from which to default an invoice class to supplier invoices that have been split manually in 'Supplier Invoice. Split' (APS202) and recorded based on FAM function AP65.

    Since the FAM function AP65 has no invoice class field, these invoice records in the Accounts Payable Ledger (table FPLEDG) must be updated in arrears with an invoice class retrieved from FAM function AP10. Otherwise, these records will not be included as is legally required in the fiscal book report created in 'Purchase Book. Print' (APS610).

Important: It is highly recommended to run this auxiliary program when there are no other users working in M3 Business Engine.

- No other user in the system.
- No auto start job activated for the component.
- Max 1 active job allowed for the job queue.

- 'Tax Asset Group. Update' (FAS310)

  The function is only used for Industry 'Equipment' for association of an asset to a Tax Asset Group to enable the maintenance of balances for Purchases, Sales, Gains or Losses that can later be used for the Like Kind Exchange process of the US Tax Code 1031.

  Tax Year and Tax Asset Group update may be done when assets are encoded late into the system or when the Tax Start date in 'Settings - Fixed Asset Acquisition' (FAS900) has been changed.

  The fixed asset record should be correctly linked to a Tax Asset Group before running the Tax Year and Tax Asset Group update.

  For specific Tax Asset Group or Tax Period update, 'Tax Asset Group. Display' (FAS300/B) can be used instead.

  Important:
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

  The below menu items must be added to the M3 Menu.

  In (MNS110) - Enter menu items.

Function	Constant	File	Component group	Function Cat	Program	Description (F-panel)
FAS300	FA30001	MVXCON	FAS	DSP	FAS300	Tax Asset Group. Display
FAS310	FA31001	MVXCON	FAS	FNC	FAS310	Tax Asset Group. Update

  In MNS111 - Connect menu items to menu and menu version.

Menu	Menu Option	Function
FAS	270	FAS300
FAS	280	FAS310
AFIM	100	FAS310

Auxiliary functions - RTM

- 'Price List. Convert to Selection Matrix' (STS910)

The function is used when switching from legacy pricelist retrieval logic to the new logic, based on the new Rental Pricelist Selection Matrix.

It is required to set up a Price List Table in advance of the data migration. This Price List Table is entered on the E-panel of STS910. Running STS910 will populate the Rental Pricelist Selection Matrix with values from the legacy pricelist priorities:

- Customer specific pricelist in SOS017 (replaced by STS017)
- The five Service Order Pricelists on CRS611/E that resides in OCUSMA.

STS910 also populates Rental Price List Table field in Customer Master (OCUSMA) and Rental Agreement Head Master (STAGHE).

Important:

- No other user in the system.
- STS910 must not be run before fix program F11100MM45 has been run (F11100MM45 copies SOS017 records to STS017 records).

- 'Price List. Convert to CO Sel Matrix' (STS913)

  The auxiliary program 'Price List. Convert to CO Sel Matrix' (STS913) creates a sales costing model defined with the price list according to the same search hierarchy as the replaced price logic.

  The replaced price list retrieval routine to the rental agreement line for line type 1, 2 and 6 includes the following hierarchy levels:

  1 Customer specific pricelist in SOS017 (replaced by STS017)

  2 The five service order price lists on (CRS611/E) from OCUSMA

  3 Default price list (STS699).

  Before running the auxiliary program, it is required to manually copy the price list IDs from 'Serv Price List. Open' (SOS017) to 'Sales Price List. Open' (OIS017). If the price list ID does not exist in (OIS017), the record is dropped. The price lists can be created via a copy function in 'Serv Price List. Open' (SOS017). Note that the discount percentage, discount amount and net price indicator in (SOS017) are not supported functionality.

- 'Rental Agreement. Update' (STS915)

  When upgrading from a previous version of M3, an update of already existing rental agreements must be done in order to make the functionality work.

  Already existing rental agreements that are migrated to the new version of M3 has no depot defined on the agreement header. The existing agreements should be updated with a rental depot and this is done by using the auxiliary program (STS915).

  The auxiliary program will update existing rental agreements with a rental depot. The selected agreement order type decides which rental agreements to be updated. If a rental depot has not been set on the agreement head, it will be updated with the rental depot selected in this dropdown list. If the depot has already been set on the agreement, no update will take place. If the rental depot field (DPOT) is blank on the agreement order header, then the rental

agreement has been migrated from a previous version of M3 and should be updated with a rental depot.

Auxiliary functions - SEC

- Authority per User. Re-create (SES990)

  A program to be able to correct/update SES401 table CMNPUS according to the entries in MNS110/MNS112/MNS150/MNS151/MNS405/MNS410/SES400. This is an easy way to remove scrap data in CMNPUS and re-build so only valid data is there, especially when customers installs new fix regarding security.

  Important:
  - This program should be called with autojob (SES900) running. While running (SES990), users may experience accessibility issues with affected programs. It is recommended not to allow users accessing the system while (SES990) is running.
  - No other user in the system.
  - No auto start job activated for the component.
  - Max 1 active job allowed for the job queue.

Auxiliary functions - SRV

Important: Restriction: Whilst the activities described below explain the process by which Service Management data can be migrated for use by the Maintenance Management functionality, it should be noted that data traceability and reporting capability is not currently available to support this functionality, and it is the end users responsibility to manage and monitor the data migration activities in accordance with their business process requirements.

When upgrading from a previous version of M3 using the Service Management (SRV) functionality to a version of M3 using the Maintenance Management (MAI/MNT) functionality, a conversion of data must be performed in order to make the functionality work. The auxiliary programs for SRV convert data in (SRV) to data in (MAI/MNT).

There are important dependencies between some of the auxiliary programs that must be considered as they affect the order in which the data should be migrated.

Service expenses should be migrated with 'Service Expense. Convert to MAI' (SAS914) before migrating service kits with 'Service Kit. Convert to Service' (SAS916). This is because the service kit lines can be created from service expenses.

Service agreements should be migrated last using 'Service Agreement. Convert to MAI' (SAS930). Because the service agreement lines contain contract items and individual items, 'Contract Item. Convert to Service' (SAS927) and 'Individual Item. Convert to Equipment' (SAS925) must be migrated before service agreements. If the service agreements have content defined in (SAS128) it is important to migrate service expenses with (SAS916), as agreement content may include service expense lines.

The recommended order of running the auxiliary programs is listed below, however the order can be deviated from as long as the above mentioned dependencies are taken into consideration. If, for example, service kits with lines consisting of service expenses are migrated before running (SAS914) then the service kit expense lines will be dropped during migration. This rule set applies to all the listed SRV-auxiliary functions:

1. 'Individual Item. Convert to Equipment' (SAS925)

   The auxiliary function 'Individual Item. Convert to Equipment' (SAS925) creates serialized items in 'Equipment/Serialized Item. Open' (MMS240) based on a selected range of individual items from 'Individual Item. Open' (SOS419).

2. 'Contract Item. Convert to Service' (SAS927)

   The auxiliary function 'Contract Item. Convert to Service' (SAS927) creates service definitions in 'Service. Open' (MOS300), with pricing in 'Service. Enter Prices' (MOS306) from a selected range of contract items in 'Contract Item. Open' (SAS450).

3. 'Service Expense. Convert to MAI' (SAS914)

   The auxiliary function 'Contract Item. Convert to Service' (SAS927) creates service definitions in 'Service. Open' (MOS300) with pricing in 'Service. Enter Prices' (MOS306) from a selected range of contract items in 'Contract Item. Open' (SAS450).

4. 'Service Kit. Convert to Service' (SAS916)

   The auxiliary function 'Service kit. Convert to Service' (SAS916) creates service definitions in 'Service. Open' (MOS300) from a selected range of service kits in 'Service Kit. Open' (SOS450).

5. 'Service Agreement. Convert to MAI' (SAS930)

   The auxiliary function 'SRV Agreement. Convert to MAI' (SAS930) creates maintenance agreements in 'Maint Agrmnt. Open' (COS410) from a selected range of service agreements in 'Service Agrmt. Open' (SAS100).

   Note: For converting price lists (SOS017) the RNT auxiliary function (STS913) should be used.

See Also

"M3 Business Engine Auto Start Job Descriptions" on page 108

"M3 Business Engine Administrator's Guide for Batch Jobs and Job Queues" on page 82

"M3 Business Engine Administrator's Guide for Job Scheduler" on page 73

M3 Business Engine Administrator's Guide for Job Scheduler

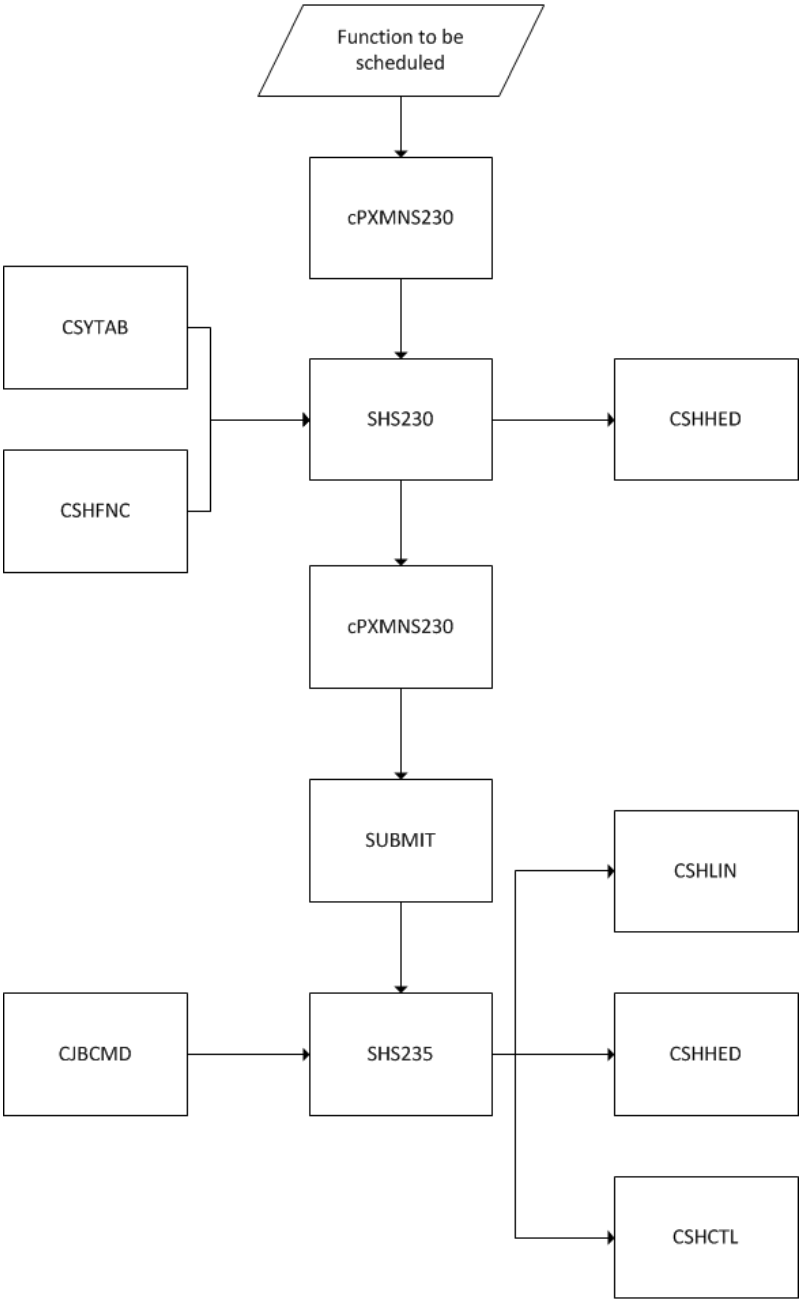
The M3 Java Job Scheduler allows standard M3 BE report or batch functions to run automatically according to a specified schedule. For mass processing that can negatively affect system performance, the function should be run in batch at night (such as CAS950).

Scheduling Functions in M3 BE Job Scheduler

This section explains how to define the settings required for M3 BE Job Scheduler and how to use it to schedule functions. In this context, a job schedule function is a function that allows time-dependent scheduling for batch jobs.

Important: This function is not related to the M3 program in 'Function. Open' (MNS110).

Workflow



1 Define Job Schedule Category (CSYTAB table)

   Define the different types of jobs to run in 'Job Schedule Category. Open' (SHS050). For each category you select the earliest and latest time a job connected to the job category can be scheduled to run. Such a specification can be necessary when batch jobs must be run in a certain order.

2 Define job scheduling function in job scheduling routine (CSHFNC table)

In 'Job Schedule Function. Open' (SHS030), you define for each function (menu program) whether it is allowed to be scheduled or must be scheduled. You also define the actual program file that runs the job (usually a program file with the suffix CL).

This definition can be done for all users or for a specific user. The difference between the two is that the latter enables you to review scheduled jobs per user (see below). To each program to be included, you can connect a job schedule category.

3 Define job scheduling programs and fields (SHS031) (SHS035)

4 Schedule jobs for function (SHS230) (SHS231)

Whenever you manually start a function included in the job scheduling routine, 'Job Schedule Information. Open' (SHS230/E) is displayed before the job is submitted to the job queue. There you define when and with which frequency the menu program should be run.

If you define an interval for the job, for example every Thursday, the sub-program 'Job Schedule Constant. Open' (SHS231) is then automatically displayed. This program enables you to add or subtract days from the date fields used in the selected function. For example, when scheduling printing of invoices in 'CO Invoice. Print' (OIS180), you can select to print invoices for all deliveries with planned delivery date three days ago.

5 Review and Adjust Scheduled Jobs

To review and change the dates and times for scheduled jobs, use 'Job Schedule Entry. Update' (SHS010) (displaying all jobs) and 'Job Schedule Entry. Update/User' (SHS011) (displaying all jobs for current user).

The jobs are listed per menu program and version number. (The first menu program scheduled gets a version number, and for subsequent schedules of the same function, the version number is increased by one each time.)

You can also print lists with information for each menu program included in 'Job Schedule. Print' (SHS800/1) and 'Job Schedule. Print/User' (SHSS800/2).

6 After the function is scheduled, you still have the option to

- Change or delete function schedule (SHS010)

  or

- Run the function on schedule

These steps are described in detail in the following sections.

Define job scheduling category (SHS050)

Job schedule categories are used to define the time limits during which scheduled functions can be run. You can use the job schedule category when you define job schedule functions. The new job schedule category is inserted in the CSYTAB table.

It is recommended to have only one job category, however, more than one category allows you to gain more control over the scheduled functions.

1 Select 'Job Schedule Category. Open' (SHS050).

2 Enter a unique name for the job schedule category.

3 Enter the following information on panel E:

From time: The start time that functions using this category should run, on a 24-hour clock.

To time: The end time that functions using this category should run.

Define job scheduling function (SHS030)

Important: You must first define the job schedule category in (SHS050) before you can proceed to define a job scheduling function.

A job schedule function must first be defined in 'Job Schedule Function. Open' (SHS030) before it can be scheduled in M3 BE Job Scheduler. The new job schedule function is inserted in the CSHFNC table. Job schedule functions can be defined for all users or for specific users. To define job schedule functions for all users, leave the User field blank.

1 Start 'Job Schedule Function. Open' (SHS030).

2 Create a new record for a function, and if necessary for a user.

3 Enter the following information on panel E:

- Job Schedule allowed

  The scheduling possibilities for the function. The following values are valid:

  0 = Scheduling this function is not allowed.

  1 = The function can be scheduled or run immediately.

  2 = The function can only be scheduled.

  3 = The function will be scheduled to run at the earliest time for the job category, without any user intervention.

- Job Schedule category

  The job schedule category that should be used with this function.

- Program

  The program that is run by the function. This corresponds to the entry in the Command field in 'Function. Open' (MNS110).

- Job

  The job name under which the batch job will be run, if the function you have selected starts a batch job.

  The program name that should be entered in this field is the CL-program. There can be some exceptions, such as whether OIS180 should be scheduled. In that case, the job name is OIS180S1. However, for most of the programs it is the CL-program.

  Prior to a batch job being submitted, standard M3 programs call 'Job Attributes. Select' (MNS230) to see if there are job attribute overrides. One of the parameters passed to this program is the

job name. This job name is used to find a job schedule function and check whether the job allows scheduling. If it does, the job scheduling panel is displayed for the user.

Define job scheduling programs and fields (SHS031)

1. On the (SHS030/B) panel, activate the scheduled function and select option 11 = Programs.

   This starts 'Job Schedule Program. Open' (SHS031). Open the E panel and fill in the name of the display file.

2. Redisplay the B panel and select option 11= Fields.

   This starts 'Job Schedule Fields. Open' (SHS035).Here you display the fields from the display file. Open the E panel for each field and connect to field in the data structure. This connection between the fields in the panel and the fields in the data structure is necessary for CSCHJOB to be able to adjust the dates and the selections.

3. Press Enter. (SHS031) is redisplayed. Press Close. (SHS030) is redisplayed.

Run Scheduling - Schedule Information

Important: You must first define the job schedule category and a job schedule function before you can run scheduling.

When a user runs a function that is defined in M3 BE Job Scheduler, with scheduling allowed, two new panels are displayed for the user before the job is submitted. These are panels (SHS230/E) and (SHS231). Here, the user decides the times and frequency with which the function is run.

Important: When scheduling a job for the first time it is the dates you've entered in the selection screen that will be used. It's first when the following run is scheduled in CSCHJOB that the dates are adjusted according to the movement parameter.

The function will be scheduled to run at the dates, times, and frequency that you entered. The information about when the function is run is stored in CSHHED and CSHDAT.

1. Select a function that is defined in M3 BE Job Scheduler (with scheduling allowed). Panel E in 'Job Schedule Information. Open' (SHS230) is displayed.

2. Enter the following information on panel E:

   - Schedule type

     Select which type of run you want to define. The value in this field controls which fields that should be open in SHS230/E.

     - Now

       Select this check box if you want the job to run immediately. This is only possible if the Job Schedule allowed field was set to 1 for this function. The job would then run as normal.

- Today

  Select this check box if you want the job to run on the current date at a scheduled time.

- Every month

  Select this check box if you want to repeat the job every month.

- On day

  Enter one of the following two-digit values if you want the job to run on a specific day: 01-28: The job will run on the specified day each month. 29-31: The job will run if the day exists in the month. 98: The job will run on the last calendar day of the month. 99: The job will run on the day designated as the period end date according to the period type in the function header.

- Next Monday - Next Sunday

  Select one of these check boxes if you want the job to run once on the next occurrence of the specified day and at a scheduled time.

- Every Monday - Every Sunday

  Select one of these check boxes if you want the job to run on a weekly basis on the specified day.

- Specific date

  Enter a specific date on which you want the job to run.

- Rec action

  Recovery action indicates whether the job is started later if the system was down when it should be run, or whether it should wait until the next time to run (if it is scheduled to be run several times).

- Job schedule calendar

  If you want to schedule a run on irregular dates this can be set up by using a job schedule calendar in SHS060/061. In these programs you freely define a calendar that can be used for controlling at which dates the job should run.

- Time

  Enter the time you want the job to be released from the scheduler to the job queue.

  Note: The job will not actually start at the specified time; this will depend on whether other jobs are ahead of it in the job queue. The time must be within the limits defined for the job category attached to this function.

- Description

  Enter a description of the job, for example 'Month end statement run' or 'Daily picking lists.'

3 Press Next and the (SHS231/B) panel is displayed.

4 Open the E panel for all fields and enter the following information on panel E:

- Movement

  Indicates the movement for the date.

- Add value and Subtract value

  Indicate a number to add or subtract to the date, based on days for normal dates and periods for period dates, in order to arrive at a new date or period. Does not apply to fixed dates.

Change or delete function schedule (SHS010)

Important: The function must be scheduled for the current user or for all users.

Scheduled functions can have their schedules changed or deleted. This is done in 'Job Schedule Entry. Update' (SHS010). This program contains a record for each scheduled job, showing the time the job is run, how the last run was performed, and so on. If a function should only be run once, it is removed from this program when it is completed.

The information about when the function is run is stored in CSHHED.

1. Start 'Job Schedule Entry. Update' (SHS010).
2. On the B panel, the Status field indicates the available statuses:

   00 = The job is scheduled but not yet run.

   10 = The job has already been run.

   50 = Job is held

   If a job should be run every Monday, the status will be 00 before the first run and 10 after the first run, regardless of how many times the job has been run.
3. To delete a scheduled function, select its record and delete it.
4. To hold/release a job use option 21/23. To recalculate the dates for a held job before releasing it use option 22.
5. To change a scheduled function, open its record for editing.
6. On panel E, change one or more of the entries as described in **Run Scheduling - Schedule Information**.
7. Press Next. (SHS231/B) is displayed. Open the E panel for all fields and fill in the Movement, Add value, and Subtract value fields.

Runtime Scenario

This section describes what happens in M3 when a function is run in M3 BE Job Scheduler.

1. M3 BE Job Scheduler initiates cPXMNS230, which starts SHS230.

   In SHS230, a quick check is run to verify if a function should be scheduled. If a scheduled run is needed, SHS230 is displayed to the user.

2. When the user has decided on the schedule, CSHHED is updated with relevant information. The program cPXMNS230 then initiates SBMJOB.
3. In SHS235, a verification of the to-be-scheduled job is performed. After that the program copies the relevant job commands from CJBCMD to CSHLIN.

   When the records are copied to CSHLIN they are deleted from CJBCMD.
4. Based on the scheduling, the first time (often the only) run of the function is calculated in SHS235.

   After that, the program CSHCTL gets updated with the schedule information.
5. To schedule a run at a later time, the job CSCHJOB must be run.

   The CSCHJOB job receive the information from the CSHCTL program on the schedule. If there is no job to run immediately, CSCHJOB job will be delayed for another 15 seconds, when CSHCTL is read again.

   Once a scheduled job is detected, the relevant job commands is copied from CSHLIN to CJBCMD in CSCHJOB. The job initiates QCMDEXC to create records in CJBCTL. In this way the job is submitted to CMNGJOB as any other submitted job from M3.

   The CSCHJOB job also performs a check to verify if a scheduled job should be run once or if it should be run again, at a later time. If it is a one time schedule, the records in CSHHED, CSHLIN and CSHCTL are deleted. If the job should be run multiple times, information in CSHCTL is updated with the upcoming schedule.

Technical Overview

This section describes the entities that are involved in the M3 BE Job Scheduler, and also the run-time scenario for M3 BE Job Scheduler.

- **Entities Added for Job Scheduling**

  The following entities have been added to enable M3 BE Job Scheduler.

Table 58. Classes

Class	Description
mvx.app.pgm.SHS010	
mvx.app.pgm.SHS030	
mvx.app.pgm.SHS050	Used to define time limits between which scheduled functions can be run.
mvx.app.pgm.SHS060	
mvx.app.pgm.SHS230	
mvx.app.pgm.SHS231	

Class	Description
mvx.app.pgm.CSCHJOB	Server program that continuously checks whether there are scheduled jobs and whether they are to run.

Table 59. Tables

Table	Description
CSHFNC	Functions that could be scheduled.
CSHHED	Header information for a certain function to be scheduled.
CSHLIN	The job command lines for a function that is scheduled.
CSHCTL	Job control file for scheduling. Compare to CJBCTL.
CSHDAT	Job scheduler date criteria
CSHPGM	Job scheduler programs
CSHFLD	Job scheduler fields
CSHCAL	Job schedule calendar
CSHCAD	Job schedule calendar details

- **Entities Modified for Job Scheduling**

  The following entities have been modified to enable M3 BE Job Scheduler.

Table 60. Classes

Class	Description
mvx.app.plist.cPXMNS230	
mvx.app.pgm.SBMJOB	

See Also

"M3 Business Engine Auto Start Job Descriptions" on page 108

"M3 Business Engine Administrator's Guide for Batch Jobs and Job Queues" on page 82

"API Security" on page 8

"M3 Business Engine Administrator's Guide for Document and Media Management" on page 88

M3 Business Engine Administrator's Guide for Batch Jobs and Job Queues

This document describes how batch jobs managed in M3 and how interruption in a batch job can be detected.

Managing Batch Jobs

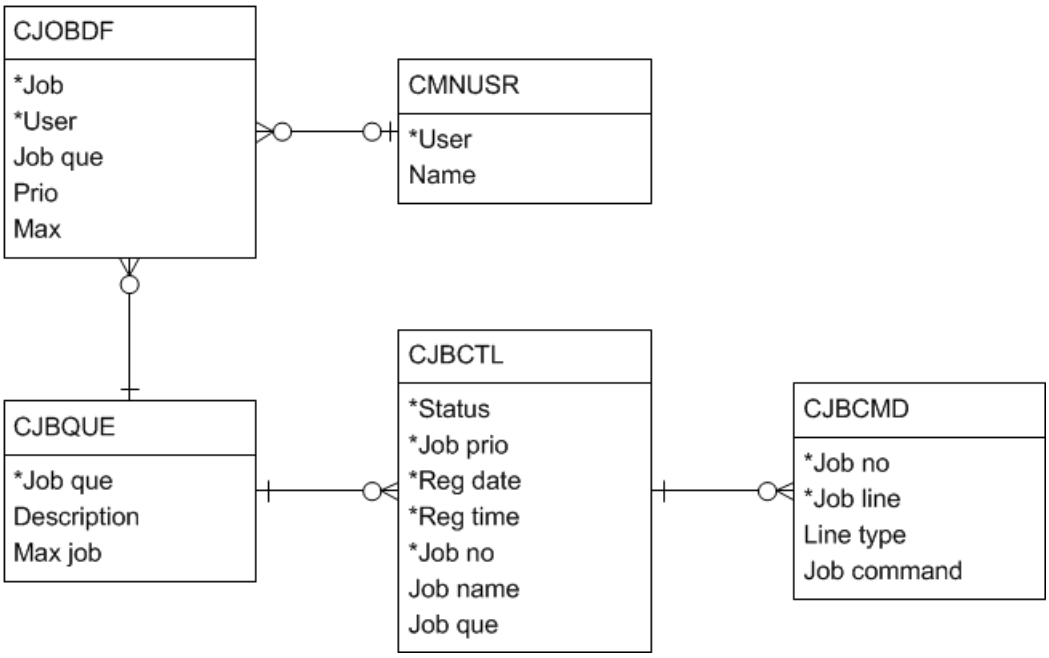
A batch job is a job that is submitted to a non-interactive environment for execution. A batch job can be a job that includes thousands of transactions, as e.g. in a weekly invoice procedure, but it can also be a job that only contains one main transaction such as an order confirmation.

A batch job can be initiated from the job scheduler (or more correct, the job scheduler initiate a program which starts a batch job) or by another transaction. A batch job can also be a part of a mainly interactive job, where the interactive part submits the batch part with specific settings attached to it. The batch job performs in that way as an extension of the interactive environment, to obtain better performance in the time-critical operations.

Many jobs that update M3, and especially those creating output from M3, are submitted. This submitted job is in control of the business transaction after submission.

The batch environment is thus an essential part of M3, and this environment must be up and running to get most business processes to function properly.

Data Model of Tables Controlling Batch Jobs



Submitting Batch Jobs

The most common way to submit a job is through the M3 Job Scheduler (CSCHJOB) or from an interactive program. The submitted jobs are managed by M3 Job Manager (CMNGJOB).

For further information on M3 Job Scheduler, refer to "M3 Business Engine Administrator's Guide for Job Scheduler" on page 73

- **Submit by Job Scheduler**

  CSCHJOB is continuously examining the queue of scheduled job to determine if the condition to start a job is met. The most common conditions are only dependent on the start time/date and periodicity of the scheduled job. Another condition can be to run the job in a certain sequence. If all conditions are met, CSCHJOB submits the job.

- **Manually Submitted by User or Automatically as Part of a Workflow**

  When the job is submitted from the interactive environment, the user normally controls the submission, such as ordering a printout or another batch job. But it can also be a part of a process as described above, to reduce the time the user has to wait by submitting non time-critical updates and other processes in a background job.

  When running a batch job from the AUX – Auxiliary Functions menu in M3, it is recommended to

  - have no other user logged onto the system
  - stop all auto start job (ASJ) for the component
  - have no more than one active job allowed for the job queue (defined in MNS300/E)

  Example:

  When running 'Allocated Quantity. Re-created' (MMS925), the allocation auto start job should not be running, and no users should be performing any allocations (run it on a restricted system). The reason for this is that all selected records are first cleared, and then they are rebuilt one-by-one. Allocations that occur between clearing and rebuilding for any particular item/warehouse record will be counted twice. This restrictions are not normally necessary when rebuilding a single item/warehouse, since the risk that an allocation occurs between clearing and update is minimal.

Start and Execute Batch Job

When the job is submitted, a record is written to a table that controls the execution of the batch, the Job Control file (CJBCTL.) The CJBCTL manages the administration of the submitted jobs and controls and monitors the execution on the highest level.

A second table, the job command file (CJBCMD) holds details about the job, as to what program to execute and other settings. This file controls the detail execution in the batch environment and may hold the settings/parameters for selection of data, job control information, execution information and printing information. Several records may be created for each job in the file CJBCMD. Not all information is needed for every job.

When a job is submitted, M3 Job Manager (CMNGJOB) is in command and controls the execution.

CMNGJOB tries to start the submitted jobs. To control this process one or several job queues are supplied for execution of the jobs. Each queue has a maximum limit for the number of job that is allowed for parallel execution, to avoid overloading the batch processor. This is set in 'Job Queue. Open' (MNS300).

For further information on Job Queue management, see the 'Manage Job Queue' section in this document.

Running a Batch Job with Auto Start Job Subsystem Stopped

If you want to run a batch job with no autojobs running you have to shut down the subsystem for auto start jobs and then start CMNGJOB in the serverview.

1 **Shut down the Subsystem for Auto Start Jobs**

   Enter the Managment Pages and shutdown the subsystem.

2 **Start CMNGJOB**

   Click on Run. The "Run job" window is displayed.

   Enter CMNGJOB (Auto Start Job Driver). Select Auto in the 'Type' field. Click on Run.

   To be able to run a batch job, CMNGJOB must run.

3 **Run the Batch Job**

   Run the batch job.

   For example if you will re create allocated balance id's you must run batch job MMS925S1. This batch job is started by function MMS925, on the AUX-menu.

4 **Start the Subsystem for Auto Start Jobs**

   Enter CSRVASJ. You can select Batch in the 'Type' field. Click on Run.

   This starts all auto start jobs that are stopped. All auto start jobs you want the system to run must be defined in 'Subsystem. Job. Open' (MNS051).

Finding Interrupted Batch Jobs

Status Code in CJBCTL

A status field is supplied to monitor the execution of the job in the CJBCTL table.

The status can be one of the following:

- 00 = Job is waiting for execution. This status is set when the job is submitted.
- 15 = Start of job failed. This status is set by CMNGJOB.
- 20 = Job is executing /active, or actually started, not finished.
- 25 = Job has finished abnormally (a dump log has been created).
- 30 = Job has finished in a normal way (OK).

CMNGJOB checks at short intervals if any job with status 00 is available, and if it is possible to start this in the requested job queue, according to the limits set on job queue and subsystem activity level. If so, the job is started and the status is set to 20. If a technical failure is detected, so the job cannot be started, the status is set to 15. A technician must analyze what caused of the problem.

If the application program dumps during execution, the status of the job is set to 25, and also in this case an analysis is required. The cause can be a program error, settings or parameters errors or an error in the database.

If the job is completes execution normally, the status is set to 30 and the job is finished.

Function to Display Interrupted Jobs

The contents of the job control file CJBCTL and job command file can be displayed using M3 functions 'Job. Connect to Job Queue' (MNS310) and 'Submitted Job. Open' (MNS250). By selecting on status in 'Job. Display History' (MNS320) the interrupted jobs can be displayed and examined. Several list views exist in the program:

- The file can be viewed for a specific job queue, job queue priority, user, user and date or date.
- (MNS250) can be used to show details in file CJBCMD, and be viewed by job number, job (file), user or date.

Restarting Batch Jobs

Content in the job control file CJBCTL and job command file can be displayed using M3 functions 'Job. Display History' (MNS320) and 'Submitted Job. Open' (MNS250).

Some jobs can be restarted in (MNS250) if status is 15 or 25. However, in most cases this is not a good idea unless the original problem has been analyzed. In most cases a restart will only cause a new dump.

Important: Restarting jobs from (GLS040), 'Update of sales, purchases and general ledger' called from various functions shall be performed from 'Trans Work File. Restart Interrupted Jobs' (GLS047), and not from (MNS250).

For further information, refer to the General Ledger documentation under Financial Accounting.

The execution of the jobs can stop in different ways:

- If a single job is finished abnormally this is managed by CMNGJOB and the status in CJBCTL is updated.
- If the whole computer dumps, or CMNGJOB dumps the status is not updated in CJBCTL for active job. The jobs that were executing when the crash occurred will still have status 20, active, in the CJBCTL file.

To take care of this a check is performed each time the CMNGJOB is re-started. All jobs currently with status 20 are checked on all active JVMs. If the jobs with status 20 are not active, the status shall be updated to 25, and normal procedure for investigation of the course can be performed.

A submitted job can be in different statuses when the problem occurs:

Status	Description	Action
00	Submitted but not started	No action required. The job remains in status 00 and will be started when CMNGJOB is restarted.
15	Start of the job failed. This status is set by CMNGJOB.	Examine the cause, and when fixed, try to restart from (MNS250) or (GLS047). This is normally harmless to do, as the job failed before the execution actually begun.
20	The job was active when the crash occurred.	Normally this job is set to status 25 when the CMNGJOB is restarted. If not, manually set status to 25 and proceed with action on that status (see below).
25	The job had dumped or was in status active when the crash occurred.	Examine the cause and try to fix the problem. This is the trickiest part as we actually don't know what happened. The transaction will normally take care of all unfinished database updates, so it shall be OK to restart from (MNS250) or (GLS047). However some jobs cannot be restarted without deleting work files or restoring backup.
30	Finished	No action required

As the job manager CMNGJOB does not release a job if it decides that the execution subsystems are fully occupied, it is important to check that the restart function works properly. If not, the subsystem can be empty, but the job manager assumes that the subsystem is fully occupied as many CJBCTL records are in status '20' (but were actually interrupted and should have status 25). A job in status 20 cannot be restarted as the system still treats it as active.

If a 'full load stop' occurs, it can result in no jobs being started. CMNGJOB will make the wrong assumption that all subsystems are busy. This can temporary be managed by changing the number of jobs in the subsystem until the situation is under full control and the problems are sorted out.

To cleanup a job control file, the files CJBCTL and CJBCMD must be examined and cleaned up on a regular basis as no automatic function can manage to clear these files for interrupted jobs.

Tip: It is recommended to cleanup job control files on a weekly basis.

Manage Job Queue

When a job is submitted, M3 Job Manager (CMNGJOB) is in command and controls the execution.

CMNGJOB tries to start the submitted jobs. To control this process one or several job queues are supplied for execution of the jobs. Each queue has a maximum limit for the number of job that is allowed for parallel execution, to avoid overloading the batch processor. This is set in 'Job Queue. Open (MNS300).

The queue is determined by the job control record in CJBCMD. Jobs without a specific queue assignment are placed in the default queue QBATCH.

The submitted jobs are executed in priority order. First are all jobs with priority 1 executed, and then all jobs with priority 2 and so on.

Example:

Queue A has 100 jobs with priority 1 and 70 jobs with priority 2. Queue B has 50 jobs with priority 1.

The execution order will be:

1. Queue A, priority 1 (100 jobs)
2. Queue B, priority 1 (50 jobs)
3. Queue A, priority 2 (70 jobs)

Job Queues and Subsystems for Different Job Types

It is a good idea to create separate queues for different types of jobs, e.g. a special queue for jobs with long execution time, another for medium and yet another for quick running jobs. Specific queues can also be assigned for a given group of jobs. Different queues combined with an appropriate limit for maximum number of jobs can be a powerful, albeit simple, way to improve system utilization and availability.

Maximum Number of Jobs per Subsystem

How many jobs that actually can be started are controlled by a maximum jobs setting for each subsystem. These settings are defined in the M3.properties file and M3 Script file.

- boot.server.maxsubs=0

  Maximum number of subsystems that can be started by server (0 - no limit)

- boot.supervisor.balanceload

  Should load balancing between M3 Subsystems be used? Value 0= False, 1= True.

- boot.subs.maxjobs

  How many jobs can be started in a M3 Subsystem at the same time? This property may be used to load balance between different subsystems running in different M3 servers. Value 0= No limit

Important: This setting is not used anymore and must be set to zero.

boot.subs.maxjobs=0

Settings are instead made in M3 Script file

Example:

If 20 jobs are allowed in SUB:B subsystem and three job queues with a maximum of 8,3 and 1 parallel jobs are attached to that subsystem, the load on the subsystem will be a maximum of 8 +3 +1 = 12 jobs.

If 10 jobs are allowed in SUB:B subsystem and three job queues with a maximum of 8,3 and 1 parallel jobs are attached to that subsystem, the load on the subsystem will be a maximum of 8 +3

+1 = 12 jobs. That is 2 more than allowed. Here load balancing between M3 Subsystems can be used, depending on the settings in the M3.properties file.

Preparing a Job to be placed in a Job Queue

Follow these steps to prepare a job to be placed in a job queue (in a file) instead of being sent directly to run in batch.

Before you start You have to set up and started jobs in the subsystem. For further information, refer to "M3 Business Engine Auto Start Job Descriptions" on page 108.

Define a Job Queue

1. Start 'Job Queue. Open' (MNS300). Enter an **ID** for the job queue.

   MNS300 – Here are two queues created, one with a maximum of ten parallel jobs running and one with a maximum of one job running.

2. Open the E panel. Fill in **Max active jobs** running at the same time in this job queue.

   Press Next.

   MNS300/E

Place a Job in Job Queue

1. Start 'Job. Connect Job Queue' (MNS310). Fill in a job in the Job field. The User/group field indicates the control of the start of the database job. A blank user indicates all users.
2. Open the E panel. Select the **job queue** in which this job should be placed. Select a **priority** for the job.

   Select if you want the user to **confirm job start** or not and the type of confirmation to be used. Select if the job history should be **saved in the job history file**. The saved jobs are displayed in (MNS320). Press Next.

See Also

"M3 Business Engine Administrator's Guide for Job Scheduler" on page 73

"M3 Business Engine Auto Start Job Descriptions" on page 108

M3 Business Engine Administrator's Guide for Document and Media Management

This document describes the document and media management solution in M3 Business Engine and is intended for those administrators who needs to set up, manage, administrate, and maintain documents and media management in M3.

Important: This document does not describe the StreamServe solution.

Overview

- **M3 Document and Media Management**

  M3 Document and Media Management enables you to control output from M3 Business Engine in the form of documents and their different media, regardless of whether they are printed on paper, faxed, e-mailed, or sent as an EDI message. For one output request, such as printing a set of purchase orders, one single document can be formatted in different ways and distributed to multiple receivers using different media and different formats.

  M3 Document and Media Management is based on the idea that document media should be user defined. This way, an organization can fully determine how its business communication takes place via M3 documents in the way that is sees fit. This in turn enables a more user-friendly media control of the documents in the business process. Media includes output on any printer or a specific printer, documents sent as a facsimile or an e-mail, or documents distributed for the purpose of sharing information with another application, such as EDI, flat files, or XML messaging over different communication protocols. The media code determines a range of background settings that control the output flow. However, the user is fully encapsulated from that information and only controls the media code and the business data.

  The media selection can be defined and determined on several functional levels:

  - By the user who requests the output
  - By the receiver of the output and the receiver's own business standards for receiving output
  - Based on document content (different object values)

- **Media Selection Based On the User**

  The most common media selection scenario is one in which the user determines the output media. M3 Business Engine provides highly flexible settings for this purpose. The requesting user can determine the media based on different combinations of M3 application area or printer file (the technical instance of a document), user ID, and the user's current location. The combination of these values then determines a media code, with additional attributes for that media, such as for specifying the printer or printer queue.

  Examples

  - A user wants all output to always be printed on the same printer. The ID of that user therefore determines the media selection. The user simply selects the printer and output server.
  - A specific document should always be printed on a specific printer. The document therefore determines the media selection.
  - All documents for an entire application in M3 Business Engine should be printed on a specific printer. In this case, only the first two letters of the application area must be set.
  - Only the location (workstation) determines the printer to which all printouts are sent. In this case, the location is the only controlling object. Of course you can specify combinations of these controlling objects, in order to be more specific.

- **Media Selection Based On the Receiver**

  In some cases, the output media must be determined by the receiver and the business standards used by the receiver. For example, you want to send purchase orders to all of your suppliers by

e-mail. Since each supplier has a different e-mail address, the purchase orders should be automatically sent based on those settings. The receivers and their processing information are then retrieved as objects from the document content to determine the output for each purchase order for multiple orders. The settings for each receiver of the purchase order therefore override the settings for the user.

- **Media Selection Based On Document Content**

  In some cases, the media selection must be determined by one or more combinations of objects within the document content. M3 supports this for a small set of documents.

- **Documents Read by a Person**

  From a usage view, documents can be separated into those oriented for humans or those oriented for applications. Documents to be read by humans are managed via output servers such as M3 OUT (StreamServe). In this case, the process is to generate the document content within M3 Business Engine via printer programs. The content is then distributed to the output server for layout and distribution.

- **Documents Shared with an External System**

  For documents to be shared with other systems, the output is still triggered in M3 Business Engine via printer programs. Although no document content is created, a document initiator with keys to the related information is shared with Infor Enterprise Collaborator (IEC). Here, the document content is created by detecting who is the sender, who is the receiver, and which document initiator was sent. IEC then finds the correct definition for how document content should be created and runs a script, which uses the keys in the document initiator to retrieve the correct information from M3 Business Engine via M3 APIs. When the entire document content is created, the document can then distributed to a syntax manager. This syntax manager, which can be a part of IEC or any software, such as an integration broker, formats the correct syntax and forwards the document to a communication engine. Here, the document is communicated to the receiving application. Also, the communication engine can be a part of IEC as well as being software.

Technical Solution

In M3 Document and Media Management, documents are initiated in M3 Business Engine but are finalized in an output server via a software service, called an output service, such as M3 OUT or Infor Enterprise Collaborator. One output service can support one or more media, and thereby one output software can support one or more media. This is defined by the output software capabilities in media support.

Depending on the type of output you want to create, all document information is pushed out from M3 Business Engine to the output service. Alternatively, only one document is pushed out. The created initiator is sent to the output service, and the document is created in the output service by retrieving document content information from M3 Business Engine using APIs. In the first case, the document is formatted according to rules in the output service and then distributed via the correct channel for the media. In the second case, both the content and format are managed according to rules in the output service. If the output software cannot manage the final requested format or communication, additional software is requested for the output service. This is the case, for example, for facsimile and EDI in EDIFACT format, where fax software and an EDI syntax server are requested as additions to M3 OUT and Infor Enterprise Collaborator.

The output file formats are distributed via a TCP/IP socket connection to an output service. (For more information, see the description of the OUT interface.) Technically, the service is defined as a port at a host, which is the output server. The different software programs on the output server are in M3 Business Engine called the output server types, and they set the limit on the output formats they can manage from M3 Business Engine. The different formats, STREAM and XMLOUT, are used for different purposes. STREAM is intended for human readers, while XMLOUT is intended for use in an application-to-application integration situation.

STREAM is technically a stream file with a name-value format. It contains three sections: the media control section, the front page section, and the document data. In the media control area you have the control information to the output service in order to control the output of the desired media. Multiple media can be specified in the media control section. The front page section declares the document output ordering data and selection criteria that were used for the output. Finally, the document data is grouped by a set of 'records' of data. For example, the document starts with header attributes, grouped within a header record. It is then followed by address attributes in an address record. After that, multiple detail lines are declared by several line records.

XMLOUT is also technically a stream file, although in XML format. Compared to STREAM, the XMLOUT file only contains control information and keys to the business data, instead of declaring the full set of data. This approach is chosen, since the target with XMLOUT is to utilize event-driven architecture for integration of applications. This means that M3 only publishes documentation of what has happened. It is up to the receiving application (the output service) to interpret what to do with the event and to create the full content, since that is connected to the interpretation of the event. The way to build up content is then made through the M3 APIs. Finally, the output service creates the media format out of the content and publishes it through the defined channel. This architecture might seem complicated at first, but it is highly efficient in the long run. For more detailed information about the XMLOUT format, see the detailed documentation about the M3 Business Message Initiator.

The Challenges of Document Output Management

Outputs from enterprise applications that are not published via user interfaces are commonly viewed as printouts, since that is the most common output media. However, output must also be distributed in different ways within and outside the enterprise. These different distribution channels or media require different technologies and infrastructures. Even if only printouts are needed, different companies have different infrastructures for it, such as printers, printer servers, and perhaps output servers. These are based on different technologies and therefore require adaptations in the printout flows for an enterprise application. Different companies also have different names for the same media, which can also be a source of confusion.

Follow these steps - Document and Media Settings

In order to make the appropriate settings for managing output, you must describe the relationship between the media code and the technical output formats that M3 supports as well as the relationship between M3 and the output servers and its software that will be used. You must also define the documents that will be used in your business processes and the media that will be supported for each document.

1 Generate Document Media (CRS116)

To define the media codes and their relationship to the technical output format support in M3 Business Engine, generate standard document media in 'Document Media. Open' (CRS116) by clicking F14='Generate standard'. Enter a name and description. The media code also determines the technical format it will generate and the appearance of the media settings for each document screen.

The valid interfaces are STREAM and XMLOUT. STREAM is a tagged file format with the entire document content inside. XMLOUT is an XML format with only key values to the document's business object. XMLOUT is also known as M3 Business Message Initiator.

The media category is the screen-controlling parameter for the document media settings and can have values for print, fax, mail, file, EDI, MBM, and send net file.

2 Define Output Server (MNS218)

To define the available servers as output servers in order to describe the output infrastructure for M3, create the output server definition in 'Output Server. Open' (MNS218). The output server definition consists of an ID and a description of the output server, as well as its location and IP address or host name.

3 Define Output Service Type (MNS217)

To define the output managing software as output service types (which determine the technical output formats from M3 that they can receive), you need to define the output service type in 'Output Service Type. Open' (MNS217). The output service type definition consists of an ID and a description of the software application (for example IEC or StreamServe), as well as the interface format of the interchange file that it can receive.

4 Define Output Service (MNS216)

Define the output service in 'Output Service. Open' (MNS216). The definition consists of and ID and a description of an output service, as well as a specific instance of an output service type on a specific server by determining an output service type and an output server together with the socket port that the socket communication that the service resides on.

Tip: The defined output servers and output service types can support a variety of media that can be distributed. The easiest way to separate what they can perform is to split them into multiple output services. Separating the different services into multiple ports technically does this via the output service definition. Thereby one output server can have one or more services that support the creation of different media via one or more output service types (software packages). This is based on the fact that the service might require different technical setups for each media. However, one service can still support multiple media, such as print or fax.

5 Connect Media to Output Service (MNS214)

Connect the media to the output service in 'Output Service Type. Connect Media' (MNS214). By connecting the media to the output service, you define that the output service can support that media. Standard media is defined in 'Document Media. Open' (CRS116).

6 Generate Standard Documents (CRS928)

Generate standard documents and document variants in 'M3 Document. Open' (CRS928) by clicking F14='Generate standard'. This is a global program; it involves all companies in M3 Business Engine. You can also click F15='Gen all' in (CRS928). This generates document media in (CRS116) and also generates the connection between document media and standard documents in 'M3 Document.

Connect Media' (CRS929). This describes which documents and variants are supported by the system and contains many attributes for controlling the document and media management process, such as the name of a document, the partner-controlling objects, and the connection to the printer file.

7 **Generate Documents per Company (CRS027)**

Select F14='Generate standard' to generate all standard documents for the company you are working in. A simple way to define the documents to use is to generate all and then remove the ones you do not want.

8 **Connect Media to Documents (CRS929)**

You connect the media to documents in 'M3 Document. Connect Media' (CRS929).

The definition states the media support per document number. By connecting a document number to a media code, it is declared that the combination is valid for the company.

You can also generate the records in (CRS929) by selecting F15='Gen all' in 'M3 Document. Open' (CRS928).

9 **Define Printers (CRS290)**

Define the printer on which the document should be printed in 'Standard Document. Open' (CRS290). The definition consists of an ID, description, name, priority, and printer queue.

Follow these steps - Media Selection Based On the User

These settings determine the media selection for approximately 900 available document outputs in M3 Business Engine. Together with potentially thousands of users in different locations, the setup must be flexible enough to suit groups of users or documents and be specific enough to suit a single user and document combination.

The usual media setting per user and printer file combination needs to enable one output request to generate multiple outputs via multiple media. You also need to determine which output service will do the job. Usually, only a few output services should be used for a company, and this is why many connections must be described; they must logically interact with the media settings for the documents.

1 **Make Output Service Selections (MNS204)**

Make the output service selections in 'Output Service Selection. Open' (MNS204). In order to ensure the correct combination of settings, the following rules apply:

Field	Description
Printer file	If this field is left blank, the setup will be valid for all printer files.
Hold output	Specifies whether the output is sent to 'Output. Manage per Job' (MNS206) and then held there and not distributed further. This is desirable when testing new output services.

Field	Description
Save output	Specifies whether the output is saved after it is sent to the output service. This acts as an archive function if it does not exist in the output service type software or used for tests.
Confirm output	Specifies whether the output is confirmed or changed in **(MNS212)** before it is printed.
Media control selection	Lets you connect media control objects from 'Output Media Selection. Open' (MNS205) and **'M3 Document. Connect Media' (CRS949)** to the output service settings.
Layout and **Overlay**	These fields are settings for StreamServe.

2 **Select Output Media (MNS205)**

Select the media for user-controlled output in 'Output Media Selection. Open' (MNS205). Multiple media records can be set for one output selection. Alternatives are:

*PRT = Printer - opens (MNS205/E).

*FILE = File - opens (MNS205/H).

*FAX = Telefax - opens (MNS205/G).

*MAIL =E-mail - opens (MNS205/F).

In order to ensure the correct combination of settings, the following rules apply:

- If the Printer file field is left blank, the setup will be valid for all printer files.
- If you want to enable all printer files to use the same server, you should leave both the 'User' field and the 'Printer file' field blank.
- If you want to define settings without division, you must log on and enter the program as only a company user. You are then allowed to define division values.

The build-up of the layout directive in the StreamServe is built up in the following way:

`Event id _ Paper size _ Country _ Modification _ Overlay.`

`Example: PPS6010H_A4_GB_XXX_Layout1`

The logic for finding media settings and output services is as follows:

1 Media settings in (MNS205) are read until one or more records are found.

To enable a highly flexible setup, the following logic is applied until a record in (MNS205) is found:

Table 63. (MNS205), Division XXX

Sequence	Division	User	Printer file	Location
1	Filled in	Filled in	Filled in	Filled in
2	Filled in	Filled in	Filled in	Blank
3	Filled in	Blank	Filled in	Blank
4	Filled in	Filled in	2 first positions of printer file name	Blank
5	Filled in	Blank	2 first positions of printer file name	Blank
6	Filled in	Filled in	Blank	Blank
7	Filled in	Blank	Blank	Blank

Another loop takes place on the company level (in other words, the division is always blank).

Table 64. (MNS205), Blank division (company level)

Sequence	Division	User	Printer file	Location
1	Blank	Filled in	Filled in	Filled in
2	Blank	Filled in	Filled in	Blank
3	Blank	Blank	Filled in	Blank
4	Blank	Blank	2 first positions of printer file name	Blank
5	Blank	Blank	2 first positions of printer file name	Blank
6	Blank	Filled in	Blank	Blank
7	Blank	Blank	Blank	Blank

When one or more media records in (MNS205) are found, the process restarts in order to find the output service to use 'Output Service Selection. Open' (MNS204). The media and output service selections that are found in (MNS204) are then used in the output process. If the Confirm setting is activated in (MNS204), you are also allowed to change the media settings for the current output and so momentarily override the settings from (MNS205).

Follow these steps - Media Selection Based On Partner

Since a document requester is not always the receiver you need to be able to override the receiver and the output media. M3 provides a function for partner-based media selection to address this issue.

Each document contains definitions of the document content objects that are valid for partner media selection. They are defined in M3 documents in 'M3 Document. Open' (CRS928). Normally, the receiving party of the document is the object, but in some cases you need multiple objects to define the receiver. The document can be partner controlled if the Media control selection field is 1='Yes' for the current document. This is displayed in (CRS928).

Another way to check if the document can be partner controlled is to open 'Standard Document. Open' (CRS027) and select option 12='Media'. If 'Std Document. Connect Media Ctrl Object' (CRS945) is opened the document can be partner controlled. Otherwise, the following message is displayed: **`Document number xxx document variant xx is not allowed on the partner level.`**

1 **Define Media Profile in (CRS033)**

The media profile defined in 'Media Profile. Open' (CRS033) can be set in an M3 transaction, such as a purchase order, as one of the components that will determine the media during printing. For example, if a media profile is set in a purchase order it will, together with the supplier number, be a media-controlling object for the purchase order printout. If the combination is not found in the media control table, the system searches for the media profile only. If that combination is not found, the system searches for the supplier number only. If that combination is not found, the system finally searches for a blank media profile and a blank supplier number. When a valid combination is found, the purchase order will be printed for all the media that are set for the valid combination.

2 **Connect Partner to Standard Document in (CRS945)**

Start 'Standard Document. Open' (CRS027), select a document, and select option 12='Media'. 'Std Document. Connect Media Ctrl Object' (CRS945) is opened.

You define the partner object values that will determine the media. In our example, the order confirmation document is determined by the customer number and possibly the address ID. If a blank object value is set, this setting will determine the media for any customer and address for the document.

In some cases (mainly within the procurement process) the media profile is transaction-based. By storing the media profile in, for example, the purchase order, you can determine the desired media from the transaction. The media profile is used as a filter and can determine which partner record to select, since one partner can have several records with different media profiles.

You can also have records with only media profiles set and no partner object values. In this case, the media is only determined by the media profile. For example, if you set media profile 1 in a purchase order and then print the purchase order, the media profile will determine a set of media regardless of the partner.

3 **Connect Media Profile to Media (CRS949)**

In 'Std Document. Connect Media Ctrl Object' (CRS945), select option 12='Media' to start 'Doc Media Control Object. Connect Media' (CRS949). You can define several media for one media profile. Due to technical restrictions, you are limited to using only one service ID for the stream-file-dependent media codes. The same is true for SPOOL records. For XMLOUT records you can define as many as you like.

When you add a media record, you must add additional attributes that determine the media and that are unique for each media code. However, you always need to set a service ID to indicate the output service to use for executing the media. Regardless of whether you want a copy of your output request, since all the documents are controlled by the media profile you will often receive a copy of

the front page. If you do not want to receive this copy on a printer or as a file, you should just send it to a 'non-existing service.'

Generate Documents and Partner Objects (CRS947)

1. Start 'M3 Document. Open' (CRS928). Click F14='Generate standard' to generate all standard documents.

   Note: 'M3 Document. Open' (CRS928) is a global program - it involves all companies in M3.

2. Select a document and click option 12=Partner reference object. This starts 'Standard Document. Connect Partner Ref Obj' (CRS947). On the E panel you define partner reference settings for this document.
3. Redisplay (CRS928), and select F15='Gen all'. This will generate all settings in (CRS928) and (CRS947) for each document.
4. You can also create variants for documents in (CR928) and define partner reference settings for the variant 's' in (CRS947).

   Example: Document 915 variant 10 sends package information to the external system when the picking list is printed. Document 915, variant 20 sends transportation information to the external system when the outbound delivery is reported. Because there are two different document variants in this example, the external system will know which information each transfer ID contains.

Follow these steps - Media Selection Based on Document Content

This type of media selection is only used for just-in-time (JIT) call-off documents. It is often used in the automotive industry, usually together with EDI business messages.

Media selection based on document content is a very flexible solution, since it enables you to determine the output media based on any field from the transaction table.

Media selection based on document content is intended for output processes that are used in-house but that must be determined by document data. For example, you want to print item labels in production and send them to the printer closest to the workstation. The workstation and/or the item are therefore the objects used to determine the output media. You might also want different layouts for the label, based on the item type or the receiver's requirements. These objects can therefore control the output process.

Object-controlled and partner-controlled media selections cannot be used for the same document number. Therefore, object-controlled media only works for some documents and partner-controlled media for other documents.

The following documents are for JIT release management:

- C30 = Item label
- C31 = Transport label
- C32 = Packing proposal list
- C33 = Picking list.

Define Object Control Table for JIT Documents (CMS016, CMS017)

1. Start 'Available Object Control Parameters. Open' (CMS016). Select JIT Output Control and select option 11='Object table detailed lines'.
2. 'Generic Object Control Table. Open' (CMS017/B) is started. Four JIT documents are displayed (C30-C33).
3. Set the panel sequence to E (T) 1.
4. Select a document and select Change.
5. On the (CMS017/E) panel, enter the following information:
   - Priorities from 1 to 10 in the **Priority** fields.

     By default, sequence 10 corresponds to priority 1, 20 to priority 2, and so on up to sequence 100, which corresponds to priority 10.
   - Field 1 (2, 3 and 4) with selections made in field group (CRC30-CRC33).

     Click F4 to select the valid fields.
6. Select the fields and redisplay (CMS017/E).
7. Press Enter until you start 'Output Control Selection Table. Open' (CRS029).

Create Values for the Object Control Table (CRS029)

You must define values for the defined control fields. Repeat these steps for each priority value.

1. On the (CRS029/B) panel, define values for the fields.

   The **Value 1**, (2, 3 and 4) fields are the first, second, third, and fourth values to be compared to the contents of a control object.
2. On the (CRS029/E) panel, enter the following information:

   Printer file, Workstation, User, and Media settings - This combination points to one or more entries in 'Output Media Selection. Open' (MNS205).

Request Document Output and Monitor Output

- **Manually Requested Document Output**

  The usual document output is requested manually by a user in M3. This request can be initiated in many ways, but the most common way is to select an option in a business transaction, select a function key in a business transaction, or simply invoke a print program.

  Regardless of how the manual output is requested, it follows the same pattern, which is described in this chapter.

  - **Document Output Requests**

    As the first step in a request for document output, a selection screen is displayed, where you can select the From and To values. The transactions included within the range will be put into the documents.

In some cases you can also determine whether only originals (first time output) or only copies (transactions that already have been on document output) should be included in the selection.

In some cases, you can also override the selections and instead use specific transactions as the selection criteria.

All output requests have a report header panel, where you can add information about this single output that will be printed on the front page, if used.

- **Select Output Media (MNS212)**

  If Confirm output was selected in MNS204/E, the program 'Output. Select Media' (MNS212) appears after the completed output selection.

  In MNS212 you can override the user-controlled settings made in MNS205 so that they can be changed for the actual output.

  For example, if you usually print a specific document but instead want to e-mail it to a colleague, you can remove the suggested *PRT record and add a *MAIL record instead with your colleague's e-mail address.

- **Auto Start Job (ASJ) Requested Document Output**

  Certain documents that can be manually requested for output can also be requested by an auto start job (ASJ), which automatically starts the output. This is done through the user-controlled media settings with the ASJ user as the requesting user. This user and the user's data are key values for the output definition selection search when the auto start job executes an output initiation.

  Example

  A picking list should be printed via an auto start job. It uses the ASJ user, for example M3, and its user data to find the appropriate settings in MNS204 and MNS205. The company number and division in addition to the user ID are retrieved from the user and, together with the actual printer file name, become the keys for the selection.

  The rules for when and what initiates document output for each document is part of the current function and is described in the documentation for the function.

- **Monitor User-Controlled Document Output**

  To monitor the output you have requested, in order to follow it within M3 and to confirm that it has been delivered to the correct output server the following process is valid.

  Note: All output files, which can include one or more documents, all have an ID that is normally the same as the job ID, which is why that is the name of the ID. That ID is unique within an M3 installation and is also used as the unique ID for the physical files when they are distributed to output servers.

  Manage Output per User (MNS206)

  The output monitoring and tracking is performed in MNS206, which holds the processing status and processing control information.

  If the Save field is activated in MNS204, then the correctly processed output will save the record: Otherwise it will be automatically removed and only records with status MSG (An error has occurred) will be stored here. I

If the Hold output setting is activated, the output will end up here but will not be distributed further to the output server until it is sent manually using option 1.

For managing user-controlled output, choose view 5 in MSN206 as this allows monitoring the output per user, printer file, date, and time.

The record in MNS206 is the control record for the output, which except for process status and process control also includes information about technical addresses as well as messages back from the output server.

- **Monitor Partner-Controlled Document Output**

  A partner-controlled output takes place within a user-controlled output job. When media overrides per partner takes place, a new document file is created and sometimes also one per document and media is created. The document data is now not written in the user-controlled file, rather in the new partner controlled file together with its media controls. Since the media codes can force a separation to several output servers, the document sometimes must be multiplied in order to be distributed to each and every server. Each document receives a new ID number, job number, which have the same features as the one for user-controlled output. Then all user-controlled document output ends up in one file and the overriding partner controlled ends up in multiple files, at least one per document. Each output file has its record in MNS206. Though all files are connected through one single record in MNS206, namely the one connected to the user-controlled output.

  To know which output jobs that have a partner related files, the user controlled record has a '!' flag on the MNS206/B panel. Then there is several connected output files and they can be reached via option 13-Partner.

  Manage Output per Partner (MNS206)

  Partner-controlled document output is managed in MNS207, which you access from MNS206 by selecting option 13=Partner from the records that are marked with an exclamation mark (!).

  When MNS207 is started, you can also see the document ID, such as the order number, and the partner controlling objects, such as the supplier.

  Example

  Select five purchase orders and send them to a printer. Two of these orders have overriding partner control. The first has *edi and *fax and the second has *mail. The first receiver actually wants the purchase order as an EDI message with a fax copy, probably for control purposes. The second receiver wants to receive the purchase order by e-mail.

  When the print job is in progress, three purchase orders will be sent to the printer. The EDI document will probably be distributed via IEC to the EDI server as an EDI message. The fax version of the same document will be distributed via the output server to the fax server. The e-mail will be distributed via the output server to the e-mail server.

  You get one user-controlled output record with partner-related output, marked with a '!' in MNS206 and three partner-related output files connected to the user record in MNS207, one for EDI, one for fax, and one for e-mail.

- **Monitor Object-Controlled Document Output**

  Object-controlled documents are managed in the same way as user-controlle, since the object selection uses the user control settings.

Manage Errors and Tracking Output

Administrators can search for specific documents based on the output status, requesting user, ordering time, and ID in MNS206 and MNS207.

Tracking and administrator monitoring processes include the following:

- **Manage Output Errors (MNS206,View 6)**

  Document output is managed based on the output status in MNS206, view 6.

  Using status 'MSG', all the erroneous document outputs are shown.

  Setting date and time allows you to limit the error search as well as by assigning printer file and user.

  Message status log can be viewed by using option 11=View which will start the Server View.

- **Track Output per User (MNS206, View 5)**

  Use MNS206, view 5, to search for document output by user, and perhaps by printer file and date and time.

- **Track Output per Printer File (MNS206, View 7)**

  Use MNS206, view 7, to search for certain printer files, and perhaps the date, time, and user.

- **Track Output per Document ID (MNS207, View 2)**

  Partner-controlled output is displayed in 'Output. Manage per Partner' (MNS207).

  If the documents are partner-media-controlled, you can search for document IDs (such as the purchase order number) using MNS207, view 2. By assigning the combination of document ID and printer file, the unique combination is shown. If the document has been distributed for output several times, multiple records are shown.

- **Track Output per Partner (MNS207, View 3)**

  To track the documents that were distributed to certain partners, you can view the documents that were distributed to a specific partner in MNS207, view 3, By assigning the printer file and the partner objects, all documents of that type for that partner will be shown.

Resend and Delete Output

- **Manual Resending of Output Files (MNS206)**

  Output files can be resent to the output server using the MNS206 function, option 1=Send. The file is then interactively retransmitted to the output server.

- **Automatic Resending of Output Files (ASJ MNS950)**

  To resend output files automatically when the out server cannot be reached, you must set up the MNS950 auto start job in MNS051. The MNS950 job will for each run try resend each output file that has status "MSG" in MNS206 for a maximum of 24 hours.

- **Manual Deletion of Output Files**

  You manually delete output files in MNS206 by selecting the Delete option. You remove the control record, the output file, and the related records and files.

- **Mass Deletion of Output Files**

  A mass delete is done in the MNS906 function. You submit the delete job by selecting F10=Delete. This starts the MNS907CL job. If the MNS906 job is controlled in the M3 job scheduler, the delete function can be controlled by a schedule.

See Also

"M3 Business Engine Auto Start Job Descriptions" on page 108

"M3 Business Engine Administrator's Guide for Batch Jobs and Job Queues" on page 82

"M3 Business Engine Administrator's Guide for Job Scheduler" on page 73

"API Security" on page 8

M3 Business Engine Administrator’s Guide for Auto Start Jobs and Subsystems

Introduction

This document is intended for those who manage the subsystems and the auto start jobs. It describes the programs and methods used to manage auto start jobs (ASJs) in M3 Business Engine.

The subsystem management programs are used for auto start jobs only. An auto start job is a batch job doing repetitive work or one-time initialization work. Defined auto start jobs are automatically started each time the ASJ subsystem is started. M3 contains a number of predefined auto start jobs. It is possible to run parallel auto start jobs.

The document "M3 Business Engine Auto Start Job Descriptions" available in M3 BE User Documentation Infocenter lists all auto start jobs. It also contains a table with dependencies and other comments about the auto start jobs.

Authorities for subsystems

It is recommended to let only few users have access to the programs that are used to maintain the subsystems. This means that the following programs should be provided with restricted access:

- 'Subsystem. Open' (MNS050)
- 'Subsystem Job. Open' (MNS051)

For further information about security, see the document "Function Security", available in M3 BE User Documentation Infocenter.

Auto start job subsystems

The subsystems used for auto start jobs are managed in one program, 'Subsystem. Open' (MNS050). The jobs in a subsystem can be started and stopped from the Management Pages, or via 'Subsystem

Job. Open' (MNS051). Start and stop from Management Pages is described below. Start and stop via (MNS051) is described in section "'Subsystem Job. Open' (MNS051)".

Start and stop the jobs in subsystem from Management Pages

When you start jobs from server view with program CSRVASJ, you start all subsystems entered in (MNS050) and their underlying auto start jobs, defined in (MNS051).

Run program CSRVASJ from the Management Pages to start new, previously stopped or un-started auto start jobs. Jobs already started are not affected by CSRVASJ. If the subsystem is down completely, you must run CSRVASJ as type "Autojob" from the Management Pages, to start the subsystem.

CSRVASJ starts the jobs specified by 'Subsystem. Open' (MNS050) and 'Subsystem Job. Open' (MNS051). These jobs are run for the user, company, division and system language specified in these two programs.

If you, for example, want to run a batch job with no use of auto start jobs, you have to shut down the subsystem for auto start jobs and then start CMNGJOB (manager of submitted jobs) in the Management Pages.

To shut down an auto start job, navigate to the Management Pages and select shut down (for example) Subsystem:A. This stops all auto start jobs that are defined in 'Subsystem Job. Open' (MNS051) for the subsystem.

Auto start job names must be unique

The Management Pages displays all jobs for all subsystems. If, for example, there are two subsystems created in (MNS050); ASJ and TST, you must have unique IDs for the connected jobs.

For example, if subsystem ASJ has job MMS901, subsystem TST must have a unique ID for this job, for example MMS90101. All jobs must have unique IDs, even if they belong to different subsystems.

'Subsystem. Open' (MNS050)

Panel B displays the subsystem. ASJ is the only valid subsystem type. Use option 1='Create' to create a new subsystem.

Use related option 11='Job in subsystem' on a subsystem record to see the connected jobs in 'Subsystem Job. Open' (MNS051).

Panel E contains the detailed information about the subsystem. The 'Delay' field specifies the default delay in seconds that a job "sleeps" between iterations. The value is normally 60 seconds.

The 'User' field displays the ID of the user that usually starts the subsystem and runs the jobs. This setting can be overridden by entering a user in 'Subsystem Job. Open' (MNS051).The value is normally M3. The user value can define different configurations per user in (MNS100/L) (retrieved from (MNS102), (MNS104)). If you have different system configurations, then there will be different subsystems with their jobs. If you have the same system configuration there will be one subsystem.

'Subsystem Job. Open' (MNS051)

Panel B displays all the jobs in the subsystem and enables you to add new jobs. You can select F14='Crt standard' to automatically create the default set of jobs, or you can select option 3='Copy' to manually create the jobs.

Option 11='Sel records' displays 'Subsystem Job. Select Records' (MNS052), where you can select specific jobs to be included.

F14= 'Crt standard' creates the standard auto start jobs. This function creates all auto start job for one subsystem. If you want to create auto start jobs connected to another subsystem, you must select option 3= 'Copy', in front of the current job.

F19 = 'Start all' starts all jobs in (MNS051). If there are several subsystems in (MNS050), this function starts all jobs for all subsystems.

F20 = 'End all' ends all jobs in (MNS051). If there are several subsystems in (MNS050), this function ends all jobs for all subsystems.

Option 9 = 'Start job' starts the selected job.

Option 10 = 'End job' ends the selected job.

Note: The tasks of starting and stopping jobs can also be done from the Management Pages.

The 'Status' of a job has the following valid values:

- 10 = Preliminary
- 20 = Definite
- 90 = Blocked/expired.

Note: Only jobs with status 20 will run when the subsystem is started.

The 'Delay' field shows the time, in seconds, that elapses from when the job has stopped processing units of work until it should start again. The processing stops when there are no more units of work to process. The delay time entered in 'Subsystem Job. Open' (MNS051) does not affect the batch job manager, CMNGJOB. That time is set in the M3 properties file.

When the auto start job is activated by a work file, the delay starts to look for new data when the queue does not contain any more records, that is, when the 'No rec' field is equal to 0.

When the auto start job is activated by a transaction file, the delay starts to look for new data after all transactions are run and updated.

The 'File' field defines the work file that activates the auto start job. If this record is blank, the auto start job is activated by a transaction file.

The 'No records' field shows the number of records that are queued and waiting to be processed by the auto start job.

The 'Active' field shows if the job is active and in use. Only jobs with status 20 can be active. However, jobs with status 20 can also be inactive for certain reasons.

The 'Select/Omit' (S/O) field shows if a record is selected with option 11='Sel records' to be displayed in 'Subsystem Job. Select Records' (MNS052), where you can restrict the jobs to be included. For some auto start jobs, a subset of units of work can be selected by using 'Subsystem Job. Select

Records' (MNS052). This is useful when more than one instance of a job is needed to increase throughput. For example, one job processes units of work for company 001 and another job processes units of work for company 999.

The 'Active change rate' field is updated from the Management Pages. It displays how active the job is during a period of time. In the Management Pages in a subsystem, you can see that every auto start job has a status. Possible statuses are SLEEP (a number of seconds), CHAIN (logical file), READ, READ_LOCK, or CONNECTING TO SUPERVISOR. All status changes do not require the same amount of time; for example, SETLL requires almost no time, while a READ_LOCK can take a few seconds. Therefore, the change rate is not an absolute measure of how fast a job is running. It only indicates the frequency of activity in a job.

In (MNS051/E), the following fields are displayed:

- Program - The program that controls the job.
- Delay - See above
- File - See above
- Company, Division – The company and division for which the job is run. If company is not specified here, the default company and division for the user specified in the 'User' field will be used. If no user is specified in the 'User' field, the default company and division for the user entered in 'Subsystem. Open' (MNS050) will be used.
- System Language - The system language for which the job is run. If system language is not specified here, the default system language for the user entered in the 'User' field will be used. (If the user is not connected to a system language, the job will be run with the language of the program.)
- User – The user for which the job is run. If no user is entered here, the job is run for the user entered in 'Subsystem. Open' (MNS050).

How to create auto start jobs connected to another subsystem

You must manually copy/create all jobs to be connected to another subsystem. F14 = 'Create all' only creates jobs for the first subsystem.

Follow these steps:

1. Select option 3='Copy' for the job to be copied/created.
2. On (MNS051/C), you must give the job a unique name. Specify the new subsystem ID. For example: copy MHS855 from subsystem ASJ to subsystem TST. Then you can name the job MHS85501 and select TST in the subsystem field.
3. On the (MNS051/E) panel, the applicable values are retrieved. You can also enter 'User', 'Company' etc.

Selecting records for auto start jobs

For some of the auto start jobs, a subset of units of work can be selected via 'Subsystem Job. Select Records' (MNS052). This is useful when more than one instance of a job is needed to increase

throughput. For example, one job processes units of work for company 001 and another job processes units of work for company 999.

The selection is performed in 'Subsystem Job. Select Records' (MNS052). On panel B, enter the conditions for the records to be selected.

The 'Select/Omit' (S/O) field indicates if a record is to be selected. 'Select' = Select the records that have field values within (or equal to) the following values. 'Omit' = Omit the records that have field values within (or equal to) the following values.

The 'Selection 1' field shows the lowest and highest value in the current field in order for the record to be selected or omitted for the job. The field can for example contain the value Company.

The 'Selection 2' field shows the lowest and highest value in the current field in order for the record to be selected or omitted for the job. The field can for example contain the value Warehouse.

The following rules apply to the conditions specified in this panel:

1. If nothing is entered in the S/O field, S=Select is used as default value.
2. If at least one of the entries in the S/O field is O=Omit, everything else is selected.
3. If at least one of the entries in the S/O field is S=Select, everything else is omitted.
4. The specified conditions are evaluated from the top and downwards. When a condition is met, no more conditions are evaluated. This is further described by the examples below.

Example 1

Scenario: Select Company 100-110. Omit company 105.

Result: If the current company is 105, it will be selected since the first condition is met. (The second condition is not evaluated.)

Example 2

Scenario: Omit company 105. Select company 100-110.

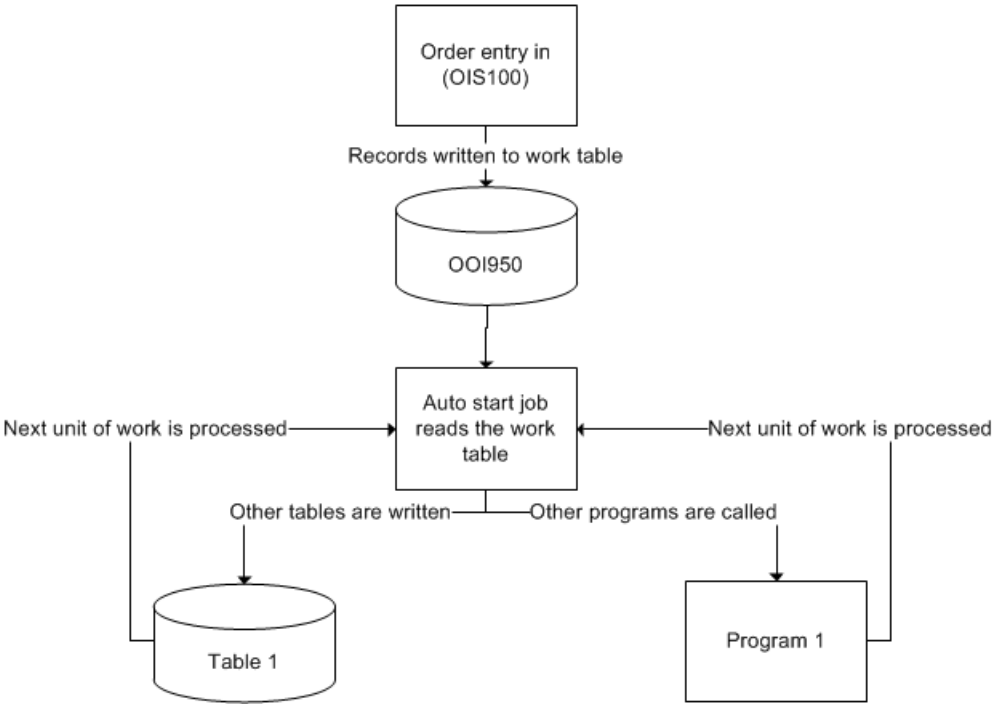
Result: If the current company is 105, it will be omitted since the first condition is met. (The second condition is not evaluated.)

Auto start jobs

The M3 auto start job subsystem has a number of predefined jobs that are performed according to the settings in the subsystem maintenance programs described in this document. The predefined jobs can be used for purposes such as:

- Allocating order lines
- Rescheduling manufacturing orders
- Processing and printing picking lists
- Printing order confirmations
- Releasing stock locations
- Updating transaction history

The units of work, for example records to be processed, are stored in queues within work tables until the corresponding auto start job has processed them.



When for example customer orders are entered, records are created and stored in the work table. The auto start job continuously monitors the work table and processes the records.

In the auto start job functionality for M3 Business Engine, it is possible to run parallel jobs against a work table to consume the queue faster. As an alternative, you can set priorities in 'Subsystem Job. Select Record' (MNS052).

Subsystem control

The following properties describe the auto start jobs:

- Job start - The auto start jobs are automatically started each time the subsystem is started. When the subsystem is active, the auto start job functionality is active and works as described in the figure above.
- Inactive subsystem - Even when the subsystem is not active, the necessary records are written to the work tables. When the auto start jobs are started again, all records are processed. The records are sorted according to the first in, first out principle. It must be observed, however, that when the subsystem is down, certain data, (for instance available to promise), may not be completely up to date.

See Also

"M3 Business Engine Auto Start Job Descriptions" on page 108

M3 Business Engine Auto Start Job Descriptions

This guide includes a description of the available Auto Start Jobs in M3 Business Engine.

COS900 - Invoice Specification

The auto start job 'Invoice Specification' (COS900) creates records for invoice specification transactions for Maintenance customer orders, and retrieves sales price and costing for reported operation, material and subcontracting transactions from a work order.

Table 65. Programs that create records in the ASJ table

Program	Description
COS101	Maint CO. Open Line
COS115	Maint Quotation. Open Information
COS130	Maint CO. Quick Entry
COS170	Maint Invoice. Open Specification
COS171	Fnc: Call for update of invoice specification
MMS905	Fnc: Stock transactions - External functions
MMS915	Fnc: Planning overview - External functions
MOS071	Fnc: Report Maintenance operations - External f.
MOS074	Report Maintenanvce operations - External f.
MOS105	WO material and operations - detail
PPS322	Handling external repair
PPS324	Handling external purchase

Table 66. Input parameters - COS900

Field name	Description	Size
IUCONO	Company	3,0
IUTTYP	Stock transaction type	2,0
IUATOR	To order number	10
IUATPO	To order line	3,0
IURORC	Reference order category	1,0
IURORN	Reference order number	10

Field name	Description	Size
IURORL	Reference order line	6,0
IUALI1	Transaction number	5,0
IUALNT	Line type	1,0
IUAFUN	Function type	1
IUGSR1	Job reference 1	15
IUGSR2	Job reference 2	15
IUTXT1	Text line 1	60
IUTXT2	Text line 2	60
IUOPDS	Operation description	30
IUFACI	Facility	3
IUWHLO	Warehouse	3
IUPRCS	Service process	3
IUSUFI	Service	20
IUITNO	Item number	15
IUSTRT	Product structure type	3
IUWHSL	Location	10
IUBANO	Lot number	12
IUCAMU	Container	12
IUREPN	Receiving number	10,0
IUAUSE	Used	1,0
IUAEXH	Exchange	1,0
IUTRQT	Transaction quantity - basic U/M	15,6
IUUMAT	Used labor run time	7,2
IUUPIT	Used machine run time	7,2
IUUSET	Used machine setup time	7,2
IUUMAS	Used labor setup time	7,2
IUMAQT	Manufactured quantity	15,6

Field name	Description	Size
IUREND	Manual completion flag	1,0
IUREMK	Remark	30
IUUNIT	Unit of measure	3
IUASP1	Sales price	15,2
IUAHPR	Handling charge	15,2
IUPLGR	Work center	8
IUPCTP	Costing type	1
IUOPNO	Operation number	4,0
IURIDN	Order number	10
IURIDL	Order line	6,0
IURIDI	Order index	3,0
IUYEA4	Year	4,0
IUVONO	Voucher number	8,0
IUVSER	Voucher number series	3
IUAMCH	Machine time	1,0
IUANDY	Number of days	5,0
IUAMTY	Miscellaneous cost types	6
IUTRDT	Transaction date	8,0
IUTRTM	Transaction time	6,0
IUTMSX	Time suffix	3,0
IUTRPR	Inventory accounting price	17,6
IUAQUO	Quotation	1,0
IUMAUP	Manually updated	1,0
IURSCD	Transaction reason	3
IUCHID	Changed by	10
IUPYNO	Payer	10
IUPYAG	Payer agreement	10

Field name	Description	Size
IUASP9	Split code	1,0
IUCFGL	Configuration position	15
IUATNR	Attribute number	17,0
IUREWK	Rework	1,0
IUEMNO	Employee number	10
IUACTR	Work element	10
IUTSTM	Timestamp	26

Table 67. External parameters - COS900

Parameter	Specified in
Detail job ref	COS895, panel E
Standard rate type	CRS780, panel E
Costing type - ordering cost	PCS001, panel E
Costing model - product cost	PCS001, panel E
Subtotal - standard cost	PCS001, panel E
Issue warning message at what percent of max value	CRS789, panel F

Table 68. Updated tables - COS900

Table	Description
ACUORH	TF: Order Head
ACUORL	TF: Order Line
ACUINV	TF: Order invoice time & material & subcontracting & misc. & loan
ACUPER	TF: Order period costs
ACUOLS	MF: Order line summary
CSYTAB	MF: System tables

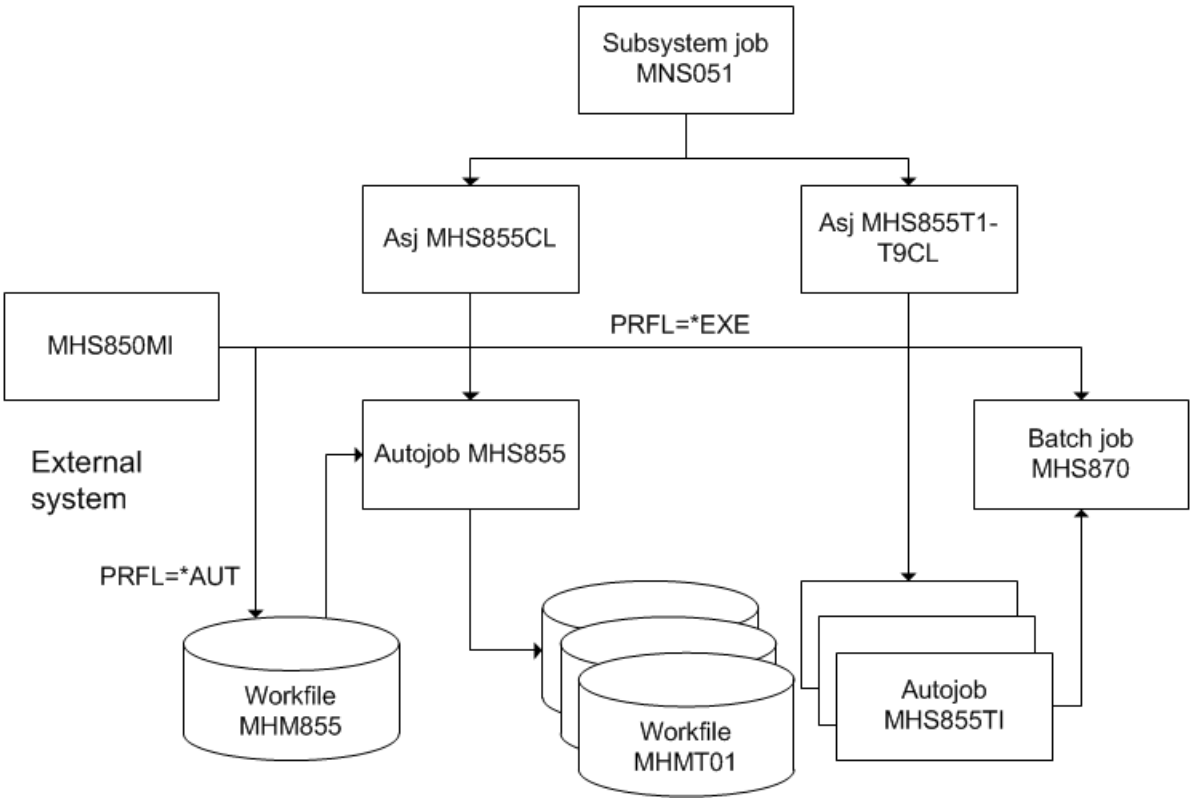
Table 69. Input parameters - COS900

	Name	Description
ASJ:	None	
Functions:	CRTVMIT	Fnc: Fetch record from table MITWHL
	CRTVMOO	Fnc: Fetch record from table MMOOPE
	CRTMOM	Fnc: Fetch record from table MMOMAT
	COS913	Fnc: Update ACUORL and MMOHED status
	COS914	Fnc: Retreive ordertype parameters
	COS916	Fnc: Retrieve workcenter prices
	CLCCUR	Fnc: Calculate to/from currency amount
	CCOMCHK	Fnc: Check Components in model
	PPS323	Fnc: Change owner when exchange in
	PPS298	Fnc: Move purchase calc. - move
	PPS106	Fnc: Retreive purchase price and discounts
	CORTVPPR	Fnc: Retrieve sales price list from customer
	CRS428	Fnc: Generate automatic mail

MHS855 - WHI Order Related Messages

You can start one auto start job for each task in WHI. This way, several jobs can execute WHI messages in parallel without any overlap or other timing =problems. For example, during partial picking the last pick might start to be reported before the previous pick has been completed; this would occur if multiple jobs are run simultaneously.

Order Related Messages up load after enhancement



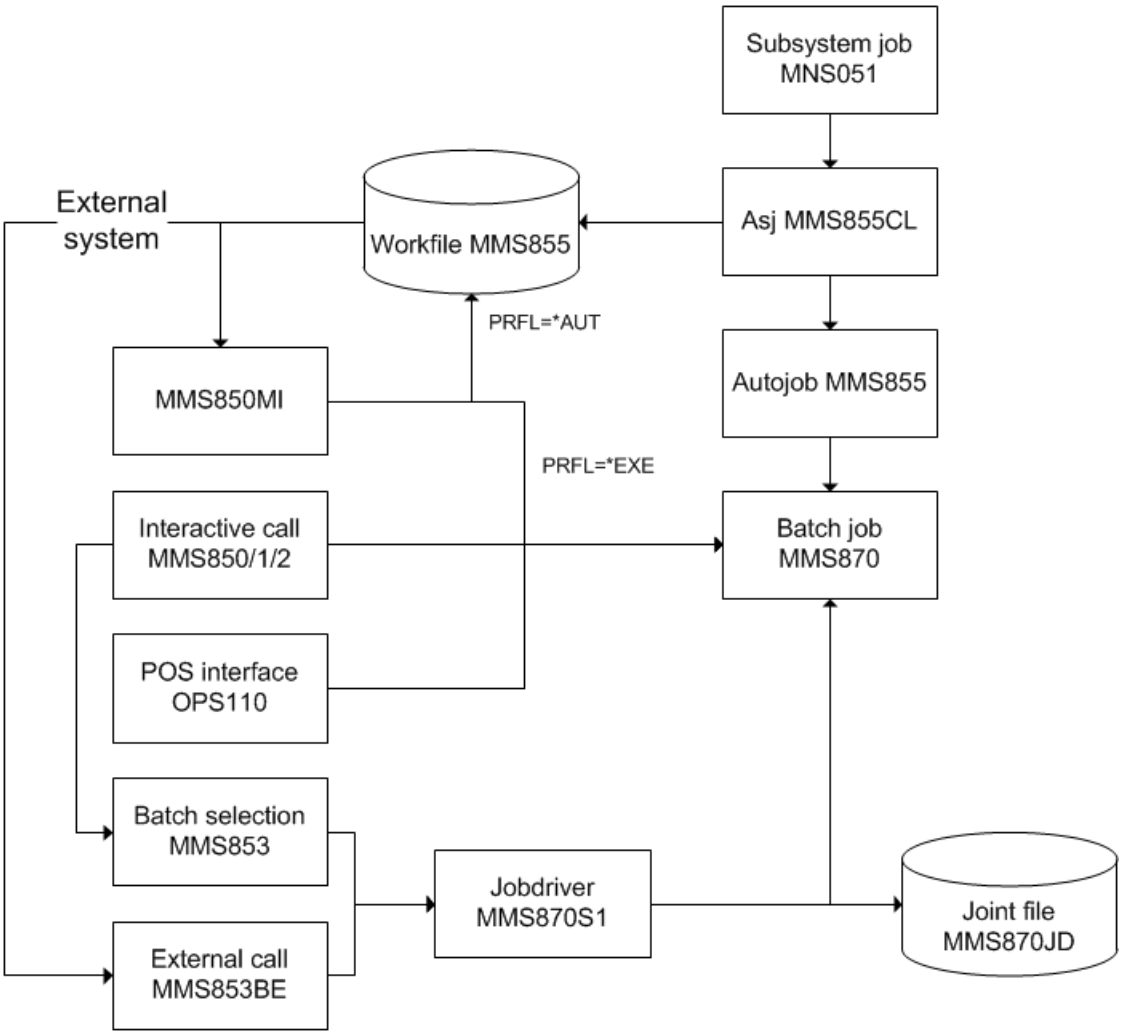
MHS855T1 - T9

- **Receipts:**
  - MHS855T1: MO put away (QLFR=10 calls PMS050BE)
  - MHS855T2: PO receipt (QLFR=20 calls PPS300BE) PO Close QLFR=23
  - MHS855T3: CO returns (QLFR=30D calls MHMNGRET)
  - MHS855T4: DO/RO receipts (QLFR=40, 50 calls MHMNGGRC)
  - MHS855T5: System Directed Put Away (QLFR=PACF calls MMMNGPPC)
  - MHS855T6: PO QI inspection (QLFR=21, calls PPS310BE)
- **Pick reporting:**
  - MHS855T7: Pick list reporting (QLFR=11, 31, 41, 51, PLRN, CFMP, 92, calls MMUPDREP)
- **Various tasks:**
  - MHS855T8: Create RO/DO (QLFR=51CR calls MMS100BE)
  - MHS855T9: Create PO ASN (QLFR=29 calls PPS365CL)

MMS855 - WHI Internal Stock Messages

- The functions MMS853BE and MHS853BE are used for an event driven flow.
- The MI programs MMS850MI and MHS850MI can either write records to the control tables for the auto jobs or they could call MMS/MHS870 interactive via the process transaction.

Internal stock messages upload



MMS901 - Transaction History

The auto start job 'Transaction History' MMS901 monitors the actual stock movements for items with inventory accounting code 1.

For these items, MMS901 updates the transaction history, item statistics, number of transactions for each location and the new average price in those cases where the items have inventory valuation method 2.

Programs that create records and get updated in the ASJ table

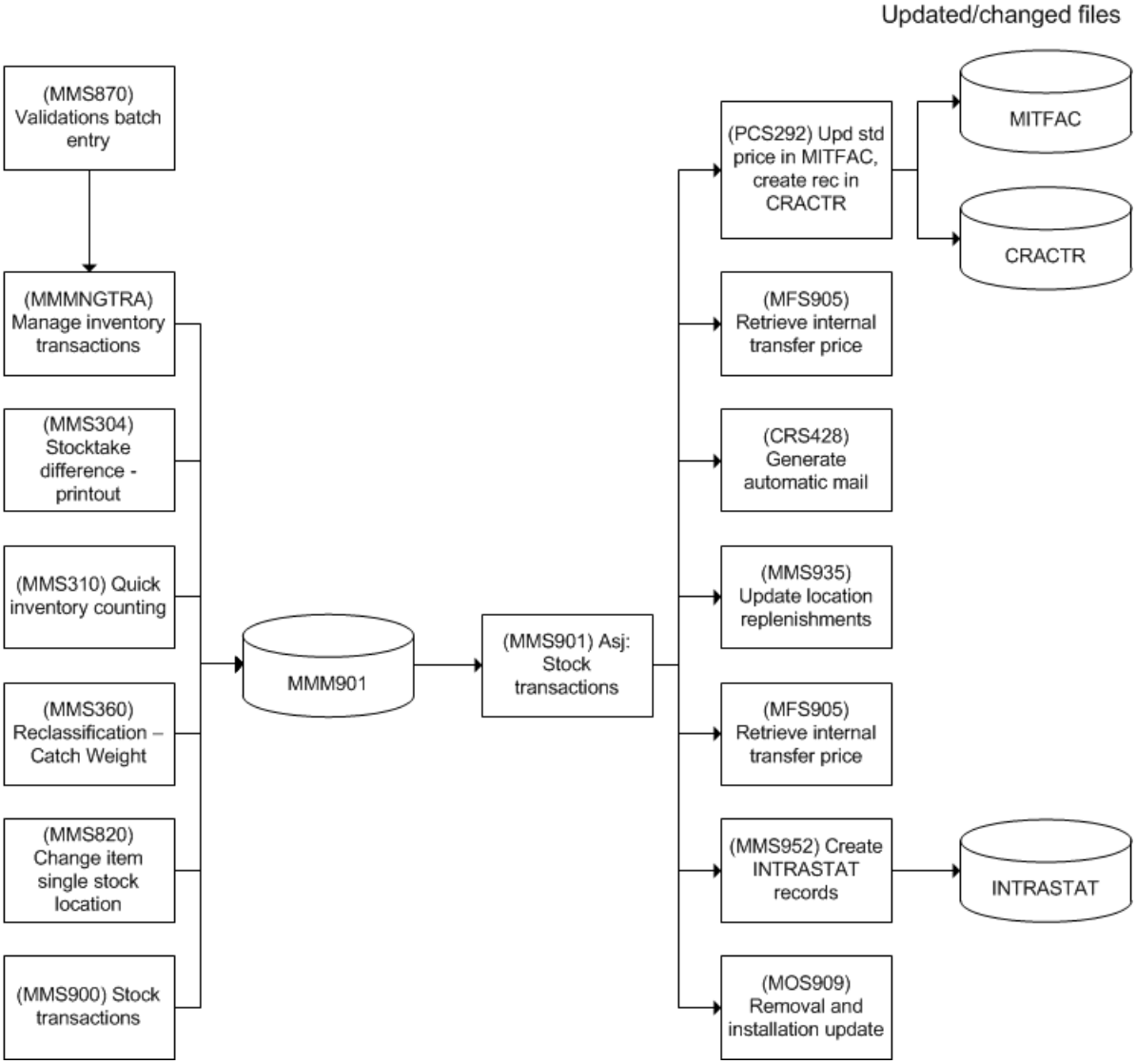


Table 70. Input parameters - MMM901

Field name	Description	Size
MTCONO	Company	3,0
MTWHLO	Warehouse	3
MTITNO	Item number	15
MTRGDT	Entry date	8,0
MTRGTM	Entry time	6,0

Field name	Description	Size
MTTRDT	Transaction date	8,0
MTRESP	Responsible	10
MTTRTP	Order type	3
MTTTYP	Stock transaction type	2,0
MTWHSL	Location	10
MTBANO	Lot number	12
MTCAMU	Container	12
MTREPN	Receiving number	10,0
MTBREF	Lot reference 1	12
MTBRE2	Lot reference 2	12
MTRIDN	Order number	7
MTRIDO	Order operation	6,0
MTRIDL	Order line	6,0
MTRIDI	Order index	3,0
MTRFTX	Reference text	30
MTRORC	Reference order category	1,0
MTRORN	Reference order number	7
MTRORL	Reference order line	6,0
MTRPRT	Representative transaction	1,0
MTECVE	Revision number	4
MTSTAS	Status - balance identity	1
MTTRQT	Quantity in basic U/M	15,6
MTNSTQ	New on-hand balance	15,6
MTNSTT	New on-hand balance per transaction date	15,6
MTINER	Physical inventory error	1,0
MTTUPC	Updating code for transaction	1,0
MTTRPR	Inventory accounting price	17,6

Field name	Description	Size
MTTRPO	Transaction price order	17,6
MTMFCO	Acquisition cost	17,6
MTPROJ	Project number	7
MTELNO	Element	8
MTRSCD	Transaction reason	3
MTPGNM	Program name	10
MTCHID	Changed by	10
MTNQUQ	On-hand for inspection per entry date	15,6
MTNRJQ	Rejected on-hand entry date	15,6
MTFANO	On-hand balance - facility	15,6
MTFANQ	On-hand balance for inspection -facility	15,6
MTFANR	Rejected on-hand balance - facility	15,6
MTPOTC	Purchase order category	2
MTCAWE	Catch weight	15,6
MTCWLO	Catch weight losses	15,6
MTNHAI	Next item number	15
MTNHSN	Next serial number	12
MTCFGL	Configuration position	15
MTBIRT	Origin identity	10,0
MTINDI	Lot control method	1,0
MTDEID	Complaint	7,0
MTPRMF	Process manufacturing order number	7,0
MTTSTM	Timestamp	26
MTOWNC	Owner	10
MTACRF	User-defined accounting control object	8
MTATNR	Attribute number	9
MTATNB	Attribute number lot	9

Field name	Description	Size
MTCDTP	Cross dock type	1
MTTRQA	Transaction quantity in alt U/M	8
MTSUDO	Delivery note number	20
MTPANR	Package number	10
MTJNA	Job name	10

MMS902 - Transaction Date

The auto start job 'Transaction Date' (MMS902) manages all stock-affecting stock transactions and calculates accounted stock per transaction date at the transaction time.

Programs that create records and get updated in the ASJ table

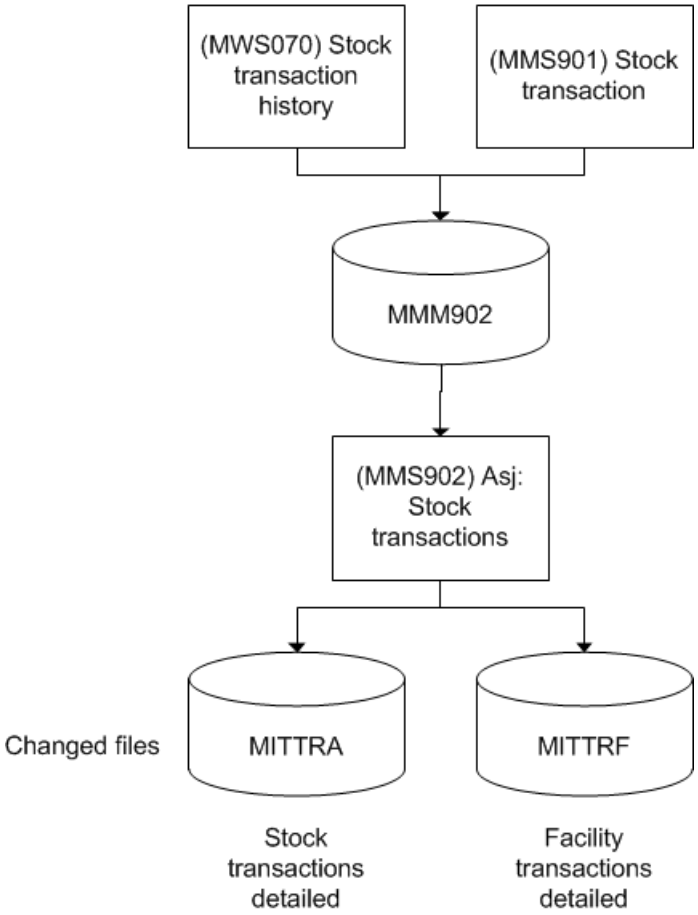


Table 71. Input parameters - MMM902

Field name	Description	Size
MTCONO	Company	3,0
MTWHLO	Warehouse	3
MTITNO	Item number	15
MTTRDT	Transaction date	8,0
MTPGNM	Program name	10
MTRGDT	Entry date	8,0
MTRGTM	Entry time	6,0
MTCHID	Changed by	10
MTTSTM	Timestamp	26
MTJNA	Job name	10

MMS911 - MRP Calculation

The auto start job 'Planning Overview' (MMS911) monitors planned stock transactions for each combination of item and warehouse, and performs the MRP calculations for items trigged for continuous net change (see parameter in MMS002/E).

Programs that create records and get updated in the ASJ table

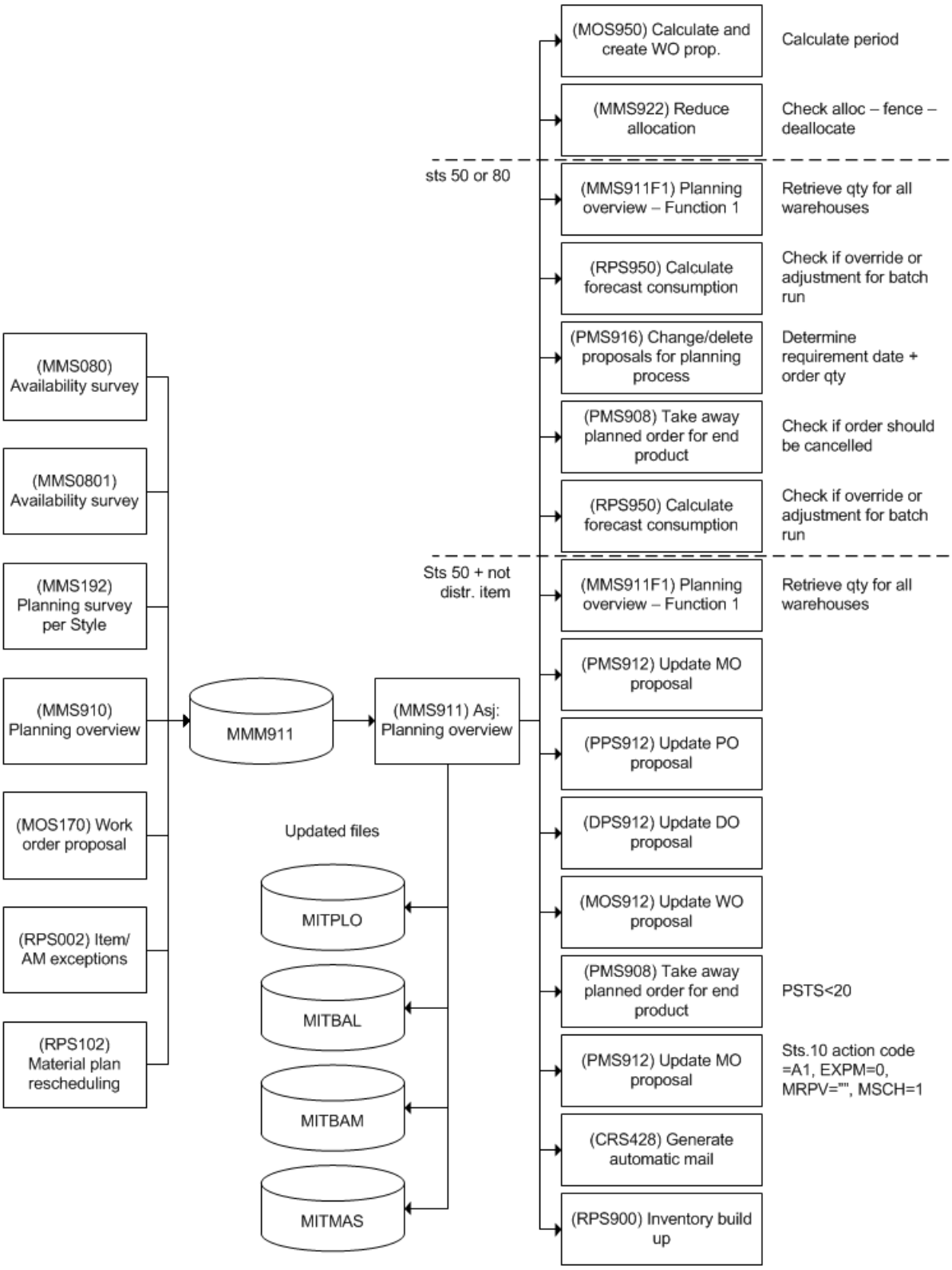


Table 72. Input parameters - MMM911

Field name	Description	Size
MCCONO	Company	3,0
MCWHLO	Warehouse	3
MCITNO	Item number	15
MCCONC	Continuous net change	1,0
MCLEVL	Lowest level	2,0
MCCALD	Calculation date	8,0
MCRFPC	Reason for planning calculation	2,0
MCBANO	Lot number	12
MCCFGH	NHA configuration position	15
MCLOCH	Location history	1,0
MCJNA	Job name	10
MCTSTM	Timestamp	26

MMS920 - Auto Allocation

The auto allocation process is triggered when a new demand for allocation arise or at goods receipt when there is new stock that can be allocated. The trigging, which can be executed from a number of functions listed in the database model, is done by writing a record to the work table MMM920.

The MMM920 work table is then read by the auto start job 'Auto Allocation' (MMS920) which monitors reservations in the material plan (see MMS080) for items that should be automatically allocated. The auto allocation sequence could be by planning date or by order priority and then planning date depending on the setting of 'Auto allocation sequence' (MMS005/G). Auto allocation is performed for reservations inside the demand time fence (see MMS002/E, CRS701 and MMS005/G) if they are qualified according to the allocation method stated in MMS002/G).

Further on MMS920 calls MMS921 where it is decided what stock to allocate. In an attempt to simplify the process one could say that MMS920 decides which orders that should get the stock and then MMS921 is called to decide which balance identity that should be allocated.

Programs that create records in the ASJ table

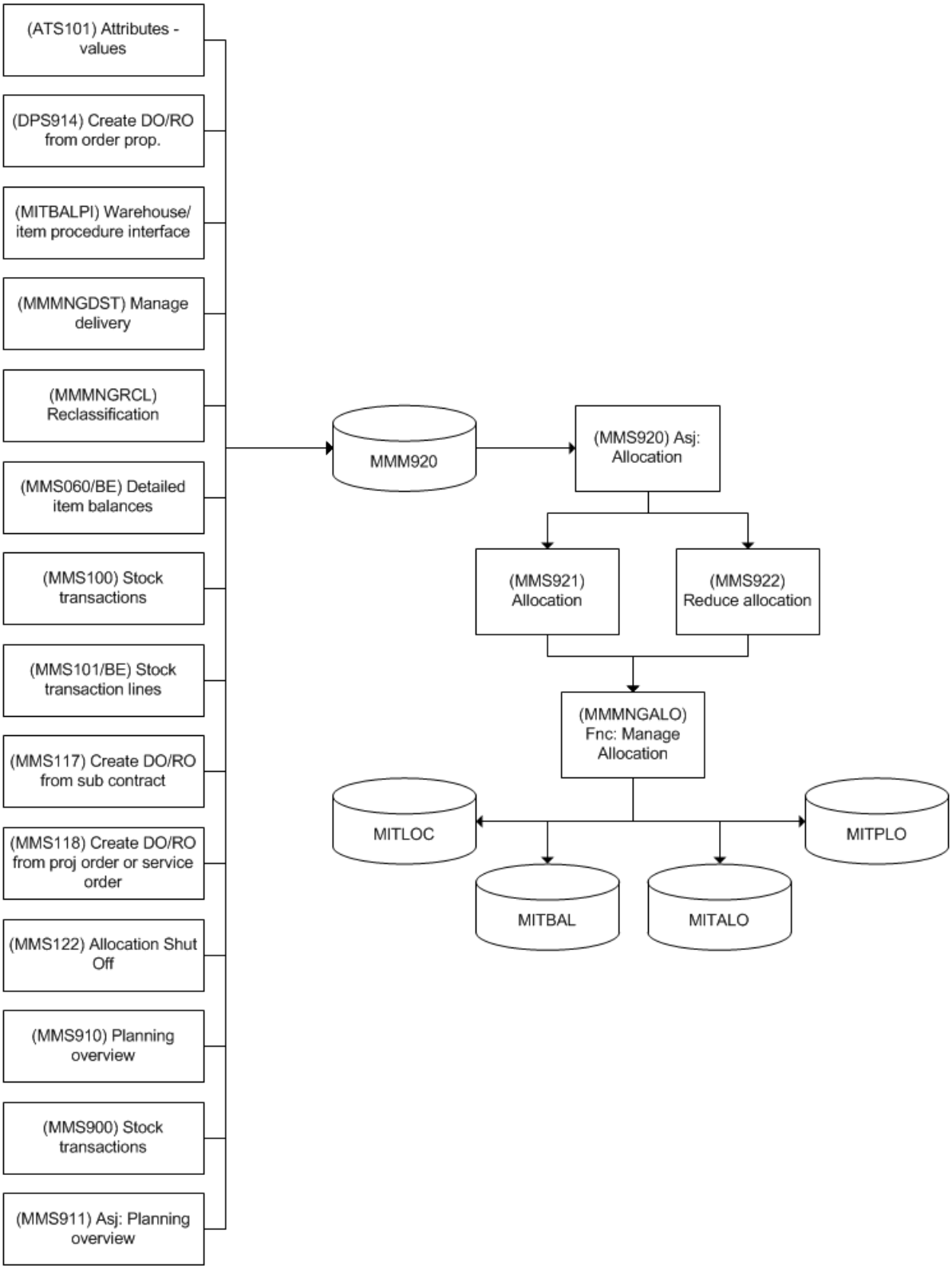


Table 73. Parameters - MMM920

Field name	Description	Size
MACONO	Company	3,0
MAWHLO	Warehouse	3
MAITNO	Item number	15
MARIDN	Order number	10
MAPGNM	Program name	10
MARGDT	Entry date	8,0
MARGTM	Entry time	6,0
MACHID	Changed by	10
MATSTM	Timestamp	26

(MMS930) - Release of Location Used

The auto start job 'Release of Location Used' (MMS930) monitors the locations that may not be divided, that is that have multi-storage location 0. When the delay entered has passed, the auto start job changes the location from occupied to vacant.

The process is triggered form the program MMS900 (Fnc: Stock transactions) which writes a record to the work table MMM930 when processing a transaction that affects a location for which the 'Number of balance identities' field becomes 0 under the processing and for which the 'Delay' field in (MMS010) is set to greater than 0.

Programs that create records and get updated in the ASJ table

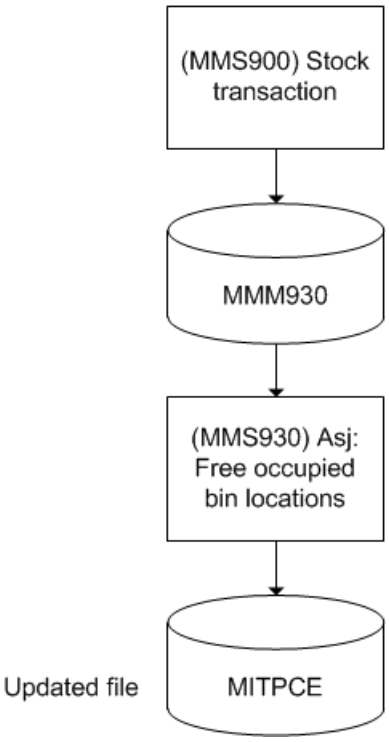


Table 74. Input parameters - MMM930

Field name	Description	Size
MTCONO	Company	3,0
MTWHLO	Warehouse	3
MTWHSL	Location	10
MTDEHO	Delay in hours	5,3
MTPGNM	Program name	10
MTRGDT	Entry date	8,0
MTRGTM	Entry time	6,0
MTCHID	Changed by	10
MTTSTM	Timestamp	26

MMS975 - Update status depending of aging

MMS975 is used to set statuse in MITLOC/MILOMA depending of Aging parameters.

1. Job is started if a transaction with ORCA=961 is found in MITPLO.
2. Control if Planning date PLDT and Time TIHM is less then todays date.
3. Read all corresponding MITPLO items ITNO included in MITLOC. Key is CONO, PLDT, WHLO and ITNO.
4. If Inspection code QACD=0 is status set to 2 and MITTRA records are created.
5. If QACD=1 is a check done against MWOHED, status=90. Then is status set to 2 and MITTRA records are created.
6. If QACD=2 is a check first done against MLIAHE, status=70. Then is status set to 2 and MITTRA records are created.

There are no input parameters.

MMS940 - Create MO/PO from Planned Orders

The auto start job 'Create MO/PO from Planned Orders' (MMS940) is used to monitor order proposals that are to be converted to purchase orders, manufacturing orders, or distribution orders. Auto start job MMS940 creates the final orders based on released order proposals.

	Order proposals	Final orders
Purchase	PPS170	PPS200
Manufacturing	PMS170	PMS100
Distribution	DPS170	MMS100

Programs that create records and get updated in the ASJ table

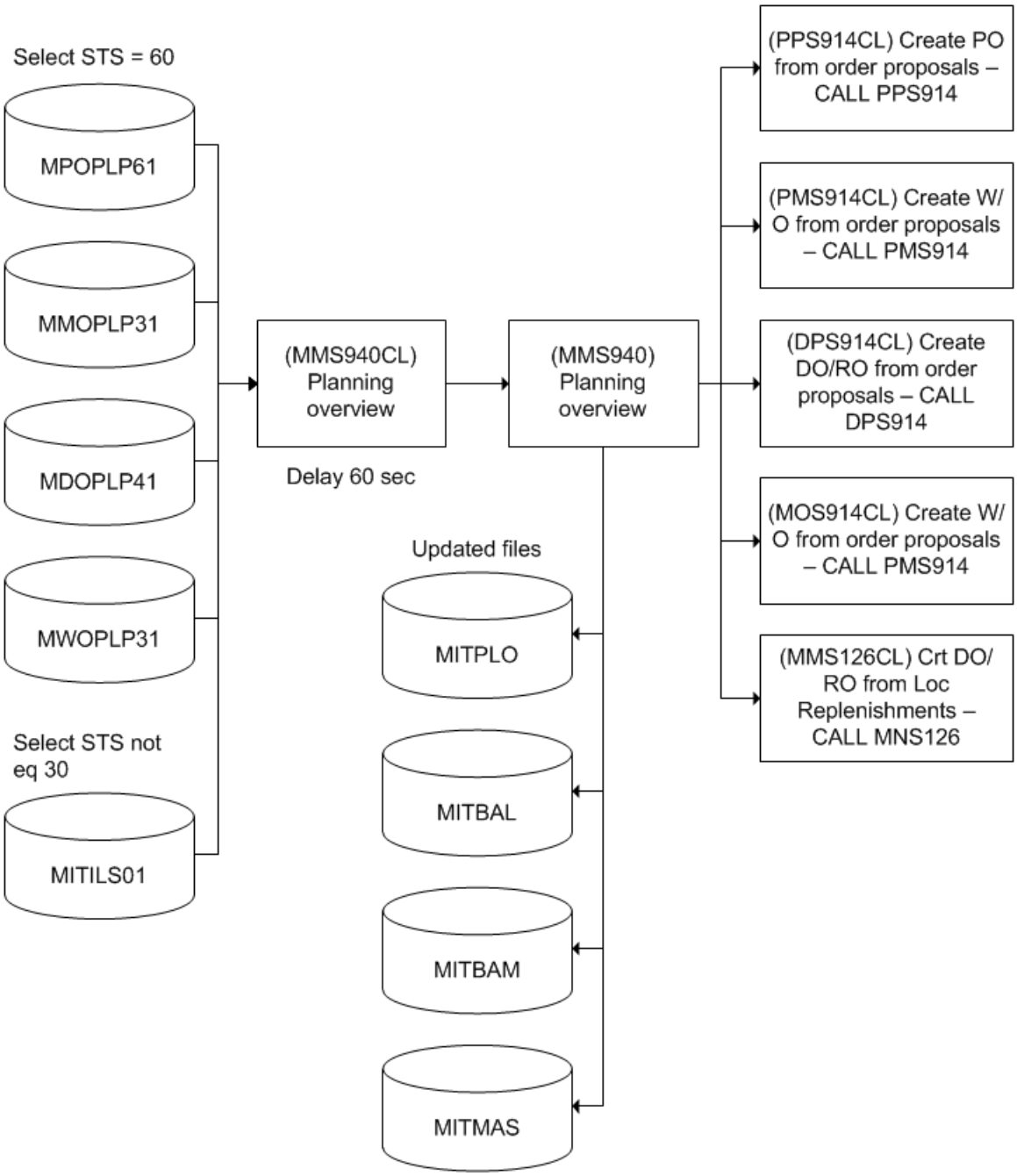


Table 76. Input tables to MMS940CL

Table	Description
MPOPLP61	Planning proposal purchase

Table	Description
MMOPLP31	Planning proposal manufacturing order
MDOPLP41	Planning proposal distribution order
MWOPLP31	Planning proposal maintenance order
MITILS01	Location replenishment orders

Table 77. Input Parameters - MPOPLP61

Field name	Description	Size
POCONO	Company	3,0
POFACI	Facility	3
POWHLO	Warehouse	3
POITNO	Item number	15
POPRCS	Service process	3
POSUFI	Service	20
POPLPN	Order proposal number	7,0
POPLPS	Order proposal subnumber	3,0
POPLP2	Order proposal subnumber	5,0
POGETY	Generation reference	2
PORPLD	Shortage date	8,0
POACTP	Action message (AM)	2
POPRIF	Priority value	3,0
PORPLQ	Shortage quantity	15,6
PONUAU	Number of automatic updates	5,0
PORELD	Release date	8,0
PODLDT	Planned delivery date	8,0
POPLDT	Planning date	8,0
POFUDT	Follow-up date	8,0
POPPQT	Planned quantity	15,6
PORESP	Responsible	10

Field name	Description	Size
POTERE	Technical supervisor	10
POBUYE	Buyer	10
POPSTS	Status - order proposal	2
POPUSL	Lowest status - purchase order	2
POMSG1	Warning message	2
POMSG2	Warning message	2
POMSG3	Warning message	2
POMSG4	Warning message	2
POPURC	Requisition by	10
PORFID	Reference	10
POYRE1	Your reference	36
POAURE	Authorized	10
POORTY	Order type	3
POPOTC	Purchase order category	2
POCMCO	Communication code	2
POTFNO	Facsimile transmission number	16
PORORN	Reference order number	7
PORORL	Reference order line	6,0
PORORC	Reference order category	1,0
POOSHV	Via address	10
POOFID	Final destination	10
POLEDT	First printout date	8,0
POLEDN	Number of printouts	2,0
POTEDL	Terms of delivery	3
POMODL	Delivery method	3
POTEPY	Terms of payment	3
POPRIP	Priority	1

Field name	Description	Size
POSUNO	Supplier number	10
POOURR	Our reference number	10
POOURT	Reference type	1
POPUNO	Purchase order number	7
POCUCD	Currency	3
POSITE	Supplier item number	30
POPITD	Purchase order item name	30
POPITT	Purchase order item description	60
POPUPR	Purchase price	17,6
POPPUN	Purchase price U/M	3
POPUUN	Purchase order U/M	3
POPUCD	Purchase price quantity	5,0
POPTCD	Price text	1,0
POODI1	Discount 1	5,2
POODI2	Discount 2	5,2
POODI3	Discount 3	5,2
POPPSQ	Co-sorting identity order proposal	2
POPROD	Manufacturer	10
POTEOR	Telephone order	1,0
POECVE	Revision number	4
PONOED	Revision printout	1,0
POPACT	Packaging	6
POIRCV	Recipient	20
POFUSC	Monitoring activity list	3
POGRMT	Goods receiving method	3
POPTXT	Note	60
POETRF	External instruction	3

Field name	Description	Size
POEXAV	Charge active	1,0
POACLI	Accounting line	1,0
POSLTP	Stock zone	2
POUPAV	Update material plan	1,0
POREPP	Representative price	1,0
POSTRT	Product structure type	3
POTPCD	Item category	1,0
PONSUN	Next supplier	10
POADID	Address number	6
POADVI	Via address	6
POYRE3	Your reference	36
POOUR1	Our reference number	10
POOFI1	Final destination	10
POWHL1	Warehouse	3
POSLT1	Stock zone	2
POOSH1	Via address	10
POWHL2	Warehouse	3
POACRF	Free accounting control object	8
POCOCE	Cost center	8
POBANO	Lot number	12
PONHAI	Next item number	15
PONHSN	Next serial number	12
POAPRB	Approved by	10
PORSCD	Transaction reason	3
POHOMA	Hole or material oriented service	1,0
POBLTA	Item or configuration oriented service	1,0
POAECN	Engineering order number	7

Field name	Description	Size
PODEID	Complaint	7,0
POMVA1	Meter value 1	15,6
POMVA2	Meter value 2	15,6
POMVA3	Meter value 3	15,6
POMVA4	Meter value 4	15,6
POMETE	Selected meter	1,0
POMVB1	Actual meter value 1	15,6
POMVB2	Actual meter value 2	15,6
POMVB3	Actual meter value 3	15,6
POMVB4	Actual meter value 4	15,6
POMES1	Meter 1	6
POMES2	Meter 2	6
POMES3	Meter 3	6
POMES4	Meter 4	6
POFSER	First service	1,0
POEXNO	Concession number	7
PONUM2	Number	3,0
POMPRN	Main product number	15
POMSTR	Main structure type	3
POMSUF	Main service	20
POUPID	Registration identity	10
POPGNM	Program name	10
POTXID	Text identity	13,0
POPROJ	Project number	7
POELNO	Project element	8
POOPED	Operational tolerance - date	8,0
POETD1	Economical tolerance date 1	8,0

Field name	Description	Size
POETD2	Economical tolerance date 2	8,0
PODWCP	Drawing copies	1,0
POTIHM	Time hours & minutes	4,0
POCFIN	Configuration number	7,0
POPRNS	Service product	15
POCFGH	NHA configuration position	15
POCFGL	Configuration position	15
POHDPR	Main product	15
POECVS	Simulation round	3,0
POCFI1	User-defined field 1 - item	10
POCFI2	User-defined field 2 - item	15,2
POCFI3	User-defined field 3 - item	3
POCFI4	User-defined field 4 - item	5
POCFI5	User-defined field 5 - item	1
POSCHD	Scheduled maintenance service	1,0
PORGDT	Entry date	8,0
PORGTM	Entry time	6,0
POLMDT	Change date	8,0
POCHNO	Change number	3,0
POCHID	Changed by	10

Table 78. Input Parameters - MMOPLP31

Field name	Description	Size
ROCONO	Company	3,0
ROFACI	Facility	3
ROWHLO	Warehouse	3
ROPRNO	Product number	15
ROPLPN	Order proposal number	7,0

Field name	Description	Size
ROPLPS	Order proposal subnumber	3,0
ROGETY	Generation reference	2
ROACTP	Action message (AM)	2
RONUAU	Number of automatic updates	5,0
RORELD	Release date	8,0
ROSTDT	Start date	8,0
ROFIDT	Finish date	8,0
ROMSTI	Start time	4,0
ROMFTI	Finish time	4,0
ROPLDT	Planning date	8,0
ROORQA	Ordered quantity - alternate U/M	15,6
ROMAUN	Manufacturing U/M	3
ROPPQT	Planned quantity	15,6
RORESP	Responsible	10
ROPSTS	Status - order proposal	2
RORORN	Reference order number	7
RORORL	Reference order line	6,0
RORORC	Reference order category	1,0
ROPRIP	Priority	1
ROWHST	Lowest status - MO	2
ROAOID	Alternative routing ID	2
ROPLGR	Work center	8
ROPRDY	Production days	5,2
ROORDP	Order dependent	1,0
RORORH	Reference order number	7
ROECVE	Revision number	4
ROLTRE	Share of lead-time	3,0

Field name	Description	Size
ROORTY	Order type	3
ROSTRT	Product structure type	3
ROPGNM	Program name	10
ROPROJ	Project number	7
ROELNO	Project element	8
ROGRTI	Group technology class	10
ROSCHN	Schedule number	8,0
ROMSPM	Material shortage purchase/manufacturing	2, 0
ROTSPM	Tool shortage	1,0
ROMSCD	Date for latest material shortage check	8,0
ROWCLN	Production line	8
ROCFIN	Configuration number	7,0
ROHDPR	Main product	15
ROECVS	Simulation round	3,0
ROPCCO	Process code	1,0
RORIFD	Reschedule in - filter date	8,0
ROROFD	Reschedule out - filter date	8,0
ROTSDA	APP timestamp	8,0
ROTSTE	APP timestamp	6 0
ROPULD	Pull-up of delayed orders	1 0
ROPULN	Pull-up of early orders	1 0
ROSUBN	Subnetwork mark	1 0
ROSUBD	Subnetwork due date	8 0
ROCLGP	Color group	2 0
RONTWP	External network priority	2 0
ROACHD	Latest APP update	8 0
ROACHT	APP change time	4 0

Field name	Description	Size
ROPRAP	APP processed	1 0
ROPLLO	Proposal number - overlying level	7 0
ROPLHL	Proposal number - highest level	7 0
RORGDT	Entry date	8,0
RORGTM	Entry time	6,0
ROLMDT	Change date	8,0
ROCHNO	Change number	3,0
ROCHID	Changed by	10
RORLSR	Released configuration orders	15,6

Table 79. Input Parameters - MDOPLP41

Field name	Description	Size
DOCONO	Company	3,0
DOFACI	Facility	3
DOTWHL	To warehouse	3
DOITNO	Item number	15
DOFWHL	From warehouse	3
DOPLPN	Order proposal number	7,0
DOPLPS	Order proposal subnumber	3,0
DOGETY	Generation reference	2
DOACTP	Action message (AM)	2
DONUAU	Number of automatic updates	5,0
DORELD	Release date	8,0
DODLDT	Planned delivery date	8,0
DOPPQT	Planned quantity	15,6
DOUNMS	Basic unit of measure	3
DORESP	Responsible	10
DOPSTS	Status - order proposal	2

Field name	Description	Size
DOMODL	Delivery method	3
DOTEDL	Terms of delivery	3
DOPRIP	Priority	1
DOFWNO	Forwarding agent	10
DOTRDY	Transportation days	3,0
DOTRSL	Lowest status - stock transaction	2
DOORTY	Order type	3
DOPTXT	Note	60
DORORC	Reference order category	1,0
DORORN	Reference order number	7
DORORL	Reference order line	6,0
DOTIHM	Time hours & minutes	4,0
DOCFIN	Configuration number	7,0
DOHDPR	Main product	15
DOECVS	Simulation round	3,0
DOTXID	Text identity	13,0
DORGDT	Entry date	8,0
DORGTM	Entry time	6,0
DOLMDT	Change date	8,0
DOCHNO	Change number	3,0
DOCHID	Changed by	10

Table 80. Input Parameters - MWOPLP31

Field name	Description	Size
QOCONO	Company	3,0
QOFACI	Facility	3
QOWHLO	Warehouse	3
QOPRNO	Product number	15

Field name	Description	Size
QOBANO	Lot number	12
QOEQNO	Equipment number	15
QOSTRT	Product structure type	3
QOSUFI	Service	20
QOPLPN	Order proposal number	7,0
QOPLPS	Subnumber - order proposal	3,0
QOPLP2	Subnumber - order proposal	5,0
QOGETY	Generation reference	2
QOACTP	Action message (AM)	2
QONUAU	Number of automatic updates	5,0
QORELD	Release date	8,0
QOSTDT	Start date	8,0
QOFIDT	Finish date	8,0
QOMSTI	Start time	4,0
QOMFTI	Finish time	4,0
QOPLDT	Planning date	8,0
QONNDT	Alternate planning date	8,0
QOORQA	Ordered quantity - alternate U/M	15,6
QOMAUN	Manufacturing U/M	3
QOPPQT	Planned quantity	15,6
QORESP	Responsible	10
QOPSTS	Status - order proposal	2
QORORN	Reference order number	7
QORORL	Reference order line	6,0
QORORC	Reference order category	1,0
QOPRIP	Priority	1
QOWHST	Status - manufacturing order	2

Field name	Description	Size
QOAOID	Alternative routing	2
QOPLGR	Work center	8
QOPRDY	Production days	5,2
QOORDP	Order dependent	1,0
QORORH	Reference order number	7
QOECVE	Revision number	4
QOLTRE	Share of lead time	3,0
QOORTY	Order type	3
QOPGNM	Program name	10
QOPROJ	Project number	7
QOELNO	Project element	8
QOGRTI	Group technology class	10
QOSCHN	Schedule number	8,0
QOMSPM	Material shortage purchase/manufacturing	2,0
QOMSCD	Date for latest material shortage check	8,0
QOTSPM	Tool shortage	1,0
QOUPMP	Update material plan	1,0
QOMRPR	Maintenance requirement proposal	1,0
QOAECN	Engineering order number	7
QODEID	Complaint	7,0
QOOPED	Operational tolerance - date	8,0
QOETD1	Economical tolerance date 1	8,0
QOETD2	Economical tolerance date 2	8,0
QONHAI	Next item number	15
QONHSN	Next serial number	12
QOAPRB	Approved by	10
QORSCD	Transaction reason	3

Field name	Description	Size
QOHOMA	Hole or material oriented service	1,0
QOBLTA	Item or configuration oriented service	1,0
QOMVA1	Meter value 1	15,6
QOMVA2	Meter value 2	15,6
QOMVA3	Meter value 3	15,6
QOMVA4	Meter value 4	15,6
QOMETE	Selected meter	1,0
QOMVB1	Actual meter value 1	15,6
QOMVB2	Actual meter value 2	15,6
QOMVB3	Actual meter value 3	15,6
QOMVB4	Actual meter value 4	15,6
QOMES1	Meter 1	6
QOMES2	Meter 2	6
QOMES3	Meter 3	6
QOMES4	Meter 4	6
QOFSER	First service	1,0
QOEXNO	Concession number	7
QONUM2	Number	3,0
QOMPRN	Main product number	15
QOMSTR	Main structure type	3
QOMSUF	Main service	20
QOMWNO	Work order number	7,0
QORLSR	Released configuration orders	15,6
QOCFGH	NHA configuration position	15
QOCFGL	Configuration position	15
QOAURE	Authorized	10
QORBAM	Request budget amount	17,6

Field name	Description	Size
QOEVTY	Event type	10
QOTX40	Description	40
QOCFI1	User-defined field 1 - item	10
QOCFI2	User-defined field 2 - item	15,2
QOCFI3	User-defined field 3 - item	3
QOCFI4	User-defined field 4 - item	5
QOCFI5	User-defined field 5 - item	1
QOSCHD	Scheduled maintenance service	1,0
QOSPR1	Specific requirement category	5
QOSPR2	Specific requirement category	5
QOSPR3	Specific requirement category	5
QOSPR4	Specific requirement category	5
QOSPR5	Specific requirement category	5
QOSPR6	Specific requirements	15
QOSPR7	Specific requirements	15
QOSPR8	Specific requirements	15
QOSPR9	Specific requirements	15
QOSPR0	Specific requirements	15
QOCADA	Calendar date	8,0
QOTOFP	Process type	3
QOSRGP	Service group	5
QOWMLI	Inventory maintenance	1,0
QONSTP	Shutdown	1,0
QOTXID	Text identity	13,0
QOCLGP	Color group	2,0
QORIFD	Reschedule in - filter date	8,0
QOROFD	Reschedule out - filter date	8,0

Field name	Description	Size
QOTSDA	APP timestamp	8,0
QOTSTE	APP timestamp	6,0
QOPULD	Pull-up of delayed orders	1,0
QOPULN	Pull-up of early orders	1,0
QOSUBN	Sub-network mark	1,0
QOPRAP	APP processed	1,0
QORGDT	Entry date	8,0
QORGTM	Entry time	6,0
QOLMDT	Change date	8,0
QOCHNO	Change number	3,0
QOCHID	Changed by	10
QOPRNS	Service product	15
QOSPRQ	Specific requirement category	5
QOSPRT	Specific requirements	15

Table 81. Input Parameters - MITILS01

Field name	Description	Size
MQCONO	Company	3,0
MQWHLO	Warehouse	3
MQITNO	Item number	15
MQFSLT	From stock zone	2
MQTSLT	To stock zone	2
MQTWSL	To location	10
MQSEQN	Sequence	7,0
MQRESP	Responsible	10
MQSTAT	Status	2
MQTRNR	Order number	7
MQPONR	Line number	3,0

Field name	Description	Size
MQPOSX	Line suffix	2,0
MQTRQT	Transaction quantity - basic U/M	15,6
MQRGDT	Entry date	8,0
MQRGTM	Entry time	6,0
MQLMDT	Change date	8,0
MQCHNO	Change number	3,0
MQCHID	Changed by	10

MNS950 - Output Resend

The purpose of MNS950 is to resend output to servers that have not responded.

MNS950 resends output that is not older than 24 hours, after that they have to be manually resent from MNS206.

Table 82. Updated tables - Output Resend

Table	Description
CCTLSF	Control Stream table

Entry of MO - MOS005

The auto start job 'Entry of MO' (MOS005) monitors the new requests for manufacturing orders and creates maintenance orders accordingly.

Table 83. Programs that create records in the ASJ table MMO005

Program	Description
MOS001	Register work orders
MOS914	Create WO from Planned WO
MOS917	Create WO direct for Planned WO

Table 84. Programs that create records in the ASJ table MMO001

Program	Description
MOS001	Register work orders
MOS005	Create work order
MOS914	Create W/O from order proposals
MOS917	Create WO direct for Planned WO

Table 85. Input parameters - MMO005

Field name	Description	Size
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0
ZACONO	Company	3,0
ZATTYP	Stock transaction type	2,0
ZASACC	Sequence number interval	2,0
ZAGETP	Origin	1,0
ZACDCD	Costing decimals	1,0
ZAPGNM	Program name	10
ZAJNA	Job name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZACHID	Changed by	10
ZATSTM	Timestamp	26

Table 86. Input parameters - MMO001

Field name	Description	Size
ZACONO	Company	3,0
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0

Field name	Description	Size
ZAPRT	Job time	6,0
ZALEVL	Lowest level	2,0
ZAFACI	Facility	3
ZAPRNO	Product number	15
ZACFIN	Configuration number	7,0
ZAECVS	Simulation round	3,0
ZAFIDT	Finish date	8,0
ZASTDT	Start date	8,0
ZAMSTI	Start time	4,0
ZAMFTI	Finish time	4,0
ZAORTY	Order type	3
ZALTRE	Share of lead-time	3,0
ZALTEX	Share of lead time	9,0
ZAORQA	Ordered quantity - alternate U/M	15,6
ZAMAUN	Manufacturing U/M	3
ZARESP	Responsible	10
ZAWHLO	Warehouse	3
ZAWHSL	Location	10
ZABANO	Lot number	12
ZAEQNO	Equipment number	15
ZARORN	Reference order number	10
ZARORL	Reference order line	6,0
ZARORC	Reference order category	1,0
ZANUC1	Number of put-away cards	2,0
ZANUC2	Number of material requisitions	2,0
ZANUC3	Number of labor tickets	2,0
ZANUC4	Number of shop travelers	2,0

Field name	Description	Size
ZANUC5	Number of routing cards	2,0
ZANUC6	Number of picking lists	2,0
ZANUC7	Number of design documents	2,0
ZABDCD	Explosion	1,0
ZAPRIO	Priority	1,0
ZAWHST	Lowest status - MO	2
ZANUBA	Number of batches	5,0
ZAWLDE	Load dependent	1,0
ZASDTB	Same date for batches	1,0
ZAVANO	Product variant	15
ZAPRHL	Product number highest level	15
ZAMFHL	MO-number highest level	7,0
ZAPRLO	Product number overlying level	15
ZAMFLO	MO-number higher level	7,0
ZAMSLO	Serial number overlying level	4,0
ZAWOSQ	MO reporting number	9,0
ZALVSQ	Level sequence	3,0
ZALECD	Lowest level	2,0
ZARNBA	Number of batches	5,0
ZADONE		1,0
ZASTRT	Product structure type	3
ZADIVI	Division	3
ZAAOID	Alternative routing ID	2
ZASTRD	Structure date	8,0
ZACFI1	Configuration number	7,0
ZAECV1	Simulation round	3,0
ZAPLPN	Order proposal number	7,0

Field name	Description	Size
ZAPLPS	Subnumber - planned order	3,0
ZAPLP2	Subsubnumber - planned order	5,0
ZAPGNM	Program name	10
ZAPROJ	Project number	7
ZAELNO	Project element	8
ZASCHN	Schedule number	11,0
ZASUFI	Service	20
ZATTYP	Stock transaction type	2,0
ZANHAI	Next item number	15
ZANHSN	Next serial number	12
ZACFGL	Configuration position	15
ZARSCD	Transaction reason	3
ZABLTA	Competing meters	1,0
ZAHOMA	Hole or material oriented service	1,0
ZASCHD	Scheduled maintenance service	1,0
ZAZSET	Service level	1,0
ZAINSR	Removal	1,0
ZAHIIT	Highest item	15
ZAHISN	Serial number highest level	12
ZAAECN	Engineering order number	7
ZADEID	Complaint	7,0
ZAMPRN	Main product number	15
ZAMSTR	Main structure type	3
ZAMSUF	Main service	20
ZATTYP	Stock transaction type	2
ZAMUIN	Multiple part removal	1,0
ZADOPC		1,0

Field name	Description	Size
ZAMSRE		1,0
ZAWCLN	Production line	8
ZATXID	Text identity	13,0
ZAURE	Authorized	10
ZAEVTY	Event type	10
ZATX40	Description	40
ZANSTP	Shutdown	1,0
ZASPR1	Specific requirement category	5
ZASPR2	Specific requirement category	5
ZASPR3	Specific requirement category	5
ZASPR4	Specific requirement category	5
ZASPR5	Specific requirement category	5
ZASPR6	Specific requirement	15
ZASPR7	Specific requirement	15
ZASPR8	Specific requirement	15
ZASPR9	Specific requirement	15
ZASPR0	Specific requirement	15
ZAMWNO	Work order number	7,0
ZAPLGR	Work center	8
ZAPRTX	Text identity	13,0
ZAPOTX	Text identity	13,0
ZADISI	Disturbance	7,0
ZATAIL	Registration number/site	15
ZASEQC	Sequence	2,0
ZAALD2	Log date	8,0
ZAATOT	Departure	7,4
ZAATNR	Attribute number	17,0

Field name	Description	Size
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZATMSX	Time suffix	3,0
ZALMDT	Change date	8,0
ZACHNO	Change number	3,0
ZACHID	Changed by	10
ZATSTM	Timestamp	26

Table 87. Updated tables - MOS005

Table	Description
MWOPLP00	Maintenance order proposal
MWOPLA00	Planning proposal maintenance order
ADECPL00	Complaints
MILOIN00	Serial number
MMO00100	Create work order
MMO00110	Create work order
MMO00200	Work order proposal operation
MMO00300	Work order materials
MMO00400	Work order several individual
MMO01500	Change work order
MMOHED00	Work order header
MMOMAT00	Work order materials
MMOMAT20	Work order materials
MMOOPE00	Work order operations
CACCST00	Accounting string
MMOOPS00	Routing operation activity description
MMOPP00	Routing operation activity, permit lines

Table 88. Related ASJs and functions - MOS005

Functions Name	Description
CCHKMTN	Check if main product > variance product
CRS983	Text, copy
CRS985	Copy text between different tables
CRTVNBR	Retrieve number
MOS900	Calculate quantities on work order
MOS905	Calculate lead-time on work order
MOS997	Create CJBCMD for simulation and calculation

MOS015 - WO Rescheduling

The auto start job 'Reschedule WO' (MOS015) monitors the request for re-planning of manufacturing orders and re-plans accordingly.

Table 89. Programs that create records in the ASJ table MMO015

Program	Description
MOS010	Maintenance Order - WO. Reschedule
MOS020	WO Operation. Reschedule
MOS025	Combined reschedule
MOS130	Work order scheduling
MOS985	Replan MO after operation finish report
RPS002	Action Message. Open per Item
MOMNGWOP	Manage work orders. Function program

Table 90. Input parameters - MMO015

Field name	Description	Size
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0
ZACONO	Company	3,0

Field name	Description	Size
ZATTYP	Stock transaction type	2,0
ZAPGNM	Program name	10
ZAJNA	Job name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZACHID	Changed by	10
ZATSTM	Timestamp	26

Table 91. Input parameters - MMO010

Field name	Description	Size
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0
ZAFACI	Facility	3
ZAPRNO	Product number	15
ZAMFNO	Manufacturing order number	7,0
ZAOPNO	Operation number	4,0
ZAFIDT	Finish date	8,0
ZASTDT	Start date	8,0
ZAMSTI	Start time	4,0
ZAMFTI	Finish time	4,0
ZALTRE	Lead-time reduction	3,0
ZAORQA	On order alternate U/M	15,6
ZAMAUN	Manufacturing U/M	3
ZAPRIO	Priority	1,0
ZAWLDE	Load dependent	1,0
ZANSOP	Operation split not allowed	1,0
ZARPLL	Re-scheduling lower levels	1,0

Field name	Description	Size
ZARPOE	Re-scheduling upstream operations	1,0
ZARPOA	Re-scheduling downstream operations	1,0
ZAPRLO	Product number overlying level	15
ZAMFLO	MO-number higher level	7,0
ZAMSLO	Serial number overlying level	4,0
ZAPROB	Product number	15
ZAMFOB	Manufacturing order number	7,0
ZAOPOB	Operation number	4,0
ZALEVL	Lowest level	2,0
ZALVSQ	Level sequence	3,0
ZADONE		1,0
ZATTYP	Stock transaction type	2,0
ZAPGNM	Program name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZALMDT	Change date	8,0
ZACHNO	Change number	3,0
ZACHID	Changed by	10
ZANFAC	New facility	3
ZADEFR	Defer work order	1,0
ZAMRES	Material reservation	1,0
ZASTD2	Start date	8,0
ZAMVA1	Meter value 1	15,6
ZAMVA2	Meter value 2	15,6
ZAMVA3	Meter value 3	15,6
ZAMVA4	Meter value 4	15,6

Table 92. Updated tables

Table	Description	
MMO01010	Start record for change/delete MO	
MMO01015	Start record for change/delete MO	
MMOHED00	Work order header	
MMOHED40	Work order header	
MMOOPE00	WO operations	

Table 93. Related ASJs and functions

	Name	Description
ASJ:	None	
Functions:	MOS900	Calculate quantities of WO
	MOS905	Calculate lead time on WO
	PMS910	Remove workload

MOS035 - WO Deletion

The auto start job 'Deletion of WO' (MOS035) monitors request for deletion of manufacturing orders and deletes accordingly.

Table 94. Programs that create records in the ASJ table

Program	Description
MOS030	Maintenance Order - WO. Delete
MOS031	Change facility on WO
MOS641	Mass deletion of WO

Table 95. Input parameters - MOS035

Field name	Description	Size
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0

Field name	Description	Size
ZACONO	Company	3,0
ZATTYP	Stock transaction type	2,0
ZAPGNM	Program name	10
ZAJNA	Job name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZACHID	Changed by	10
ZATSTM	Timestamp	26

Table 96. Input parameters - MMO010

Field name	Description	Size
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0
ZAFACI	Facility	3
ZAPRNO	Product number	15
ZAMFNO	Manufacturing order number	7,0
ZAOPNO	Operation number	4,0
ZAFIDT	Finish date	8,0
ZASTDT	Start date	8,0
ZAMSTI	Start time	4,0
ZAMFTI	Finish time	4,0
ZALTRE	Lead-time reduction	3,0
ZAORQA	On order alternate U/M	15,6
ZAMAUN	Manufacturing U/M	3
ZAPRIO	Priority	1,0
ZAWLDE	Load dependent	1,0
ZANSOP	Operation split not allowed	1,0

Field name	Description	Size
ZARPLL	Re-scheduling lower levels	1,0
ZARPOE	Re-scheduling upstream operations	1,0
ZARPOA	Re-scheduling downstream operations	1,0
ZAPRLO	Product number overlying level	15
ZAMFLO	MO-number higher level	7,0
ZAMSLO	Serial number overlying level	4,0
ZAPROB	Product number	15
ZAMFOB	Manufacturing order number	7,0
ZAOPOB	Operation number	4,0
ZALEVL	Lowest level	2,0
ZALVSQ	Level sequence	3,0
ZADONE		1,0
ZATTYP	Stock transaction type	2,0
ZAPGNM	Program name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZALMDT	Change date	8,0
ZACHNO	Change number	3,0
ZACHID	Changed by	10
ZANFAC	New facility	3
ZADEFR	Defer work order	1,0
ZAMRES	Material reservation	1,0
ZASTD2	Start date	8,0
ZAMVA1	Meter value 1	15,6
ZAMVA2	Meter value 2	15,6
ZAMVA3	Meter value 3	15,6
ZAMVA4	Meter value 4	15,6

Table 97. Updated tables

Table	Description
MITCOS20	Item calculation values
MPDCHF20	Configuration header table
MPDSDM00	Simulation design main table
MPDSIH00	Simulation product table
MMO01010	Start record for change/delete WO
MMO01015	Start record for change/delete WO
MWOCPN00	Co-product /operation number
MMOHED00	Work order header
MMOHED40	Work order header
MMOMAT00	Work order materials
MMOOPE00	WO operations
MMOPHA00	Work order used phantoms
MMOCPN00	Co-product per operation number
MMOOPS00	Routing operation activity description
MMOOPP00	Routing operation activity, permit lines
MMORCO00	Rate compensators per material
MPDSIS00	Simulation product table
MCHEAD30	Costing header table
MCCOMA00	Costing component aggregated
MCCOML00	Costing component this level
MCCWAR00	Calculation warnings
MILOIN00	Serial number
MGLINE30	Stock transaction, detail
MGHEAD00	Stock transaction, head
MGLLOG00	Transaction line change log
MWOPLA30	Planning proposal maintenance order
ACUORH00	Maintenance Customer Order Head

Table	Description
CPOCAW00	Post calculation maintenance
MITPCC00	Planning calculation control
MOOPGM00	EO Program
MMOSPE00	Maintenance order head several individual
OOLINE00	Customer order line

Table 98. Related ASJs and functions

	Name	Description
ASJ:	None	
Functions:	CRS984	Delete text
	MMS910	Update planning overview
	MMS921	Allocation
	MOS912	WO Proposal
	MOS935	Create proposal lines from order
	PPS912	PO Proposal
	PMS910	Remove workload

MOS930 - WO Operation Time Calculation

The auto start job 'Calculate Operation Times' (MOS930) calculates time of reported operations in maintenance orders and/or work orders.

Table 99. Programs that create records in the ASJ-table

Program	Description
MOS880	Update of Maintenance order operation
MOS885	Start and stop of work group on Maintenance order operation

Table 100. Input parameters - MOS930

Field name	Description	Size
DECONO	Company number	3,0

Field name	Description	Size
DETRTY	Transaction type	2
DESDAT	Transaction date	8,0
DESTTE	Transaction time	6,0
DECANO	Card number	10,0
DEWOSQ	Reporting number MO or WO	9,0
DEMXMO	Transaction from Maintenance order 0/1	1,0
DEMXPM	Transaction from Work order 0/1	1,0
DEJNA	Job name	10
DERGDT	Registration date	8,0
DERGTM	Registration time	6,0
DECHID	Changed by User	10
DETSTM	Time mark	26

Table 101. External parameters

Parameter	Specified in
Settings - Reporting/facility	MOS990
Time calculation method when reporting operation	MOS991

MOS960 - WO Load

The auto start job 'Load' (MOS960) recalculates work-load based on signals from the auto start jobs 'Entry of WO' (MOS005), 'Reschedule WO' (MOS015) and 'Deletion of WO' (MOS035). Programs that create records in the ASJ table.

Table 102. Programs that create records in the ASJ-table

Program	Description
DCS0H0	Stop operation
MOS065	Auto report WO material
MOS070	WO Operation. Report
MOS070MI	Maintenance time report

Program	Description
MOS085	Inspection results - print
MOS085MI	Inspections
MOS143	Work order documents - print
MOS872	Update operations
MOS905	Calculate lead time on WO
PPS322	Handling external repair

Table 103. Input parameters - MOS960

Field name	Description	Size
ZACONO	Company	3,0
ZATTYP	Stock transaction type	2,0
ZAFACI	Facility	3
ZAPRNO	Product number	15
ZAMFNO	Manufacturing order number	7,0
ZAOPNO	Operation number	4,0
ZAPGNM	Program name	10
ZAJNA	Job name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZACHID	Changed by	10
ZATSTM	Timestamp	26

Table 104. Updated tables

Table	Description
MOS960RR	Change workload

Table 105. Related ASJs and functions

Name	Description
PMS910	Remove workload
MOS970	Calculate remaining time on WO operation
CPSS991	Re-create workload

MWS910 - Rescheduling Planning Date

MWS910 - Rescheduling Planning Date is designed to handle all types of orders. It functions as follows:

1 Detect that an acquisition order has changed date/time.

This mostly happens in MMS910. We save the date for the MITPLO record that is being changed, then check after the change if the date/time changed. If it did, then we also check if any links exist (a link can be either an order initiated link or a pre-allocation). If any links exist then we write a record to table MMW910 to trigger a rescheduling.

MMS910 checks for the change and calls MMMNGPRR with *RESC if a link exists. MMMNGPRR calls MMMNGPRA with *DATE to write to MMW910.

A number of programs write to MMW910 directly. This is usually because they update MITPLO directly OR they deal with line type 2 (no MITPLO exists).

2 Write a record to MMW910.

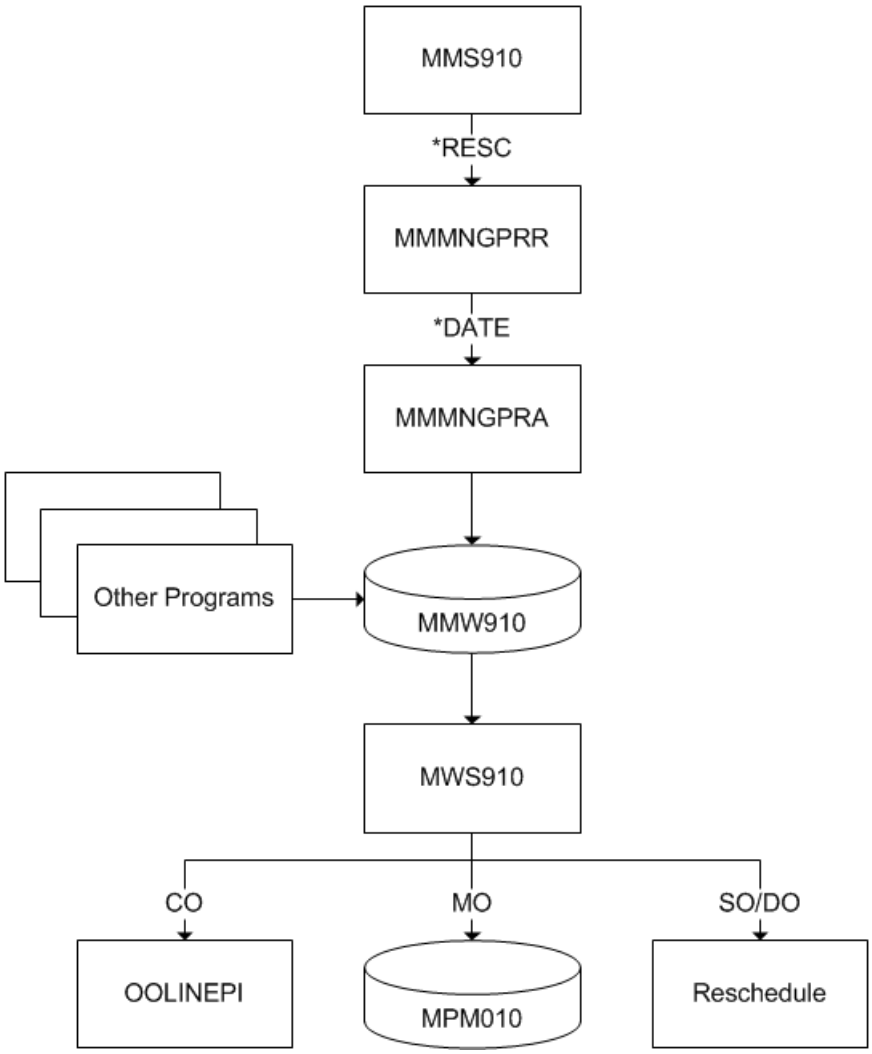
3 Perform or trigger the reschedule.

This is done by MWS910. This is an auto start job.

MWS910 waits for new records to be written into table MMW910. When a new record arrives it is processed by MWS910, then deleted.

MWS910 first checks if the order to be rescheduled has rescheduling turned on (this is a flag on the various order types). If so, then it performs a reschedule according to the type of order. In all cases notification is done if required according to a parameter passed in MMW910 (message 256 in M3 Mail).

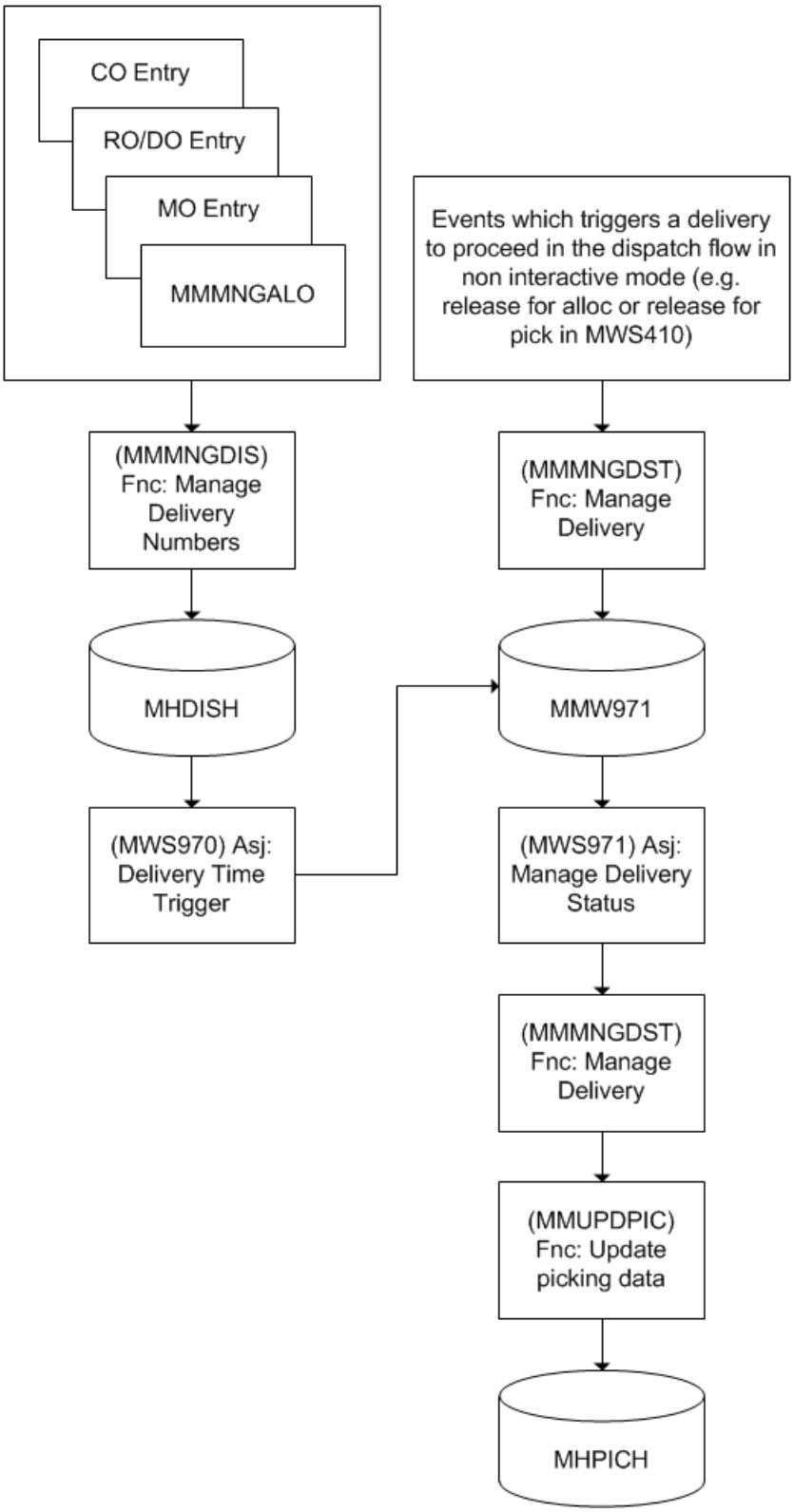
- CO is done in MWS910 by calling OOLINEPI.
- Service orders are done inside MWS910 itself.
- RO/DO is done inside MWS910.
- MO rescheduling is done by writing a record to MPM010. Note that we reschedule the start date of the connected operation in all cases except when the acquisition order that triggered the reschedule is a subcontract PO. For subcontract operations we reschedule using the new date as the finish date.



MWS970 - Delivery Time Trigger

The auto start job 'Delivery Manager Time Trigger' (MWS970) monitors the deliveries (MHDISH) of status 01. If the current date/time exceeds the transaction date/time a trigger record is written to the work table MMW971 for further processing.

Programs that create records in the ASJ table



MWS971 - Delivery Status

The auto start job 'Manage Delivery Status' (MWS971) monitors the trigger records of MMW971 and calls MMMNGDST where the deliveries are processed according to the dispatch settings of the delivery.

The programs that create records in the MMW971 table are shown in the chart for MWS970.

Table 106. Input parameters - MMW971

Field name	Description	Size
J1CONO	Company	3,0
J1DLIX	Delivery number	10
J1WHLO	Warehouse	3
J1PLRI	Wave number	10
J1PGNM	Program name	10
J1OPC	Operation code	10
J1COPL	Wave line	1/0
J1JNA	Job name	10
J1RGDT	Entry date	8/0
J1RGTM	Entry time	6/0
J1CHID	Changed by	10
J1TSTM	Timestamp	26

MWS972 - Printout Picking Lists

The auto start job 'Manage Printout Picking List' (MWS972) monitors the work table MMW972 and calls MWS435, MWS46, MWS437 and MWS438 which reads through the work table MITDPR for records related to the specific program and finally generate the printout/stream table.

Programs that create records in the ASJ table

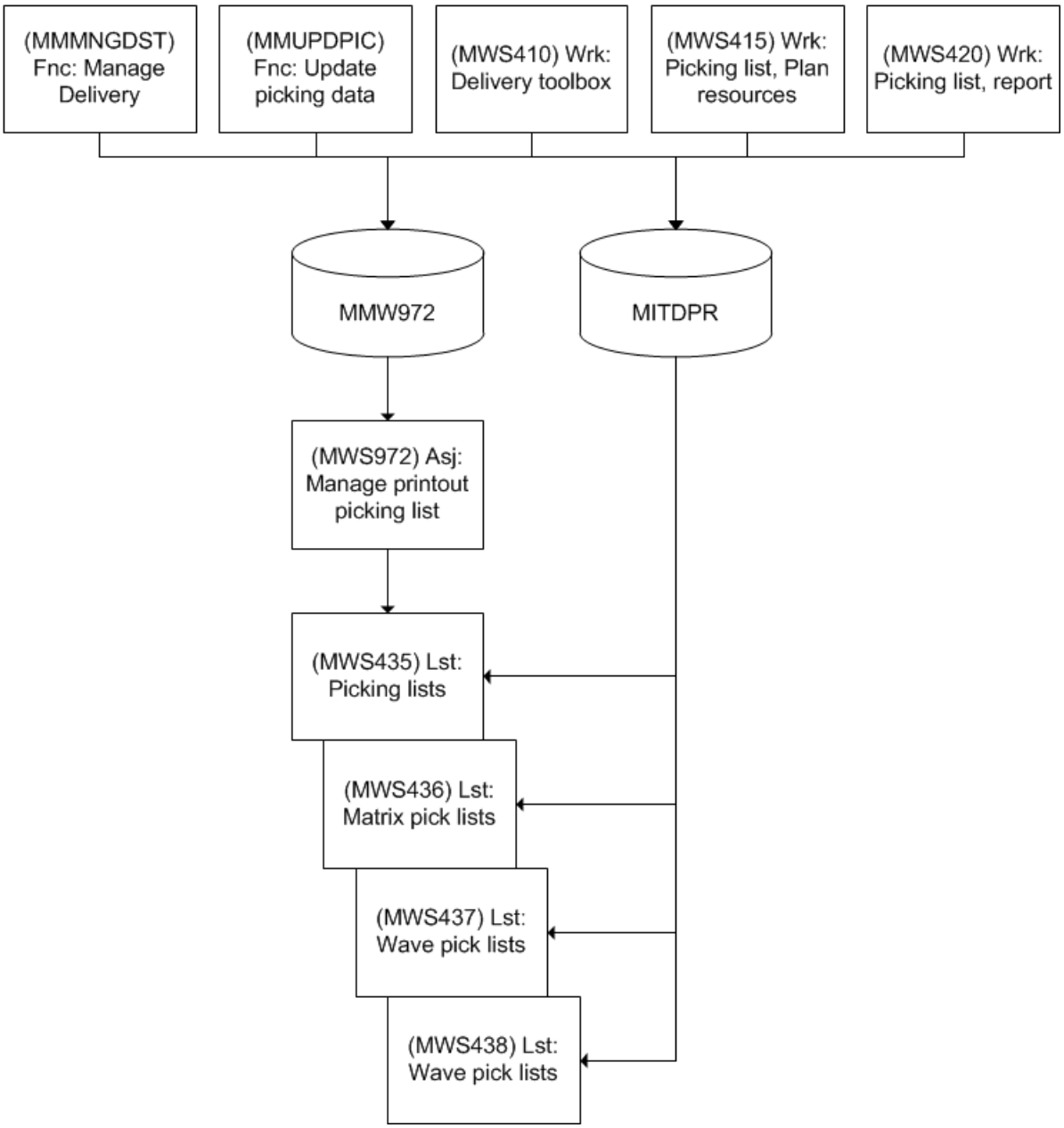


Table 107. Input parameters - MMW972

Field name	Description	Size
J2CONO	Company	3,0
J2WHLO	Warehouse	3
J2BJNO	Job number	18

Field name	Description	Size
J2PGNM	Program name	10
J2JNA	Job name	10
J2RGDT	Entry date	8/0
J2RGTM	Entry time	6/0
J2CHID	Changed by	10
J2TSTM	Timestamp	26

MWS973 - Auto Receipt DO

This auto start job is used when alternative 2=Auto DO receipts, is selected in 'Dispatch Policy. Open' (MWS010), parameter **220 Auto DO receipt** is selected.

Automatic DO receipt reporting based on an estimated receiving date (transaction date and time of the inbound delivery). This date is calculated by auto start job MWS973 as being the departure date and time of the outbound delivery + the transportation time defined in (DPS001).

MWS973 monitors the work table MMW972 and updates MMW973.

MWS975 - Create Inbound Delivery

This auto start job is used when alternative 1=At Order Entry, is selected in 'Dispatch Policy. Open' (MWS010), parameter **220 Create inbound Delivery** is selected.

For receipt of DO inbound delivery is needed first when dispatch of DO is done. If not activating 220 then the Inbound delivery is created when outbound is fully dispatched. By activating 220 it will be possible to monitor the inbound side directly after order is entered in Delivery toolbox MWS490.

MMMNGDIS updates MMW975.

DRS900 - Shipment Time Triggers

This auto start job monitors all shipments (table DCONSI) that have a lowest status of >=10 and manual connect flag of 0 or 1. If it is found that the deadline date/time has passed, then the manual connect flag is changed to 2.

When this occurs, if it is found that the lowest status is 60, then the SHIPMENT_ISSUED event is triggered.

DRS901 - Process SHIPMENT_ISSUED Event

This ASJ processes all occurrences of the SHIPMENT_ISSUED event that have occurred in DRS900.

DRS901 monitors the work table DRD901.

MWS974 - Asynchronous Document Production

This auto start job is used document production from Event Based Document Control triggers a document to be produced asynchronously. Asynchronous production of EDC documents is controlled via the flag on MWS145/E.

MWS974 monitors the work table MMW974.

OIS950 - Print Out of CO Documents

The auto start job 'Next Manual Function' (OIS950) is used to initiate printout of customer order documents marked for automatic printout.

Programs that create records in the ASJ table

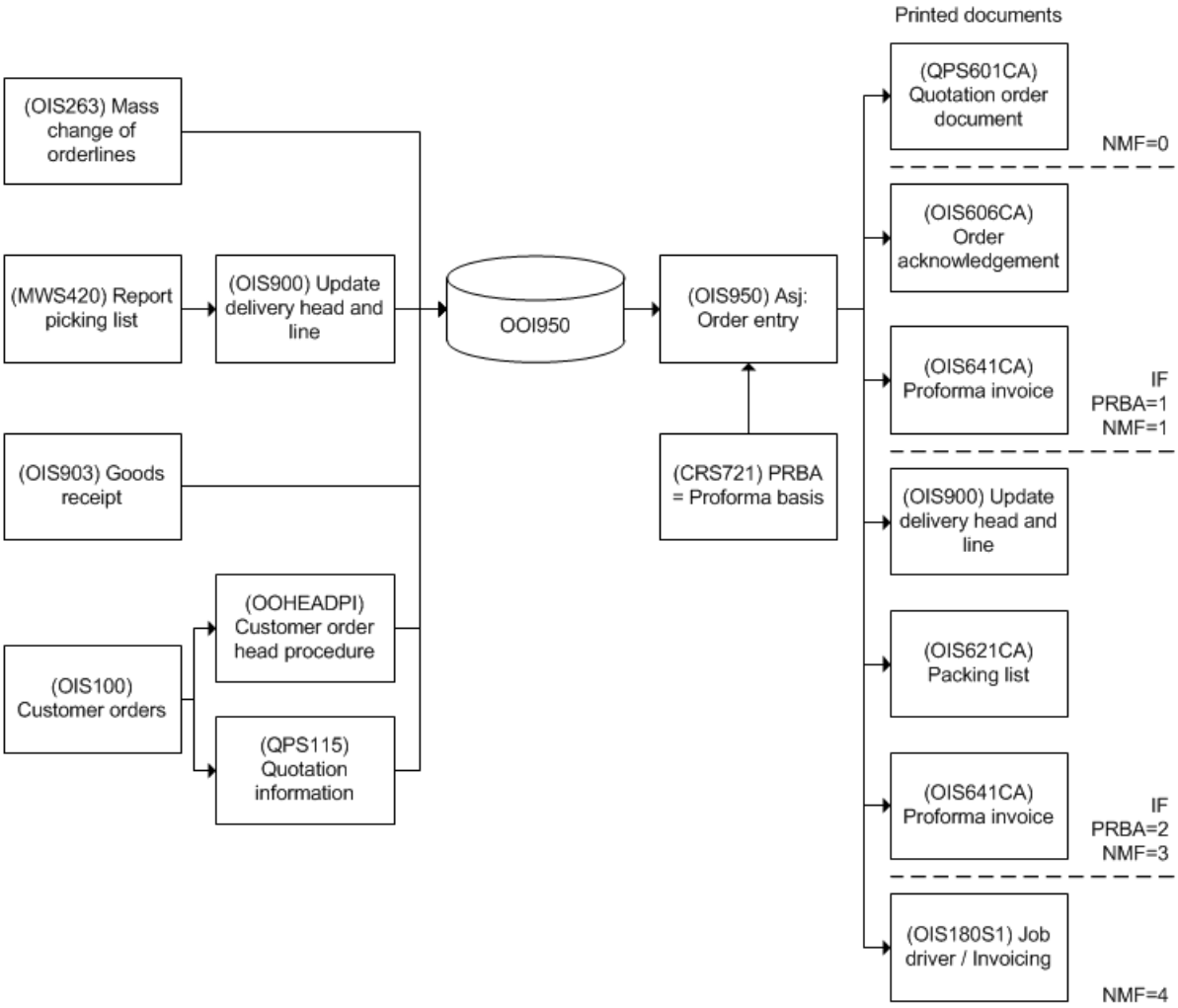


Table 108. Input parameters - OOI950

Field name	Description	Size
OZCONO	Company	3,0
OZDIVI	Division	3
OZORNO	Customer order number	7
OZDLIX	Delivery index	3,0
OZWHLO	Warehouse	3
OZNEXT	Next manual function	1,0
OZNEX1	Next manual function	1 ,0
OZDEVD	Workstation	10
OZNEXX	Next manual function	1,0
OZJNA	Job name	10
OZPGNM	Program name	10
OZRGDT	Entry date	8,0
OZRGTM	Entry time	6,0
OZCHID	Changed by	10
ZDCONO	Company	3,0
ZDDCFM	Decimal format	1
ZDDTFM	Date format	3
ZDAUPF	User group - function access	10
ZDREPF	Display item name in own language	1,0
ZDCMTP	Company type	1,0
ZDLOCD	Local currency	3
ZDDMCU	Currency conversion method	1,0
ZDLCDC	Number of decimal places	1,0
ZDLANC	System language	2
ZDAUFI	Authority fields	40
ZDTTBL	Table	10
ZDACMT	Accounting price	1,0

Field name	Description	Size
ZDMXDR	Excess generates DO return	1,0
ZDPCPA	Costing parameter company	1,0
ZDCDCD	Costing decimal places	1,0
ZDROW3	Information line 3 - panel/report	78
ZDDIVI	Division	3
ZDRESP	Responsible	10
ZDMXMS		1,0
ZDSTRT	Product structure type	3
ZDSTTK	Standard product structure type for kit	3
ZDMUNI	Yes/no	1,0
OZTSTM	Timestamp	26

OSS900 - Order Entry Statistics Detail

The auto start job 'Order Entry Statistics Detail' (OSS900) monitors the customer order lines that should be included in the detailed order entry statistics (OSASTD) and checks whether the order line is new, changed or deleted. OSS900 updates the order entry statistics with these lines.

Programs that create records and get updated in the ASJ table

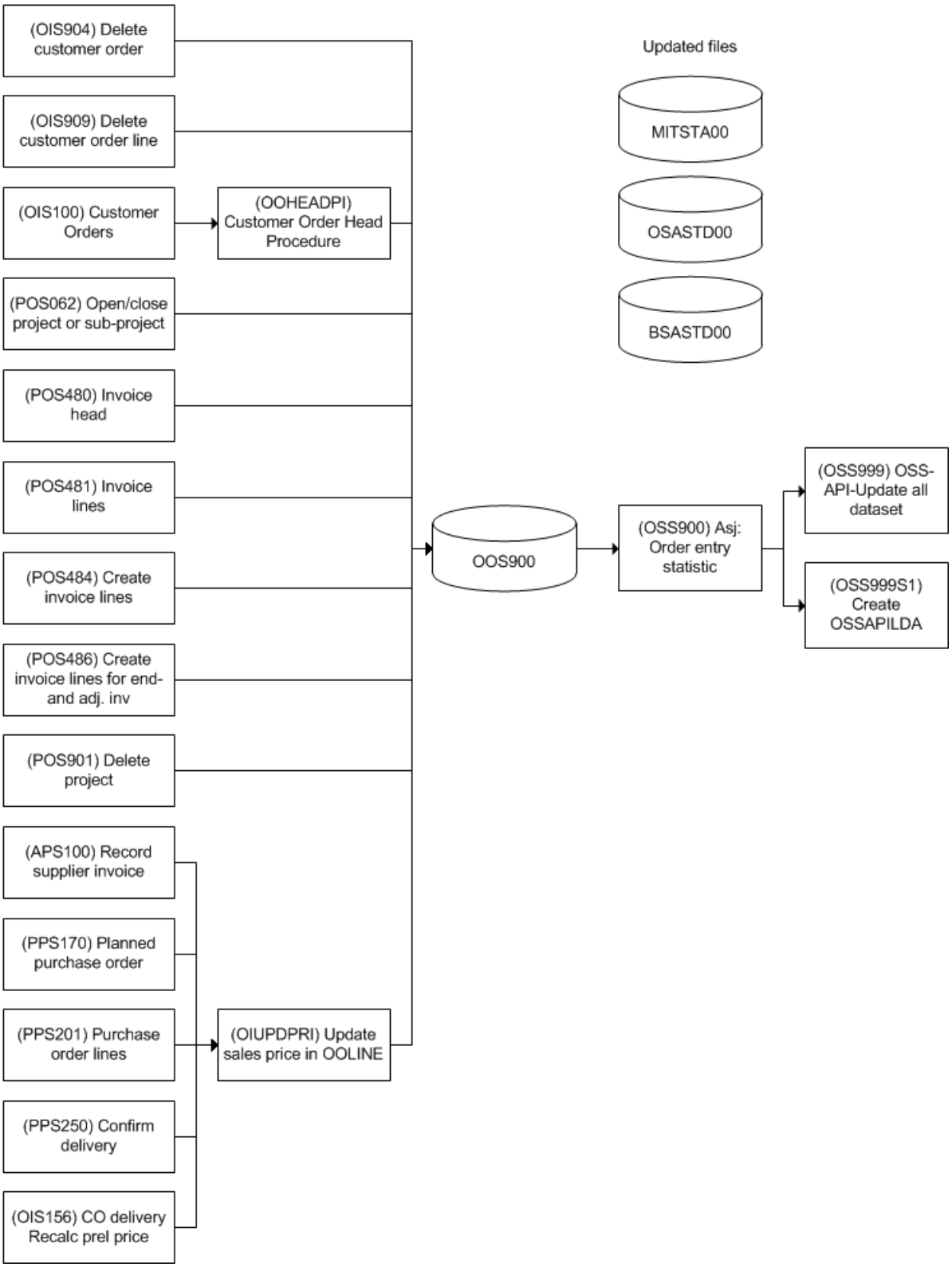


Table 109. Input parameters - OOS900

Field name	Description	Size
OUCONO	Company	3,0
OUDIVI	Division	3
OUORNO	Customer order number	7
OUPONR	Line number	3,0
OUPOSX	Line suffix	2,0
OUDLIX	Delivery index	3, 0
OUSPLT	Split code	1,0
OUPGNM	Program name	10
OUCMTP	Company type	1,0
OUSTRT	Product structure type	3
OUORIG	Origin	1,0
OUPROJ	Project number	7
OUELNO	Project element	8
OUJNA	Job name	10
OURGDT	Entry date	8,0
OURGTM	Entry time	6,0
OUCHID	Changed by	10
OUTSTM	Timestamp	26

OSS980 - Sales Entry Statistics Detail

The auto start job 'Sales Statistics Entry' (OSS980) monitors the customer order lines and service order lines, that have been delivered but not invoiced, that should be included in the 'Sales statistics' (OSBSTD). OSS980 updates the sales statistics with these lines.

Programs that create records and get updated in the ASJ table

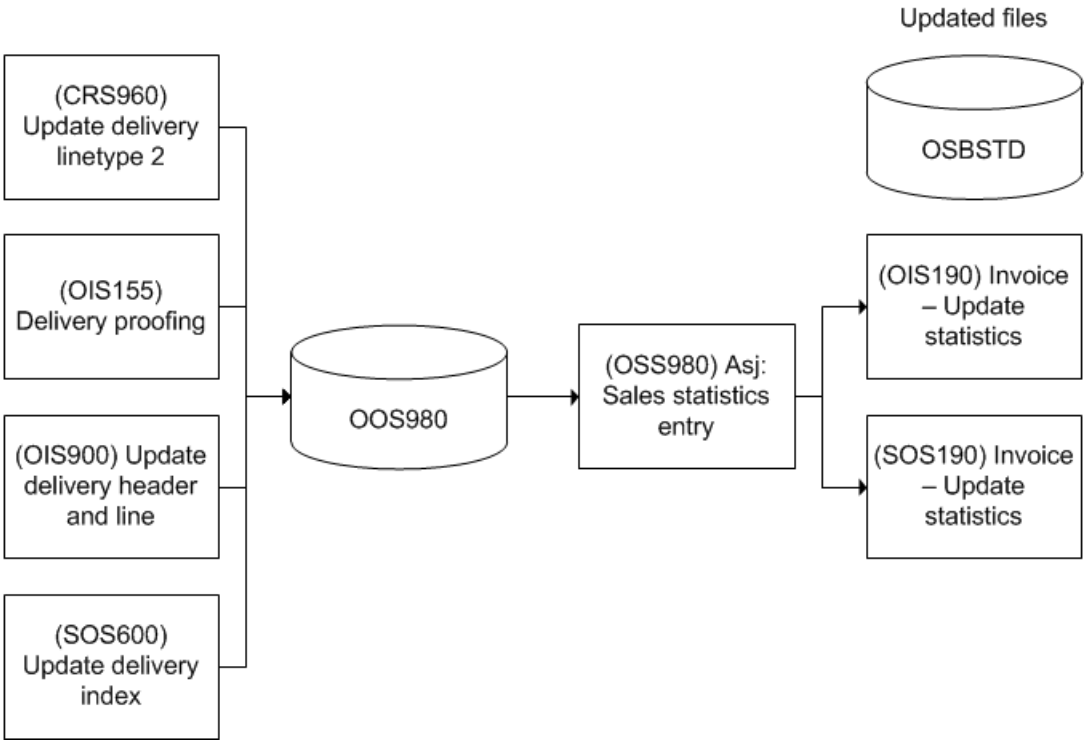


Table 110. Input parameters - OOS980

Field name	Description	Size
OUCONO	Company	3,0
OUDIVI	Division	3
OUORNO	Customer order number	7
OUDLIX	Delivery index	3,0
OUPONR	Line number	3,0
OUPOSX	Line suffix	2,0
OUWHLO	Warehouse	3
OUPGNM	Program name	10
OUORIG	Origin	1,0
OUDLCD	Delete	1,0
OUJNA	Job name	10
OURGDT	Entry date	8,0

Field name	Description	Size
OURGTM	Entry time	6,0
OUCHID	Changed by	10
OUTSTM	Timestamp	26

PMS005 - Entry of MO

The auto start job 'Entry of MO' (PMS005) monitors the new requests for manufacturing orders and creates manufacturing orders accordingly.

Table 111. Programs that create records in the ASJ table MPM005

Program	Description
OIS100	Customer Order. Open (if auto MO is 1 or 2)
OIS273	Read OXCNTR & INIT order tables
OIS300	Customer Order. Open Toolbox
OIS916	Update available for preliminary order
PMS001	Manufact Order. Enter
PMS914	Create W/O from order proposals
PMS995	Create records for MPM001 work orders

Table 112. Programs that create records in the ASJ table MPM001

Program	Description
OIS937	Create records for MPM001 work orders
PMS914	Create W/O from order proposals
PMS005	Create work order
PMS995	Create records for MPM001 work orders
PMS917	Create W/O direct for MO proposal
PMS101	Manufacturing Order. Open Lines

Table 113. Input parameters - MPM005

Field name	Description	Size
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0
ZACONO	Company	3,0
ZATTYP	Stock transaction type	2,0
ZASACC	Serial number range	2,0
ZAGETP	Origin	1,0
ZACDCD	Costing decimals	1,0
ZAPGNM	Program name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZACHID	Changed by	10
ZATSTM	Timestamp	26

Table 114. Input parameters - MPM001

Field name	Description	Size
ZACONO	Company	3,0
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0
ZALEVL	Lowest level	2,0
ZAFACI	Facility	3
ZAPRNO	Product number	15
ZACFIN	Configuration number	7,0
ZAECVS	Simulation round	3,0
ZAFIDT	Finish date	8,0
ZASTDT	Start date	8,0

Field name	Description	Size
ZAMSTI	Start time	4,0
ZAMFTI	Finish time	4,0
ZAORTY	Order type	3
ZALTRE	Share of lead-time	3,0
ZAORQA	Ordered quantity - alternate U/M	15,6
ZAMAUN	Manufacturing U/M	3
ZARESP	Responsible	10
ZAWHLO	Warehouse	3
ZAWHSL	Location	10
ZABANO	Lot number	12
ZARORN	Reference order number	7
ZARORL	Reference order line	6,0
ZARORC	Reference order category	1,0
ZANUC1	Number of put-away cards	2,0
ZANUC2	Number of material requisitions	2,0
ZANUC3	Number of labor tickets	2,0
ZANUC4	Number of shop travelers	2,0
ZANUC5	Number of routing cards	2,0
ZANUC6	Number of picking lists	2,0
ZANUC7	Number of design documents	2,0
ZABDCD	Explosion	1,0
ZAPRIO	Priority	1,0
ZAWHST	Lowest status - MO	2
ZANUBA	Number of batches	5,0
ZAWLDE	Load dependent	1,0
ZASDTB	Same date for batches	1,0
ZAVANO	Product variant	15

Field name	Description	Size
ZAPRHL	Product number highest level	15
ZAMFHL	MO-number highest level	7,0
ZAPRLO	Product number overlying level	15
ZAMFLO	MO-number higher level	7,0
ZAMSLO	Serial number overlying level	4,0
ZAWOSQ	MO reporting number	9,0
ZALVSQ	Level sequence	3,0
ZALECD	Lowest level	2,0
ZARNBA	Number of batches	5,0
ZADONE		1,0
ZASTRT	Product structure type	3
ZADIVI	Division	3
ZAAOID	Alternative routing ID	2
ZASTRD	Structure date	8,0
ZACFI1	Configuration number	7,0
ZAECV1	Simulation round	3,0
ZAPLPN	Order proposal number	7,0
ZAPGNM	Program name	10
ZAPROJ	Project number	7
ZAELNO	Project element	8
ZASCHN	Schedule number	8,0
ZASUFI	Service	20
ZATTYP	Stock transaction type	2,0
ZADOPC		1,0
ZAMSRE		1,0
ZAWCLN	Production line	8
ZARGDT	Entry date	8,0

Field name	Description	Size
ZARGTM	Entry time	6,0
ZALMDT	Change date	8,0
ZACHNO	Change number	3,0
ZACHID	Changed by	10
ZAITNO	Item number	15
ZAMFNO	Manufacturing order number	7,0
ZATSTM	Timestamp	26

Table 115. Updated tables

Table	Description
BPMOPO00	Manufacturing order proposal
MPDCHF20	Configuration header table
MPDSDM00	Simulation design main table
MPDSIH00	Simulation product table
MPM00100	Create work order
MPM00110	Create work order
MPM05P00	Create work order phantom table
MWOCPN00	Co-product per operation number
MWOHED00	Work order header
MWOMAT00	Work order materials
MWOMAT20	Work order materials
MWOOPE00	Work order operations
MWOPHA	Work order used phantoms
MWORCO00	Rate compensators per material
OOLINE00	Customer order, line
MWOPOL	Work Order Production Lots

Table 116. Related ASJs and functions

	Name	Description
ASJ:	None	
Functions:	CCHKMTN	Check if main product > variance product
	CRS975	Retrieve formula/matrix/feature value
	CRS983	Text, copy
	CRS985	Copy text between different tables
	CRTVNBR	Retrieve number
	PMS900	Calculate quantities on work order
	PMS905	Calculate lead-time on work order
	PMS997	Create CJBCMD for simulation and calculation
	PMS901	Create alt. material for MO

Reschedule MO (PMS015)

The autostart job 'Reschedule MO' (PMS015) monitors the request for re-planning of manufacturing orders and re-plans accordingly.

Table 117. Programs that create records in the ASJ table MPM015

Program	Description
PMS010	Manufact Order. Reschedule
PMS020	MO Operation. Reschedule
RPS002	Action Message. Open per Item
RPS102	Material Plan. Rescheduling

Table 118. Input parameters - MPM015

Field name	Description	Size
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0
ZACONO	Company	3,0

Field name	Description	Size
ZATTYP	Stock transaction type	2,0
ZAPGNM	Program name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZACHID	Changed by	10
ZATSTM	Timestamp	26

Table 119. Input parameters - MPM010

Field name	Description	Size
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0
ZAFACI	Facility	3
ZAPRNO	Product number	15
ZAMFNO	Manufacturing order number	7,0
ZAOPNO	Operation number	3,0
ZAFIDT	Finish date	8,0
ZASTDT	Start date	8,0
ZAMSTI	Start time	4,0
ZAMFTI	Finish time	4,0
ZALTRE	Lead-time reduction	3,0
ZAORQA	On order alternate U/M	15,6
ZAMAUN	Manufacturing U/M	3
ZAPRIO	Priority	1,0
ZAWLDE	Load dependent	1,0
ZANSOP	Operation split not allowed	1,0
ZARPLL	Re-scheduling lower levels	1,0
ZARPOE	Re-scheduling upstream operations	1,0

Field name	Description	Size
ZARPOA	Re-scheduling downstream operations	1,0
ZAPRLO	Product number overlying level	15
ZAMFLO	MO-number higher level	7,0
ZAMSLO	Serial number overlying level	4,0
ZAPROB	Product number	15
ZAMFOB	Manufacturing order number	7,0
ZAOPOB	Operation number	4,0
ZALEVL	Lowest level	2,0
ZALVSQ	Level sequence	3,0
ZADONE		1,0
ZATTYP	Stock transaction type	2,0
ZAPGNM	Program name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZALMDT	Change date	8,0
ZACHNO	Change number	3,0
ZACHID	Changed by	10
ZACRNS	Create new subcontract order	1,0

Table 120. Updated tables

Table	Description
MPM01010	Start record for change/delete MO
MPM01015	Start record for change/delete MO
MWOHED00	Work order header
MWOHED40	Work order header
MWOOPE00	MO operations
MWOPOL10	Work Order Production Lots
MWOOPS00	Routing operation activity description

Table 121. Related ASJs and functions

Name	Description
PMS900	Calculate quantities of MO
PMS905	Calculate lead time on MO
PMS910	Remove workload

Deletion of MO (PMS035)

The autostart job 'Deletion of MO' (PMS035) monitors request for deletion of manufacturing orders and deletes accordingly.

Table 122. Programs that create records in the ASJ table

Program	Description
PMS030	Manufact Order. Delete
PMS641	Mass deletion of MO

Table 123. Input parameters - MPM035

Field name	Description	Size
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0
ZACONO	Company	3,0
ZATTYP	Stock transaction type	2,0
ZAPGNM	Program name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZACHID	Changed by	10
ZATSTM	Timestamp	26

Table 124. Input parameters - MPM010

Field name	Description	Size
ZAJNU	Job number	6,0
ZAPRD	Job date	6,0
ZAPRT	Job time	6,0
ZAFACI	Facility	3
ZAPRNO	Product number	15
ZAMFNO	Manufacturing order number	7,0
ZAOPNO	Operation number	3,0
ZAFIDT	Finish date	8,0
ZASTDT	Start date	8,0
ZAMSTI	Start time	4,0
ZAMFTI	Finish time	4,0
ZALTRE	Lead-time reduction	3,0
ZAORQA	On order alternate U/M	15,6
ZAMAUN	Manufacturing U/M	3
ZAPRIO	Priority	1,0
ZAWLDE	Load dependent	1,0
ZANSOP	Operation split not allowed	1,0
ZARPLL	Re-scheduling lower levels	1,0
ZARPOE	Re-scheduling upstream operations	1,0
ZARPOA	Re-scheduling downstream operations	1,0
ZAPRLO	Product number overlying level	15
ZAMFLO	MO-number higher level	7,0
ZAMSLO	Serial number overlying level	4,0
ZAPROB	Product number	15
ZAMFOB	Manufacturing order number	7,0
ZAOPOB	Operation number	4,0
ZALEVL	Lowest level	2,0

Field name	Description	Size
ZALVSQ	Level sequence	3,0
ZADONE		1,0
ZATTYP	Stock transaction type	2,0
ZAPGNM	Program name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZALMDT	Change date	8,0
ZACHNO	Change number	3,0
ZACHID	Changed by	10
ZACRNS	Create new subcontract order	1,0

Table 125. Updated tables

Table	Description
MITCOS20	Item calculation values
MPDCHF20	Configuration header table
MPDSDM00	Simulation design main table
MPDSIH00	Simulation product table
MPM01010	Start record for change/delete MO
MPM01015	Start record for change/delete MO
MWOCPN00	Co-product /operation number
MWOHED00	Work order header
MWOHED40	Work order header
MWOMAT00	Work order materials
MWOOPE00	MO operations
MWOPHA00	Work order used phantoms
MWORCO00	Rate compensators per material
ODLINE00	Customer order delivery line
OOLINE00	Customer order line

Table	Description
OOLINE55	Customer order line
MWOMAA	Alt. Material - Manufacturing

Table 126. Related ASJs and functions

Name	Description
CRS984	Delete text
MMS910	Update planning overview
MMS921	Allocation
PMS910	Remove workload

Calculate Operation Times (PMS930)

The autostart job 'Calculate Operation Times' (PMS930) calculates time of reported operations in maintenance orders and/or work orders.

Table 127. Programs that create records in the ASJ table

Program	Description
MOS880	Update of Maintenance order operation
MOS885	Start and stop of work group on Maintenance order operation
PMS510	Start and stop of Manufacturing order operation
PMS515	Start and stop of work group on Manufacturing order operation
PMS510	Start and stop of Manufacturing order operation
TMS005	Report Come and Go

Table 128. Input parameters - PMS930

Field name	Description	Size
DECONO	Company number	3,0
DETRTY	Transaction type	2
DESDAT	Transaction date	8,0
DESTTE	Transaction time	6,0

Field name	Description	Size
DECANO	Card number	10,0
DEWOSQ	Reporting number MO or WO	9,0
DEMXMO	Transaction from Maintenance order 0/1	1,0
DEMXPM	Transaction from Work order 0/1	1,0
DERGDT	Registration date	8,0
DERGTM	Registration time	6,0
DECHID	Changed by User	10
DETSTM	Time mark	26

Table 129. External parameters

Parameter	Specified in
Time calculation method for reporting operation	PMS490
Time calculation method when reporting operation	MOS991

Table 130. Related ASJs and functions

Name	Description
PMS501	Calculation of operation time Manufacturing order
MOS871	Calculation of operation time Maintenance order

Load (PMS960)

The autostart job 'Load' (PMS960) recalculates work-load based on signals from the autostart jobs 'Entry of MO' (PMS005), 'Reschedule MO' (PMS015) and 'Deletion of MO' (PMS035).

Table 131. Programs that create records in the ASJ table

Program	Description
DCS0H0	Stop operation
PMS065	Auto report MO material
PMS070	MO Operation. Report
PMS905	Calculate lead time on MO

Program	Description
PMS945	Auto-report quality inspection work center
PMS991	Re-create workload
PPS321	Handling subcontracting

Table 132. Input parameters - MPM960

Field name	Description	Size
ZACONO	Company	3,0
ZATTYP	Stock transaction type	2,0
ZAFACI	Facility	3
ZAPRNO	Product number	15
ZAMFNO	Manufacturing order number	7,0
ZAOPNO	Operation number	3,0
ZAPGNM	Program name	10
ZARGDT	Entry date	8,0
ZARGTM	Entry time	6,0
ZACHID	Changed by	10
ZATSTM	Timestamp	26

Table 133. Updated tables

Table	Description
MPM960RR	Change workload

Table 134. Related ASJs and functions

	Name	Description
ASJ:	None	
Functions:	PMS910	Remove workload
	PMS970	Calculate remaining time on MO operation
	PMS991	Re-create workload

Transactions from GLR to POM (POS950)

The autostart job 'Transactions from GLR to POM' (POS950) transfers transactions from the table BPO950 to Project Order Management. The table BPO950 contains accounting transactions from General Ledger (GLR) created from program GLS040. The transactions affect Outcome, Forecast and Committed amounts and quantities per project in POM/PJM.

The records in the BPO950 table are created under the following conditions: POM/PJM is installed (installation parameter MNS100/H, PO=1).

The transaction is not a recognition accounting transaction (Accounting event PO30).

Project and element number exist in the accounting dimensions given by parameters in 'Settings - Project Management' (CRS590).

Outcome management in PJM

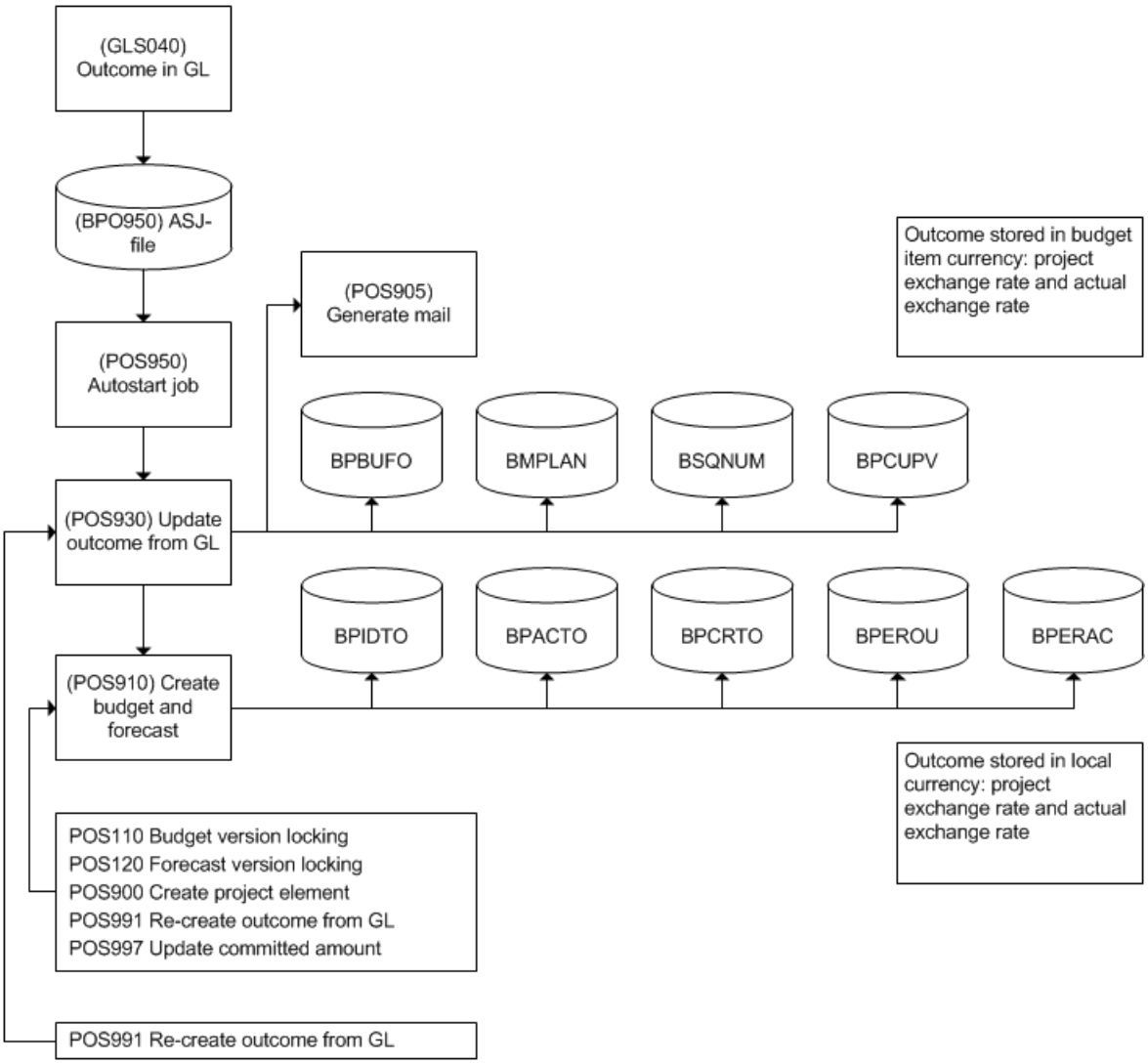


Table 135. Programs that create records in the ASJ-table

Program	Description
GLS040	Update and printout of journal

Table 136. Input parameters - BPO950

Field name	Description	Size
P6CONO	Company	3,0
P6DIVI	Division	3
P6YEA4	Year	4,0
P6PERI	Period	2,0
P6AIT1	Accounting dimension 1	8
P6AIT2	Accounting dimension 2	8
P6AIT3	Accounting dimension 3	8
P6AIT4	Accounting dimension 4	8
P6AIT5	Accounting dimension 5	8
P6AIT6	Accounting dimension 6	8
P6AIT7	Accounting dimension 7	8
P6CUCD	Currency	3
P6LOCD	Local currency	3
P6DMCU	Currency conversion method	1,0
P6DTUM	Date	8,0
P6OUAL	Actual amount local currency	15,2
P6OURR	Actual amount actual rate	15,2
P6OUQT	Actual quantity	15,6

Table 137. Updated tables

Table	Description
BPBUFO	Budget and forecast lines
BMPLAN	Material budget

Table	Description
BPCUPV	Currency per project or costing
BPIDTO	Budget and forecast totals on identity
BPACTO	Budget and forecast totals on acc dim
BPCRTO	Budget and forecast totals of cost or revenue
BPEROU	Accrual accounting outcome
BPERAC	Accrual accounting outcome acc dim

Monitoring Delivery Schedules (RSS950)

The autostart job 'Monitoring Delivery Schedules' (RSS950) monitors Customer Delivery Schedules that are expected to be received through M3 EDI Solution within a specific time interval.

The monitoring is based on partner parameters created in 'Settings - Partners' (RSS015). Through field 240 'Delivery schedule interval' and field 255 'Latest received delivery schedule', RSS950 determines if a delivery schedule from a specific partner is overdue. If this is the case, an application message is sent informing the responsible user about the situation. The application message sent is 507 'Expected delivery schedule not received' and it has to be enabled in 'Settings - Application Messages' (CRS424) and in 'Partner. Define Application Messages' (RSS017). The application message 507 can be monitored via 'Application Message. Open' (CRS420).

Once a new delivery schedule is received via M3 EDI Solution, field 255 'Latest received delivery schedule' is updated with date and timestamp. The message flag indicating that a message has been sent is also reset. Once this update is performed RSS950 will once again monitor the partner and send a new application message when the number of days and hours in field 240 'Delivery schedule interval' has passed.

RSS950 does not use a regular ASJ table as input for processing. It uses the master table ORSPPT that is created through 'Settings - Partners' (RSS015).

Program that create records in the ASJ table

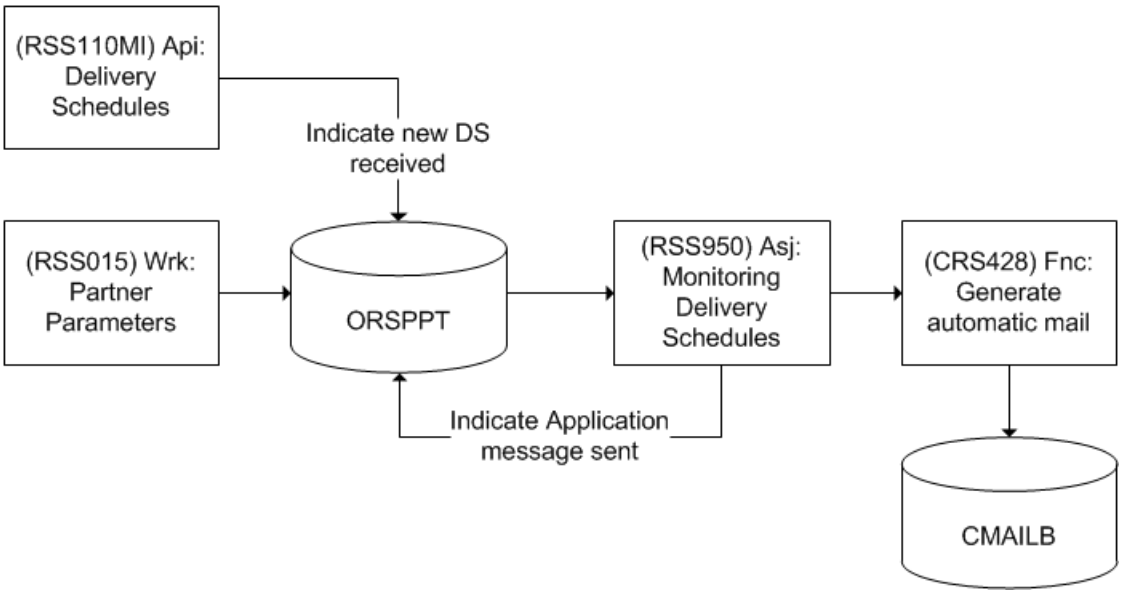


Table 138. Input parameters - RSS950

Field name	Description	Size
RPCONO	Company	3,0
RDIVI	Division	3
RPE0IO	Message direction	1
RPE0PA	Partner	17
RPE065	Message type	6
RPE026	Application reference	14
RPE068	Access reference	30
RPRESP	Responsible	10
RPGEDT	Date generated	8,0
RPGETM	Time generated	6,0
RPDSIV	Delivery schedule interval - Days	3,0
RPDSIU	Delivery schedule interval - Hours	2,0
RPMSND	Message sent	1,0

Table 139. External parameters

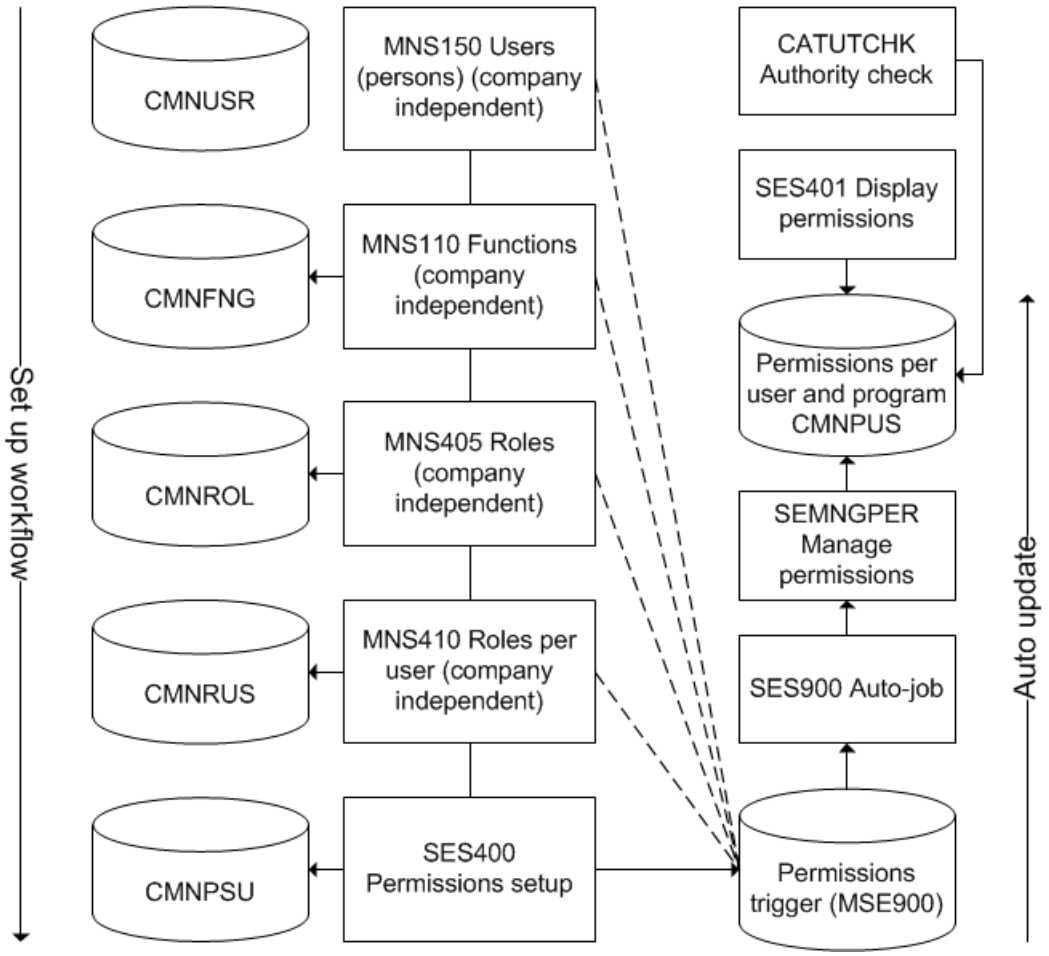
Parameter	Specified in
Act appl msg tp	RSS017, panel E
Responsible	RSS017, panel E
Act appl msg tp	CRS424, panel E

Table 140. Updated tables

Table	Description
ORSPPT	MF: Partner parameters
CMAILB	MF: Mail
CMAILP	TF: Mail - program parameters

Managing Permissions (SES900)

The autostartjob Managing Permissions (SES900) monitor security settings regarding role based security - MNS405, MNS410, SES400. SES900 reads from the Permissions trigger' (MSE900) table and updates the 'Manage permissions' (SEMNGPER) program. See data model below.



CMS910 - Event subscription - Db update

This auto start job subscribes to event sent from the event hub. The events to subscribe to are defined in the function Event subscription (CMS045). When an event is received then content of the event is mapped to a M3 BE table according to the definition in the function Event mapping (CMS046). Please note that the delay setting in the auto jobs is not applicable for this program. The program is only activated when an event is received.

See Also

"M3 Business Engine Administrator's Guide for Job Scheduler" on page 73

"M3 Business Engine Administrator's Guide for Batch Jobs and Job Queues" on page 82

Database Update Manager

Abstract

M3 delivers a new standard for fix programs that enables database updates with full tracabillity and the capability to monitor the run's progress.

Background

Many database update programs are delivered for each base and feature pack of M3. A net change report for a base delivery of M3 contains the instructions on how to run these programs. For a new base delivery, the Migration Center will normally manage the migration using a set of programs that makes changes to the database as smoothly as possible. For example, some programs are replaced by SQL scripts in order to improve performance.

Limitations

The new standard for fix programs is available for all programs, however, customers who are upgrading from versions prior to 15.x must run older fix programs separately.

Before you start

1. Open CMS950.
2. To generate the desired fix program, the version that M3 was upgraded from should be indicated.
3. Set the From Version in the settings panel to indicate the versions for which the fix programs metadata should be generated.
4. Click F16 from the Action menu to generate the metadata. You can also do this by clicking Next and then closing and opening the program.
5. All the fix programs released after the From Version entered in the settings are generated.

For more information about running fix programs, see the *M3 Core Installation Guide.*.

Follow These Steps

To run a fix program

1. Right click on the fix program and select option 09 (Run).

   Only programs with status 05 (Ready) can be run. The status may be changed to 05 (Ready) in the detailed panel if needed.

To pause a fix program

1. Before you run a program, set the logging increment to indicate when to pause the program. So, if the logging increment is set to 10 then for every 10 records read the program checks for a pause signal to pause.

2 While the program is running, right click on it and select option 08 (Pause migration).

To resume a program

1 Right click on the paused program in status 06 (Pause) and select option 09 (Run) to resume a fix program.

To discard a program

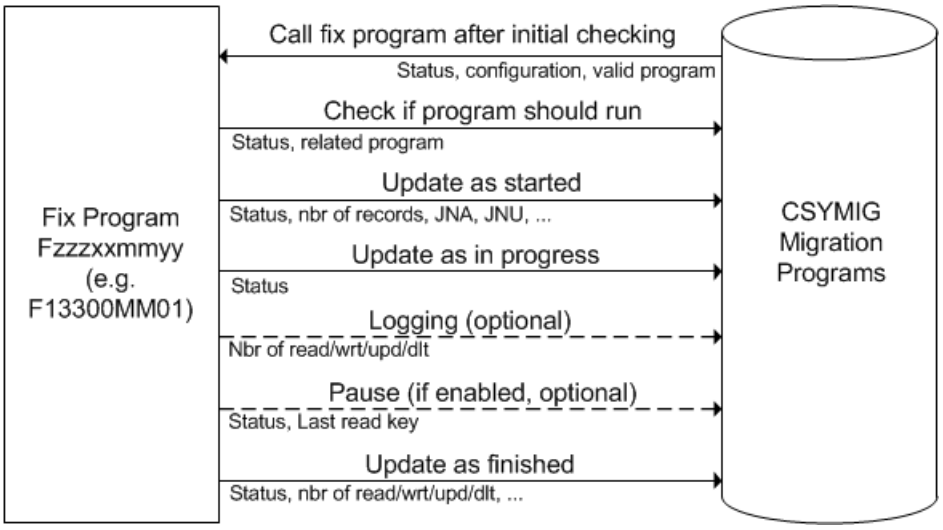
1 Click on the program and select option 07 (Discard). The discarded programs are the programs that are already run in the system using a method other than the database update manger.

To delete a program

1 You can only delete programs that are in status 00 (Not found). To delete a program, use the Delete option on any program in status 00.

To update a program

1 You can update only certain information directly from the database update manager. To update the sequence number or migration status (with limitations) or migration log increment or migration reference, select option 02 (Change) to change and update a program



Outcome

After you run a fix program, the data in a related table is adjusted with the required modifications. The status of the fix program in the migration table CSYMIG is updated to 90 (Finished). The number of records in the modified table and the number of read/updated/written/deleted records is written to the migration table. Furthermore, the information about the submitted job is updated, such as job number, job name, user, and start and finish time and dates.

If the fix program is safe to run several times, you can reset the status to 05 (Ready) and run it again in the future. Otherwise, the program cannot be run again anymore.

MCE Packages

The MCE packages related to the new fix programs released for a correction may contain the fix program itself and an updated version of migration utility cCMMigrationMetadata. The updated version of the utility contains an array element of newly added fix programs. This means that after you install the MCE package and correctly configure the database update manager, the new fix program automatically appears in the list in status 05 (Ready).

Logging increment

The logging increment is a feature that lets you track the progress of tables that have a high importance. This feature adds the functionality to log the number of records read and the record updated/written/deleted in runtime. For example, if the logging increment is set to 10 then for every 10 records read the program will log this information.

Important: Use caution when you set the logging increment, since it can affect program performance. The recommended logging level is the highest possible. With every increment, the program calls a utility and updates the migration table.

In addition, logging is used for the pause option. If the program has the pause option set and the logging increment is set to a value greater than zero, then for every increment the fix program listens for a pause signal to pause its operation.

CMS950MI - API for database update manager

The database update manager comes with an API that has the same full functionality as CMS950 itself.

Define Number Series

Number series are used for assigning unique identities to each individual order or transaction in M3.

This document explains how to define number series for customer, distribution and requisition orders, as well as for the M3 financial system, or for customer invoices and internal invoices.

Outcome

Number series are defined for the one or several of the areas described above.

Number series are used for assigning unique IDs (numbers) to each individual order and/or transaction in M3. Each number series is connected to a specific number series type. The number series type indicates the purpose of the number series, for example, customer orders, purchase orders, customer returns, package number, picking list, reclassification number, etc.

Number series are stored in the (CSYNBR) file.

Before you start

- You must complete the steps described in .
- You must be in the correct division and commands to switch between divisions must be defined in 'Function. Open' (MNS110). You must have authority for the divisions. Authority is assigned in 'User. Open' (MNS150).

Follow these steps

Select one of the following alternatives and continue with the steps for the selected procedure.

- **Define Number Series for Customer, Distribution and Requisition Order and/or for the Financial System**

  1. Start 'Number Series. Open' (CRS165/B).
  2. Specify the number series type and the identity of the number series. Select New.
  3. On the E panel E, specify a name, describing the purpose of the number series. Specify also the start value and the end value for the number series.
  4. If necessary, specify a date when this number series should end, and the identity of the number series that should replace it. Press Enter.

     The 'Last number' field specifies the last number used in the number series, and is incremented automatically when a number is used.

- **Define Number Series for Customer Invoices and Internal Invoices**

  1. Start 'Internal Invoice Series. Open' (MFS165/B).
  2. Specify the identity of the number series and the year for which it applies. Select New.
  3. On the E panel, specify a name, describing the purpose of the number series. Specify also the start value and the end value of the number series. Press Enter.

     The 'Last number' field specifies the last number used in the number series, and is incremented automatically when a number is used.

Parameters to set

Program ID/Panel	Field	The field indicates …
(CRS165/B) or (MFS165)	Number series type	…the purpose of each number series. Click F1 in this field to see the purpose and area (application) for each number series type. Next to each type, information is displayed about which number series can be used for the type. If an asterisk (*) is displayed instead of a number series identity, that means that the number series is optional, which also means that you can define more than one number series for that type.
(CRS165/B) or (MFS165)	Number series	…the number series.

See also

Enter System Periods and Seasonal Curves

This document explains how you define system periods and seasonal curves in a MUC configuration.

Outcome

Up to five systems periods are entered for each specified division and for the blank division.

At least one seasonal curve is entered for each specified division and for the blank division.

System periods are used to enter different kinds of data that use different periods. For instance, the manufacturing area may have different periods than the financial area. Seasonal curves is used to describe how a value (for example, sales) varies in percent over a year

Seasonal curves primarily influence budgeting and forecasting.

System periods are stored in the (CSYPER) file, and seasonal curves are stored in the (CSYSCH) file.

Before you start

- You must know what period interval your company uses for different applications.

  Periods and curves must be defined for each of the divisions included in a MUC configuration.
- You must complete the steps described in .
- You must be in the correct division and commands to switch between divisions must be defined in 'Function. Open' (MNS110). You must have authority for the divisions. Authority is assigned in 'User. Open' (MNS150).

Follow these steps

Define System Periods

1. Start 'Division. Open' (MNS100/B).

   This instruction is based on panel sequence EF.
2. Select Open for the division and press Enter until you reach the F panel.
3. On the F panel, specify the period type to use for the respective area (MPM, SLS, FIN, etc.) and the number of periods for each area's period type. Press Enter and F3.
4. Start 'System Calendar. Open Period' (CRS910/B).

   This instruction is based on panel sequence E1.
5. Specify the period type and year. Select New.
6. On the E panel, specify the name of each period in the Text field (for example January, February, etc.) and adjust the proposed start date for the period in the 'From date' field, when necessary. Press Enter.

   In addition to the from date, information is also displayed about the end date, the number of calendar days, workdays, and bank days for each period.

Define Seasonal Curve

1. Start 'Seasonal Curve. Open' (CRS915/B).

   The instruction is based on panel sequence E.
2. Specify period type, year, and an identity for the curve you will create. Select New.
3. On the E panel, specify a description and a name for the curve.
4. Specify a seasonal index for all the relevant periods in the curve. Press Enter and F3.

   The total percentage field displays the total of the specified percentages. To leave the panel, the total must be equal to 100%.

Parameters to set

Program ID/Panel	Field	The field indicates …
1. Define System Periods		
(MNS100/F	Period type MPM/MAI	…the period type which is to be used in the different applications.
(MNS100/F)	Number of periods –period type 1 (2,3,4,5)	… the number of periods per year that are included in a period type. **Examples** If period type 1 is defined as month, then you specify 12 in this field. If period type 2 is defined as week, then you define 52 in this field.
(CRS910/B)	Period type	… the period type defined in (MNS100/F). For each record in the system calendar, you can see that the day is connected to one of five different period types. It makes it possible to work simultaneously with up to five different period types in each division. **Tip** Besides the five different period types, period type 9 can be used in the forecast application to enable forecasting item numbers per week. The number of periods for period type 9 is 52 by default.

Program ID/Panel	Field	The field indicates …
(CRS910/B)	Year	… the calendar year as defined in the system calendar.
(CRS910/E)	From date	… the start date for the period.
	To date	… the end date for the period. This date is calculated automatically as the date before the next from date. The only exception is for for the last period where the to date must be entered manually.
2. Define Seasonal Curves		
(CRS915/B)	Period type	… the period type which is to be connected to a seasonal curve Seasonal curve can be used when you have a fluctuation over a year, for example a sales fluctuation. It is possible to have more than one seasonal curve per period type.
(CRS915/B)	Seasonal curve	… the ID for the seasonal curve. The seasonal curve can, for example, describe sales fluctuations during the year For instance, your company are selling skies. The peak season for that is on the winter.

Program ID/Panel	Field	The field indicates …
(CRS915/E)	Seasonal index	… the period's percentage of the annual totals defined in the seasonal curve. The sum of the seasonal indices for all of the year's periods must equal 100%.

See also

Create and Change a System Calendar

This document explains how you create a system calendar and define days in the system calendar.

Outcome

You have created a system calendar for a division. (A system calendar must be created for each division.) Normally at least two calendar years from the current date should have been defined.

For MUC configuration, a system calendar must be defined for each of the divisions included in the configuration. This means that a calendar must be defined for the central (blank) division, even if the division is not used to process information.

You have changed one or several values in the following fields:

- Generated capacity on each day
- Production days
- Goods receiving days
- Delivery days.

When a date is entered in M3, the system checks that the date has been defined in the system calendar.

The system calendar is stored in the CSYCAL file.

Before you start

- You must be in the correct division and commands to switch between divisions must be defined in 'Function. Open' (MNS110). You must have authority for the divisions. Authority is assigned in 'User. Open' (MNS150).
- If you want to change a day in 'System Calendar. Open' (CRS900), a system calendar must have been defined in 'System Calendar. Create Days' (CRS905).

Follow these steps

Create system calendar

1. To create the system calendar, start 'System Calendar. Open' (CRS900).
2. Select 'Settings' (F13) on the B panel.
3. On the P panel, select 'Generate calendar' (F13).

   This displays 'System Calendar. Create Days' (CRS905/A).
4. Enter a range in the fields 'From Year' and 'To year'.
5. Specify values in the following fields on the E panel: 'General capacity,' 'Production day,' 'Goods receiving day,' 'Delivery day.'
6. Select 'Start generation' (F13). The generation takes place online and not in a batch job.
7. Repeat the procedure to define one more calendar year, since you should define at least two calendar years. Press F3.

Change system calendar

1. To define the system calendar day, start 'System Calendar. Open' (CRS900/B).
2. Select a date in the display file, then on the File menu, click Open.
3. Specify values in the following fields on the E panel: 'General capacity,' 'Production day,' 'Goods receiving day,' 'Delivery day.'
4. Click Next to finish.

Parameters to set

Program ID/ Panel	Field	The field indicates …
(CRS900/E) (CRS905/E)	General capacity	… the portion of a workday that can be load planned. This portion is entered as a percentage for each day. Example A: A company normally works 8 hours on Mondays. If on a certain Monday it only works 4 hours, 50% should be entered as the general capacity percentage in (CRS900) for that Monday. If the employees in a certain work center only work 2 hours this particular Monday, 50% should be entered as the actual capacity percentage for the current combination and for Monday.
(CRS900/E) (CRS905/E)	Production day	… whether the date selected is flagged as a production day in the system calendar. You cannot create capacity for a work center on days that are not flagged as production days.
(CRS905/A)	Bank day	… whether the actual day is a so-called bank day in the calendar. The purchase ledger, for instance, uses the ledger in the financial management system.
(CRS905/A)	Adjustment days payment day	… the payment day that is displayed as the default according to the day of the week on which the due date falls. Example If the real due date happens to be on a Sunday, you can as default set the payment date to be on the following Monday. During automatic creation of a system period, the adjustment days are updated as follows: • Mon 1 payment default Tuesday • Tue 0 payment default same day • Wed 0 payment default same day • Thu 0 payment default same day • Fri 0 payment default same day • Sat 1 payment default Friday • Sun 2 payment default Tuesday

Program ID/ Panel	Field	The field indicates …
(CRS900/E) (CRS905/E)	Goods receiving day	... whether goods can be entered as received in M3 on a specific weekday. Example: If goods receiving can take place on a Monday, enter 1 in the Monday field. If goods receiving cannot take place on a Saturday, enter 0 in the Saturday field.
(CRS900/E) (CRS905/E)	Delivery day	… whether deliveries can be entered in M3 on a specific weekday.
(CRS905/E)	From year To year	… the year from which and to which the calendar is to be created.

See also

Security Administration

2

This document provides information on Authority Security in M3 Business Engine.

This document does not describe the security management for:

- access to database objects outside of M3 Business Engine. An end user retrieves access to the database when starting M3 BE
- communication security such as port allocation schema and firewalls
- security management regarding M3 user interfaces
- other products not included in M3 Business Engine.

For information on communication security, please refer to the IBM Redbook, M3 BE on the IBM iSeries Server, an Implementation Guide.

M3 BE Security Model Overview

This document describes the security system available in M3 Business Engine. The following limitations apply:

1. Access to database objects outside of M3 Business Engine. An end user retrieves access to the database when starting M3 Business Engine.
2. Communication security such as port allocation schema and firewalls.
3. Security management regarding M3 Workplace and the Smart Office user interfaces.

- **Company and Division Security**

  The security system in M3 Business Engine consists of many different components. The most central one is the M3 BE user definition, which is managed in the program 'User. Open' (MNS150). With this definition as the basis, more detailed information is maintained to define the companies and divisions to which a specific user is authorized, and to specify the authority the user has to specific functions within a specific company and division. M3 Business Engine Security is independent of any underlying security mechanisms of the operating system. In addition, the definitions can be made using different grouping levels to ease maintenance.

- **Function Security**

Security on the function level is ensured by making an association between a function and a user and specifying whether or not the combination is allowed. Maintaining function-level security can be simplified by using function groups and user groups. This security is also applicable for programs (programs are not started from the menu; they are only started through functions).

M3 Business Engine provides the following methods to manage security on a functional level:

- Authorities (SES003)
- Authorities by roles 'Function. Connect Authority by Role' (SES400).

The method to be used is determined by the app.pgm.CAUTCHK.mode property file. This property is activated (1) for SES400 and deactivated (0) for SES003.

- **Data Authority**

  Authority to data is managed by object access groups, which will qualify users to monitor and maintain different objects in M3 Business Engine, such as sales price lists, statistic reports, orders, and facilities. These objects can be connected to an object access group, and different users can be connected to user groups. For each user group, you can specify a number of object access groups. Therefore, if an object is connected to an access group, access is only granted to users that belong to a user group connected to that access group.

- **Field Audit Trail Manager**

  The Field Audit Trail Manager is used to display changes that are made in each field. The field audit shows information about the changes made, the user who made the changes, the programs used, and the date and time the changes were made. The field audit trail in M3 Business Engine is important to use when a field contains vital information such as bank account numbers.

See Also

"Company and Division Security" on page 207

"Security Aspects of M3 Business Engine Functions" on page 204

"Function Security" on page 210

"Data Authority Security" on page 214

"Field Access Security" on page 216

Security Aspects of M3 Business Engine Functions

Security Aspects of M3 Business Engine Functions

This section describes the attributes of M3 Business Engine functions that relate to security. Use'Function. Open' (MNS110) to access the definitions of menus and functions within M3 Business Engine.

Note: M3 considers a menu to be a special type of function. A menu has many of the characteristics of an 'executable' function, such as having the need to be secured, or the capability of being attached to another menu. Creating a menu is done by creating a function with the category MNU.

The attributes of a function that relate to security are:

- **Function**

  A function consists of an ID and a name. A function is in the menu and you start the program by entering the function. The function ID is often the same as the ID of the function/program you start, but it does not have to be. You can, for example, name the function MMS001 as 'ITEMS' in the function ID field. It is the value in the Program field that determines which program is connected to 'your' function ID.

  The function name is entered on the 'Function. Open' (MNS110)/F panel.

  You can name MMS200 "My Item Register" with the function ID "ITEMS." If you want your function start MMS200, you enter MMS200 in the Program field.

- **Function Category**

  There are several categories of functions: those that actually run programs, menus, text functions (which are used to place remarks or comments on menus), function groups, and functions that change to a different company or division. Although you can apply security to most of these categories of functions, only two categories have a specific role to play in M3 BE Security: the categories GRP and MNU.

  - **Function Category GRP**

    A function with a category of GRP is a function group. Other functions can be placed into a function group. Groups are used to simplify security maintenance by reducing the number of entries made to the list of authorized functions/users.

    A function with the category GRP cannot be placed in other groups. That is, you cannot have function groups within groups. Also, a single function cannot be a member of more than one group. A function can either be in one group or no groups at all.

  - **Function Category MNU**

    Menus are defined by the function category MNU. This allows you to use option 12='Menu' in 'Function. Open' (MNS110) to attach menu options to the menu. A function with the category MNU can be placed into other MNU functions. That is, you can have MNU groups within MNU groups. This is also done by selecting option 12.

- **Password Check**

  Before the function runs, the user must enter the correct login password. This prevents unauthorized users from running a function at an unattached panel.

- **Authority Required**

  In 'Function. Open' (MNS110)/E, the Authority required field has the following settings:

  - Not selected (0) means that authorization for the function is checked according to the entries made in 'Authority by User. Display' (SES401) for the user. If no entries exist in 'Authority by

User. Display' (SES401) for the user, the function is considered approved and open. This means that the system is open for all users if no entries are made in SES400/401, but can be partly limited for some user, user/groups by adding records in SES400/401 for these user/groups.

- Selected (1) means that authorization for the function is checked according to the entries made in 'Authority by User. Display' (SES401) for the user. If no entries exist in 'Authority by User. Display' (SES401) for the user, the function is considered denied and restricted. This means that the system is closed for all users if no entries are made in SES400/401, but can be opened in selected areas and functions for user, user/groups by adding records in SES400/401 for these user/groups.

The default setting for M3 Business Engine inactivated (0) for all functions.

Important: If you want to restrict access in all company and divisions for a specific function, then you should activate the Authority required field in 'Function. Open' (MNS110)/E for all functions you made entries in 'Function. Connect Authority by Role' (SES400).

To mass change the value for all functions (except MNU functions) to 1, you can run the following SQL command:

update mvxjdta.cmnfng set jfauty ='1' where jfpgnm >' ' mvxjdta = the name of the library/schema where the database is.

- **Program**

  The Program field is the actual program that should be started when you enter the current function ID.

  The function consists of an ID and a name. A function is in the menu and you start the program by entering the function. The function ID is often the same as the ID of the function/program you start, but it does not have to be. You can, for example, name the function MMS001 as 'ITEMS' in the function ID field. It is the value in the Program field that determines what program is connected to 'your' function ID.

  The function name is entered on the 'Function. Open' (MNS110)/F panel.

  You can name MMS200 "My Item Register" with the function ID "ITEMS." If you want your function start MMS200, you enter MMS200 in the Program field.

See also

"M3 BE Security Model Overview" on page 203

"Company and Division Security" on page 207

"Data Authority Security" on page 214

"Function Security" on page 210

"Field Access Security" on page 216

Company and Division Security

This document describes the programs and methods used to define users in M3 Business Engine and to control user access to companies and divisions.

User definitions

In order to use M3, each user must be defined in the program 'User. Open' (MNS150). This program contains all the environmental information that is assigned to each user to set up the correct environment when the user starts a new session. The user can override some, but not all of, the settings within the session.

User definitions are created on the E panel. They include the default values for the company and division, language, date format, and so on, for a user.

On the F panel, the Menu version prompts to 'Menu Version. Open' (MNS080). A menu version must be entered if the Smart Office user interface is used.

Menu versions are variants of a menu that can be created in M3 Business Engine and attached to copies of existing menus. Any menu can have a number of versions. All menus are created with a blank menu version by default. The version of a menu carries the original menu name and the version name. It can be an identical copy of the original menu or a variant of the original. In practice, it is often a complete copy.

The Start menu is defined in 'Function. Open' (MNS110).

Controlling user access to companies and divisions

Since M3 is delivered as an open system, users have access to all companies and divisions. In order for users to have restricted access to companies and divisions, they must be defined in 'User. Open' (MNS150) and must also be authorized to use the companies and divisions in question. This authorization is specified in the function 'Authorization. Specify for Company' (MNS151).

A list of user access can be printed through 'User Access Report. Print' (SES500).

Option 11='User permissions to Cmp/Div' displays 'User. Access per Company Division' (MNS151), allowing you to selectively control user access. It is used for interactive maintenance of the list of companies and divisions to which the user is authorized.

Option 21='Update User Access all Cmp/Div' grants the user access to all companies and divisions. It is used as a reset. This option is often followed by option 11 to trim the list. There is no display panel with option 21. As soon as you press Enter the data is updated.

Important: This mass update is only done for existing companies and divisions. If a new company or division is entered afterwards, all users that should be authorized to that combination must be updated. This mass update should be used with care. In many cases, not all users should be authorized to all of the existing companies or divisions.

Authorization to Company

Information entered in 'User. Open' (MNS150) can be overridden by information entered in 'User. Access per Company Division' (MNS151) for the specific combination of user, company, and division.

This can be helpful if one division operates under a different date format or another language, for example.

In 'User. Open' (MNS150), select option 11='User permissions to Cmp/Div'. This starts 'User. Access per Company Division' (MNS151).

To grant access to a company/division, enter the name of the company/division and select New. On the E panel you can override some of the fields specified in ('User. Open' (MNS150)), such as start menu or user group.

To remove access to a company/division, select Delete.

Differences between option 1 and option 3 when creating user

When you create a new user in 'User. Open' (MNS150), the user is initially only authorized to the company/division defined in 'User. Open' (MNS150)/E. Authorizing a user to other companies and/or divisions must be done manually in (MNS151). In addition, option 21='Update User Access all Cmp/Div' on the 'User. Open' (MNS150)/B panel for a certain user will authorize the user to all companies/divisions in the database.

If you use option 3='Copy' to create a new user based on an existing one, only the responsibilities (defined in MNS151) of the based-on user are assigned to the new user.

Important: This means that it is convenient to have some template users, with the correct authority set, entered in this program and then use Copy record to add new users to the system.

See also

"M3 BE Security Model Overview" on page 203

"Security Aspects of M3 Business Engine Functions" on page 204

"Function Security" on page 210

"Data Authority Security" on page 214

"Field Access Security" on page 216

"Create and Configure User Defined Menu" on page 295

Create Function

This document explains how you create a system function and define its settings. Standard M3 functions are provided when the M3 Business Engine is installed, but you may create additional functions as needed.

Outcome

Various functions are created. Each function contains information about which program to use. It is typically connected to a menu tree. Functions also may be used for:

- Shortcut commands in the start box
- Security as set up in Function. Connect Authority (SES003)
- Security by Role as defined in Function. Connect Authority by Role (SES400)

Follow These Steps

1. Start 'Function. Open' (MNS110).
2. On the B1 panel, enter an identifier in the Function field.
3. Select the Create option.
4. On the E panel, enter these fields and settings:

   a Constant - enter an ID of the constant from which the description is retrieved and displayed on the menu for this function.

   b File - enter a file ID where the defined constant ID is to be stored.

   c Component group - enter the group to which this new function belongs.

   d Function category - select one of the pre-defined alternatives to indicate the function type/category to be used. This category helps control how each function should be processed in the M3 menu system.

   e Function group - select the group into which the function should belong. Each group can be used to define authorization in (SES003).

   Note: The function group(s) must be defined in (MNS110) with the function category to set 'GRP'.

   f Authorization required - select this check box to require an authorization check for this function.

   g Password check - select this check box to apply an extra password check. For example, this can be used to force system users to enter their passwords to start this function.

   h Program - enter a program name to indicate which program or Java class should be executed when this function is called by the user.

5. Click Next to save your changes. The function record and corresponding details display on the F panel.

See Also

"Function Security" on page 210

"Company and Division Security" on page 207

Function Security

Security on the function level is ensured by making an association between a function and a user and specifying whether or not the combination is allowed. Maintaining function-level security can be simplified by using function groups and user groups. This security is also applicable for programs (programs are not started from the menu; they are only started through functions).

M3 Business Engine provides the following methods to manage security on a functional level:

- Authorities - 'Function. Connect Authority' (SES003)
- Authorities by roles in - 'Function. Connect Authority by Role' (SES400).

The method to be used is determined by app.pgm.CAUTCHK.mode property file. This property is activated (1) for 'Function. Connect Authority by Role' (SES400) and deactivated (0) for 'Function. Connect Authority' (SES003).

Note: This document only describes Authorities by roles 'Function. Connect Authority by Role' (SES400).

Security entries made at the company level

Security entries made at the company level (blank division) will also apply to any division in that company which has no security entries of its own.

The number of records in 'Authority by User. Display' (SES401) (CMNPUS) will be fewer, especially for companies with many divisions and roles and many combinations of security settings. Also the load on program SEMNGPER and auto job SES900 will decrease.

This is valid if you use 'Function. Connect Authority' (SES003) or 'Function. Connect Authority by Role' (SES400) security.

- **Relationship between company and division**

  There is a referential link between company and division in M3 Business Engine Security. Security entries made at the company level (blank division) will also apply to any division in that company which has no security entries of its own. This can be thought of as the divisions having no need for their own security, and therefore adhering to company policy.

- **Restricting company and division**

  Restricting Company and Division with options 11='User permissions to Cmp/Div' and 21='Update User Access all Cmp/Div' in 'User. Open' (MNS150), as described in the earlier section Controlling Access to Companies and Divisions.

  Further, if any new company/divisions were created, and it was forgotten to enter the restriction in these, users could then have access to these.

  Note: If the new user was created using New, a responsibility is given for all companies and divisions.

  If the new user was created using Copy (copied from an existing user), only the responsibilities of the based-on user are assigned to the new user.

Checking security

When a user requests a function, the security entries specified in 'Authority by User. Display' (SES401) are searched for a matching combination of user and function by authority check program (CAUTCHK) to assure full functional coverage.

M3 BE Security will use company-level entries if the requesting user is working at the division level and there are no security entries at division level. Remember the relationship between company and division.

If the search is unsuccessful, M3 Business Engine Security refers back to the Authority required setting in the function definition 'Function. Open' (MNS110). If this is 1, the request is denied; if this is 0, the request is permitted.

Security using authorities

Here you connect a function or a program to a user and then define restrictions for this combination. You can also secure function groups and user groups.

Important: When you use this method, a single user cannot be a member of more than one group. A user can either be in one group or no groups at all.

Security using authorities by roles

Authorities by roles is a method for controlling user access rights in M3 Business Engine. The role based authority decides, for example, what programs the user is authorized to use or what features within a program the user is authorized to use.

Role based security is not about data authority via object access groups, for example what price lists, customers, or items a user is authorized to view or maintain.

If the authorities by roles method is not used, the authority check will work via security setup in 'Function. Connect Authority' (SES003).

Roles

Roles are introduced to manage large numbers of M3 users regarding authorities by roles. Roles define a set of authorizations in M3 Business Engine.

By connecting a role to a user, you grant the set of authorizations that the role defines to the user.

Authorities by roles - Setup per role and function

For the authorities by roles setup in 'Function. Connect Authority by Role' (SES400), define the functions a role is permitted to use in different companies and divisions.

The authorities by roles set up enables control of authorities by roles for all options (option 1 - 99) and for all function keys.

A role can have different authorities by roles in different companies and divisions. For example, the role SALESCLERK can have different authorities by roles in Company 100 and 200, or different authorities by roles in division AAA and BBB within the same company.

Authorities by roles - direct

Authorities by roles can be applied directly to programs with panels for user interactions. This only applies if the program does not exist as a function in 'Function. Connect Program' (MNS112).

If you want a user or a user group to be restricted to a specific program (not in the menu), you have to specify a connection between a function and this program in (MNS112) and activate the restriction in 'Function. Connect Authority by Role' (SES400).

When authorities by roles are applied directly to programs that inherit authorities by roles, the direct setup will override the inheritance.

Authorities by roles - Least restrictive principle

The least restrictive principle applies if a user is connected to several roles with different authorities by roles for a certain function.

Authorities by roles - Settings

Roles. Open (MNS405)

Roles are defined independently of company in 'Roles. Open' (MNS405), so the same roles apply for all companies in the database.

In (MNS405/E), it is possible but not mandatory to automatically create authorities by roles setup records (see SES400) and authorities by users (see 'Authority by User. Display' (SES401)) for a specific company and division.

Authorities by roles 'Authority by User. Display' (SES401) will be created for all users connected to the role. Only functions where authorization is required (see 'Function. Open' (MNS110)) will be considered and only new combinations will be generated (existing authorities by roles will not be changed or removed).

Important: If you want to restrict access in all company and divisions for a specific function, then you should activate the 'Authority required' field in (MNS110/E) for all functions you made entries in (SES003) or (SES400). This is recommended.

If you only want to restrict access in a specific division, or some divisions in a single company, then you should deactivate the 'Authority required' field in MNS110/E.

Roles per User. Open (MNS410)

Roles per user are defined independently of company with or without validity dates. A user can be connected to several roles at the same time. Each connection of user and role can have validity dates to enable temporary authorities by roles, such as vacation replacements.

Function. Connect Authority by Role (SES400)

In the authorities by roles setup, you define which functions are permitted per role and per company and division.

Note: Functions where an authority check is required must be defined here if they should be accessible to users connected to the current role.

A role can, for the same functions, have different authorities by roles in different companies.

Only active records (status 20) will create authorities by roles. Direct setup to programs is possible (the function does not need to exist in MNS110).

In the authorities by roles setup details, you define the basic options, related options, and functions keys that will be permitted.

Buttons are provided to select or clear check boxes for all options or function keys before fine-tuning the setup.

Note: The status must be set to 20 (Active) to create authorities by roles.

Important: If a function is connected to several roles and you delete one of the function/role records, then you must select option 2=Change for the remaining function/role records to activate them again.

If, instead of deleting a function record, you deactivate it to status 10 (SES400/E), then you do not need to select option 2 for the remaining function/role records. They will continue to be activated.

Authorities by User. Display (SES401)

It is always possible to monitor records in the authorities by roles file by viewing the result of the setup by 'Authority by User. Display' (SES401). Despite that, setup is done by function and role, authorities by roles are created per program and user to gain system performance and to enable special setup per user interaction programs. The authorities by roles file contains one record for each combination of program, user, company, and division.

Note: Programs that inherit functional security are included in the authorities by roles file. The authorities by roles file is automatically updated when:

- A record is created, changed, or deleted in the authority setup 'Function. Connect Authority by Role' (SES400).
- A record is created, changed, or deleted in 'Roles per User. Connect' (MNS410).
- A record is deleted in 'Roles. Open' (MNS405).
- System date changes (The authorities by roles are rebuilt, including validity date check, when auto-job SES900 is started).

In (SES401/E), you can view the details for display authorities by roles as a result of the authorities by roles setup.

Authorities by roles are valid per user and program, not per role and function as the permission setup in SES400 manages.

Note: Authorities by roles are updated in a background job (SES900). It can take a minute until the authorities by roles are updated.

Creating new role

When creating a new role it can be useful also to copy the connected users and/or to also copy the connected authorities by roles.

'Authority per User. Re-create' (SES990)

'Authority per User. Re-create' (SES990) allows you to correct or update CMNPUS in 'Authority by User. Display' (SES401) according to the entries in MNS110/MNS112/MNS150/MNS151/MNS405/MNS410/SES400.

Important: This program should be called with auto job (SES900) running. While running (SES990), users may experience accessibility issues with affected programs. It is recommended not to allow users accessing the system while (SES990) is running. While running 'Authority per User. Re-create' (SES990), users may experience accessability issues with affected programs. It's recommended not to allow users accessing the system while (SES990) is running.

See also

"Create Function" on page 208

"M3 BE Security Model Overview" on page 203

"Company and Division Security" on page 207

"Security Aspects of M3 Business Engine Functions" on page 204

"Data Authority Security" on page 214

"Field Access Security" on page 216

"Create and Configure User Defined Menu" on page 295

Data Authority Security

This document describes data authority security to apply to restrictions in order to prevent users and user groups from entering specific records within a function.

Follow these steps - Authority to access object groups

Authority to Access Object Groups will qualify users to monitor and maintain different objects in M3 BE, such as sales price lists, statistic reports, orders, facilities etc. These objects can be connected to an object access group, and different users can be connected to user groups. For each user group, you can specify a number of object access groups. Therefore, if an object is connected to an access group, access is only granted to users that belong to a user group connected to that access group.

1 **Create User Groups for Object Access Group**

   Start 'User Group. Open' (CRS004) Create an optional group identity, for example USRGRP-ONE.

2 **Connect Users to User Group**

   Start 'User. Open' (MNS150), and select the user to be connected to a user group for object access groups. You can also connect a user of type GRPPRF, which actually is a user group. See section User Groups.

Start 'Authorization. Specify for Company' (MNS151) by using option 11=User ID in 'User. Open' (MNS150). A list of companies and divisions the user is authorized to will be displayed. Enter the Company/Division, by selecting Open, for which the user should be connected with the user group. Enter the User group - object access field, on the E panel with the user group for object access groups. Press Enter.

Repeat this step for each company/division that should be connected to a user.

Important: The same user could be connected to different User Groups (for object access) in different companies and/or divisions. If the specific combination of company and division are missing for a certain user, the record containing company and 'blank' division will be used when performing the authority check.

3 **Create Object Access Group**

Start 'Object Access Group. Open' (CRS006). Create an object access group identity, for example ACCGRP-ONE.

Repeat this step for each company/division that should be connected to a user.

4 **Connect the User Group to the Object Access Group.**

Start 'Object Access Group. Connect User Group' (CRS007) by using option 11 in 'Object Access Group. Open' (CRS006). Connect one or several user groups to the object access group.

Repeat this step for each company/division that should be connected to a user.

5 **Connect the Object Access Group to an Object**

This step can be completed in different functions, e.g. 'Facility. Open' (CRS008), 'Sales Price List. Open' (OIS017), 'Sales Stats/Budget Report. Open' (OSS412).

Select the object (record) and press Open. Enter the Object access group field and select the actual object access group for this object (function). When an object is connected to an access group, access is only granted to users that belong to a user group connected to that access group.

Authority to items, orders, general ledger

You can make authority for users and restrict not authorized users to certain functions as item types, item categories, order types, general ledgers, purchase orders. You can set up the following authorities in M3 BE:

- Authority for General Ledger - 'Settings - Access Authority Check' (GLS005)
- Authority for Customer Orders - 'Authorization Group for CO Type. Open' (OIS007)
- Authority for Purchase Orders - 'Purchase Authority. Open' (PPS235)
- Authority for Work Orders - 'Work Order Authorization. Open' (MOS175)
- Authority for Items - 'Item. Connect Authority' (MMS014)

See also

"M3 BE Security Model Overview" on page 203

"Company and Division Security" on page 207

"Security Aspects of M3 Business Engine Functions" on page 204

"Function Security" on page 210

"Field Access Security" on page 216

Field Access Security

Field security allows you to control user access to a much finer degree than function security.

Field level security uses field groups to control access to individual fields. A field group has two attributes: a description and a default public access level. Fields are attached to a field group. Users are then attached to the field group with an individual access level. Users view the fields 'through' the field group with either the public level of access or their individual level of access. Field groups are always required, even if you are securing only one field. (There is an alternative way of defining access level for fields in some programs which contain many fields. The purpose is then only to simplify the workflow, not to adjust any security settings.)

A field group has a default access level defined in 'Field Group. Open' (SES100).

You can attach individual users or user groups to determine different access levels for the field group in 'Field Group. Connect Authority' (SES010). However, all users outside these attached individuals and groups are still governed by the field groups default access level.

Field level security enables you to restrict users from displaying or changing specific fields in specific display panels. The valid alternatives are:

0 = The field is not displayed.

1 = The field is displayed, but its contents cannot be changed.

2 = The field is displayed and its contents can be changed.

Important: Field security control 3 = the field is mandatory to enter, exists in some programs; for example, 'Req/Distr Order type. Open' (CRS201). This is not a part of the field-level security concept and is not discussed here.

Field level security based on Company/Division

Field groups exist at company level. This allows you to have distinct security policies in different companies. However, you cannot have separate field groups existing at division level. Even if the group was created by a user working at division level, it is considered to belong to the company, not the division. Since field groups have a default public access level, as soon as a field group is created, we automatically have a company-wide default access level in field-level security. This is quite unlike function-level security.

A significant difference between field-level security and function-level security occurs when working at division level. In field-level security, company entries are considered in addition to divisional entries in all cases. Contrast this with function-level security, where the company entries are considered only if there are no divisional entries. In function-level authority, an absence of divisional security implies the division is adhering to company policy; whereas if there were entries at division level, it means the division has established its own security policy, and would never refer to company security; the link to company was broken.

M3 Business Engine checks the field level security by first searching for security settings at division level. If no settings are found there, the search continues at company level.

The steps involved in field-level security

There are four steps required to set up field-level security:

1. Preparing for field-level security
2. Defining a field group
3. Attaching fields to a field group
4. Attaching users to a field group

In the first step you need to establish two things:

- The identity of the field as it appears in the database and the identity of the reference field.
- The field is possible to secure.

This preparatory step is necessary because field-level security is not available for all fields in the M3 Business Engine panels.

Follow these steps

Define whether the field can be secured

1. Verify that it is possible to secure the field.
2. Note the field name, the program ID and the panel ID as they appear in the database.
3. Start 'Field. Display per Program' (SES200), to review the list of fields.

   The B panel lists all fields, panels, field groups and reference fields by program.
4. Select a suitable sorting order to find the fields to secure.
5. Select Display for a field to check on the E panel whether it can be secured.

   Important: Do not select the Change option for the field in (SES200/B) to define field security unless absolutely necessary; see below. The purpose of (SES200) is only to display available fields and to which extent they can be secured. The only exception is when you really need to restrict access to a specific field

   The 'Ind - Protect' ('Indicator for protection', PR) and the 'Ind Non-display' ('Indicator for non-display', ND) fields determine whether the field can be secured. If any values are displayed in the 'Indicator - Protect' fields, the field can be protected (access level 1=displayed but not editable). If any values

are displayed in the 'Ind Non-display' fields, you are able to hide the field on the panels in the specific program (access level 0= Not displayed). If there are no values for these fields in (SES200/E), the field cannot be secured.

Define a field group

1 Start 'Field Group. Open' (SES100).

2 Enter an ID for the field group in the 'Field group' field. Click Create.

3 On the E panel displayed, enter a description of the field group in the 'Name' field.

4 Select one of the access levels below in the 'Field selection' field. Press Enter.

- 0 = Do not display field heading or content.
- 1 = Display field (heading and content) but changes cannot be made.
- 2 = Display field (heading and content) and contents can be changed.

Connect fields to a field group

1 Start 'Field Group. Connect Fields' (SES102). Can also be started by option 11 in (SES100/B).

The program can also be reached by selecting related option 11 = 'Fields/field group' for the field group in 'Field Group. Open' (SES100/B).

2 Select the field group and enter the ID of the field to add to the field group. Click Create.

Important: If you enter the "real" field ID, the security restrictions will only apply to this specific field in the the current program and its panels. If you enter the ID of the reference field instead, the security restrictions will apply to all fields connected to this reference field, not only in the current program.

As soon as a field is connected to a field group, the field group determines the security settings for the field. Users have the default public access level of their user group until they are connected to the field group.

3 Add the selected or required groups to the field. Press Enter.

4 In (SES100/B), select related option 21 = 'Where used' to display in which programs and on which panels the field group and its connected fields appear.

Connect users to field group

1 Start 'Field Group. Connect Authority' (SES010).

2 Select a 'blank' division if the field level security for the user should apply throughout the entire company; otherwise select a specific division. Then select a field group and a user or user group. Click Create.

3 On the E panel, select the field access level in the 'Field selection' field. Press Enter.

Add or modify field level security manually for existing fields in (SES200)

To secure a field in a program that is listed in 'Field. Display per Program' (SES200) but nevertheless lacks values in the indicator fields ('Ind - Protect' and 'Ind - Non-display'), you need access to the development environment and a screendesigner tool.

1 Go to panel (SES200/E).

2 Enter the appropriate indicators, two previously not entered, in the 'Ind - Protect' and the 'Ind - Non-display' fields.

   All field selection indicators (1–40) are available. Normally, indicators 1–20 are reserved for 'Ind - Protect' and indicators 21–40 for 'Ind - Non-display'. It is possible to secure up to 20 fields per panel, but the same indicators can be used for several fields. Note that indicator 45 often is already entered, since it is being used for protection of fields when the Display option is used.

See also

"M3 BE Security Model Overview" on page 203

"Company and Division Security" on page 207

"Security Aspects of M3 Business Engine Functions" on page 204

"Function Security" on page 210

"Data Authority Security" on page 214

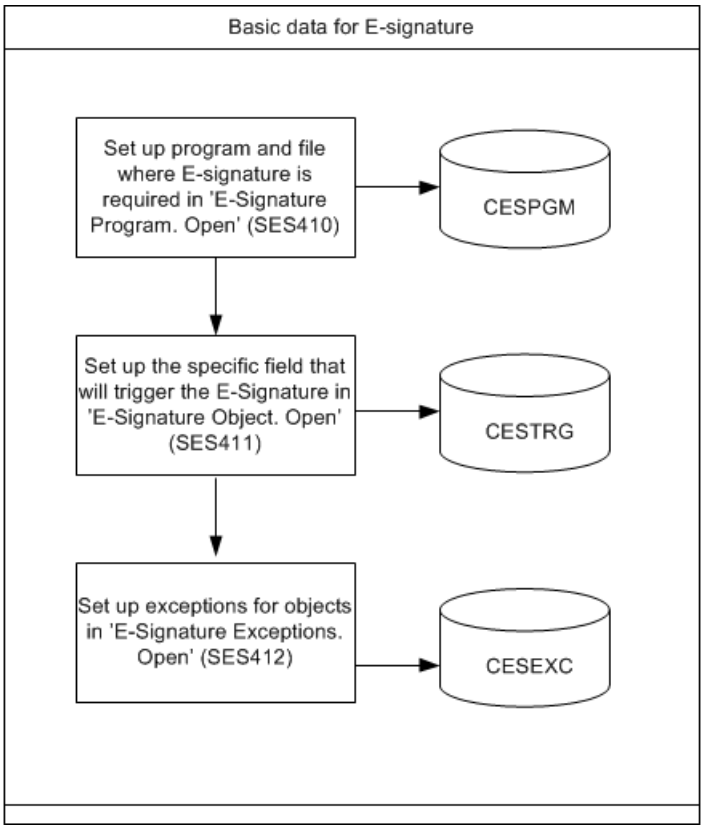
Manage E-Signature

The e-signature functionality allows users to sign and approve electronic records within the system. Selected programs, files, and objects can be set up to trigger a request for an e-signature to ensure that review or approval of the electronic record is performed before changes are saved.

This document describes the basic data set up required to activate this functionality in addition to the activities involved in e-signature creation, signature, and error handling.

Basic data for e-signature

Perform the following activities to set up basic data for e-signature:



Define programs and files for e-signature

Programs and files for e-signature are defined in 'E-Signature Program. Open' (SES410). This program is used to identify programs and files that require an e-signature. Records are stored in table CESPGM.

A program is an entity that updates data in electronic records stored in a file. A program can update records in multiple files. A combination of the two - program and file - comprise the e-signature program that requests an e-signature from the user when changes are made.

The following settings are defined for an e-signature program:

Field	Description
Signature Event	Determines how often an e-signature is required per program. Alternatives are '1-First Panel' and '2-Every Panel'. When alternative 1 is selected, the e-signature will be required only once, in the first panel of the program or the first panel where a field requiring signature is changed. The signature will be applied throughout the program. In alternative 2, the e-signature will be required in every panel of the program where a field requiring signature is changed. If comments are required, based on the set up in (SES411), the e-signature is displayed in every panel regardless of the setting, allowing the user to enter the required comments.
Status	Determines if the e-signature program is '10-Prelimary' or '20-Released'. Only released e-signature programs will trigger a request for an e-signature.

Define objects for e-signatures

E-signature objects are defined in 'E-Signature Object. Open' (SES411). This program can be accessed directly or started from 'E-Signature Program. Open' (SES410) using related option 11='E-signature object'.

Only programs and files that are defined in (SES410) can be used to define an e-signature object. Fields from the identified program and file are set up to trigger an e-signature request. When changes are made in the field, an e-signature will be required. The combination of these three - program, file, and field - form the e-signature object. This is stored in the CESTRG table.

A blank field can be entered to enable e-signature when creating or deleting records in the e-signature program.

The following settings must be defined for an e-signature object:

Field	Description
Reason	The reason for requiring an e-signature for the object. This will be displayed when the e-signature is triggered.
Signature Method	Determines the method used when signing the e-signature. When alternative '1-System' is selected, signing is performed within the system by entering user and password. No external system or security product is used.
Signature Strategy	Determines the strategy used when signing the e-signature. When alternative '1-Simple' is selected, no other signatory is required. The user who made the changes to the record will also be the one to sign.

Field	Description
Sign Process	Determines the process used in signing the e-signature. When alternative '1-Synchronous' is selected, e-signature will immediately be prompted and must be completed without interruption. Signing must be made before a new transaction can be started.
Comment Input	Determines whether comments are required when updating an object or executing the e-signature. Alternatives are '0-Not Applicable', '1-Optional' or '2-Mandatory'. When alternative '0-Not Applicable' is selected, the comment box is not displayed.
Status	Determines if the e-signature object is '10-Prelimary' or '20-Released'. Only released e-signature objects will trigger an e-signature when changes are made.

Note: (SES411) may also be used to set up comment input when updating a record. To do this, signature method, strategy, and process are set to '0-No Signature' and comment input should either be '1-Optional' or '2-Mandatory'.

Settings for application messages are also defined in this program. The following settings are defined for successful signature and failed signature:

Field	Description
Send Message	Determines if an application message should be sent after a successful or failed signature.
Receiver	Determines to whom the application message will be sent.
BOD Enabled	Indicates if the created application message should be sent to ION in the form of a business object document.
Workflow Name	Indicates the name of the workflow to be started in ION when an application message is created.

Define exceptions for e-signature

By default, e-signature is required for all changes in objects defined in 'E-Signature Object. Open' (SES411). In program 'E-Signature Exception. Open' (SES412), exceptions per e-signature object are defined. It is better to define exceptions to avoid missing definition of conditions where e-signature will be applied. This program can be accessed directly or started from 'E-Signature Object. Open' (SES411) using related option 12='E-signature exception'. The exceptions are stored in table CESEXC.

- **Validations**

  New exception records can only be created for existing (SES411) records (CESTRG) with status 20.

  The table to be validated for exception is the object table being signed. Related tables defined in 'Related Tables. Connect' (CMS011) can also be used. This can be accessed from 'List and Printer programs. Configure' (CMS005), using related option 11='Related Tables'. Note that use of related tables are valid only for programs using the new list standard.

- **Assumption**

  Verification is not performed between conditions. It is the responsibility of the user to specify correct exception criteria. Exception conditions are specified per e-signature object. The following are defined for each condition in (SES412/E):

Field	Description
Sequence	Sequence (SQNU) starts from 1 and can be manually inputted. If not entered, last sequence will be incremented with 1.
Join	Multiple conditions can be joined by 'AND' or 'OR'. The first condition should always have value of '0-Blank' and will mark the beginning of the entire process exception.
File	The same as the object table being signed or one of the related tables defined in (CMS011).
Field	The specific table field to be validated if the record will be exempted from signature processing.
Condition	Determines the comparison to be performed for the specified value field.
Value field	Specific value to be tested if met to enable exception.

If there are multiple exceptions created for an e-signature object, the relation between the conditions should be logical to represent the business condition where the e-signature is not required.

E-signature process

Creation of e-signature record

When changes are made to specific fields that require an e-signature in the program, electronic records are created in 'E-Signature Record. Open' (SES440) with 'Pending' as status. Multiple records are created depending on how many fields for e-signature are changed. The records will be assigned the same unique number series (per panel) called 'E-signature number'.

Records contain the following information:

Field	Description
Program	The e-signature program where changes were made.
File	The file containing the changed field or object.
Field	The changed field or object.
Old value	The old value of the field changed.
New value	The proposed new value of the field.
Reason	The reason for requiring the e-signature.
Change Date and Time	Determines when the changes were made.
Changed by	The user who made the changes in the record.
Sign date and time	Determines when the e-signature record was signed.
Signatory	The user who last signed the record.
Settings of the e-signature object at time of creation	Sign method, Sign strategy, Sign process, and Comment Input.

When adding or deleting a record in the e-signature program, an electronic record is created in 'E-Signature Record. Open' (SES440) with reason 'Record Creation' or 'Record Deletion'. These records initially get status 'Pending'. Fields 'Old Value' and 'New Value' fields are blank.

Signing of e-signature record

When clicking 'enter' in the program, 'E-Signature. Open' (SES450/B) will be displayed. The timing of the display is dependent on the basic option used (e.g. add, delete, or change) in additon to the 'Signature Event' setup in 'E-Signature Object. Open' (SES411). Records will be created in 'E-Signature. Open' (SES450) with 'Pending' as status. Single or multiple records are created depending on the number of fields changed for e-signature.

When adding a new record, (SES450/B) will be displayed after the record creation panel. Only one line with reason 'Record Creation' will be displayed in the subfile.

When deleting a record, (SES450/B) will be displayed after confirming in Panel D in the e-signature program. Only one line with reason 'Record Deletion' will be displayed in the subfile.

When updating a record, (SES450/B) will be displayed after the first panel or every panel, depending on the 'Signature Event' setting in 'E-Signature Program. Open' (SES410). Single or multiple fields or objects will be displayed in the subfile, depending on the numbers updated.

In all cases, 'E-signature number', 'workflow', and 'signatory' will be displayed in the header.

After reviewing the subfile, 'Process All' under Actions is selected to sign the records. If one or more fields in the panel require signature, password prompt will be displayed. Once the password is provided and entered, the records in (SES440) and (SES450) will be updated with 'Signed' status.

Once signed, date and time of signing and the last signatory will be updated.

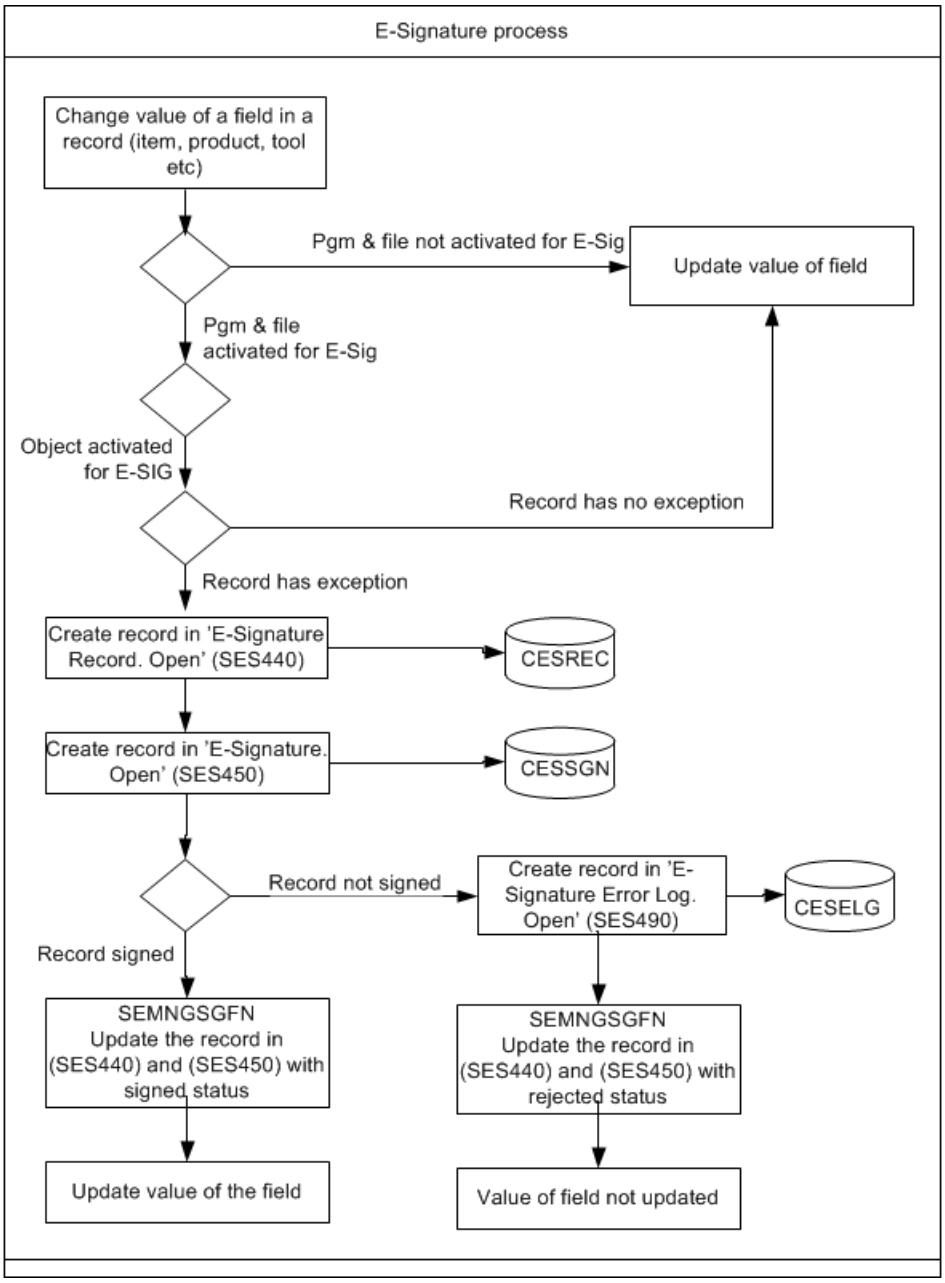
If password is not entered and (SES450) is closed, the record in (SES440) and (SES450) will be updated with 'Rejected' status.

Error logging of e-signature record

Errors in the signing process will create a record in 'E-Signature Err Log. Open' (SES490). Cancelling or closing (SES450) or the password prompt will trigger the creation of error log in (SES490) with error 'Cancellation'. Entering a wrong password will trigger the creation of error log in (SES490) with error 'Cancellation' or 'Invalid Password'.

In the scenario when two users make changes to the same record at the same time, only the first signed record will be saved. The second record in (SES440) will be updated with status 'Discarded' and a record in (SES490) is created with error 'Change overruled'.

When e-signature is cancelled or an error is encountered, no changes will be made in the database and the original program and panel will be displayed.



Functional limitations

Only those programs that have the program infrastructure can be enabled to request electronic signature. In order to enable e-signature in other programs, changes should be made according to a template. This should be done prior to setup in (SES410), (SES411), and (SES412).

Application Message Authority

This document explains how you give another user temporary authorization to view and use your application messages.

Follow these steps

Give a User Temporary Authorization

1. Start 'Application Message. Open' (CRS420).
2. In the Receiver field on the B panel, specify the ID of the person that normally receives the application message.
3. Select action Authority (F18).
4. On the B panel in 'Application Message. Connect Authority' (CRS422), enter the authority level of the temporary receiver.

   The valid alternatives are:

   1=Work with messages. The other user is allowed to work with the application messages. If this alternative is selected, you can specify which options and function keys can be used by the temporary user.

   2=Messages rerouted. The application messages are rerouted to the other user, who can only review the messages. Note that it is only possible to reroute from one user to another user, and not in a chain of users.

   3=Messages forwarded. A copy of the application message is forwarded to the other user, who is only able to review the messages. Note that it is only possible to forward from the original user to another user, and not in a chain of users.
5. Specify the user that will receive temporary authorization.
6. Specify the date when the authorization will become effective. Select Create.
7. On the E panel, specify the date when the authorization will end.
8. If you selected authority level 1 (Work with messages), select the check boxes for all the options and/or function keys that you want the temporary user to be able to use. Press Enter.

   The valid alternatives are: Option Change (2), Copy (3), Delete (4), Display (5), Print (6), 21, 22, File (24), Create messages types (F14), Print application messages (F16), and Authority (F18).
9. On the B panel, select one of the following alternatives:
   - If you want the authorization defined above to apply for all application messages generated for the original user, press F3.
   - If you want the authorization defined above to apply only for some application messages generated for the original user, go to Limit the Authorization for Specific Application Messages.

Limit the Authorization for Specific Application Messages

Note that you limit the authorization per authority record. For example, you can create a general authority record with authority level 3 (Messages forwarded) for user B with no limitations, and then an authority record with authority level 1 (Work with messages) for user B, but limit this authority to a few application messages.

1. Select option 'Message types' for the authority record.
2. In 'Application Message. Mail Authority' (CRS423/B), enter the application message type that the authorization will apply for. Select Create.
3. On the E panel, select the 'Activate the application message type' check box.
4. Type 1 (e-mail) in the 'Send e-mail/sms' field if you want the application messages to be sent as e-mails. Press Enter.

   Note: None of the other fields displayed on the E panel are used.

See also

"Set Up the M3 Application Message System" on page 370

"Application Messages and Detailed Messages" on page 366

System Maintenance Run

3

System Maintenance Run Overview

There are several functions in M3 Business Engine that are controlled by date, and when the date changes several checks and updates have to be done. System Maintenance Run in M3 Business Engine executes a number of programs which 'clean up' certain elements of M3 database. Some of the programs are always executed when the System Maintenance Run starts, while others are started optionally.

Using System Maintenance Run

The system maintenance run is an alternative to the normal night run (CRS999 - Night Run. Start). It adds some flexibility since you can define your own runs. For example, you can have different night runs for different occasions like a Weekend Night run or a Monday Night run etc.

Important: It is recommended to execute the System Maintenance Run each night.

System Maintenance Run and Job Scheduler

The M3 Business Engine Job Scheduler is used to run programs on schedule. In order for a function to run on a schedule, M3 Business Engine System Maintenance Run must be defined in the M3 Business Engine Job Scheduler as a scheduled job. M3 Business Engine System Maintenance Run runs a number of predefined programs once each night, while other scheduled jobs in M3 Business Engine Job Scheduler often runs one defined program.

For further information on Job Scheduler, refer to "M3 Business Engine Administrator's Guide for Job Scheduler" on page 73.

Solution for Parallel Run

It is possible to run all System Maintenance Runs in parallel.

Parameters on the E panel in 'Night Run.Start (CRS999)' and the Run function field in SHS101 indicate whether the auto jobs required to be shut down automatically during the System Maintenance Run.

Shutting down the auto jobs are not necessary from a data consistency point of view but could be selected if you want to minimize the impact on the System Maintenance Run from other activities in the system.

Important: Running MRP with automatic release of proposals with A2 messages where the grouping of, e.g. purchase order proposals might be affected.

In case of Multi Company installation, the M3 Business Engine database must have its own System Maintenance Run job set up and scheduled. Different database System Maintenance Runs can be submitted to run concurrently. It is also possible to select which companies and divisions are to be included in the System Maintenance Run for the database.

Ordering a System Maintenance Run

A System maintenance run can be ordered by in one of the following ways:

- Order system maintenance run by the Job Scheduler.
- Order system maintenance run by option 9=Run on the SHS100/B panel.

For more details, refer to "Enabling System Maintenance Run" on page 231.

System Maintenance Run Process

The System Maintenance Run parameters are specified in SHS100, SHS101 and SHS105. Before performing System Maintenance Run, the job needs to get scheduled. This is done in 'Job Schedule Category. Open' (SHS050) and 'Job Schedule. Open' (SHS030).

After a System Maintenance Run is scheduled in 'Job Schedule Category. Open (SHS050)' and in 'Job Schedule Function.Open (SHS030)' it needs to get ordered in 'System Maintenance.Open (SHS100)'. When completed, the SHS999CL is added to the CSHCTL file in 'Job Schedule Entry. Update (SHS010)'.

The job CSCHJOB 'Scheduled Job Driver' in the auto-job subsytem controls if there are any jobs in the CSHCTL file that should get started. At start time, the job CSCHJOB 'Scheduled Job Driver' in SHS999CLsubmits the file to CMNGJOB 'Batch Job Driver' which starts the System Maintenance Run.

When the System Maintenance Run process is finished, the job SHS999CL is again placed in the CSHCTL file in 'Job Schedule Entry. Update (SHS010)'.

Important: You can run System Maintenance without stopping the auto start jobs, however it is recommended to stop the auto start jobs before System Maintenance Run.

- System performance is better if auto start jobs are stopped during System Maintenance Run.
- If the auto start job 'Create MO/PO from planned orders (MMS940)' is stopped, no planned order will be released during System Maintenance Run. As a result, the grouping of released orders will work better.

System Maintenance Run Operations

- **Changing Parameters in a Scheduled System Maintenance Run**

  1. Start 'Job Schedule Entry. Update' (SHS010).
  2. If you will make changes, click Change, the E panel is opened. This panel is the same as the (SHS230/E) panel. Fill in the changes you want to make in the following fields.

User	The last user who affected SHS100.
Version	The field indicates the number used to identify different submissions of the same function. Each time a job is placed on the job scheduler, a check is made for the last version submitted for the function and 1 is added to it for the current version.
Job number	Job number is used in the operating system to distinguish different batch jobs.

- **Display and Re-start Executed System Maintenance Runs**

  1. Start 'Submitted Job. Open' (MNS250).
  2. On the E panel you find the Command field which indicates the command used to start the job.
  3. You can also restart an already executed System Maintenance Run by option 9=Run.

System Maintenance Run History

If the Record history is selected on the E panel in 'System Maintenance.Open (SHS100)', information about the night run is stored in 'System Maintenance Run. Analyze' (SHS300). Here you can see the different night runs. A status indicates if the night run has performed ok, has failed, or is currently running. You can also see the start/finish time of the night and a run time.

If the night run has failed you can restart the night run from the beginning via option 9 'Run'.

Option 11 'Details' takes you to 'System Maintenance Details. Analyze' (SHS301) where you can se the same information about each individual job and also the number of records that has been processed. Here it is possible to restart a failed night run, via option 9=Restart, starting from the program that failed (or any other program). This will run the selected program and all programs with a higher sequence number. There are two additional inquiry types present also, so that you can compare several runs for one function within one job identity or one function within several job identities.

See Also

"Enabling System Maintenance Run" on page 231

"Programs Included in System Maintenance Runs" on page 234

"M3 Business Engine Administrator's Guide for Auxiliary Functions (AUX) " on page 54

"M3 Business Engine Administrator's Guide for Job Scheduler" on page 73

Enabling System Maintenance Run

This document describes the required settings to enable System Maintenance Runs.

Before you start

- The subsystem ASJ - 'Subsystem for M3 data base updating must be defined in 'Subsystem. Open' (MNS050). You can create ASJ by select F14=Create standard.
- CSCHJOB 'Scheduled Job Driver' and CMNGJOB 'Batch Job Driver' must be connected to the auto-job subsytem in 'Subsystem Job. Open' (MNS051).
- 'System Maintenance. Open' (SHS100) has to be set up as a scheduled job.

  If you want to include Engineering Change Order (ECS435) in System Maintenance Run, you must activate the '309 Engineering change order' field in (MNS100/J).

Follow these Steps

Proceed with the following steps to enable System Maintenance Run.

If you don't want to schedule the System Maintenance run, Start 'System Maintenance. Open' (SHS100) and select option 9=Run.

1 Start 'Job Schedule Category. Open' (SHS050) and enter the job category.

This field indicates a category, which can be attached to a function in order to determine which job queue and at what time of day the function can be run.

2 Open the E panel and enter the following information

From time - The field indicates the earliest time a job (belonging to a job schedule category) can be scheduled to run.

To time - The field indicates the latest time a job (belonging to a job schedule category) can be scheduled to run.

3 Start 'Job Schedule Function. Open' (SHS030) and Enter 'SHS100' in the Function field.

Leave the User field blank.

4 Open the E panel and enter 'JS allowed' field. The available options are the following:

0	This function is not allowed to be scheduled.
1	This function can be scheduled or run immediately
2	This function must be scheduled.
3	This function will be scheduled to run once at the earliest time allowed for function category.

5 In the 'JS category' field you select your job category defined in 'Job Schedule Category. Open' (SHS050).

Enter 'SHS998' in the Program field.

Enter 'SHS999CL' in the 'Job' field.

Before a batch job is submitted, M3 Business Engine standard programs calls program 'Select Job Attribute' (MNS230) to see if there are job attribute overrides. One of the parameters passed to this program is the job name. This job name is used to find a job schedule function and check if the job allows scheduling. If scheduling is allowed, the job scheduling screen (SHS230/E) is displayed.

Press Enter

6 Start 'Job Schedule Program. Open' (SHS031). Can also be started via option 11=Program from SHS050/B.

7 Enter SHS998 in the Program field and open the E panel and fill in Description and the display file SHS998DSP.

For further information on Job Scheduler, refer to "M3 Business Engine Administrator's Guide for Job Scheduler" on page 73.

8 Start 'System Maintenance. Open' (SHS100) and enter a Job identity.

This field indicates the user defined identity of the system maintenance run. For example, you can have different system maintenance runs for different occasions like a Weekend Night run or a MRP Night run etc.

9 On the E panel you enter a Description for the job.

Field	Description
User	This field indicates the user to be notified about the results of the run.
Notify finish	This field indicates if the user should be notified when the system maintenance run has finished ok.
Notify failed	This field indicates if the defined user should be notified when the system maintenance run has failed.
Record history	This field indicates if the system maintenance run should generate history records. The history records are used for monitoring and comparing earlier runs in 'System Maintenance Run. Analyze' (SHS300).
Time out time	This field indicates the maximum number of hours the System maintenance run is allowed to run before it's considered to be abnormal. When the specified number of hours has been passed the System maintenance run responsible will be notified.

10 Start 'System Maintenance. Open Details' (SHS101), via option 11=Details on SHS100/B.

(SHS101/B) contains a F14 key that generates the std night run set up i.e. the same programs and sequence as currently are used in the 'Old' night run (CRS999).

Here it is possible to define if a program should be included in the night run or not. This can be done by deleting the program or by ticking the checkbox 'Run function' in (SHS101/E). It's also possible to further fine tune the content by the 'from and to date'.

Important: Activating Run function in SHS101/E is recommended at least for mandatory programs listed in "Programs Included in System Maintenance Runs" on page 234 to ensure a complete System Maintenance Run.

It is possible to change the sequence of the included programs, however, it is not recommended. Changing sequence is done by adding a new record (new sequence) with the program you want to move and deleting the old sequence.

11 Open SHS100/B and select option 17=Selections. This starts 'System Maintenance. Open Selections' (SHS105). Here you can define the company and division (one or several) where the night run should be performed.

See Also

"M3 Business Engine Administrator's Guide for Auxiliary Functions (AUX) " on page 54

"M3 Business Engine Administrator's Guide for Job Scheduler" on page 73

"System Maintenance Run Overview" on page 229

"Programs Included in System Maintenance Runs" on page 234

Programs Included in System Maintenance Runs

There are optional and mandatory programs included in a System Maintenance Run. While the mandatory programs keep various parts of the system updated, the optional programs clear redundant data record files and recalculate loads/capacities.

Important: Since a M3 Business Engine installation always contains all database files, all System Maintenance Run programs can be run although only parts of M3 Business Engine are in use. That is, you don't have to install all M3 Business Engine applications to be able to run System Maintenance Run.

Mandatory programs

The following programs must be run in a M3 Business Engine System Maintenance Run.

Program ID	Program Name
SAS920	Update Agreement info on individuals
PDS999	Restart interrupted transactions after PDS001
PMS999A	Restart interrupted MO issues
PMS966	Create Action Message C2

Program ID	Program Name
MOS966	Create action message C2
CPS931	Create past time workload
CRS930	Update customer with invoice amount from ledger
RSS310	Move data to historical files
RCS999	Re-create CTP validation file
MOS999A	Restart interrupted WO issues
MOS984S1	Deletion of Canceled Planned Work Orders
MOS999S2	Service Requirements Planning Calculation

Important: You should activate Run function in SHS101/E for all programs that are mandatory to ensure a complete System Maintenance Run.

- **Update Agreement Information on Individuals (SAS920)**

  This program updates the individual item file (SINDIV) with valid service agreements information.

  System Maintenance Run SHS101/E - Run function must be activated.

- **Restart Interrupted Transactions after PDS001 (PDS999)**

  If the product structure, processed in 'Product Structure. Open' (PDS001) has been interrupted; (PDS999) restarts this processing. The program first calls program (PDS900) to complete the transactions, and then program (PDS906) to update lower levels of product structure, etc.

  This restart can also be made in 'Product. Restart Interruption aft PDS001' (PDS998), available on the AUX menu.

  System Maintenance Run SHS101/E - Run function must be activated.

- **Restart Interrupted MO Issues (PMS999A)**

  This program restarts interrupted manufacturing order (MO) issues. If a MO issue is interrupted, then program (PMS065) is called to complete the processing. This situation occurs mainly when using back flush materials and the user does not leave 'MO Operation. Reporting' (PMS070) before e.g. the back up starts. The back up routine will terminate all programs in use, including this one, and therefore no triggering is done in order to execute the back flush transactions. These transactions will not process until (PMS999) has run.

  This restart can also be made in 'Restart Interrupted MO Issues PMS065' (PMS998) available on the AUX menu.

  System Maintenance Run SHS101/E - Run function must be activated.

- **Create Action Message C2 (PMS966)**

An action message suggests performing a certain planning action. It is automatically created by the system either at change of date or when change has occurred in the material plan for an item.

The action message should be regarded as a signal to the planner. The whole philosophy is based on exception technique, giving signals only for transactions that need action. Therefore the setup of parameters and lead-time relating to planning are of great importance. All action messages are related to time fences, which involves usage of the item lead-time.

The C2 message (Released order will be delayed) gives an indication that a released order may be delayed. When calculating if the C2 should be applied the system considers operations and remaining time to estimate a possible delay. Generally it is generated when a manufacturing order has not started or started operation that cannot be finished in time.

To manually create C2 messages for transactions you must run 'Action Message. Create C2' (PMS965) from the MAP menu. The System Maintenance Run program (PMS966) creates the C2 messages automatically.

The following criteria must be fulfilled for a C2 message:

- It must be a released manufacturing order.
- Item/warehouse must exist.
- Orders must be qualified for selected facilities/warehouse in the run.
- The item uses a planning policy where the parameter 130 Create AM for potential delays in (MMS037/F) is activated.
- No other action message is active for the manufacturing order.
- The planned start date on the manufacturing order head is earlier than time filter date (today's date minus the number of time filter days on the planning policy).
- Any operation on the order with status ≥ 60 and ≤ 70 where the calculated finish date is later than the planned finish date. The calculated finish date is calculated by distributing the remaining time according to the capacity in the capacity calendar for the work center.
- System Maintenance Run SHS101/E - Run function must be activated.

- **Create Action Message C2 (MOS966)**

  This program is used to create C2 messages for work orders. The following criteria must be fulfilled for at C2 message.

  - It must be a released manufacturing order.
  - Item/warehouse must exist.
  - Orders must be qualified for selected facilities/warehouse in the run.
  - The item uses a planning policy where the parameter 130 Create AM for potential delays in (MMS037/F) is activated.
  - No other action message is active for the manufacturing order.
  - The planned start date on the work order head is earlier than time filter date (today's date minus the number of time filter days on the planning policy).

- Any operation on the order with status ≤ 50 (not started) and planned start date earlier than the time filter date.
- Any operation on the order with status ≥ 60 and ≤ 70 (started, partly reported) where the calculated finish date is later than the planned finish date. The calculated finish date is calculated by distributing the remaining time according to the capacity in the capacity calendar for the work center.
- System Maintenance Run SHS101/E - Run function must be activated.

- **Create Past Time Workload (CPS931)**

  System Maintenance Run SHS101/E - Run function must be activated.

- **Update Customer with Invoice Amount from Ledger (CRS930)**

  This program updates customer records with the number of overdue days, current outstanding and overdue invoices amounts from the sales ledger.

  System Maintenance Run SHS101/E - Run function must be activated.

- **Move Data to Historical Files - CDS (RSS310)**

  This program goes through the Customer Delivery Schedules (CDS) and archives those that match the criteria. Archiving of delivery schedule is set up per partner in 'Settings - Partner' (RSS015), and the following parameters must be set:

  - 240 Delivery schedule interval
  - 245 Archiving
  - 250 Days before archiving/deletion

  Parameter 245 must be set to 1 to enable archiving. In this case all delivery schedules with start date less than current date - delivery schedule interval - Days before archiving/deletion will be archived, no matter what status they have. It is possible to view archived delivery schedules in 'Delivery Schedule. Display Historical' (RSS300) where option 21=Trf to prod may be used to move them back to the production files.

  System Maintenance Run SHS101/E - Run function must be activated.

- **Re-create CTP Validation File (RCS999)**

  - Planned orders of different order categories are the basis for creating load for the CTP validation (Global Capable to Promise) in the system. Loads are created on-line at CTP validation for the requesting order, but changes in the material plan will not update the loads in the rough cut capacity plan. Then System Maintenance Run will re-create the load and base it on the current situation in the material plan.
  - Load will be generated for items that have a corresponding resource profile and are set as master scheduled in 'Item. Connect Warehouse' (MMS002). Planned manufacturing orders are always included in the update of load, while other order categories are included if they are defined in 'Product Structure. Connect Item' (CRS784).
  - System Maintenance Run SHS101/E - Run function must be activated.

- **Restart Interrupted WO Issues (MOS999A)**

This program restarts interrupted work order (WO) issues. If a WO issue is interrupted, then program 'Auto report Work Order Material' (MOS065) is called to complete the processing. This situation occurs mainly when using back flush materials and the user doesn't leave 'WO Operation. Reporting' (MOS070) before e.g. the back up starts. The back up routine will terminate all programs in use, including this one, and therefore no triggering is done in order to execute the back flush transactions. These transactions will not be processed until (MOS999A) has run.

This restart can also be made in 'Restart Interrupted WO Issues MOS065' (MOS998) available on the AUX menu.

System Maintenance Run SHS101/E - Run function must be activated.

- **Deletion of Canceled Planned Work Orders (MOS984S1)**

  The program goes over all work requests that have status 90 (= "cancelled") and start date earlier than or equal to the current date. These work requests are deleted and then moved to the service history (MOS180), just as if they had been performed on the start date. The latest service date per meter (MMS242) will also be updated in the same way.

  This job can also be started from 'Work Request. Delete Canceled' (MOS984) available on the AUX menu.

  System Maintenance Run SHS101/E - Run function must be activated.

- **Service Requirements Planning Calculation (MOS999S2)**

  This program recalculates the master schedule for maintenance (MOS170 work requests and MOS180 open released work requests) for serialized items with continuous net change = 0 in (MMS240), I. e is the batch net change SRP program.

  The work flow of the program is as follows:

  1. (MOS999S2) reads the whole MITPCC file and selects all serialized items that have a Next calculation date (MCCALD) equal or less than today's date.
  2. For every item that is selected a record will be written in MITPCC. This record is updated with a 9 in Continuous net change code (MCCONC).
  3. When all the MITPCC records have been read, the program calls (MOS950) that will do the actual SRP calculation. The items that are calculated in (MOS950) are the ones marked with a 9 in MITPCC. These records are deleted prior to calling MOS950. When the MOS950 has run for a serialized item, a new MITPCC record is created with a new calculated Next calculation date and Continuous net change code according to the serialized item.
  4. This recalculation can also be started in 'Master Schedule. Regenerate' (MOS999), available on the AUX menu. Please be aware however, that when you run this program manually, you can choose from batch net change run or regenerative run.
  5. Regenerative run means that all work requests below a given status are deleted (with some exceptions) before they are regenerated. When MOS999S2 runs in the System Maintenance Run, it is always in net change mode - never regenerative.

  Night Run - CRS999: The Reclassify lots field in (CRS999) must be activated.

Optional programs

The following programs are optional to run in a M3 Business Engine System Maintenance.

Program ID	Program Name	Field (valid when the night run is executed by CRS999)
ECS435	Engineering change order implement	MXEC
MMS999S2	Recalculate planning picture	CMRP
MMS981S2	Remove expired lots in MITLOC	IFCL
MMS978	Move lots (MILOMA) to rejected depending on date	RCLA
OIS935	Update payer with order-value not invoiced	BLOG
POS999	Generate mail from project orders and project quotations.	GMPO
POS998	Generate expected days for the project order schedule	GEXP
POS997	Update the value from not yet been delivered PO on the project orders	GCOM
STS840	Create Rental Invoice Orders Automatically	CROR
STS970	Update Status on Individuals	AAPA
TMS960	Calculate time and attendance from Portable Device Support.	CTAA
POS996	Calculate degree of completion for each element in a project order.	REDG
MWS951	Remove old reservations	
ATS993	Set status 90 to attributes	

- **Update Engineering Changes (ECS435)**

  Engineering changes refer to changes in the construction or design of parts from the perspective of a product structure. These changes often result in changes to the product structure. They are made by adding, deleting, exchanging components in t he structure or changing structure quantities. Engineering changes are defined in an engineering change order (ECO) for the object of the change, such as the item, document, drawing or bill of material.

Important: If you want to include Engineering Change Order (ECS435) in System Maintenance Run, you must activate the 309 Engineering change order field in (MNS100/J).

1. (ECS435) will first call (ECS437) in order to calculate the projected on-hand balance. This information is used on order to find an implementation date for the ECO change. (ECS438) will then copy the product structure information from the product structure files to the work files. In (ECS436) the ECO change are implemented to the product structures in the work files and is then copied back to real product structure files in (ECS439). When all ECO changes have been implemented, (PDS906) is run in order to calculate the low level codes
2. (ECS435) will only run if module EC is installed (activate the 309 Engineering change order field in (MNS100/J).
3. (ECS435) implements all engineering changes that are approved i.e. in status 80.
4. (ECS435) can also be started manually via function key F16=Act changes in (ECS420).
5. System Maintenance Run SHS101/E - Run function must be activated.

- **Recalculate Planning Picture (MMS999S2)**

  This program recalculates the material plan and is mainly used for the items with continuous net change = 0 in (MMS002), I. e is the batch net change MRP program.

  The work flow of the program is as follows:

  1. (MMS999S2) reads the whole MITPCC file and selects all items that have a Next calculation date (MCCALD) equal or less than today's date.
  2. For every item that is selected a record will be written in MITPCC. This record is updated with a 9 in Continuous net change code (MCCONC).
  3. When all the MITPCC records have been read, the program calls (MMS911) that will do t he actual MRP calculation. The items that are calculated in (MMS911) are the ones marked with a 9 in MITPCC.
  4. When the MRP calculations have been done for an item, the record in MITPCC is deleted and a new one is created with a new calculated Next calculation date and the right Continuous net change code.

     This recalculation can also be started in 'Material Plan. Re-calculate' (MMS999), available on the AUX menu.

  System Maintenance Run SHS101/E - Run function must be activated.

- **Remove Expired Records in MITLOC (MMS981S2)**

  This program removes expired records from the Stock Identities file MITLOC, if all of the following criteria are met:

  - Auto delete field is 1 (MMS010)
  - Auto deletion delay field has passed the number of days (MMS010)
  - On hand quantity is 0

- Allocated quantity is 0

This removal can also be started from 'Inventory Record. Delete Out of Stock' (MMS981), available on the AUX menu.

The record may not be labeled for inventory, which means that the field MLINON must be 0. If MLINON is 1 the balance ID first either has to be reported as calculated in the physical inventory (MMS300) or removed from the physical inventory list. Either one of these actions will set MLINON to 0 so that the balance ID can be removed.

- Night Run - CRS999: The Check expired balance records field in (CRS999) must be activated.
- System Maintenance Run SHS101/E - Run function must be activated.

- **Move MILOMA to Rejected Depending on Date (MMS978)**

  This program reclassifies and re-analyzes expired lots. The check means that approved expired lots (status 2) are reclassified to quarantine status 3, if no allocated quantity exists. Lots are expired when the expiration date has been passed. Re-classified lots will create a LI request, if LI is used. Lots with a passed follow up date will create a LI print out.

  - Night Run - CRS999: The Reclassify lots field in (CRS999) must be activated.
  - System Maintenance Run SHS101/E - Run function must be activated.

- **Update Payer with Order-Value not Invoiced (OIS935)**

  This program updates customer records with the order value not invoiced, also referred to as the backlog. The program calculates the backlog based on all customer orders that are not yet invoiced. If there are a lot of customers and a lot of customer orders that are not invoiced, then this calculation will take a lot of time. If the calculation is not performed, then the backlog value might not always be correct. The backlog value is used for credit check against credit limit 3, defined in (CRS610).

  - Night Run - CRS999 Update customer backlog field must be activated.
  - System Maintenance Run SHS101/E - Run function must be activated.

  Tip: OIS935 should only be executed included in a System Maintenance Run (SHS999) if Credit Limit 1 or 4 is used for past due invoices. Credit limit 1, 2, 3 and 4 are defined in 'Customer. Open' (CRS610/J). If not credit limit 1 or 4 is used, OIS935 should only be executed if there has occurred errors in the OCUSMA table.

  1 Start 'Customer Order. Stop' (OIS120)

  2 Select the customer with error in the OCUSMA table and open the E panel.

  3 On the E panel, select F15=Refre inv amt.OIS935 is started

- **Generate Mail - Projects (POS999)**

  This program generates messages for the M3 Business Engine mailbox from PJP - Project Processing and PJQ - Project Quotations.

  To assist the project manager in keeping control of the various projects he is in charge of, M3 Business Engine offers the possibility to have messages and mails generated for specified occasions.

Supported occasions are among others "Activity xxx has been started" and "Actual costs exceeds budget".

Some of these messages are generated interactively during the day, such as "Activity has been started" but others are trigged because no action has been taken. Therefore there is a need for System Maintenance Run checking.

The messages will be sent to project manager and sub project manager as entered in 'Project. Open' (POS100). The messages can be viewed in 'Application Message. Open' (CRS420).

The Following setup is necessary:

- The project manager must have the Msg recipient field set to 1 on the (POS015/E) panel.
- The Send message field in 'Project Element. Open' (POS001) should be set to 1. This could be changed in 'Project. Open' (POS100).
- The Message type field must be set to 1 in 'Settings - Application Messages' (CRS424). Message types for projects starts at 800.
- In order to get e-mails, and e-mail address for the project manager, this must be specified in 'e-mail Address. Open' (CRS111).
- Night Run - CRS999:

  The Generate application messages POM field in (CRS999) must be activated.
- System Maintenance Run SHS101/E - Run function must be activated.
- Messages included in the System Maintenance Run will be sent for the following events for active projects:
  - Planned starting date has been passed.
  - Planned finish date has been passed.
  - Planned starting date is the same as current date.
  - Planned finish date is the same as current date.
  - Follow-up date is the same as current date.
  - Follow-up date has been passed.
  - A milestone date has been passed.

- **Generate Expected Days - Projects (POS998)**

  This program updates the Project order time planning with:

  - Delivery date from connected purchase orders
  - Start/end date from manufacturing orders
  - Delivery date from stock transactions

  The general idea behind the program is that the fulfillment of orders connected to an project element should be reflected in the project time planning. Consequently, if a Purchase order connected to an element gets Valid delivery date 20030701 then the element could be expected to end no earlier than that, hence the Expected finish date L8EXPF is set to 20030701.

Messages will be sent for the following events for active projects:

- Delivery date for a connected Purchase order is outside the planned range.
- Completion date for a connected Manufacturing order is outside the planned range.
- Completion date for a connected Maintenance order is outside the planned range.
- Completion date for a connected Stock transaction is outside the planned range.
- The Gen dates POM field in (CRS999) must be activated.
- Night Run - CRS999

  The Gen dates POM field in (CRS999) must be activated.
- System Maintenance Run SHS101/E - Run function must be activated.

- **Update Committed from PO - Projects (POS997)**

  This program is used to calculate the outstanding committed amount for purchase orders connected to projects.

  The committed amount represents the amount that is to be accounted as outcome in the project accounting when a purchase order is received or checked for invoicing.

  To identify purchase orders as committed the following conditions apply:

  - The Calculate PO committed field in 'Settings - Project Management' (CRS590) decides if the committed amount should be calculated and at what stage to reduce the committed amount (goods receipt or invoice check).
  - Purchase order lines (PPS201/F) have to be connected to Project number and Project element.
  - The outcome has to be accounted against the project. This is prepared in 'Accounting Rule. Set' (CRS395) where project and element must be accounted in the Accounting dimensions, defined in 'Settings - Project management' (CRS590).
  - The committed amount is updated in the System Maintenance Run program if the parameter Calculate purch POM is activated. In (CRS999), which results in a complete update of all projects?
  - When outcome is recorded in PJM only the project elements retrieving outcome is updated. The update is performed in the same way as when the cost for a purchase order is accounted against a project.
  - If the committed amount is to be reduced at goods receipt, accounting event PP10 is used together with accounting type 903 if the item is not inventory accounted and accounting type 910 if the item is inventory accounted.
  - If the committed amount is to be reduced at invoice checking, accounting event PP20 is used together with accounting type 260 if the item is not inventory accounted and accounting type 225 if the item is inventory accounted. Note that the amount recorded for these events is the same amount as for accounting type 909 at goods receipt PP10.
  - System Maintenance Run SHS101/E - Run function must be activated.

- **Create Rental Invoice Orders Automatically (STS840)**

This program creates rental invoice orders for all rental invoice proposals that have been created with an agreement order type (SRS020) where the Create SO auto field is activated on the (STS020/F) panel.

- Night Run - CRS999

  The Create orders field in (CRS999) must be activated.

- System Maintenance Run SHS101/E - Run function must be activated.

- **Update Status on Individuals (STS970)**

  This program updates if an employee(s) should be automatically allocated to work orders, and if so, at what point.

  The valid alternatives are:

  0 = No

  1 = Yes, when planned WO is created

  Note: Before an employee is allocated, a check is made to ensure that the employee has the required skills.

  - The Automatic allocation of employee's field must be activated
  - System Maintenance Run SHS101/E - Run function must be activated.

- **Calculate Time and Attendance (TMS960)**

  This program calculates time and attendance times, which can be reposted in many different ways, for example from time clocks, in 'Clock-In/Out Trans. Report' (TMS001) or in 'Clock-In/Out Trans. Open Schedule Day' (TMS215), etc.

  The calculation for an employee is either started from the day before the current day, or it is started from Calculate to date (EACTOD) in CEAMP if EACTOD is less than the date for the day before the current day. The calculation is ended either the current day, or the Calculated to date (EACTOD) id EACTOD is greater than the current day. Calculated to date is shown on the (CRS530/F) panel.

  When the time calculation begins, all previous calculated times, if any, are first backed up to the start date for the calculation. Then the new calculations starts, and the reported times are checked against each employee's calendar. If there are any employees working night shift the current night, no times will be calculated for those employees for the current night but only for earlier nights.

  If there are any times that already have been authorized, they will become unauthorized after the calculation.

  The result of t he calculation depends on how each employee has been defined in 'Person. Open' (CRS530) with regards to overtime code, flextime model, variable workday, etc. The result of the calculation also depends on how the different time types have been defined in 'Time Type. Open' (TMS100). 'Work Hour Group. Connect Time Type' (TMS110) and 'Absence Type. Connect Time Type' (TMS140).

  This calculation can also be made in the following ways:

  - Manually, in 'calculated Time. Calculate' (TMS400)

- Using F17=Calculate in 'Calculated Time. Approve on-Screen' (TMS230)
- Night Run - CRS999

  The Calculate Time and Attendance field in (CRS999) must be activated.
- System Maintenance Run SHS101/E - Run function must be activated.

- **Calculate Readiness Degree - Project (POS996)**

  This program calculates the degree of completion for each project element in a project order. The records can be viewed in 'Project. Display Progress' (POS305), but it is only in (POS996) that they will be updated or added. The program will also calculate the current values of BCWP and BCWS, as they are function of time passed since the element was started.
  - Night Run - CRS999

    The Calculate degree of completion - project field in (CRS999) must be activated.
  - System Maintenance Run SHS101/E - Run function must be activated.

- **Remove old reservations (MWS951)**

  Running this program depends on using the reservation functionality (MWS330).
  - This program removes all old reservations i.e. where the valid to date has passed.
  - System Maintenance Run SHS101/E - Run function must be activated.

- **Set status 90 to attributes (ATS993)**

  Running this program depends on using the attribute functionality (ATS101).
  - This program removes set status 90 to all MOATTR records if the connected order doesn't exist in MITPLO. It also sets status 90 to all MIATTR records if the record doesn't exist in MILOMA and MITLOC.
  - System Maintenance Run SHS101/E - Run function must be activated.

See Also

"M3 Business Engine Administrator's Guide for Auxiliary Functions (AUX) " on page 54

"M3 Business Engine Administrator's Guide for Job Scheduler" on page 73

"System Maintenance Run Overview" on page 229

"Enabling System Maintenance Run" on page 231

Accessing Information in M3

4

Defining Access to Information in M3

This document explains how to define the user access to information in M3 by working with groups of users.

Outcome

User access to specific components and financial information is defined by having connected user groups to object access groups. The object access groups are connected to specific components and accounting identities.

Furthermore, financial programs are selected and included in the automatic authorization check routine.

The access definitions are used to ensure that the users can retrieve the information and work with the components relevant to their respective role within the company. When a user tries to access information from these components - or accounting identities - there is an automatic check that the user is connected to the valid user group.

Consequently, it is also used to prevent unauthorized persons from monitoring or maintaining specific data in M3.

See the respective settings instruction for further information.

Before you start

See the respective settings instruction for further information on starting conditions.

Follow these steps

1. Create User Group

   Begin by creating an empty user group by giving it an identity in 'User Group. Open' (CRS004). The group can be accessed from every company and division.

2. Connect User to User Group

Connect each user to a user group in 'Authorization. Specify for Company' (MNS151); the program is called via 'User. Open' (MNS150).

A user does not have to be a member of a user group. Note, however, that a single user cannot be connected to more than one group if user groups are used.

3 Create Object Access Group

Create an empty group by giving it an identity in 'Object Access Group. Open' (CRS006). The group can be accessed from every company and division.

4 Connect User Group to Object Access Group

Connect the user group to the object access group in 'Object Access Group. Connect User Group' (CRS007); the program is called via (CRS006). If the user group for a user is not connected to an object access group this way, the user does not have access authority to components or accounting identities with connected object access groups.

5 Connect Components to Object Access Group

Define who should be permitted to work with specific objects or components by connecting the respective component to the desired object access group. Examples of such components are facility, sales price list, and sales statistics.

To limit the user access to specific accounting identities in the financial system, connect the object access groups to any number of such identities in 'Accounting Identity. Open' (CRS630).

Note: If no object access group is connected to the component or accounting identity, it has no access security and can be accessed by all users.

For a list of programs where an object access group can be entered, see "Connect User Group to Object Access Group" on page 252.

6 Define Check of Information Access for Financial Programs and Accounting Dimensions

Specify the financial programs and the accounting dimensions that should be included in the authorization check in 'Settings - Access Authority Check' (GLS005).

When the affected accounting dimensions are identified, the accounting identity used for the respective dimension is automatically checked against 'Accounting Identity. Open' (CRS630). See above.

See also

"Create a User Group" on page 248

"Connect User to User Group" on page 248

"Create Object Access Group" on page 251

"Connect User Group to Object Access Group" on page 252

"Define Check of Information Access for Financial Programs and Accounting Dimensions" on page 253

Create a User Group

This document explains how to define a user group. A user group is a group of users that have the same access to files and records in M3. For example, all users who are responsible for price and discount maintenance can be defined as one user group.

Follow these steps

1. Start 'User Group. Open' (CRS004) and the B panel is displayed.
2. Specify an identity for the user group you are creating. Press Enter to proceed to the E panel.
3. On the E panel, fill in the user group's name and description. Press Enter and you will return to the B panel.
4. To define additional user groups, repeat the procedure from step 2. Close the program when there are no more user groups to be defined.

Outcome

A user group is created and it is now possible to connect users to the user group. User groups are saved in the parameter file (CSYTAB).

User groups can be used together with object access groups. In this way, only a limited number of people in a user group will have access to, for example, a company's price lists. This limited number of people forms an object access group.

See also

"Create a User" on page 296

"Object Access Control" on page 250

"Connect User to User Group" on page 248

"Defining Access to Information in M3" on page 246

"Create Object Access Group" on page 251

"Connect User Group to Object Access Group" on page 252

Connect User to User Group

This document explains how you group users depending on their role or responsibility by connecting them to a user group. These groups are then used when defining access to information in M3.

Follow these steps

Before you start

- A user must be defined in 'User. Open' (MNS150).
- User groups must be defined in 'User Group. Open' (CRS004).

1. Start 'User. Open' (MNS150) and the B panel is displayed.
2. Select a user and select option 11=User ID. The B panel in 'User. Access per Company Division' (MNS151) is then displayed.
3. On the B panel, select the company/division to which you want the user to be authorized to connect to. Press Enter and the E panel is displayed.
4. On the E panel, specify the user group in the 'User group – object access' field. Press Enter and you will return to the B panel in (MNS151).
5. Repeat the procedure from step 3 to connect the user to user groups in other companies/divisions.

Outcome

You have connected a user to a user group, and by doing so have given the user the authorization to have access to and maintain certain records.

Connecting users to user groups is the final step in the process of activating object access control. This prevents unauthorized users from being able to maintain records in master files.

A list of object access groups can be printed through 'Object Access Group. Print' (SES505).

Important: The same user could be connected to different user groups (for object access) in different companies and/or divisions. If the specific combination of company and division is missing for a certain user, the record containing company and 'blank' division will be used when performing the authority check.

See also

"Object Access Control" on page 250

"Create a User Group" on page 248

"Defining Access to Information in M3" on page 246

"Create Object Access Group" on page 251

"Connect User Group to Object Access Group" on page 252

Object Access Control

This document explains what object access control is. It also lists the different programs in Sales and Distribution where this functionality can be implemented.

Before you start

- User groups, object access groups and the connections between them must be defined before you can begin using object access control. Each user who is to be included must be connected to a user group.
- A user must be defined in 'User. Open' (MNS150).
- A user group must be defined in 'User Group. Open' (CRS004).
- An object access group must be defined in 'Object Access Group. Open' (CRS006) and be connected to a user group in 'Object Access Group. Connect User Group' (CRS007).

Description

Purpose

Object access control is a security feature for functions in M3.

You can use object access control to ensure that only authorized personnel have access to certain records.

When a user tries to access a record that is connected to an object access group, the system checks to see whether the user belongs to a user group that is connected to the relevant object access group. If so, the user is granted access. If not, a message appears on the screen telling the user that he/she has been denied access.

Example: Using object access control

You have created an object access group called Prices for price maintenance.

You have also created a user group called Pricemaint for personnel who are responsible for pricing. All qualified users must be connected to this user group.

To make object access control work, the object access group and the user group need to be connected to each other.

A price list has to be connected to the object access group Prices in the function 'Sales Price List. Open' (OIS017/E).

If a user who is not connected to the user group Pricemaint tries to open that particular price list after it has been connected to the object access group Prices, he/she will be denied access.

The following functions can be connected to an object access group:

- 'Customer Blanket Agreement. Open' (OIS060)
- 'CO Charge. Open' (OIS030)
- 'Order Line Charge Model. Open' (CRS278)

- 'Sales Costing Model. Open' (OIS022)
- 'Discount Campaign. Open' (OIS820)
- 'Promotion. Open' (OIS840)
- 'Bonus/Commission Agreement. Open' (OIS412)
- 'Sales Price List. Open' (OIS017)
- 'Sales Price Report. Open' (OIS530)
- 'Purchase Costing Model. Open' (PPS285)
- 'Purchase Agreement. Open' (PPS100)
- 'Customer. Open' (CRS610)
- 'Customer. Open Local Exceptions' (MFS610).

Outcome

A user group and an object access group have been created. These two groups are subsequently connected to each other in order to obtain object access control.

Object access control can be used when a company, for security reasons, wants only a limited number of employees to have access to records in various programs such as price lists.

See also

"Create a User Group" on page 248

"Connect User to User Group" on page 248

Create Object Access Group

This document explains how you create an empty object access group, to which different user groups can be connected. This is done for information access purposes.

Outcome

A designation for an object access group is defined.

Connect one or several user groups to the object access group in 'Object Access Group. Connect User Group' (CRS007).

The object access group is saved in the parameter file (CSYTAB).

Before you start

There are no specific starting conditions for this instruction.

Follow these steps

1 Start 'Object Access Group' (CRS006.
2 On the B panel, set the panel sequence.
3 This instruction is based on panel sequence E.
4 Enter an identity for the group. Press New.
5 The identity can be alpha-numeric and consist of up to ten characters.
6 On the E panel, enter a description and a name. Press Enter.

See also

"Defining Access to Information in M3" on page 246

"Connect User Group to Object Access Group" on page 252

Connect User Group to Object Access Group

This document explains how you define the rules for user access to information in M3 by connecting groups of users to object access groups.

Outcome

One or several user groups are connected to an object access group.

Connect specific components or accounting identities to the respective object access group to control the information access.

The access group file (FACCES) is updated.

Before you start

An object access group must be created in 'Object Access Group. Open' (CRS006).

Follow these steps

1 Start 'Object Access Group. Open' (CRS006).
2 On the B panel, select option 11='User groups' for the object access group to work with.
3 'Object Access Group. Connect User Group' is called.
4 On panel (CRS007/B), enter the identity of the user group to connect. Press New.
5 On panel (CRS007/E), check the description of the user group to make sure that the right group is selected. Press Enter.

6 To add more user groups to the same object access group, repeat steps on panel (CRS007/B) and (CRS007/E).

See also

"Defining Access to Information in M3" on page 246

"Create Object Access Group" on page 251

"Create a User Group" on page 248

Define Check of Information Access for Financial Programs and Accounting Dimensions

This document explains how you set the rules for accessing information in the financial system.

Outcome

Programs within the financial system are included in the authorization check routine. For each program, the accounting dimensions to be checked are selected.

When you start one of the included programs, the accounting identity used for the selected dimension is automatically checked against the object access group in 'Accounting Identity. Open' (CRS630/F) to verify that the user is authorized.

The parameter file (CSYTAB), key AACH, is updated.

Before you start

- Accounting dimension names should be defined in 'Accounting Dimension. Enter Names' (CRS012).
- The company's chart of account must be defined in 'Accounting Identity. Open' (CRS630).
- Object access groups should be connected to the relevant accounting identities in (CRS630/F).

Follow these steps

1 Start 'Settings – Access Authority Check' (GLS005).

The B panel is displayed, listing the relevant financial programs with indications on whether they are included in the access check.

If you call (GLS005) for the first time, import a standard setup of programs by pressing F14 on the B panel.

2 Select a program with option Open.

3 On the E panel, change the standard description and name, if desired.

4 Select the 'Access check' checkbox whether the program should be included in the authorization check.

5 Select the check boxes for the accounting dimensions you wish to be checked when starting the program. Press Enter.

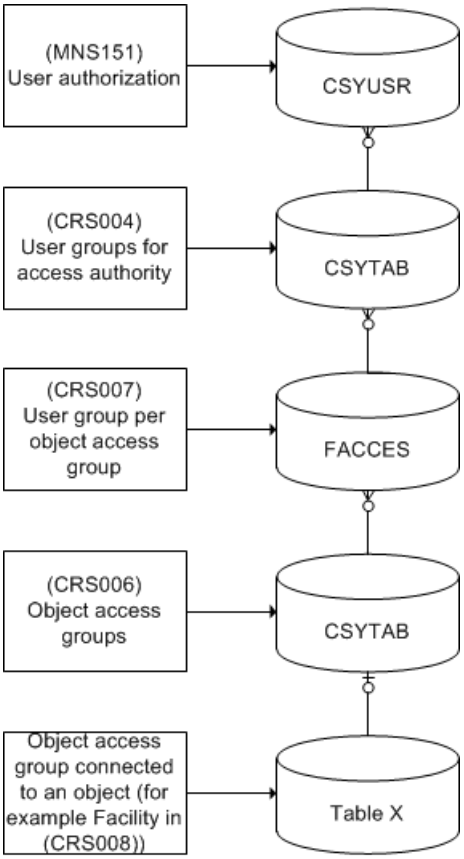
See also

"Defining Access to Information in M3" on page 246

"Connect User Group to Object Access Group" on page 252

Functions that Use Fields with Object Access Group Checking Routines

Data model



Functions where object access groups can be attached

Object access groups are used to grant or deny access to users for monitoring and maintaining different objects in M3 Business Engine, such as sales price lists, statistic reports, orders, and so on.

List of functions

In the following functions you can fill in the 'Object Access Group' field with the object access group you defined in 'Object Access Group. Open' (CRS006).

Program name	Description
AHS010	Ad-hoc report location
AHS100	Ad-hoc report
AMS010	Archiving library
AMS200	Archiving log
APS060	AP Standard Document. Open
BUS100	Budget definition
CAS006	Resource driver units version
CAS007	Resource driver rate version
CAS040	Resource driver
CAS050	Cost center model
CFS020	Cash flow models header
CMS015	Information Browser - MI
CRS008	Facility
CRS006	Object access group
CRS007	Access group entries
CRS072	Bank account indicator
CRS100	Salesperson
CRS117	Address format rules
CRS278	Charge models
CRS406	FAM Function. Open Details
CRS418	Program Problem. Solve
CRS609	Customer. Select Fields

Program name	Description
CRS610	Customer
CRS630	Chart of accounts file
CRS692	Bank accounts
MFS610	Customer local exceptions
MMS005	Warehouses
MMS056	Supply Model. Open
MNS100	Division
MMS250	Template for list panels
OIS017	Sales price list master
OIS022	Sales price calculation models
OIS060	Customer agreement header
OIS370	Bulk Order Batch. Open Toolbox
OIS412	Bonus agreements
OIS530	Price list - select
OIS800	Discount models
OIS820	Discount campaigns
OIS840	Promotions
OIS860	Supplier rebate agreement
OSS412	Stat. and Bud. report definitions
PPS100	Agreement
PPS285	Procurement cost ID
RGS600	FAM report generator
RGS640	Report generator - list definition
SES505	Object access group reports
SOS022	Price lists
STS017	Rental pricelist master
TAS001	Project

Program name	Description
TAS002	Project activity
TAS003	Connect activity project
TAS010	Prices, header
TAS045	Approval identity
TAS050	Authorization identity

Programs using object access group checking routines

Check access authority for bank accounts - CCHKABA

CCHKABA uses parameter list cPLCHKBA. cPLCHKBA is used by the following programs:

Program name	Description
ABS100	Bank Statement. Open
CCHKABA	Check access authority for bank account
CRS692	Bank accounts

Check access authority for accounting items - CCHKACA

CCHKACA uses parameter list cPLCHKAC. cPLCHKAC is used by the following programs:

Program name	Description
AUTCHKMI	Check authority
BUS101	Budget entry
BUS200	Details in budget
CAS200	Cost center analysis
CAS201	Cost center analysis
CCHKACA	Check access authority for accounting dimensions
CMMNGXML	Information browser
CMS100	Information browser
CMS990	Information browser

Program name	Description
GLMNGBAL	Manage GL balance file
GLS039	Error transactions
GLS096	Petty cash - Entries
GLS180	External reconciliation
GLS185	Internal reconciliation
GLS200	Voucher number
GLS210	Details in general ledger
GLS211	Transaction in general ledger
GLS215	Balance file
GLS217	Period analysis
GLS218	Balance file information
GLS220	GL. Display Stmnt of Account
GLS221	Contra Account Entry. Accounts Payable
GLS222	Contra Account Entry. Accounts Receivable
GLS506	Revision - printout
GLS512	Balance lists
GLS523	Profit and loss report
GLS526	General ledger - printout
GLS536	Account specification - crt opening
GLS537	Account specification - crt detail
GLS900	Reversing of journals - start pgm
MDBREADMI	Generic MI
MTS072	CCHKACA - Check access authority for acc item
RGS651	Report generator - select

Check access authority for budgets – CCHKACB

CCHKACB uses parameter list cPLCHKAB. cPLCHKAB is used by the following programs:

Program name	Description
BUS100	Budget definition
BUS100MI	Budget definition interface
BUS101	Budget entry
BUS110	Decentralized budget
BUS120	Prop/upd create next years budget
BUS140	Prop/upd currency simulation
BUS160	Activity plan
BUS170	Resource plan
BUS200	Details in budget
CAS160	Create fixed/variable budget
CAS260	Resource Driver. Calculate Rate
CCHKACB	Check access authority for budgets
GLS215	Balance file
GLS217	Period analysis
GLS218	Balance file information
GMS220	Group accounting, proposal for transfer to FC
PCS480	Financial transfer proposal
PCS490	Financial transfer proposal
PCS495	Budgeting maintenance proposal
PCS495MI	Budgeting maintenance proposal
POS149	Budgeting maintenance proposal

Check access authority for company – CCHKACC

CCHKACC uses parameter list cPLCHKCC. cPLCHKCC is used by the following programs:

Program name	Description
CCHKACC	Check access authority for Company
DCS001MI	Interface to DC

Program name	Description
PMS055MI	MO backflush
SOS941	Create service order job header from SOS100MI
SOS942	Manage service order lines from SOS100MI
SOS943	Create service order job header from SOS100MI
SOS944	Add meter reading from SOS100MI
SPS100MI	Retrieve SCP versions

Check access authority for divisions – CCHKACD

CCHKACD uses parameter list cPLCHKAD. cPLCHKAD is used by the following programs:

Program	Description	Program	Description
AAS300	Standard Audit File. Create	CRS691MI	Bank branches
AAS350Fnc	Manage Journal Entry Report	CRS692	Bank accounts
AAS370	Accounts Receivable Audit Report. Start	CRS725	CSYPAR/Stock interest parameters
AAS640	Electronic Chart Of Account Report	CRS730	CSYPAR/Special order cost
AAS640Fnc	Manage Electronic Chart Of Account Report	CRS736	CSYPAR/Accounting error method
ABS010	Transaction type	CRS750	CSYPAR/Parameters for GL entry
ABS020	Business transaction code	CRS750MI	GL parameters
ABS100	Bank Statement. Open	CRS780	CSYPAR/Purchase parameters
ABS900	Bank identities	CRS900	System calendar
ABS910	Settings - Scenario number priority	CRS940	Document text header
ABS911	Scenario Number. Open	CRS945	Partner reference
ABS920	Payment variance control	CSS090	Filing attributes - select

Program	Description	Program	Description
ABS930	Additional information structure	DRS045MI	Time zone
ABS940	Text identifier	DRS151	Shipment package details
APS010	Trade code	EMU090	Parameters for access authority check
APS015	Specify Bank Fee / Supplier Payment	ENS105	Eco-Transaction. Submit
APS030	AP bank quotas	EVS002MI	Send table data
APS035	Company information for tax reporting	EVS040	Subscriber
APS037	Supplier Tax. Open Exemption Letter	FAMNGCAF	API fixed assets
APS060	AP Standard Document. Open	FAMNGDIS	Disposal of fixed assets
APS062	AP Standard documents Text	FAS001	Fixed assets
APS064	Debit note reason code	FAS015	Print depreciation
APS080	Payment Stop	FAS025	Coefficient for declining method
APS085	Void Code / Check	FAS026	Coefficient for declining method
APS090	Bank account connections	FAS045	Column templates for list
APS095	Recurring Payments Header	FAS100	Prop/upd Depreciations - select
APS098	Payment tolerance AP	FAS105	MACRS Proposal/update depreciation - select
APS100	Record Supplier Invoice	FAS110	Asset revaluation
APS110	Recode Supplier Invoice	FAS120	Prop/upd Cost of capital calc - sel
APS112	Supplier invoices, accounting	FAS130	Sales of assets
APS115	Recode Supplier Invoice	FAS140	Accelerated depreciations - select

Program	Description	Program	Description
APS120	Enter Manual Supplier Payment	FAS145	Scrap of assets - select
APS121	Supplier payments	FAS151	Physical count of assets
APS130	Supplier Payment Proposal	FAS155	Physical count of assets - changes
APS130MI	MI-program for APS130	FAS160	Assets in work - select
APS131	Payment proposal - Proposal creation	FAS170	Prop/upd Budgets - select
APS137	Payment proposal - Chg/Dsp	FAS175	Transfer cost of capital to budget
APS145	Change Check Number	FAS190	Year end routine - select
APS147	Check	FAS200	Fixed Assets
APS175	Drafts confirmation and tick-off	FAS210	Value information
APS176	Drafts reconciliation (detail level)	FAS220	Value information
APS190	Report Bank Confirmation / Supplier Payment	FAS230	Fixed Asset. Display Vouchers
APS200	Accounts Payable	FAS310	Assets mirror list - select
APS201	Single invoice	FAS500	Fixed assets catalog - select
APS205	Supplier Invoice / Invoice Number	FAS510	Value reports - select
APS210	AP Statement of Account	FAS520	Periods changes - select
APS215	Separate Supplier Invoice	FAS530	Assets mirror list - select
APS216	Extra information for an AP invoice	FAS550	Detailed value list - select
APS217	Payment reconciliation	FAS560	Insurance reports - select
APS220	Supplier Invoice / Due Date	FAS565	Print 5 years history of fixed asset groups
APS225	Accounts Payable Balance	FAS700	Standard voucher header
APS226	AP balance file - period analysis/payee	FAS701	Payment proposal

Program	Description	Program	Description
APS227	AP balance file / payee/ supplier	FAS703	Standard voucher header
APS228	AP balance file - period analysis/supplier	FAS800	Automatic generation of depreciation plan
APS230	Nonauthorized Supplier Invoice	FAS805	Move depr adjustment to extraordinary
APS235	Separate Supplier Invoice	FAS845	Depreciation Plan Simulation. Select Op
APS240	Payment Stopped Supplier Invoice	FAS950	Recalculation FA files - values & historic
APS245	Reconciliation number	FCFMDEPI	Cash flow model - Elements PI
APS250	Accounts Payable Additional Info	FCFMDHPI	Cash flow model - Header PI
APS251	Extra information detail	FCFMDIPI	Cash flow model - Acc range PI
APS300	AP Checkbook	FCFMDLPI	Cash flow model - Lines PI
APS301	AP Check book - details	FCFVERPI	Cash flow model - Version PI
APS310	Stop Old Check	GLMNGACC	Manage GL accountings
APS315	Update Batch Cashed Check	GLMNGBAL	Manage GL Balance file
APS375	Supplier invoice. Auto Match GR Line	GLS005	Parameters for access authority check
APS380	Non accepted draft payment - Open	GLS010	Value date calculation method
APS401	Statem of acc - select	GLS030	Account Translation Scenario. Open
APS425	Service code per payments	GLS031	Translation scenario. Details
APS426	Supplier Tax Report. Display Deductions	GLS037	Error jobs
APS431	Supplier TAX reporting - select	GLS047	Restart of file FCR040

Program	Description	Program	Description
APS450	Supplier invoice batch	GLS060	Distribution base table - header
APS450Fnc	Manage Supplier invoice batch	GLS061	Distribution base table - details
APS450MI	Supplier invoice batch	GLS062	Distribution target table – header
APS451Fnc	Manage Supplier invoice batch - lines	GLS063	Distribution target table – details
APS452Fnc	Manage Supplier invoice batch - Reject history	GLS064	Distribution selection table – header
APS453Fnc	Manage Supplier invoice batch - Additional information	GLS065	Distribution select table - details
APS454Fnc	Manage GCM settlement	GLS070	Accounts distribution template
APS455Fnc	Supplier Invoice Batch - Select Operation	GLS071	Accounts distribution elements
APS460	GRNI round proposal	GLS095	Petty cash entry
APS470	Pre Payments lines	GLS100	Journal entries
APS500	Accounts Payable	GLS120	Accounting, called from various functions
APS505	Supplier Invoice Specification	GLS130	Prop/upd Acc distribution - select
APS510	AP Statement of Account	GLS140	Prop/upd Accounts allocation - select
APS515	AP Payment Forecast/Age Distribution	GLS150	Fnc Official renumeration of Entries
APS520	Nonauthorized Supplier Invoice	GLS155	Offical Renumeration of Entries
APS525	AP Clearing Account	GLS160	Unrealized currency gain
APS530	Accounts Payable Balance	GLS170	Recurring journal voucher
APS540	Payment Stopped Supplier Invoice	GLS180	External reconciliation

Program	Description	Program	Description
APS545	Reconciliation number - select	GLS180MI	MI program for GLS180
APS550	Payee Turnover	GLS185	Internal reconciliation
APS555	Supplier Tax. Print Details	GLS190	
APS565		GLS195	
APS570	Recurring payments printout	GLS200	Voucher number
APS575	Payment register - select	GLS210	Details in general ledger
APS580	Purchase Order. Print Rcvd/ Not invoiced	GLS211	Transaction in general ledger
APS585	Supplier invoice. Print Invoicd/Not Rcvd	GLS215	Balance file
APS590	Segment reporting	GLS217	Period analysis
APS610	Purchase book - select	GLS218	Balance file information
APS900	Settings - Supplier Invoice Match	GLS220	GL. Display Stmnt of Account
APS905	Settings - Accounts Payable	GLS221	Contra Account Entry. Accounts Payable
APS910	Year-end routine for AP bal file	GLS222	Contra Account Entry. Accounts Receivable
APS915	Del	GLS250	Extra information numbers
APS920	AP Invoice Class. Update	GLS251	GL extra info details
APS998	Reminding function	GLS470	Accounts allocation table
ARS007	Interest rates	GLS471	General remove of records
ARS015	Payment cost table	GLS475	Specification of period accounts
ARS016	With reasons - debit notes	GLS480	Period accounting table
ARS040	Batch payments	GLS505	Revision - select
ARS050	Standard letters - text	GLS510	Balance lists
ARS052	Bill back types	GLS515	Specification of contra accounting
ARS055	Payment reminder stop	GLS520	Profit and loss report

Program	Description	Program	Description
ARS060	Reserve for doubtful debts - periods	GLS525	General ledger - select
ARS065	Reserve for doubtful debts - rates	GLS535	Account specification - select
ARS075	Batch payment types	GLS615	Inventory Books. Print
ARS090	Payment pattern interval range	GLS625	Daily Ledger
ARS098	Payment tolerance	GLS630	Daily Ledger Official Number
ARS100	Customer invoice entry	GLS635	Balance 8 Columns. Print
ARS105	Payment documents entry	GLS680	Structure analysis
ARS107	Delete records in work file FAR106	GLS690	Balance keys
ARS110	Payment receipts Start pgm	GLS800	Filing to history ledgers - select
ARS112	Payment receipts OOUI	GLS820	Filing templates, header
ARS113	Payment receipts: Cash discount	GLS830	Filing types
ARS118	Payment receipts Full-screen	GLS840	Interface Definition
ARS120	Manual customer invoice entry	GLS840MI	MI program for GLS840
ARS122	Manual customer invoicing - re-print	GLS841	Interface Definition
ARS125	Debit notes	GLS850	FAM interface definition
ARS130	Prop	GLS900	Reversing of journals - start pgm
ARS141	Statement of acc - select	GLS905	Year end routine for bal file - start
ARS151	Reminders - select	GLS915	Tfr acc. am. to bal. file - start program
ARS160	Interest inv	GLS920	Tfr bud am.
ARS161	Interest inv - select	GLS930	Delete records in bal file - start pgm

Program	Description	Program	Description
ARS171	Collection - select	GLS935	Fnc: Rebuild Voucher Head
ARS181	Advices - select	GLS940	Analyze GL balance file
ARS190	Group invoices - job	GLS960	Control of voucher number - select
ARS191	Grouping of invoices - select	GLS975	Balance control of journal
ARS200MI	Customer invoice	GLS980	GL balance file control - select
ARS201	Change invoice	GLS985	Close Year Definitively
ARS205	Invoice sequence	GLS990	Period ending
ARS210	Statement of account	GLS995	Prop
ARS215	Separate invoice	GMS200	Suggestion for transfer to Group company
ARS216	AR extra info for one transaction	GMS210	Group accounting, proposal for trf
ARS217	Payment reconciliation	GMS220	Group accounting, proposal for trf to FC
ARS220	Due dates	MFS010	CSYPAR
ARS225	AR balance file	MFS015	Text to internal invoicing
ARS226	AR balance file - period analysis	MFS020	Division group
ARS227	AR balance file - customer	MFS055	Currency codes local exceptions
ARS228	AR balance file - period analysis	MFS100	Internal invoices
ARS230	Revised due dates	MFS101	Internal invoices - select
ARS240	Stopped invoices	MFS167	CSYPAR/Invoice numbering
ARS245	Reconciliation number	MFS610	Customer local exceptions
ARS250	Extra information numbers	MFS620	Supplier local exceptions
ARS251	Extra information detail	MMS185	Filing - DO
ARS260	Payer	MNS100	Division
ARS270	Payment pattern	MNS151	Responsible

Program	Description	Program	Description
ARS280	Customer drafts inquiry	MNS204	Output server definition
ARS300	Bank remittance - Select	MNS205	Stream file definition
ARS300MI	MI program for ARS300	MNS205MI	Output media selection
ARS320	Postdated check allocation	MNS212	Output media selection
ARS321	Postdated check create proposal	MNS220	Job definition
ARS325	Postdated check proposal	MNS600	My Recent History
ARS326	Postdated check invoice	MOS140MI	Print Work Order
ARS330	Customer risk cancellation	MTS070	CCHKACD - Check access authority for division
ARS340	Unpaid checks	OIS085	Filing - deleted orders - select
ARS350	Validated remittances	OIS090	Filing - orders - select
ARS360	Doubtful invoices	OIS095	Filing - invoices - select
ARS370	Non accepted draft payment - Open	OIS124	Invoice - select
ARS380	Create invoices from payment plan - selection	OIS151	Invoice - Parameters select
ARS381	Create invoices from payment plan - selection	OIS180	Invoice - select
ARS390	Payment plans	OIS196	Transfer transactions to FAM - select
ARS430	Customer checks information	OIS215	Cash sales - Open payment
ARS450	Direct debiting agreement	OIS217	Cash sales - Cash desk management
ARS452	Parameters for mail	OIS218	Transfer transactions to FAM - select
ARS460	Direct debiting agreement	OIS350	Invoice header inquiry
ARS470	GRNI round proposal	OIS360	Invoice account inquiry
ARS500	Sales ledger, cust no - select	OIS530	Price list - select

Program	Description	Program	Description
ARS505	Sales ledger, invoice no - select	OIS605	Order acknowledgement - select
ARS510	Statements list - select	OIS610	Letter of excuse - select
ARS515	Payment forecast	OIS650	Select order for invoice
ARS520	AR balance report	OIS660	Customer order overview - select
ARS525	Credit limit - select	OIS670	Delivered not invoiced - select
ARS540	Blocked invoices - select	OIS680	Copy invoice - select
ARS545	Reconciliation number - select	OIS686	Calc & update trade statistics
ARS550	Customer turnover - select	OIS690	Coding specification
ARS565	Payment register - select	OIS691	Update sales statistic
ARS570	Payment plans printout	OIS952	Copy invoice - select
ARS590	Segment reporting	OPS080	Filing - sales ticket entry - selec
ARS600	Batch payments - downloading of payments	OPS090	Filing - sales ticket finance - sel
ARS605	AR Trial Balance Print	OPS270	Batch sales ticket - select
ARS610	Sales Book. Print	OPS275	POS Sales Ticket. Open
ARS905	Settings - Account Receivable	OPS280	Sales ticket entry - select
ARS910	Year end routine for AR bal file	OPS500	Store
ARS915	Del	OSS080	Filing - sales stat
ARS920	AR Invoice Class. Update	OSS401	Statistics & budget data sets
ARS955	AR bank quotas	OSS650	Service level
ATS640	Filing attributes - select	PCS420	RD Rate. Transfer From Resource Driver
AUTCHKMI	Check authority	PCS480	Financial transfer proposal
BUS001	Budget calculation template	PCS490	Financial transfer proposal

Program	Description	Program	Description
BUS002	Budget calculation template elements	PCS495	Budgeting maintenance proposal
BUS003	Budget calculation template element lines	PDS640	Filing configuration - select
BUS005	Distribution template	POS062MI	Open
BUS006	Distribution elements	POS063MI	Start
BUS010	Activities	POS095	Archive project invoices
BUS011	Connection resource - activity	POS100MI	Project structure
BUS015	Resources	POS111MI	Project budget
BUS016	Cost components per resource	POS149	Budgeting maintenance proposal/update
BUS035	Budget officer	POS180	Invoice - select
BUS036	Available resources	POS211MI	Time planning lines
BUS100	Budget definition	POS291MI	Material budget - lines
BUS100MI	Budget definition Interface	POS400	Filing project - select
BUS110	Decentralized budget	POS994	Selective updates - select
BUS160	Activity plan	PPS098	Order types EPR
BUS170	Resource plan	PPS114	FAM function connect to supplier
BUS200	Details in budget	PPS118	Self-billing log
CAS006	Resource driver units version	PPS127	Generate Supplier Claim Invoice
CAS007	Resource driver rate version	PPS430	Parameters - Vendor statistics
CAS015	Cost of capital table - select	PPS435	Creation of vendor statistics - Select
CAS020	Stock valuation accounting conversion	PPS440	Vendor statistics
CAS030	WIP valuation accounting conversion	PPS520	Supplier Claim Reconciliation. Print Document

Program	Description	Program	Description
CAS041	Resource Driver - Enter Connection	PPS860	Supplier statistic - select
CAS050	Cost center model	PPS970	Commitments - select
CAS060	Order costing balance file key	QQS500	Stock reconciliation
CAS080	Analytical Accounting Aggregated Balance File key	QUS605	Quotation Print Confirmation
CAS110	Prop	RGS010	User for report distribution
CAS130	Internal allocation - select	RGS220	Users for report distribution
CAS150	Warranty fund valuation - head	RGS600	FAM report generator
CAS160	Create fixed	RGS650	Report generator - select
CAS170	WIP valuation – header	RMS010	Action code
CAS180	Stock valuation – header	RMS100	Letter of credit
CAS190	Stock valuation - detail	RMS120	Future rate agreements
CAS200	Cost center analysis	RMS200	Letter of credit connected to order
CAS201	Cost center analysis	RMS400	DSO calculation - select
CAS210	Resource driver - Enter units	RMS410	Create credit manager transaction - select
CAS220	Resource driver - Enter rates	RMS420	Credit manager tool box - header
CAS250	Resource driver - Calculate units	RMS421	Credit manager tool box - payer detail
CAS260	Resource Driver. Calculate rate	RMS422	Credit manager tool box - invoice
CAS300	Internal account entry	RMS430	Credit manager tool box - global
CAS303	Various accounting transactions	RMS431	Credit manager tool box - total
CAS305	Post calculation - Maintenance	RMS440	Tickler notes ID

Program	Description	Program	Description
CAS310	Order Costing. Display	RMS530	Cust insurance overdue in time - select
CAS320	Release for order costing	RMS535	Cust insurance overdue amount - select
CAS330	OC balance file	RMS560	Currency exposure list AR
CAS375	Average Cost. Recalculate	RMS565	Currency exposure list GL - select
CAS390	Work with model ID codes	RMS900	Parameter - DSO calculation
CAS393	Batch invoice	RMS905	Parameter - Credit manager tool box
CAS400	Historic actual price - Calculate	RSS190	Archive delivery schedule
CAS410	Historic actual price - Line	S1SX01	Update Direct Debiting Agreements
CAS411	Historic actual price - Result	SAS090	Activate agreements - select
CAS413	FIFO/LIFO Display connected transactions	SAS160	Prop
CAS420	Internal account entry	SAS170	Accounts allocation table
CAS450	Create periodic account entries	SAS410	Agreement type codes
CAS500	Internal accountings - select	SAS450	Agreement rights items
CAS515	Control list, delivered not invoiced - OINACC	SAS490	
CAS520	Reconc list, int del - del division	SAS495	
CAS521	Reconc list, int del - del division	SES003	Security
CAS525	Reconc list, int del - receiving div	SES010	Security
CAS526	Reconc list, int del - receiving div	SOS090	Activate orders - select
CAS530	Stock reconciliation	SOS095	Filing - invoices - select

Program	Description	Program	Description
CAS535	Order Costing	SOS180	Invoice - select
CAS550	Order costing	SOS270	Information
CAS900	CSYPAR	SOS388	Service batch-order parameters
CAS905	Year end routine for bal file - Order costing	SOS408	Service item identity
CAS910	Order Costing Bal File. Update	SOS410	Error symptom code
CAS915	Analytic AC - Bal File. Update w Outcome	SOS411	Error code
CAS920	Year end routine for bal file - Analytical accounting	SOS412	Measure code
CAS950	Create internal accountings	SOS414	Measure text code
CAS951	MITTRA - Create internal accountings and upd	SOS420	Zone code
CAS960	Transfer internal acc. to FAM - select	SOS422	Service responsible
CAS968	Order costing analysis	SOS450	Order-kit-header
CAS970	Filing of internal accountings - select	SOS465	Popular numbers
CAS980	Filing of order costing - select	SOS490	Qualification
CCHKACD	Check access authority for divisions	SOS491	Geographic area
CFS010	Cash flow conversion table, header	SOS492	Connect technician to geographic area
CFS015	Cash distribution table, header	SOS493	Connect qualification
CFS100	Create cash flow budget from budget - select	SOS495	Technician competence
CFS200	Cash flow model versions	SOS580	Parts warranty
CFS205	Cash flow model version	SOS585	Machine warranty

Program	Description	Program	Description
CFS206	Cash flow model version - Line and date	STS380	Revenue accruals - Proposal
CFS210	Cash flow model version - Opening balances	STS390	Daily flash report - select
CFS211	Cash flow model version - Op bal.... acc level	STS450	Order kit header
CFS220	Cash flow model version - General disp detail	STS455	STR Package Structure Header
CFS230	Cash flow model version - Disp overdue inv	STS652	Create rental statistics utilization
CFS235	Cash flow model version - Blocked inv	STS655	Update rental statistics utilization
CMMNGXML	Information Browser	STS672	Update rental statistics utilization
CMS065	Business process	STS800	Create STR invoice proposal - select
CMS100	Information Browser	TAS001	Project
CMS100MI	Information Browser MI	TAS002	Project activity
CMS990	Browse with search	TAS003	Connect activity project
COMNGAPPR	Check and Approve MCO line	TAS005	Labor code
COS180	Invoice - select	TAS010	Prices, header
COS180MI		TAS015	Labor code templates, header
COS196	Transfer transactions to FAM - select *	TAS020	Labor code group
COS370	Credit - select	TAS025	Personal category
COS605MI	Order confirmation	TAS030	Labor code category
COS680	Copy Invoice - select	TAS040	Area
COS685	Preliminary Invoice - select	TAS045	Approval identity
COS690	Quotation - select	TAS050	Authorization identity

Program	Description	Program	Description
COS691	Update sales statistic	TAS055	Column template for dsp of balance file TA
CRCCINMI	Manage credit card transactions	TAS100	Entry of timesheets
CRS008	Facility	TAS110	Approval – header
CRS030	VAT code	TAS111	Approval - lines
CRS031	VAT code percentage	TAS115	Approval - lines
CRS055MI	Currency code	TAS120	Prop/upd Time acc. Recs. To GL - select
CRS056	Exchange rate type	TAS130	Prop/upd Invoice - select
CRS057	Currency rates	TAS140	Prop/upd Time acc. Recs. To PA - select
CRS167	Report number series	TAS150	Complete internal transactions - select
CRS240	EC transaction codes	TAS200	Balance values from OTSALD
CRS388	Object value translations	TAS210	Detailed time transactions
CRS395	Accounting rule	TAS500	Time reports - select
CRS397	Accounting setup - Select	TAS510	Employee list - select
CRS405	FAM function	TAS520	Project list - select
CRS407	FAM function connect to order type	TAS525	Cost center list - select
CRS408	Accounting books	TAS530	Time rep./ voucher - select
CRS409	Invoice Class. Open	TAS540	Time rep. Held
CRS410	Voucher number series	TAS800	Filing time reports - select
CRS411	Petty cash parameters	TAS900	CSYPAR/Installation parameters
CRS412	FAM Function exceptions	TAS901	Invoice level/ customer
CRS416	CSYTAB/Labels for GLS516PF report type 3	TAS910	Delete/ transfer bal. file - start pgm

Program	Description	Program	Description
CRS418	Program Problem. Solve	TXS001	VAT Reporting. Connect MI Transactions
CRS431	Monetary union status	TXS010	Trade code
CRS432	Monetary union currencies	TXS015	Business type per country
CRS433	Counter-value printout	TXS020	VAT exemptions
CRS436	Credit card capture	TXS025	Simulate VAT decision
CRS450	Allocation masks	TXS030	Fiscal representative
CRS455	Reference groups	TXS035	Electronic EU sales/purcase report
CRS530	Employees	TXS050	Tax code exemption
CRS587	PCM Integration, parameters	TXS100	VAT report generator
CRS600	Trade Statistics - select	TXS115	Create VAT on payment voucher
CRS630	Chart of accounts file	TXS130	EU sales/purchase proposal - update
CRS632	Accounting identities - language	TXS132	EU SALES/Purchase balance file
CRS633	Account groups	TXS136	EU SALES/Purchase proposal
CRS635	Pseudo identities	TXS137	EU SALES/Purchase proposal Detail
CRS636	Pseudo code - select	TXS140	Annual VAT report proposal - update
CRS640	Accounting item - select	TXS145	Annual VAT report proposal - line
CRS648	Structure definitions - select	TXS146	Annual VAT report proposal - lines
CRS650MI	GL parameters	TXS147	Annual VAT report proposal - detail
CRS655	Approval code - select	TXS300	Trade statistics
CRS663	Related service code	TXS305	Freight adjustment factor

Program	Description	Program	Description
CRS664	Connect related service code	TXS320	Subcontracting dist. order types
CRS667	Withholding Percentage. Define per Date	TXS330	Calc & update Intrastat on goods movements
CRS690	Banks	TXS340	Calc & update Intrastat on purchase orders
CRS690MI	Banks	TXS350	Calc & update Intrastat on distribution
CRS691	Bank branches	TXS500	Sales tax reports - s

Check Access Authority for Facilities – CCHKACF

CCHKACF uses parameter list cPLCHKAF. cPLCHKAF is used by the following programs:

Program	Description	Program	Description
APS352	Supplier Invoice. Receive Goods	OIS409	Bonus substitution hierarchy
APS370	Purchase Order. Reconcile Recd/Not Invd	OIS412	Bonus agreements
AUTCHKMI	Check Authority	OIS415	Bonus payout
CAS170	WIP valuation - header	OIS605	Order acknowledgement - select
CAS250	Resource driver - Calculate units	OIS610	Letter of excuse - select
CAS300	Internal Account Entry	OIS650	Select order for invoice
CAS310	Order Costing. Display	OIS850	Planning items
CAS315	MO Operations	OIS855	Cust agreement lines
CAS320	Release for Order Costing	OIS909	Delete customer order line
CAS370	Average Cost. Enter per Item/Facility	OOHEADPI	Customer order header procedure interface
CAS371	Average Cost. Display/ Update History	OOLINEPI	Customer order lines procedure interface

Program	Description	Program	Description
CAS380	Average Cost. Enter per Attribute	OPS010	Item replication trigger settings
CAS412	Historic Average Cost. Display History	OPS270	Batch sales ticket - select
CAS420	Internal Account Entry	OPS275	Sales ticket batch entry
CAS550	Order Costing	OPS280	Sales ticket entry - select
CAS570	Average cost print history	OPS610	POS item batch - select
CAS975	Filing of stock transaction history	OPS615	POS customer batch - select
CBS120	Available Technician	OPS616	POS price batch - select
CCHKACF	Check access authority for Facilities	OPS617	POS promotion batch - select
CMMNGXML	Information Browser	OPS618	POS user batch - select
CMS100	Information Browser	OPS619	POS tables batch - select
CMS100MI	Information Browser MI	OPS650MI	Print label
CMS990	Browse with search	OSS401MI	Forecast calculation
COMNGAPPR	Check and Approve MCO line	OSS450	Lost sales
COS014	Work Center Prices	OSS650	Service level
COS100	Maint CO	PCS011	Component data
COS120	Block code on customer order	PCS012	Cost center amount
COS130	MCO Quick Entry	PCS016	Element data
COS150	Report MCO Expenses	PCS100	Work centers - Costing data
COS180	Invoice - select	PCS105	Tools - Cost data
COS180MI	MI Template	PCS115	Material
COS270	Batch order select	PCS120	Product overhead
COS275	Customer batch order - header	PCS145	Basic costing data
COS300	Maint CO - Report Component Receipt	PCS150	Warning exceptions

Program	Description	Program	Description
COS343	Add operations to work order	PCS155	Costing texts
COS350	Invoice header	PCS160	Target costing data
COS410	Maint Agmnt	PCS165	Target costing - Mass update PCS315
COS414	Maintenance agreement - WC prices	PCS200	Product costing calculation - select
COS610	Create MCO for Invoicing - select	PCS210	Product costing calculation - total
COS620	Reset Created MCO - select	PCS220	Product costing calculation - where used
COS650	Print Monitoring Report	PCS230	Product costing calculation- Variants
COS685	Preliminary Invoice - select	PCS235	Product costing calculation - Services
CPS050	Create CRP - select	PCS240	Product costing calculation - Manufact orders
CPS100	Load	PCS245	Product costing calculation - Mainten. orders
CPS105	Pegged load requirement	PCS260	Product Costing - Manual update
CPS110	Product load profile	PCS265	Actual cost update/display
CPS115	Over/under load	PCS270	Delete product costing calculations
CPS120	Over/under load	PCS275	Copy product costing calculations
CPS160	Person Load	PCS280	Calculate purchase costing
CPS600	Capacity and load survey - select	PCS290	Update standard price in item
CPS610	Department cost report - select	PCS300	Item costing
CPS615	Tool requirement planning report - select	PCS301	Item costing - Materials and operations

Program	Description	Program	Description
CPS990	Recreate workload - select	PCS303	Item costing model
CRS008	Facility	PCS304	Cost difference analyze
CRS530	Employees	PCS306	Sales/Costing simulation
CRS545	Authority	PCS310	Item costing with attributes
DPS001	Warehouse distribution relation table	PCS315	Currency analysis
DPS170	Distribution order proposal	PCS325	Costing warnings
DPS600	Planned distribution order report - select	PCS330	Target costing follow up
DPS610	Distribution planning report - select	PCS410	Product costing analysis - select
DRS100	Shipment	PCS420	RD Rate. Transfer From Resource Driver
ECS001	CAD integration - header	PCS440	Calculation of material overheads
ECS001BE	CAD integration - header	PCS460	Cost driver units - Tools
ECS301	Service/facility	PCS470	Cost driver units - Product
ECS422	Engineering change order detail	PDS001BE	Product structures
ECS422BE	Engineering change order detail	PDS010	Planning groups
EDS001	Stock Locations	PDS011	Resource relations
FCS001	Forecasting	PDS014	Work center - shift
FCS010	Forecasting alarm	PDS015	Planning groups capacity
FCS020	Manual adjustment	PDS020	Transport time table
FCS040	Forecast in graphic	PDS022	Sequential setup times
FCS100	Create forecast - start pgm	PDS030	Shifts
FCS105	Forecast Competition - select	PDS031	Shift models
FCS200	Forecasting alarm - select	PDS032	Shift model lines
FCS210	Forecasting items - select	PDS033	Shift patterns

Program	Description	Program	Description
FCS330	Daily forecast distribution table	PDS034	Shift pattern lines
FCS330MI	Forecast distribution table interface	PDS035	Alternate operation identity
FCS331	Daily forecast distribution	PDS036	Shift pattern adjustments
FCS366MI	Planning entity	PDS038	Work center - Disturbance
FCS410	Family items details	PDS045	Work center - item
FCS425	Budget transfer to item forecast -select	PDS060	Variance numbers
FCS430	Manual forecasts - select	PDS100	Contain of analysis
FCS450	Update comparing forecasts - select	PDS103	Summarized bill-of-material
FCS460	Comparing forecasts - select	PDS105	Lead time analyse total
FCS480	Retrieve history	PDS110	Where used analyses
FCS490	Delete period forecast and/ or weekly forecast	PDS120	Lead time
LIS100	Specification heads	PDS200	Lead time calc, sel products - select
LIS105	Specification language part	PDS210	Renumber sel structure - select
LIS200	Inspection lot report heads	PDS350	Calc and update the BOM with option - select
LIS205	Inspection lot report language part	PDS500	Planning groups - select
LIS220	Stock Locations	PDS520	Contain of analysis - select
LIS610	Specifications - select	PDS525	Summary contain of analysis - select
LIS650	Inspection lot report	PDS530	Product database structure - select
LIS660	Certificate	PDS540	Config
LTS100	Leasing Agreement - header	PDS550	Difference between config

Program	Description	Program	Description
LTS100MI	API interface Leasing Agreement Head	PDS560	Create MPDSUM - select
LTS200	Funding	PDS570	Lead time analysis total - select
LTS200MI	Leasing Funding	PDS605	Configuration header
LTS350	Invoices inquiry	PDS630	Where used
LTS610	Agreements documents	PDS960	Generate capacity records - select
LTS670	Post calculation	PMS001	Register work orders
LTS800	Create Leasing invoice proposals - Select	PMS001BE	Register work orders
LTS810	Leasing proposals - headers	PMS010	Change work order date and quantity
MCS300	Create performance measurement	PMS010BE	Change work order date and quantity
MCS330	Operation deviations	PMS012	MO summary document - select
MCS340	Material usage deviations	PMS016	Work order header
MCS610	Material issue service level	PMS020	Change work order operation Date and quantity
MFS101	Internal invoices - select	PMS030	Delete of work order
MHS200	Item toolbox	PMS040	Component availability check
MHS800MI	Expected receipt download	PMS050	Report manufacturing stock entrance
MMCPYSTA	Copy item statistics	PMS050BE	Report manufacturing stock entrance
MMMNGMOV	Manage location movement	PMS050MI	Manufact Order. Report Receipt
MMMNGPOS	Manage external sales transaction	PMS055	MO split
MMMNGRCL	Reclassification	PMS055MI	

Program	Description	Program	Description
MMMNGTRA	Manage inventory transactions	PMS060	MO reporting - Issues
MMS002	Items	PMS060MI	Manufact Order. Report Issue
MMS003	Items	PMS070	MO reporting - Operations
MMS005	Warehouses	PMS070MI	MO Operation. Report
MMS010	Stock locations	PMS080	Report by-products manufacturing order
MMS011	Preferred buffer location	PMS080MI	Report by-products manufacturing order
MMS012	Stock location statistics	PMS085	Inspection results
MMS040	Stock area	PMS085MI	MO report inspection results
MMS045	Weight limits	PMS086	Inspection results
MMS057	Stock location type	PMS090	Report co-products manufacturing order
MMS060	Detailed item balances	PMS090MI	API for report co-product
MMS065	Item location	PMS095	Operation transactions
MMS071	Stock transaction history	PMS100	Manufacturing order
MMS080	Material plan	PMS101	WO material and operation
MMS081	Availability for all warehouses	PMS105	MO material scrap reporting
MMS085	Simulate availability for material	PMS140	Work order header
MMS087	Material Plan. Display Delayed Issues	PMS170	Work order proposal
MMS090	Item statistics	PMS190	Filing - work order - select
MMS093	Safety stock control table	PMS230	Work center scheduling
MMS100	Stock transactions	PMS233	Tool requirements
MMS100BE	Stock transactions	PMS240	Work order documents - select

Program	Description	Program	Description
MMS101	Stock transactions lines	PMS250	Work order document one by one
MMS101BE	Stock transactions lines	PMS280	Update MO for changed product structure
MMS105	Container movement	PMS300	Create performance measurement
MMS125	Crt GST fr location replenishments - select	PMS312	Production statistics printout
MMS170	Location replenishments	PMS317	Production statistics printout
MMS175	Movement. Change Loc - Item	PMS320	Scrap analysis - select
MMS175BE	Movement. Change Loc - Item	PMS330	Operation deviations
MMS180	Move all between locations	PMS338	MO operation average statistics
MMS200	Item toolbox	PMS340	Material usage deviations
MMS215	Can be required items	PMS348	MO material average statistics
MMS220	Simulation	PMS352	Production statistics printout
MMS240	Serial number	PMS354	Selection - MO Operation Statistics
MMS245	External owner	PMS356	MO Material Statistics
MMS290	Item statistics summary	PMS400	Operations report
MMS300	Stocktake – header	PMS600	MO costing
MMS301	Stocktake - detail	PMS605	WIP calculation
MMS306	Stocktake - detail	PMS610	Run schedule - select
MMS310	Quick inventory counting	PMS620	Work order survey - select
MMS350	Mass update planning values MITBAL - select	PMS625	Work center scheduling - select
MMS355	Calculate planning time fence	PMS640	Mass deletion of work orders - select

Program	Description	Program	Description
MMS360	Reclassification - CW	PMS670	Planned manufacturing order report - select
MMS405	Item - Picking times	PMS680	Update material check on planned MO - select
MMS425	Order line completion control	PPS080	Quality control task
MMS515	Excess calculation - select	PPS116	Create self-billing invoice - select
MMS520	Delete calculation - select	PPS170	Purchase order proposal
MMS525	Excess materials - select	PPS180	PO requisition
MMS530	Calculation - Item status	PPS200	Purchase order header
MMS595	Update order quantity	PPS201	Purchase order lines
MMS600	ABC volume - select	PPS220	PO lines
MMS610	Stock turnover - select	PPS290	Procurement costing calc.
MMS615	Safety-stock and order - point - select	PPS295	Procurement cost model
MMS620	Max-stock and EOQ - select	PPS300	Goods receipt
MMS625	Stock location - select	PPS310	Quality inspection
MMS635	Qty on hand total - select	PPS320	Stock receipt
MMS640	Qty on hand detail - select	PPS320Fnc	
MMS645	GST status report - select	PPS330	PO transactions
MMS655	Stock transaction history - select	PPS360	Delivery notes
MMS665	Item date analysis - select	PPS365	Delivery note files check
MMS670	ABC contribution analysis - select	PPS390	Receiving claim
MMS675	ABC frequency analysis - select	PPS390MI	Receiving claim Interface
MMS680	Item statistics - select	PPS450	Purchase statistics
MMS685	Availability survey - select	PPS460	Delivery time detail

Program	Description	Program	Description
MMS690	Calc location replenishment values - select	PPS461	Delivery time summary
MMS695	Kanban cards - select	PPS600	Purchase order - select
MMS805	Item statistic, period calc - select	PPS605	Purchase order inquiry - select
MMS820	Change item single stock location	PPS615	Delivery schedules - select
MMS824	Changes of container management	PPS620	Purchase order status report - select
MMS830	Update fixed annual demand - select	PPS635	PO inquiry status report - select
MMS917	Remove planned orders - select	PPS640	PO follow-up report - select
MOS001	Register work orders	PPS650	Exp follow-up - select
MOS010	Change WO date and quantity	PPS660	Del follow-up - select
MOS020	Change work order operation Date and QTY	PPS665	Purchase delivery remainder - select
MOS030	Delete WO	PPS670	Purchase confirmation remainder - select
MOS031	Change facility on WO	PPS675	Purchase inquiry remainder - select
MOS040	Material shortage analysis & allocation	PPS680	Internal lead time follow up - select
MOS050	Report WO closure	PPS685	Transport lead time follow up - select
MOS050BE	Work Order. Close	PPS820	Receiving claim notes - select
MOS055	WO split	PPS865	Price evaluation - select
MOS060	MO Reporting - Issues	PPS870	Delivery time - select
MOS070	WO operation reporting	PPS875	Quality inspection analysis - select

Program	Description	Program	Description
MOS070MI	Maintenance time report	PPS880	Quality inspection statistics - select
MOS080	Report byproducts maintenance order	PPS885	Claim report - select
MOS085	Inspection results	PPS950	Mass update of agreement data - select
MOS085MI	Inspections	PPS955	PO update from agreements - select
MOS086	Inspection results	QMS600	Certificate of analysis
MOS087	Permit report	QMS610	Certificate of analysis
MOS087MI	Permits	QMS620	Lab order request
MOS095	Operation transactions	QPS115	Quotation information
MOS100	Work order	QPS600	Quotation order document - select
MOS110	WO structure	RCS030	Resource structure header
MOS115	WO individuals	RCS050	Create RCCP - select
MOS130	Work order scheduling	RCS060	Create RCCP - select
MOS133	Tool requirements	RCS100	Rough-cut load
MOS137	Planned work order scheduling	RCS105	Pegged load requirement
MOS140	Work order documents - select	RCS110	Product load profile
MOS140MI	Print work order	RCS115	Product group load profile
MOS146	Work order documents - select	RCS120	Over/under load
MOS150	Work order document one by one	RCS300	Create resource profile - select
MOS170	Planned work order	RCS600	Capacity and load survey - select
MOS180	Released planned WO	RPS001	Item
MOS189	Defer service	RPS002	Item

Program	Description	Program	Description
MOS190	Filing - work order - select	RPS005	Item
MOS195	W/C scheduling	RPS030	Production rates
MOS196	Transfer planned work order	RPS040	Inventory build-up
MOS197	W/C scheduling	RPS045	Planning items
MOS199	Gantt schedule	RPS045MI	Planning entity
MOS290	Serialized item update	RPS080	Point of time table
MOS301	Service	RPS090	Sourcing rules
MOS306	Service prices	RPS110	Line planning
MOS306MI	Equipment Srl Item Meter Reading	RPS115	Material plan - several items
MOS345	Service costing calculation	RPS250	Start up supply chain order
MOS355	Costing related services	RPS260	Preallocate Existing Order
MOS370	Create op plan from order proposal - select	RPS300	Macro Order. Open
MOS600	WO costing	RPS300MI	Transfer macro orders to fashion
MOS605	WIP calculation	RPS370	Recreate connections to macro
MOS615	Run schedule - select	RPS390	Generate details for macro orders
MOS620	Work order survey - select	RPS600	Master schedule report - select
MOS625	Planned schedule - select	RPS605	Material requirement summary report - select
MOS630	Equipment printout	RPS610	Master schedule report total - select
MOS640	Mass deletion of work orders - select	RPS615	Stock projection report - select
MOS642	Manage Blanket workorders - select	RPS620	Update annual demand and item statistics

Program	Description	Program	Description
MOS670	Planned maintenance order report - select	RPS650	Move proposals from MRP-version to real dbase
MOS675	Maintenance order report - select	RPS660	Recreate inventory build-up
MOS722	Manage Blanket workorders - select	RPS676	Surplus inventory return facility
MOS800	Operations report	RPS677	Surplus inventory return warehouse
MOS999	Regenerate master schedule	RPS999	ERP calculation - select
MPS100	Retrieve forecast	SAS100	Agreement header
MPS110	Copy MDS versions	SAS100MI	API for agreement header
MPS130	Copy MDS version to forecast	SAS121	Meter price schedule - agreement
MPS140	Deletion of MDS version	SAS122	Meter price schedule details - agreement
MPS400	Master demand plan - select	SAS132	Create records in SPMACT from SPMINF
MPS410	Forecast differences - select	SAS270	Create agreement proposal - select
MTS071	CCHKACF - Check access authority for facility	SAS520	Agreement header
MTS080	CCHKACF - Check access authority for facility	SAS525	Agreement locations
MWS030	Default picker	SAS530	Agreement item lines
MWS060	Balance ID toolbox	SAS550	Agreement - select
MWS070	Stock transaction history	SAS600	Create agreement SO - select
MWS075	Cross-dock transaction history	SAS610	Create SO from preventive service
MWS120	Pre-allocation	SAS611	Create SO from prev service - print

Program	Description	Program	Description
MWS121	Pre-allocation	SAS620	Recreate agreement - select
MWS130	Cross-dock put-away selection table	SAS630	Update
MWS140	Outbound loading platform - Define	SIS170	Planned Work Order
MWS170	Setting of picking guidelines	SOS026	Update pricelist - select
MWS175	Picking list capacity	SOS100	Service order
MWS178	Picking sequence	SOS101	Individual items
MWS185	Cartonization selection table	SOS105	Customer sites
MWS300	Req/Distr Order. Open Toolbox	SOS106	Customer sites
MWS301	Req/Distr Order. Open Line Toolbox	SOS110	Service order
MWS360	Unpack of packages	SOS120	Service order lines
MWS410	Delivery toolbox	SOS170	Exchange handling
MWS415	Picking List. Plan Pickers	SOS180	Invoice - select
MWS420	Picking List. Report	SOS250	Quotation information
MWS420MI	Picking List	SOS330	Individual meter value report - header
MWS423	Packing open	SOS340	Meter transactions - Individual item
MWS424	Matrix. Report	SOS350	Invoice header
MWS440	Goods receipt DO	SOS375	Service batch-order header
MWS440MI	Goods receipt DO	SOS388	Service batch-order parameters
MWS442	Inbound delivery toolbox	SOS475	Planning of service order job number
MWS443	Inbound packages DO	SOS485	Gantt schedule

Program	Description	Program	Description
MWS444	Inbound package details DO	SOS500	Individual transaction history
MWS460	Pending Put-away. Perform	SOS520	Service order header
MWS805	Item statistic, recreate inv stats from history	SOS525	Service order job
MYS410	Select deliveries for download	SOS530	Service order lines
OIS101	Customer order Lines	SOS610	Service order - select
OIS102	Customer order address	SOS650	Service order - feedback
OIS103	Customer order charges	SOS660	Service order - feedback job
OIS115	Order approvals	SOS820	Service Order. Print Documents
OIS120	Block code on customer order	SOS950	Create service order header
OIS130	Rescheduling of CO lines	SSHEADPI	Service order header procedure interface
OIS143	Shortage management - alternative warehouses	SSJOBHPI	Service order assignment API
OIS145	Procurement of CO lines	SSLINEPI	Service order line API
OIS150	Deliveries	STAGHEPI	Rental agreement API
OIS180	Invoice - select	STS045	STR Generic item
OIS209		STS046MI	Generic Item - Rental
OIS210	Cash desk	STS090	Archive agreement
OIS211	Cash Desk. Connect Payment Method	STS100	Agreement header – Short-term rental
OIS212	Cash Desk. Connect Users	STS100MI	Short term rental agreement head
OIS215	Cash sales - Open payment	STS101	Agreement line short term
OIS217	Cash sales - Cash desk management	STS130	Book in - Rental

Program	Description	Program	Description
OIS221	Unpaid cash invoice - Select	STS135	Book out - Rental
OIS223	Payment - Select	STS140	Rental Logistic toolbox
OIS269	BO entry customer order address	STS220	Rental line detail open
OIS270	Batch order - select	STS350	Rental invoices
OIS273	Customer order charges batch order	STS380	Revenue accruals - Proposal
OIS275	Customer batch order header	STS390	Daily flash report - select
OIS278	Batch order parameters	STS495	Rental Equipment Planning board. Open
OIS300	Customer order header inquiry	STS610	Agreement document
OIS301	Customer order line inquiry	STS650	Short term rental statistics
OIS345	Price Margin. Simulate CO Line	STS652	Create statistics utilization
OIS345MI	Price Margin. Simulate CO Line	STS672	Create statistics utilization
OIS350	Invoice header inquiry	STS800	Create Rental invoice proposal - select
OIS355	Delivery header inquiry	STS810	Rental invoice proposals - headers
OIS390	Customer returns		

Check Access Authority for FAM Functions – CCHKACG

CCHKACG uses parameter list cPLCHKAG. cPLCHKAG is used by the following programs:

Program name	Description
APS100	Record supplier invoice
APS120	Enter manual supplier payment
APS202	Splitting invoices

Program name	Description
ARS040	Batch payments
ARS100	Customer invoice entry
ARS105	Payment documents entry
ARS110	Payment receipts Start pgm
ARS120	Manual customer invoice entry
ARS191	Grouping of invoices
ARS202	Splitting invoices
ARS203	Manually customer invoice grouping
ARS380	Create invoices from payment plan - selection
CCHKACG	Check access authority for FAM function
CRS722	CSYPAR/Invoice parameters
FAS100	Prop
FAS105	MACRS proposal/update depreciation
FAS701	Transfer to derogatory
GLS038	Error jobs
GLS039	Error transactions
GLS095	Petty cash entry
GLS100	Journal entries
GLS200	Voucher number
GLS210	Details in general ledger

Check Access Authority for Resource Driver – CCHKACR

CCHKACR uses parameter list cPLCHKAR. cPLCHKAR is used by the following programs:

Program name	Description
CAS250	Resource driver - Calculate units
CAS260	Resource driver - Calculate rate
CCHKACR	Check access authority for resource driver

Check Access Authority for OA Group - CCHKAOA

CCHKAOA uses parameter list cPLCHKAO. cPLCHKAO is used by the following programs:

Program name	Description
OIS325	Sales price simulation
OIS370	Bulk Order Batch. Open Toolbox
OIS410	Bonus status per recipient
OIS412	Bonus agreements
OIS414	Bonus allocation %
OIS530	Pricelist - select
OIS532	Price list report selection field
OIS534	Price list report column
OIS535	Price list report
OIS537	Price list report
OIS545	Delete price list report information
OIS812	Discount campaign scale
OIS820	Discount campaigns
OIS821	Discount campaign description
OIS840	Promotions
OIS841	Promotions lines
OIS860	Supplier rebate agreement
OIS860MI	Supplier rebate agreement
OIS861	Supplier rebate agreements lines
OIS864	Sales price calc. elements rates
PPS100	Agreement
PPS101	Agreement lines
PPS285	Procurement cost ID
PPS285MI	Purchase costing model and elements
PPS295	Display/simulate costing model
PPS531	Agreement doc - printout

See also

"Create Object Access Group" on page 251

"Connect User Group to Object Access Group" on page 252

Create and Configure User Defined Menu

This document describes how to create and configure user specific menu in 'Menu Version. Open' (MNS080).

Introduction

Whenever a user open M3 functionality in Infor Smart Office, the menu is displayed based on the settings in MNS111MI. These settings are user specific and depend on the security settings for the user in M3 Business Engine and also which menu version the user is connected to in 'User.Open' (MNS150/E).

Follow these steps

A user, by default, is connected to a blank menu version in 'Function. Open' (MNS110). To create User Defined Menu, follow these steps.

Create a new Menu Version

1. Start 'Menu Version. Open' (MNS080).
2. Enter a Menu version and choose Options > Create
3. Enter the name for the new Menu version on the E panel. Click Next.

   The new menu version is created.

Create a new Menu

To create a new Menu for the created Menu version, you can copy and connect existing Menu(s) (and their submenus) used in the default (or any other) menu version.

1. Start 'Menu Version. Open' (MNS080).
2. To copy a menu, right click a record and select Copy.
3. Enter the Menu version you want to copy to and click Next until you are back on the B panel again.
4. Repeat these steps until all submenus and menus are connected to the new Menu version you created.

Connect a Menu Version to a User

1. Start 'User. Open' (MNS150).
2. Select the current user and open the F panel.

3 Select the menu version you created.

   Menu version is what will be shown in the menu.

4 Press Next and close 'User. Open' (MNS150).

Depending on security settings in 'Function. Connect Authority by Role' (SES400), your menu version display the functions your user is connected to.

Display the new Menu

Log off and log on to Infor Smart Office. After logging in, the new menu items (with connected functionality are available.

See also

"Company and Division Security" on page 207

"Function Security" on page 210

Create a User

This document explains how to define a user. A user record is set up to establish access to files and records in M3.

Outcome

One or more users are created and it is now possible to connect users to a user group that has been defined. Users are able to access and work with the M3 system based on the settings established.

Follow these steps

1 Start 'User. Open' (MNS150) and the B panel is displayed.

2 Specify an identifier for the user you are creating.

3 Select the Create option.

4 On the E panel, fill in the desired fields. These fields are required:

   - Name
   - User type
   - Date format
   - System language

5 Click Next.

6 On the F panel, enter the desired menu settings for the user.

7 Click Next to save the record.

See also

"Create a User Group" on page 248

"Object Access Control" on page 250

"Connect User to User Group" on page 248

"Defining Access to Information in M3" on page 246

"Create Object Access Group" on page 251

"Connect User Group to Object Access Group" on page 252

Output Management

5

Define Basic Data for Document Output Management

This document explains how you define basic data for document output management. Basic data includes media codes and how they are related to the technical format of the printer file, output server, output service and its type.

The relationships between the other basic settings are:

- The media code defines a certain format and way to distribute a document, such as via e mail. Examples of the technical format of the printer file are, *STREAM or *XMLOUT.
- An output server is the physical server that hosts an output service function.
- The output service type is a piece of software that can perform one or several output services. For example Forms Output Management (FOM) or Infor Enterprise Collaborator (IEC). The media code is connected to the output service type.
- The output service definition connects the output server and output service type to a specific output service ID. The output service definition pinpoints, for example, a specific installation of FOM via a specific port number.

Outcome

Basic settings for document output management are defined.

The basic settings for document output management are stored in the following physical files:

COSRVR (MNS218)

CSYTAB, where the constant value STCO = MEDC (CRS116)

COSITY (MNS217)

COSIME (MNS214)

COSRVI (MNS216)

CSYDOC (CRS928)

ODEDOC (CRS027)

CSYDME (CRS928)

CSYTAB

CTSTCO = 'DEV'

After defining the relationship between M3 and the output services, the media support for each and every service must be defined. The media code must be unique but can be supported by multiple output services.

Before You Start

- To produce output for the *STREAM interface, you must have a Streamserve server installed.
- To produce output for the *XMLOUT interface, you must have IEC installed.
- To produce output for the *XMLOUTMVX (FOM) interface, you must have a Streamserve server installed.

Follow These Steps

Define M3 Business Documents

1. Start 'M3 Document. Open' (CRS928).
2. Enter a document number and document variant. Press Create.

   A full set of documents can be generated by using F14. A simple way to define documents to be used is to generate all documents and then remove those that will not be used.

   Document variants refer to the variants of document content structures. A dispatch advice document contains a particular content describing delivery, but by using another document variant, you can restructure the content (for example, with details that are package, item or order-oriented).
3. Press Enter to finish.

Define Media Code

1. Start 'Document Media. Open' (CRS116).
2. Enter a media code and press Create.

   By pressing F14 you can generate all standard media codes in M3.
3. Enter a name, description and interface.

   Interface means the technical format the media code should generate.
4. Enter a media category.

Media categories define which output will be delivered by the output server.

5 Press Enter to finish.

Define Output Server

1 Start 'Output Server. Open' (MNS218/B).

2 Enter the identity of the server and press Create.

3 Enter a description, server address and server location.

4 Press Enter to finish.

Define Output Service Type and Connect to Media Code

1 Start 'Output Service Type. Open' (MNS217/B).

2 Enter a name of the output service type and press Create.

3 Enter a description and select an interface format. Press Enter.

'Output Service Type. Connect Media' (MNS214/B) is displayed.

4 Enter the media code that should be connected to the output service type and press Create.

5 Press Enter to finish.

Define Service Identity

1 Start 'Output Service. Open' (MNS216/B).

2 Enter the identity of the service and press Create.

3 Enter the service type.

By doing this you connect the service type to the service identity.

4 Enter the server ID.

5 Enter the port number.

6 Press Enter to finish.

Define Business Documents for the Installation

1 Start 'Standard Document. Open' (CRS027).

2 To define business documents one by one, go to step 3.

To define business documents in a full set, go to step 6.

3 Enter a document number and press Create.

4 Select the check box if the document is to be printed automatically.

5 Select one or several check boxes if the document is included in one or several document classes. Go to step 8

6 Press F14 to generate a full set of business documents defined in M3.

7 Select the unwanted documents and press Delete.

8 Press Enter to finish.

Define Media Support for M3 Business Documents

1 Start 'M3 Document. Connect Media' (CRS929).
2 Select the 'Document number' and 'Media Code' fields and press Create.

   By connecting a document number to a media code, you state that the combination is valid for the installation.

3 Press Enter to finish.

Define Available Printers

1 Start 'Printer. Open' (CRS290).
2 Enter a printer name and press Create.
3 Enter a name and description.
4 Select a printer priority.
5 Select to which queue the printout is to be sent.
6 Press Enter to finish.

Parameters to Set

Program ID/ Panel	Field	The field indicates …
(CRS928/B)	Document number	… the unique ID of a document.
(CRS928/B)	Document variant	… the variants of a standard document as defined in (CRS027). Standard documents available in M3 normally use a blank variant.
(CRS928/E)	Name	… the name of the current identity.
(CRS928/E)	Media control object used for selection	… whether object selection for media control is used for the current document. The valid alternatives are: 0 = No 1 = Yes 2 = Yes, selection in (CRS029).

Program ID/ Panel	Field	The field indicates …
(CRS928/E)	Media profile	… whether the media profile should be used as a key for partner referencing of documents. The valid alternatives are: 0 = Media profile should not be used. 1 = Media profile should be used as a key.
(CRS928/E)	Printer file	… the name of the file to be replaced temporarily with data from the printer file definition.
(CRS928/E)	Object value for partner reference	… the object value used for partner reference selection.
(CRS928/E)	External/internal document	… whether the document is internal. The valid alternatives are: 0 = No, external 1 = Yes, internal. When printing internal documents the local language is used. When printing external documents the language of the customer is used. For invoice documents in the customer order system, the document is printed according to the payer's language.
(CRS928/E)	Document category	… the document category that is specified for each standard document. The valid categories are: 0 = Confirmation document (order confirmation, quotation, and so on) 1 = Picking document (picking list) 2 = Delivery document (delivery note, waybill, and so on) 3 = Invoicing document (invoice, credit note, and so on) 4 = Basic data (item list, and so on) 5 = Finance 6 = Work order 7 = Purchasing 8 = Personnel administration The document category is used to control printouts, etc.

Program ID/ Panel	Field	The field indicates …
(CRS928/E)	Number of different print files	… the number of print files used for the delivery document. The information is updated automatically for every M3 standard document, but can be useful for additional documents added to M3 in an implementation project. Note that these added print files must be named according to M3 standard, as follows: MWSxxxPF First file MWSxxxP1 Second file MWSxxxP2 Third file. See also (MWS616) for examples.
(CRS928/E)	Save document data	… whether the document data created is saved in separate files for the documents. The valid alternatives are: 0 = No 1 = Yes. This is updated automatically in every M3 standard document, but is also useful for additional documents created for enhancements in a M3 implementation project.
(CRS928/E)	Program—document header	… the program used to maintain information in the header of each delivery document. The information is updated automatically for M3 standard documents, but is useful for documents added as enhancements in M3 implementation projects.
(CRS928/E)	Program—document line	… the program used to maintain line information entered in each delivery document. The information is updated automatically in M3 standard documents, but is useful for documents added as enhancements in the M3 implementation projects.
(CRS928/E)	Number series type	… the purpose of each number series. If a number series is marked with an asterisk (*), it is optional. In this case, more than one number series may be used for each number series type.
(CRS928/E)	Number series	… the number series. The same ID may be used by other series if they belong to other types. For example, there may be a series A for order numbers as well as for invoice numbers, although they have separate number ranges and start values.
(MNS218/B)	Server identity	… the physical attributes of the server.

Program ID/ Panel	Field	The field indicates …
(MNS218/E)	Server address	… the IP address of the server.
(MNS218/E)	Server location	… the physical location of the OUT server.
(CRS116/B)	Media	… a media code as defined in (CRS116). Each medium is connected to a media type that defines which type of output the medium should generate. Media defined in (CRS116) are connected to M3 documents in (CRS929) and out data service types in (MNS214).
(CRS116/E)	Interface - media	… the valid interfaces. The valid alternatives are: *STREAM *XMLOUT *XMLOUTMVX (FOM)
(CRS116/E)	Media type	… a media type that is set for the media code to define the output that will be delivered by the output server. The valid alternatives are: 01 = Fax 02 = File 03 = Printer 04 = e Mail 05 = EDI via EDI enable 06 = MBM initiator 07 = Net file via OS400
(MNS217)	Service type	… the software that supplies the different types of services. Every service type has a specific interface that describes how the software and M3 are interfaced.
(MNS214/B)	Service type	… the software that supplies the different types of services. Every service type has a specific interface that describes how the software and M3 are interfaced.
(MNS214/B)	Media	…a media code as defined in (CRS116). Each medium is connected to a media type that defines which type of output the medium should generate. Media defined in (CRS116) are connected to M3 documents in (CRS929) and out data service types in (MNS214).

Program ID/ Panel	Field	The field indicates …
(MNS216/B)	Service identity	… a common object that describes a service provider for output from M3.
(MNS216/E)	Port number	…the port number used by the OUT server.

See Also

"Enabling Document Output Management" on page 338

"Define Settings for User-Controlled Document Output" on page 328

"Define Settings for Partner-Controlled Document Output" on page 323

"Define Settings for Object-Controlled Document Output" on page 320

"Document Output Management" on page 336

"Processing Manually or Automatically Initiated Document Output" on page 344

"Monitoring Document Output" on page 341

"Maintaining Document Output" on page 340

Define Configurable Views and Reports

Functional solution

This chapter describes the new output and view solution, managing configurable views, and reports. The following chapters include how to define and manage the programs.

Configuring views and generating standards

Configurations for configurable views are set in the program 'List and Printer programs. Configure' (CMS005). By using the function key F14='Generate standard', (CMS005) is populated with a list of all programs that support the configurable view standard.

Configurable views is a standard for list panels in M3 Business Engine. Programs adhering to this standard support a number of features and have the same look and feel.

The following configurations are possible for configurable views in (CMS005):

- Manage related tables: Use related option 11='Related tables'.

  For more information, see specific chapter on managing related tables.
- Manage virtual fields: Use related option 12='Virtual fields'.

For more information, see specific chapter on managing virtual fields.

- Manage available fields: Use related option 21='Field group'.

  For more information, see specific chapter on field group.

- Manage views: Use related option 22='View/Report layout'.

  For more information, see specific chapter on view layout.

- Manage sorting orders: Use related option 23='Sorting order'.

  For more information, see specific chapter on sorting order.

- Run program: Use related option 24='Run function'.
- The list and printer programs can be run from (CMS005). Use the related option 'Run Function' (Ctrl+24) in (CMS005) to start the designated program. After running the function, the program works as normal. See the correlating REQ document for more information on each specific program.
- Reset metadata to standard: Use related option 25='Reset to standard'.

  There is a possibility to reset the metadata back to the configured standard metadata. Use the related option 'Reset to standard' (Ctrl+25). A popup is displayed with the options OK and Cancel.

  Note: When using 'Reset to standard', all program settings will be reset to the standard setup and all prior changes will be lost, so it must be used with caution.

- Manage program start values: Use related option 26='Program start values'.

  To manage the start values of programs, the Select option must be set to 1-'All' or 2-'List Programs', since it is not possible to manage program start values from a printer file (i.e. option 3).

- Export configuration: Use the related option 27='Export Configuration'.

  By exporting the configuration it is possible to save or transfer the settings of a printer file or list program. Use the related option 'Export Configuration' (Ctrl+27) and then specify the file name and version number of the configuration.

- Update metadata to standard: Use related option 28='Update standard'.

  The difference between updating and resetting the metadata is that the update does not remove any of the customizations of a file or program. The update fills out any missing data retrieved from the standard setup, while still keeping the customizations.

Information browser categories

The information browser category controls which data that will be displayed in the information browser in 'Information Browser. Open'. (CMS100)

Information browser categories are defined in (CMS010). The actual data to display is retrieved from the master table selected for the information browser category in this program. To use an information browser category in (CMS100), it must first be activated in this program by selecting 'Activate' or pressing Ctrl+7.

The following may be defined for the information browser categories:

- Activate an information browser category: Use related option 7='Activate'.
- Deactivate an information browser category: Use related option 8='Deactivate'.
- Create virtual fields: Use related option 11='Virtual fields'.

  For more information, see specific chapter on virtual fields.
- Manage related options and set up a related option for each information category: Use related option 13 ='Related options'.

  For more information, see specific chapter on related options.
- Manage available fields: Use related option 21='Field group'.

  For more information, see specific chapter on field group.
- Manage views: Use related option 22='View'.

  For more information, see specific chapter on view layout.
- Manage sorting orders: Use related option 23='Sorting Order'.

  For more information, see specific chapter on sorting order.
- Design and simulate the list: Use related option 24='Simulate list'.
- When selecting 'Simulate list', the program for customer list design is opened. This offers a preview of the selected list and design throughout (CMS100).
- Export configuration: Use related option 27=' Export Configuration'.

  By exporting the configuration, it is possible to save or transfer the settings of a printer file or list program. Use the related option 'Export Configuration' (Ctrl+27) and then specify the file name and version number of the configuration.

Managing ad hoc report group

Creating, changing, and managing ad hoc reports is performed in the program 'Ad Hoc Report Group. Open' (AHS100). The report group is the base for which file the ad hoc report will use. Every file has a default view that controls which fields to display when creating an ad hoc report, although this is highly configurable by using related tables and virtual fields in order to create customized reports.

The following related options are available in (AHS100):

- Create and manage ad hoc reports: Use related option 11 ='Ad hoc report'.

  For more information, see specific chapter on ad hoc report.
- Manage related tables: Use related option 20='Related tables'.

  For more information, see specific chapter on managing related tables.
- Manage virtual fields: Use related option 21='Virtual fields'.

  For more information, see specific chapter on managing virtual fields.
- Manage available fields: Use related option 22='Field group'.

For more information, see specific chapter on field group.

- Manage views: Use related option 23='View'.

  For more information, see specific chapter on view layout.

- Manage sorting order: Use related option 24='Sorting order'.

  For more information, see specific chapter on sorting order.

- Design and simulate a list: Use related option 24='Simulate list'.
- When selecting 'Simulate list', the program for customer list design is opened. This offers a preview of the selected list and design throughout (CMS100).
- Export configuration: Use related option 26=' Export Configuration'.

  By exporting the configuration, it is possible to save or transfer the settings of a printer file or list program. Use the related option 'Export Configuration' (Ctrl+26) and then specify the file name and version number of the configuration.

Manage report layout selection

The report layout per printer file is defined in 'Report Layout Selection' (MNS210). In order to select which report layout to use per printer file, the printer files must be defined in 'List and Printer Programs. Configure' (CMS005). A report layout should also be defined in 'Report Layout. Open' (CMS025).

View printer files XML variants

One printer file can generate different kinds of variants, for example a normal invoice or a credit note. By choosing the different XML variants, you can get different kinds of printouts from the same printer file. Use 'Printer Files XML Variants. Open' (CMS004) to open these.

Browse, change and open the report layouts

The different report layouts are sorted per printer file and show the report layout name, a description, and which XML structure (see separate chapter for more information on XML structures) that is used for the said report layout. The XML structure is set up in 'XML Structure. Open' (CMS006). Apart from that, it is also possible to select some different options for the XML content such as information on cover, formatting, label, and media.

Browse, change and open the XML structures

In order to define and set up the XML structure per printer file, the user may use 'XML Structure. Open' (CMS006). An XML Structure defines how and in which order the elements are set up. XML documents are formed as element trees. An XML tree starts at a root element and branches from the root to child elements. All elements may have sub elements (child elements). The terms parent, child, and sibling are used to describe the relationships between elements in the structure. Parents have children. Children have parents. Siblings are children at the same level (brothers and sisters). All elements may have text content and attributes.

The program has two related options. See related chapters on what each related option does.

- XML Structure. Open Section - Ctrl+11

- XML Structure Section. Open Element - Ctrl+12.

When creating a new XML structure, it is possible to set three different formats:

- M3 Standard.
- Open
- In order to create a customized XML structure, the format must be open so that it is possible to define the elements and other parts such as root elements and namespaces (see below for a full description of these fields).

Root elements

The XML document must contain one root element that is the parent of all other elements. The root element is the first and last tag in the XML document.

For example:

```
<?xml version="1.0" encoding="UTF-8"?>
<note>
  <to>Tove</to>
  <from>Jani</from>
  <heading>Reminder</heading>
  <body>Don't forget me this weekend!</body>
</note>
```

where <note> is the root element.

Dft namespace

XML Namespace provide a method to avoid element name conflicts. In XML, element names are defined by the developer. This often results in a conflict when trying to mix XML documents from different XML applications.

Name conflicts in XML can easily be avoided using a name prefix. When using prefixes in XML, a namespace for the prefix must be defined.

The namespace can be defined by an xmlns attribute in the start tag of an element. The namespace declaration has the following syntax: xmlns:prefix="URI".

Defining a default namespace for an element saves us from using prefixes in all the child elements. It has the following syntax: xmlns="namespaceURI".

Pr for namesp1

The field indicates the prefix for the alternate namespace 1.

Schema namespace

Since several vocabularies can be used to describe different elements and attributes in XML documents, the use of namespaces and prefixes is recommended to remove any ambiguity for element and attribute declarations. Distinguishing between element and attribute names for each namespace is essential when using schemas from more than one namespace.

Schema

The XML schema describes the structure of an XML document. The purpose of an XML schema is to define the legal building blocks of an XML document:

- the elements and attributes that can be displayed in a document
- the number of (and order of) child elements
- data types for elements and attributes
- default and fixed values for elements and attributes

Element name

The element name is what defines the name of the tag. If the element name is Item, the tag will be <item>.

Browse, change, and open the XML structure sections

The program 'XML Structure. Open Section' (CMS007) is used in order to structure and define how the XML will look and operate. It is sorted by printer file and an XML structure. Each row is a section of elements on different levels in order to create subsections when needed. The different sections contain certain base files and fields, but additions can be made to this by the use of the 'Related tables' or 'Virtual fields' option. It is possible to change the name of the sections and define whether it should output an attribute or not. It is also possible to select whether the section should be active or not by setting the status to 10-'Not active' or 20-'Active'.

There are three related options:

- 'XML Structure Section. Open Element' (Ctrl+11)
- 'Create Custom Section' (Ctrl+20)
- 'Delete Custom Section' (Ctrl+21)

Browse, change, and open the XML structure section elements

The program 'XML Structure Section. Open Element' (CMS009) contains a list of the elements and a description of each element and which field and file that is used to retrieve the data. There are no specific related options but the E and F panels contain some unique functions. To create an element, source of data must be entered. Based on this, the E panel will change. As of now, there are different sources of data but the most commonly used are probably 'Field' or 'Specific value'. The 'Field' option is used when retrieving data from other files, in order to extract data from M3 BE. If the field does not exist as a default field, it is possible to create a field by using the 'Related tables' option and then add the new field.

When selecting 'Specific value' it is possible to enter any value. This may be used if the information is static or if the value is collected externally to M3 BE, such as a role description or a signature. The checkbox 'Upd at rep run' lets the user enter the specific value every time a printer file is run.

After entering an element name, the user can give this element attributes on the F panel by entering attribute names and link a source of data as well as specific values to the attributes.

Manage related tables

Fields from other BE tables that are related to the master table can be displayed by defining 'Related tables' in the program 'Related Tables. Connect' (CMS011). Use the related option "Related tables (Ctrl+11) in the following programs to open (CMS011):

- (CMS005)
- (CMS009)
- (CMS010)

Define a related table by following these steps in (CMS011/B):

Sorting option

The 'Sorting' option indicates an index connected to the table. An index is a unique sorting order of a table. The sorting is controlled by the selected fields and by their relation to each other. System-defined indexes (00-99) or user-defined indexes (U1-U9, V1-V9, or X1-X9) may be used.

Read option

The 'Read' option indicates how to set the key fields in the related table according to the selected 'Sorting' option. On the N panel, select if all or only specific fields should be added to the 'Field' group. Press Enter to activate the related table and update the 'Field' group. In the list program, now fields from the related table can be selected as fields (columns) in the list.

The read option indicates how to set the key fields in the related table.

Alternatives:

1	=	Key field set to value from the field 'Object' or 'Value'
2	=	Key field set to blank
3	=	First record found according to key fields with a lower number
4	=	Last record found according to key fields with a lower number
5	=	Key field set to user's current division
6	=	Key field set to user's current language
7	=	Mixed division
8	=	Active date

If you select alternative 3, 4, or 8, all subsequent key fields must have the same read option.

If you select alternative 7, the program first reads with the current division. If no record is found, a second read is performed with a blank division. This alternative is used for tables having both blank and local division data, for example accounting identities.

Trim zeros

The field indicates if leading zeros should be removed. The field is only used if the 'Master table' field is numeric and the 'Related table' field is a text string.

Shortcut

There is a shortcut for defining a related table. Press the button 'Create New' in (CMS011/B), specify the table name, and press OK.

If the join conditions between the related and master table can be determined automatically, the N panel is displayed. If the join conditions cannot be determined automatically, the E panel is displayed.

Functional limitations

Up to 30 related tables may be defined.

Manage virtual fields

Fields that do not exist in any BE table can be displayed in the list by defining virtual fields in the program 'Virtual Fields. Connect' (CMS012). Use the related option 'Virtual fields' (Ctrl+12) in the following programs to open (CMS011):

- (CMS005)
- (CMS009)
- (CMS010)

The following types of virtual fields can be defined:

1 - Value calculated by a formula

2 - Value retrieved by a function program

3 - Value from a description field in CSYTAB

4 - Value from a name field in CSYTAB

5 - Value from a currency conversion

6 - Value from a logical formula

7 - Date conversion

8 - Merge data

You may define an unlimited number of virtual fields. When created, the virtual fields can be selected as fields (columns) in the list. The naming convention for a virtual field is &XXXX.

The name for a virtual field is specified by entering either the description or a message ID. If you specify a description, it can also be defined per language by clicking the 'Language' button. If you specify a message ID, the column heading is automatically displayed in the end user's M3 language.

The calculation sequence is used if other virtual fields are used as objects in the calculation formula. The current virtual field must have a higher calculation sequence than the virtual fields used as objects.

The number of decimal places is controlled either by specifying the number of decimal places (04) or selecting a field information code.

Value calculated by a formula

The value is calculated based on fields from the master table, related tables, or other virtual fields.

Specify the calculation formula by entering a value for Operator (+, -, /, *), Object (field from master table, related table or other virtual field) and Factor.

Value from description or name field in CSYTAB

Field	Description
Key 2 field	Read option for the 'Key' field CTDIVI ('Division'). Normally, this should be set to 'Blank'.
Key 3 field	Read option for the 'Key' field CTSTCO ('Constant' value). Normally, this should be set to 'Equal to'. The value is normally the last 4 positions of the field.
Key 4 field	Read option for the 'Key' field CTSTKY ('Key' value). Normally, this should be set to 'Equal to'. Object is normally the field.
Key 5 field	Read option for the 'Key' field CTLNCD ('Language'). Normally, this should be set to 'Blank'.

The value is retrieved from the 'Description' or 'Name' field in the system table CSYTAB.

Value from a currency conversion

The value is retrieved from a currency conversion.

Field	Description
Base value	Read option for 'Base value'. This is the value to convert .
Base division	Read option for 'Base division'. The division can either be set 'Equal to' a division object, or be searched for via a facility or warehouse field.
Rate type	Read option for 'Rate type'. If a blank value is set, rate type 01 is used.
From currency	Read option for 'From currency'. This is the currency of the base value prior to the conversion.
To currency	Read option for 'To currency'. This is the currency of the base value after the conversion.

Value from a logical formula

Values are displayed (or not) based on a logical formula.

Field	Description
Logical type	Specify the logical type for the condition (alphanumeric or numeric).
First operand	Specify the first operand (always a field from the field group).
Condition	Specify the condition.
Second operand	Specify how to set the second operand (field from field group, specific value, or blank).
Combine	Specify how to combine 2 or 3 different conditions.
Value if condition is true	Specify how to set the value if a condition is true (field from field group, specific value, or blank)
Value if condition is false	Specify how to set the value if a condition is false (field from field group, specific value, or blank).

Date conversion

Convert a date to a unique serial number. The serial number starts by 1 on the first day in the system calendar. By using two virtual fields for a date in a virtual field for calculation, it is possible to calculate the difference between two dates. It is also possible to decide whether the unique sequence number should include all days, only working days, or only bank days.

Field	Description
Base date	The base date (1-Current date, 2-Object, 3-Specific date).
Output date	The output date (3-Working day number).

Merge data

The value is merged from different fields into one field, for example to display an order number and an order line number in the same field like this: 3953987-0020. Up to 5 different sections may be merged into the new virtual field. For every section, a number of parameters are specified.

Field	Description
Base date	Specify if data for the section is retrieved from a field or if a manually entered value is used.

Field	Description
Length	Specify a fixed length for the section. If no length is specified, this is set dynamically based on the value retrieved.
Field	Field ID if data should be retrieved from a field.
Value field	Specify if data is entered manually.
Separator	Specify the separator to be used last in a section.
Add blank	Select this to add one blank space after the separator.
Decimal format	Specify the decimal format to use for numeric values retrieved from the database. If left blank, the user's decimal format is used.
Trim zeros	Select if leading zeros should be removed. The setting is only used if the field is numeric and a fixed length has been specified.
Date format	Specify the data format that should be used for date fields.
Date editing	Specify the character to separate different parts of a date.
Zero suppression	Select this if values of zero should not be displayed (zero is then displayed as a blank value).

Manage available fields

The available fields to use in a list or report is managed in the program 'Field Group. Display Permitted Fields' (CRS109). Use the related option 'Field Group' (Ctrl+21) in the following programs to open (CRS109):

- (CMS005)
- (CMS009)
- (CMS010)

Label

The label for a specific field is controlled by the 'Label method' field using the following methods:

1 = Standard message ID (default value)

2 = Overriding message ID = Overriding name

For alternative 1, the standard M3 message ID is retrieved from the file where the field originates. The label text is retrieved from the message file MVXCON in the end user's M3 language.

For alternative 2, an overriding M3 message ID and a message file are specified. The label text is retrieved from the specified message file in the end user's M3 language. If no message file is specified, MVXCON is used.

For alternative 3, an overriding label text is specified. Any translations must be manually specified by using the button 'Language'. The overriding label text can be 1-15 characters long.

Field security

To control which content a specific user can see, the field security function is used. The field security function is activated for a specific field by entering a field security group in (CRS109). If a field security group is specified in (CRS109), the content for the field is displayed/editable depending on the settings in (SES100) and (SES010).

Note: The connection between the field security group and the field in (SES102) is NOT used.

Manage views

The view controls which information (field) that will be displayed in the list, as well as in which column specific information is displayed. Views are defined in the program 'View. Open' (CRS020) and is either defined per sorting order or for all sorting orders. Use the related option 'View/Report Layout' (Ctrl+22) in the following programs to open (CRS020):

- (CMS005)
- (CMS009)
- (CMS010)

A view can be shared or personal. Shared views can be used by all users. This is managed by the PAVR field and stored in CSYSPV with RESP = *Blank.

Personal views can only be used by the user who created the views. This is managed by the UPVR field and stored in CSYSPV with RESP = User ID.

Both fields PAVR and UPVR are defined in the view definition, but the UI will hide UPVR and merge the dropdown values into the PAVR field.

Subfile length

The maximum subfile length is hard coded per program and can include 150-300 positions.

Functional limitations

The number of columns is hard coded to 30.

Manage sorting orders

The sorting order controls the sorting and filtering. The sorting order is always user-defined (the user defines the sorting and filter). Use the related option 'Sorting Order' in the following programs to open (CRS022):

- (CMS005)
- (CMS009)
- (CMS010)

File

The main table for the program.

Sorting option

The ID of a logical view connected to the table. The logical view can either be system-defined (0099) or user-defined (U1-U9, V1-V9, or X1-X9).

Number of filters

The number of key fields, in the selected sorting option, that should act as filters. The fields are selected starting from the first key field and then field by field throughout the key definition.

A filter is used to make field selections. A value must be entered in the filter when a sorting order is used. Only records containing a value are displayed.

Change filter

This defines whether the number of filters should be changeable in the very program.

Max number of records

The maximum number of database records (database reads) that will be performed. If the maximum number is reached, the subfield build is stopped and an error message is displayed.

The field is used to ensure that the computer has the capacity to manage a large number of records. If no value is entered in this field, the number of records will be maximized to 1,000. Normally, the value is greater than 1,000 and less than 10,000. 'Records' refer to the number of items, customers, etc.

Single division

This controls whether the sorting order should only display records for a single division. If the field is selected, division must be selected as the first filter. Users that are working in a single division (local users) can only use sorting orders that have the 'Single division' field selected. Users that are working in all divisions (central users) can use all sorting orders regardless of the setting in the 'Single division' field.

Selection field 1-3

The ID of the three fields that should be used as 'From' and 'To' selection fields in the program.

Aggregation

Aggregation is used to accumulate several records into one record. Aggregation levels are used to indicate how records in the list will be aggregated. Key fields that are not included in the aggregation level will be aggregated. The presentation of aggregated fields is defined per view and field in the aggregation display rule. The number of aggregated records is always stored in the S0NAGG field. This field can be used to find out if a subfile record is aggregated. The virtual field &NAGG is automatically added to the field group and can be used for the view to display the number of aggregated lines.

Change aggregation

This controls whether aggregation should be changeable in the very program.

Subtotal 1-3

Subtotals are used to insert a subtotal record when the value in a specific key field is updated. Any key field, in the selected sorting option, can be used as a break level for the subtotal. The presentation of the subtotal record is defined per view and field in the subtotal rule.

Translate description

For programs supporting Configurable Views, a new check box "Translate description" has been added in program "Sorting Order. Open" (CRS022/E).

If the check box is selected, a sorting order description is generated automatically per language in program (CRS830) the first time this is required. An automatically generated description is always based on the Sorting option.

The automatic generation is triggered from CRS022/B or CRS022/E. It is also triggered from some Configurable View programs at startup.

If the check box is not selected, a description must be maintained manually in (CRS022) or per language in (CRS8300).

Standard values

To every sorting order, 6 standard views may be connected. The user can toggle between the available standard views by selecting 'Actions' = 'Next view' (F10) in the list program. It is possible to define both shared standard views and personal standard views. Personal standard views will always override the shared standard views.

View 1 is sometimes used as a start value.

Manage program start values

The start value of programs can be controlled by defining options like sorting order, viewing panel sequence, opening panel, and listing records in the program 'Program Start Values. Open' (CRS014).

To pgm

The field indicates the started program for which the setup is valid.

From pgm

The field indicates the starting program for which the setup is valid. If this information is blank, the setup is valid when the To-program is started from the menu.

User

The field indicates the user for which the setup is valid. If this information is left blank, the setup is valid for all users.

Option

The field indicates how objects displayed on the panel should be processed. An option can be specified for several objects at the same time.

Sorting order

The field indicates which sorting order to use for the called program. If this value is zero, M3 will retrieve the same sorting order that was used the last time the "To" program was called.

View

The field indicates the view. The view controls the information (field) that is displayed in the list and the columns in which the information is displayed. The sorting order and filtering capabilities are determined by the value in the 'Sorting Order' field. Views are shared (can be used by everyone) or personal (can only be used by the user creating the view). Views are edited by using Smart Office (using personalized views) or by using 'View. Open' (CRS020). The user may toggle between the available views by selecting the 'Next View' action or by pressing F10.

Panel Sequence

The field indicates which panels will be displayed when making changes and inquiries, as well as the sequence in which they are displayed. For programs with user-defined sorting orders, the panel sequence used in the started program will be the one connected to the sorting order in the program.

For example:

Sorting order 1 and panel sequence E are connected in 'Item. Open Toolbox' (MMS200). In 'Program Start Values. Open' (CRS014), sorting order 1 and panel sequence EF are connected for 'Item. Open Toolbox' (MMS200). The panel sequence displayed in 'Item. Open Toolbox' (MMS200) will be E.

Opening panel

The field indicates which panel will be displayed when the program is opened.

List records

The field indicates whether the starting program (the 'To' program) should prevent an automatic listing of qualified records on the B panel when opened, or when the sorting order is changed manually by the user.

Alternatives

Blank = All qualified records list (default)

*NODSP = Records not listed

When *NODSP is selected, the user must refresh the B panel before any records are displayed. This enables the user to fill out the actual filter values before reading the database, and thereby avoid unnecessary reads in order to increase performance.

No validations are made on this field to enable future enhancements and customized modifications.

Related options

Related options are used to create a customized related option for an information category based on a selected program. Open (CMS013) by using the related option (Ctrl+13).

See also

"Define Basic Data for Document Output Management" on page 298

"Define Settings for Object-Controlled Document Output" on page 320

"Define Settings for Partner-Controlled Document Output" on page 323

"Define Settings for User-Controlled Document Output" on page 328

"Document Output Management" on page 336

"Enabling Document Output Management" on page 338

"Maintaining Document Output" on page 340

"Monitoring Document Output" on page 341

"Processing Manually or Automatically Initiated Document Output" on page 344

Define Settings for Object-Controlled Document Output

This document explains how you define settings for document output that is controlled by object (values from the document content). More or less all objects in the transaction control the output making object-controlled output very flexible. Object-controlled document output is intended for output processes that are used in-house, but must to be controlled by document data.

Note: Media selections for object-controlled and partner-controlled output cannot be used for the same document number. For this reason, object-controlled document output only works for some documents and partner-controlled for others. (See definition in (CRS928)).

Object-controlled output only works for JIT call off documents.

Outcome

You have defined settings for object-controlled document output.

Object-controlled output is used for instance when you print item labels in production, which you want to direct to the printer closest to your workstation. Then the workstation and/or the item are the objects to use for controlling the output.

Before you start

You have to define settings for user-controlled document output.

Follow These Steps

Connect media control object

1 Start 'Generic Object Control Table. Open' (CMS017).

2 Select a document connected to (CRS029).

3 Specify (CRS029) and press Create to proceed to the E panel.

4 Enter the attribute ID.

5 Enter the priority and the objects to control the output.

   Max 10 priorities can be added with up to four controlling objects for each priority. Thereby you can add several combinations. If the first, most qualified, combination does not work then the second one is tested and so on.

   The available controlling objects are defined by document number.

   You can reach the object value settings by selecting option=Object table detail lines.

Define media control object

1 Start 'Output Control Selection Table. Open' (CRS029).

2 Select a document number.

   Note that object-controlled output only works for JIT call off documents.

3 Enter, if necessary, the document variant.

4 Enter the priority.

   The available objects to control the output of the current document will be displayed in the list.

5 Enter customer number, address number and, if necessary, delivery specification and press Create.

6 Select whether you want to use the departure selection method.

7 Enter, if necessary, the printer file and workstation.

8 Press Enter to finish.

Parameters to Set

Program ID/ Panel	Field	The field indicates …
(CMS017/E)	Attribute ID	… the first valid value to be compared with the contents of a control object. If the contents are greater than or equal to this start value, the record will be accepted. If there are several start values, the one that is the closest lowest value is valid. Example: You have item number as the control object, and have set start value = A100, A200 and A300. If the content of the control object is A150, the record with start value = A100 will be accepted. If the content of the control object is A375, the record with start value = A300 will be accepted.
(CMS017/E)	Priority	… The field indicates a priority for the selected fields. The object lookup is always performed in priority order. If no qualified objects are found according to priority one, M3 will try to find matching objects according to priority two, etc.
(CMS017/E)	Field	… This information refers to a field or data element from a specific file. It is used to create keys or search paths for user-defined tables, and also to create the contents of user-defined files.

See Also

"Enabling Document Output Management" on page 338

"Define Settings for User-Controlled Document Output" on page 328

"Define Settings for Partner-Controlled Document Output" on page 323

"Define Basic Data for Document Output Management" on page 298

"Document Output Management" on page 336

"Processing Manually or Automatically Initiated Document Output" on page 344

"Maintaining Document Output" on page 340

"Monitoring Document Output" on page 341

Define Settings for Partner-Controlled Document Output

This document explains how you define settings for partner-controlled document output. 'Partner' refers to the planned receiver of the document. Partner-controlled settings always override the settings for user-controlled document output.

Some forms of media are only available to partner-controlled output since they are directly connected to partners. An example is EDI, where the invoice receiver is the company/partner.

Outcome

You have defined settings for partner-controlled document output.

Partner-controlled settings are used for sending information directly to a document receiver (as opposed to object-controlled settings that are used for integrating output data with another in-house application).

Example: A customer invoice printout job is running meaning that the delivery of the document output is controlled by how the media settings are defined. These media settings include all invoice printouts. But when you have performed the override actions, you can deliver a certain invoice printout in the form of an e-mail or fax to one customer while delivering it as an EDI message to another customer. Consequently, you can deliver copies of an invoice printout to different receivers.

Before you start

You have to define settings for user-controlled document output.

Follow These Steps

Define Media Profile

1. Start Media Profile. Open (CRS033).

   Note! Currently, the usage of media profile is restricted to purchasing documents.

   A media profile is used to control the media selection based on a business transaction, such as a purchase order. The media profile specifies the form of media to be used for the output of the transaction. It works as a filter in the partner media selection enabling you to have multiple combinations of partner media settings with or without different media profiles. The media profile can control the selection of media on its own or in collaboration with other objects.
2. Enter the media profile code and press Create to proceed to the E panel.
3. Enter a description and name.
4. Press Enter to finish.

Connect Media Control Object

1. Start 'Standard Document. Open' (CRS027).

   By pressing F14 you can generate all standard documents in M3.

2. Select Std document and press option 12=Media to proceed to 'Std Document. Connect Media Ctrl Object' (CRS945/B1).
3. Enter a media control object and press Create to proceed to the E panel.
4. Enter a name and description.
5. Press Enter to finish and return to (CRS945/B1).
6. Press option 12=Media to proceed to 'Doc Media Control Object. Connect Media' (CRS949/B1).
7. Enter the media code by pressing F4 and selecting a form of media valid for the document. Press Create.

   Depending on which form of media you are defining, the E, F, G, H, or J panels will be displayed.
8. Select one of the following alternatives:
   - If the E panel is displayed, go to Define Media Print (E Panel)
   - If the F panel is displayed, go to Define Media E-mail (F Panel)
   - If the G panel is displayed, go to Define Media Fax (G Panel)
   - If the H panel is displayed, go to Define Media File (H Panel)
   - If the J panel is displayed, go to Define Media EDI and MBM (J Panel)

Define Media Print (E Panel)

1. Enter the service provider to be used for the output from M3.
2. Enter the printer to be used for the printout.

   You can enter a printer name or *SYSVAL (the printer to be used according to the system value) or *JOB (the printer associated with the job creating the printout).
3. Enter overlay, tray, bin and number of copies.

   These parameters depend on the technical infrastructure. If they are not supported by the infrastructure, they will be disabled.
4. Enter the paper size.
5. Enter the number of copies that you want of the printout.
6. Enter, if necessary, the country code and modification.
7. Enter whether you want copies of previously printed documents to be printed.
8. Press Enter to finish and return to (CRS949/B1).

Define Media E-mail (F Panel)

1. Enter the service provider to be used for the output from M3.
2. Enter the to and from e-mail addresses and, if necessary, a cc e-mail address.
3. Enter the subject, note, mail text and attached file.
4. Enter, if necessary, the size, country code and modification to control document layout.

5 Enter whether you want copies of previously printed documents to be printed.

6 Press Enter to finish and return to (CRS949/B1).

Define Media Fax (G Panel)

1 Enter the service provider to be used for the output from M3.

2 Enter a fax number for a customer, supplier or address.

If you are using automatic fax transmission, enter the number without any blank spaces.

3 Enter the priority the printout should have in the queue to which it is sent.

4 Enter, if necessary, an internal comment. This will make it easier to differentiate the printouts in the printout queue.

5 Enter the time when the selected fax machine should try to send the document.

6 Enter the directory in which the document is to be stored if the fax could not be sent. The directory must be recognized by the output server.

7 Enter the subject of the fax.

8 Enter, if necessary, a note to the receiver.

9 Enter the paper size.

10 Enter, if necessary, the country code and modification to control the document layout.

11 Enter whether you want copies of previously printed documents to be printed.

12 Press Enter to finish and return to (CRS949/B1).

Define Media File (H Panel)

1 Enter the service provider to be used for the output from M3.

2 Enter the file system path to the destination in which the file is to be stored.

3 Enter the file type for the resulting file.

4 Enter, if necessary, a file suffix that is added to the destination file name.

If nothing is entered, 'PDF' will be the file suffix.

5 Enter the generic name method.

Note: If method 0 is selected, the file name will not be unique and thus there is a risk that a second file will overwrite the first one.

6 Enter, if necessary, the country code and modification to control the document layout.

7 Press Enter to finish and return to (CRS949/B1).

Define Media EDI and MBM (J Panel)

1 Enter the service provider to be used for the output from M3.

2 Enter the identity of the receiver.

3 Enter whether you want to use a test message (also known as a test flag).

4 Enter whether you want copies of previously printed documents to be printed.

5 Press Enter to finish and return to (CRS949/B1).

Parameters to Set

Program ID/Panel	Field	The field indicates …
(CRS033/B)	Media profile	… a media-controlling object that is used as a filter in the media control table (CRS945). The media profile can be set in a M3 transaction, a purchase order for example, to be one of the media-controlling components of a printout.
(CRS033/E)	Description	… a description of the current identity.
(CRS033/E)	Name	… the name of the current identity.
(CRS945/B)	Media control object	… the object that controls the media for the document, such as a customer or a supplier.
(CRS949/B)	Media	… a code for the media used for output from M3.
(CRS949/E/F/G/H)	Copy	… whether copies of previously printed documents should be printed. The valid alternatives are: 0 = No. Only documents not previously printed should be printed. 1 = Yes. Only copies of previously printed documents should be printed. 2 = Both original documents and copies should be printed.

Program ID/Panel	Field	The field indicates …
(CRS949/E)	Printer	… the printer to be used for the printout. Enter a printer name or one of the following alternatives: *SYSVAL=The printer to be used according to the system value. *JOB=The printer associated with the job that is creating the printout. Note that the printer may be changed for an individual printout before printing starts under the condition that you have entered *YES in the 'Hold printout' field in 'Output Server Definition. Open' (MNS204/E).
(CRS949/E)	Overlay front page	… the name of the overlay to be printed on the front page. If this field is filled in, all field headings will be retrieved from the overlay providing that the 'Overlay front page library' field is also filled in.
(CRS949/E)	Tray	… the tray to be used for the selected printer. The valid alternatives are: 1 = Tray no. 1 2 = Tray no. 2 3 = Tray no. 3 *E1 = Envelopes
(CRS949/E)	Paper size	… the form type to be used. If the 'Paper size' field is left blank, the standard size (*STD) of the output server will be used.
(CRS949/E)	Bin	

See Also

"Enabling Document Output Management" on page 338

"Define Basic Data for Document Output Management" on page 298

"Define Settings for User-Controlled Document Output" on page 328

"Define Settings for Object-Controlled Document Output" on page 320

"Document Output Management" on page 336

"Processing Manually or Automatically Initiated Document Output" on page 344

"Monitoring Document Output" on page 341

"Maintaining Document Output" on page 340

Define Settings for User-Controlled Document Output

This document explains how you define media settings for user-controlled document output. The output can be distributed as a printout, PDF file, fax or email.

Outcome

The settings for how to control media by user are defined. These settings determine the type of media to create as well as how and where to distribute the document output.

You are able to control the type of media when creating document output, such as a customer order invoice or an on-hand balance list.

In 'Output Media Selection. Open' (MNS212), you can check the settings defined in 'Output Server Definition. Open (MNS204) and 'Output Definition. Open' (MNS205). You can change and confirm the settings before creating the output. This can be done for each output job, but note that the 'Confirm output' field in (MNS204/E) must be selected.

You can also define output settings controlled by partner or object. Partner and object-controlled output settings will override user-controlled output settings.

The following files are updated:

CSFDEF

COUTSV

Before you start

You must have registered basic settings for document output management.

Follow These Steps

Define Output Server

1 Start 'Output Server Definition. Open' (MNS204).

2 Select one of the following alternatives:

- For the output service to be valid for a whole area in M3, specify the first two letters of the component group in the 'Printer file' field. Press Create.

  If the field is left blank, the setup will be valid for all printer files.

If you want to enable all printer files to use the same server, you should leave both the 'User' and the 'Printer file' fields blank.

If you want to define settings without Division, you must log on and enter the program as a company user. You are then allowed to define values for division.

- To control the output service by user, prompt and select the user. Press Create.
- To control the output service by location, prompt and select the location. Press Create.

3 Enter the service ID.

4 Select whether the output is to be held and not distributed to the output server.

This is useful in tests of new output services.

The output is always distributed to (MNS206).

5 Select whether the output is to be saved after being sent to the output service.

6 Select whether you want to confirm and possibly override the media settings for an output process.

7 Press Enter to finish.

Select Media for the Printer File

1 Start 'Output Definition. Open (MNS205/B)'.

2 Select one of the following alternatives:

- For the output service to be valid for a whole area in M3, specify the first two letters of the component group in the 'Printer file' field. Press Create.

  If the field is left blank, the setup will be valid for all printer files.

  If you want to enable all printer files to use the same server, you should leave both the 'User' and the 'Printer file' fields blank.

  If you want to define settings without division, you must log on and enter the program as a company user. You are then allowed to define values for division.
- To control the output service by user, prompt and select the user. Press Create.
- To control the output selection by location, prompt and select the location. Press Create.

3 Select a media code.

Multiple media records can be set for one output selection.

4 Depending on the media you have selected for the printer file, one of the E, F, G or H panels, will be displayed. Choose one of the following alternatives:

- If the E panel is displayed (printer), continue with **Connect Printer File to Printer**.
- If the F panel is displayed (email), continue with **Connect Printer File to eMail**.
- If the G panel is displayed (fax), continue with **Connect Printer File to Fax**.
- If the H panel is displayed (file), continue with **Connect Printer File to File**.

Connect Printer File to Printer

1. Enter the printer file and default printer names.
2. Select whether you want the field heading and contents to be displayed.
3. Enter the overlay, tray on the printer, bin and number of copies.

   These parameters depend on the technical infrastructure. If they are not supported by the infrastructure, they will be disabled.
4. Enter the paper size.
5. Select whether the document is to be sent to the archive.
6. Enter, if necessary, the country code and modification to control the document layout.
7. Press Enter to finish

Connect Printer File to eMail

1. Enter the to/from e-mail addresses and, if necessary, to the cc e-mail address.
2. Select whether you want the field heading and contents to be displayed.
3. Enter the subject, note, mail text and attached file.
4. Enter the subject, note, mail text and attached file.
5. Enter, if necessary, the size, country code and modification to control the document layout.
6. Press Enter to finish.

Connect Printer File to Fax

1. Enter the receiver's fax number.
2. Select whether you want the field heading and contents to be displayed.
3. Enter the priority of the fax.
4. Enter the send time for the document.
5. Select whether the document is to be sent to the archive.
6. Enter, if necessary, the size, country code and modification to control the document layout.
7. Press Enter to finish.

Connect Printer File to File

1. Enter the printer file and location.
2. Enter the path and destination files.
3. Enter the file suffix.

   If nothing is entered, 'PDF' is used as the file suffix.
4. Enter the generic name method.

   Note: If method 0 is selected, there is a risk that the file name will not be unique and therefore a second file may overwrite the first one generated.

5 Select whether the document should be sent to the archive.

6 Enter, if necessary, the size, country code and modification to control the document layout.

7 Press Enter to finish.

Parameters to Set

Program ID/ Panel	Field	The field indicates …
(MNS204/B)	Printer file	… the name of the file to temporarily be replaced by data from the definition.
(MNS204/B)	User	… the user ID that controls printouts or batch jobs. Note that if the field is left blank, the setup will be valid for all users.
(MNS204/B)	Media	… the media as defined in (CRS116). Each media is connected to a media type that defines the type of output the media is to generate. Media defined in (CRS116) are connected to M3 documents in (CRS929) and output data service types in (MNS214).
(MNS204/E)	Service identity	… the common object that describes a service provider for output from M3.
(MNS204/E)	Server address	… the IP-address to the output server. For example: 10.10.10.10. The server's IP address can be found by checking the IP configuration for the output.
(MNS204/E)	Port number	… the port number used by the output server. If the field is left blank, port number 20102 is used by default. The port number can be found in the output server's command window. Note that if both the service ID and IP address/port number are entered in (MNS204/E), then the IP address/port number will be used when creating the stream file.

Program ID/ Panel	Field	The field indicates …
(MNS204/E)	Hold output	… whether the printout should be held in the out queue for later release and printout. *YES = Hold the printout. *NO = Immediate printout.
(MNS204/E)	Save output	… whether the printout should be saved in the printout queue after being printed. The valid alternatives are: *YES = The printout will be saved. *NO = The printout will not be saved.
(MNS204/E)	Confirm output	… whether settings for M3 output should be confirmed when output is initiated in (MNS212). The valid alternatives are: *YES = Configuration is shown. *NO = Configuration is not shown.
(MNS205/B)	Media	… the output media. The valid alternatives are: *PRT = Printer *FILE = File *FAX = Fax *MAIL = eMail

Program ID/ Panel	Field	The field indicates …
(MNS205/E) (MNS205/F) (MNS205/G) (MNS205/H)	Field selection	… whether the field heading and contents are displayed and if the latter can be changed. The valid alternatives are: 0 = Do not display field heading or content. 1 = Display field heading and content, but changes cannot be made. 2 = Display field heading and content and contents can be changed.
(MNS205/E)	Printer	... the name of the default printer. The printer must be known to the output server. Mapping of M3 and the network printer name is done in the queue alias file on the output server.
(MNS205/E)	Overlay	... the name of the overlay to be used.
(MNS205/E)	Tray	... the tray to be used for the selected printer.
(MNS205/E)	Paper size	... the desired paper size. If the field is left blank, the standard paper size of the printer will be used.
(MNS205/E)	Bin	... the bin where the selected printer will store printouts.
(MNS205/E)	Number of copies	... the number of copies to be printed.
(MNS205/F)	Printer file	... the printer file name if the function you have selected produces a printout. This information is used for inquiries regarding printer files, for example in (MNS200), in order to connect the printer name to the function name.
(MNS205/F)	Mail text	... the body text of an email. Note that a maximum of 39 characters is allowed.

Program ID/ Panel	Field	The field indicates …
(MNS205/F)	Attached file	… the name of the file attached. Enter the full path to the file to be attached. The path must be known by the output server. For example: C:\attachments\attachement.txt or \\<server name>\attachements\attachment.txt
(MNS205/G)	Facsimile transmission number	... a fax number for a customer, supplier or address. When using automatic fax transmission, enter the number without any blank spaces: Example: 00947 (Country: Norway) 66 (Area code: Oslo) 121314 (Client: Hansen A/S) Example of a fax transmission number as it should be entered: 0094766121314
(MNS205/G)	Priority	... the priority of the fax. When several documents have been queued in the output file, a higher value in the priority field may result in an earlier sending time.
(MNS205/G)	Comments	... a comment. Maximum 10 characters are allowed.
(MNS205/G)	Send time – fax	... the time when the selected fax machine should try to send the document.

Program ID/ Panel	Field	The field indicates …
(MNS205/G)	Alternative destination	... the directory in which to store the document if the fax could not be sent. The directory must be entered in the output server's queue alias file. For example: C:\savedfaxes points to a directory in the output server, or to a mapped drive on the AS/400, or any server on the network. \\<server name>\savedfaxes points back to the AS/400, or any server on the network.
(MNS205/H)	Path file	… the system path to the file in which the destination file should be stored by Streamserve. Note that the signs in the path are dependent on the operating system of the Streamserve platform, as well as on the CCSID (the code for the signs) that is used. Example: C:\M3output\
(MNS205/H)	Destination file	... the directory in which to store the document. Also enter the file type for the resulting file. The directory and file type must be known by the output server. For example: C:\MvxFormattedOutput*.pdf points to a directory in the output server, or to a mapped drive on the AS/400, or any server on the network. The resulting file type will be PDF. \\<server name>\MvxFormattedOutput*.pdf points back to the AS/400 or any server on the network.
(MNS205/H)	File suffix	... the file suffix that is added to the destination file name. Example: 'TXT' If nothing is entered, "PDF" is used as the file suffix.

Program ID/ Panel	Field	The field indicates …
(MNS205/H)	Generic name	... how the file name is generated. The valid alternatives are: 0 = Entered file name (without suffix) 1 = Generated file name (file name + date + time + job number) 2 = Entered file name + generated file name Note that if method 0 is selected, there is a risk that the file name will not be unique and therefore a second file may overwrite the first one generated.

See Also

"Enabling Document Output Management" on page 338

"Define Basic Data for Document Output Management" on page 298

"Define Settings for Partner-Controlled Document Output" on page 323

"Define Settings for Object-Controlled Document Output" on page 320

"Document Output Management" on page 336

"Processing Manually or Automatically Initiated Document Output" on page 344

"Monitoring Document Output" on page 341

"Maintaining Document Output" on page 340

Document Output Management

This document explains how you manage document output in M3. The process enables you to send document output via different kinds of media, such as a printer, e-mail, fax or electronic data interchange (EDI).

Outcome

- You have defined all basic settings for document output management.
- You can process, monitor and maintain a document output.

You can control the output from M3 in the form of business documents and its different media.

Before you start

For starting conditions specific to particular processes or activities, refer to each respective document.

Follow These Steps

1 Enabling Document Output

Define the basic data for document output, such as:

- the available media
- the output infrastructure of M3
- which business documents your company will use.

Then you define how the individual business document will be processed when ordered. You can use a number of selection criteria to control the output of documents.

You can override the definitions made above (if any) for certain business documents and control them so they are processed according to the receiver of the document (by partner) or the content in the document (by object). Partner or object settings always override user settings.

2 Processing Document Output

The infrastructure for M3 document output is based on that the output of documents is initiated in the M3 Business Engine, but finalized in an output server via a software service. This service is called output service. M3OUT and IEC are examples of these. Document output can be ordered manually or automatically.

Normal document output is initiated when a user that is logged in in M3 manually orders it.

Automatic document output is ordered by so-called auto jobs. How the output is initiated is determined by the media settings that have been defined by the user. The auto job user is the ordering user. The user and its data function as the key values for the output definition selection search when the auto job initiates output.

Document output can be controlled by users, partners or objects. Partner-controlled output takes place within a user-controlled output job.

A new document file is created when output is controlled by a partner. Sometimes a new file is also created for each document and each media used.

Object-controlled output is managed in the same way as user-controlled since object selection uses the settings for user–controlled output.

3 Monitoring Document Output

You use 'Output. Manage per Job' (MNS206) and 'Output. Manage per Partner' (MNS207) to monitor document output. This means, for example, to search for certain documents and track document output errors.

4 Maintaining Document Output

In order to manage and maintain document output you can resend or delete output files. You can resend files automatically or manually. You can delete obsolete files manually or in batch.

See Also

"Enabling Document Output Management" on page 338

"Processing Manually or Automatically Initiated Document Output" on page 344

"Monitoring Document Output" on page 341

"Maintaining Document Output" on page 340

"Define Basic Data for Document Output Management" on page 298

"Define Settings for User-Controlled Document Output" on page 328

"Define Settings for Partner-Controlled Document Output" on page 323

"Define Settings for Object-Controlled Document Output" on page 320

Enabling Document Output Management

This document explains how you define document output, which controls a company's document output. Media management enables you to send the document output via different kinds of media, such as printer, email, fax or EDI, in order to meet with the needs and wishes of the document receiver.

You perform this process when you set up media management or when you want to change previously defined media management settings.

Outcome

A document output is sent according to the wishes of the user, a customer for example.

Media management is used for different kinds of user-defined business communication via M3 documents.

Before you start

- To produce output for the *STREAM interface, you must have a Streamserve server installed.
- To produce output for the *XMLOUT interface, you must have IEC installed.
- To produce output for the *XMLOUTMVX (FOM) interface, you must have a Streamserve server installed.

Follow These Steps

Activity Description

1 Define Basic Data for Document Output

First, you must define the basic data for document output management. This will enable you to control the processing of the business documents. You must define the following:

- The available media for the installation - fax, print, email, stream file and M3 business messages are examples of different media. The types of media are defined in 'Document Media. Open' (CRS116).
- The output infrastructure of M3 meaning all available output servers (generally speaking addresses via an IP address), as well as the output service types. This is done in a number of programs.
- The business documents to be used by your company and the media in which they are available. This is also done in a number of programs (for example (CRS027) and (CRS929)).

2 Defining Settings for Document Output by User

Once the basic settings mentioned above are made, you define how the individual business documents will be processed when ordered.

You set up rules for media in 'Output Definition. Open' (MNS205) for a certain combination, and then define the output service to be used in 'Output Server Definitions. Open' (MNS204). When output for a business document is ordered, the applicable media rules and output service settings will control the output of the document.

The settings mentioned above can be done in a variety of ways and combinations. When it comes to the media rules, for example, you can specify that for a particular user, the same media rule should apply for all business documents, or that a media rule apply for a specific group of business documents but only when the documents are ordered from a specific location.

The media is selected in 'Output Definition. Open' (MNS205). The media contains settings that control the output. When you define media, you can set a number of parameters. For example, you can specify that the setup will be valid for a whole area of M3 regardless of business document, that the setup will be valid for a certain user regardless of the business document, or that it will be valid only for that individual document.

You can use a number of selection criteria to control the output of documents in (MNS205), (MNS204).

3 Defining Settings for Document Output – Controlled by Partner

Note: If you define partner-controlled settings you will not be able to define object-controlled settings.

You can override user-controlled settings for certain business documents so that they are processed according to the planned receiver of the document (the partner). This normally means that the document is sent to the planned receiver (a customer, supplier or legal unit, for example). A practical example is a customer invoice to be sent to a supplier by email.

Partner-controlled functionality can be used for certain business documents. Note that some business documents, for example those that only use business messages as media, must be defined using partner-controlled settings.

4 Define Settings for Document Output – Controlled by Object

You can override any user and partner-controlled settings made above for certain business document so that they are processed according to the content of the document. You then need to specify

which object (such as item or warehouse) in the document will control how the document is processed. It is actually the values specified for this object that control how the document is processed. A practical example is an item label, which must be printed on different printers because of where the item is stored.

See Also

"Define Settings for User-Controlled Document Output" on page 328

"Define Settings for Partner-Controlled Document Output" on page 323

"Define Settings for Object-Controlled Document Output" on page 320

"Document Output Management" on page 336

Maintaining Document Output

This document explains how you manage and maintain document output. The maintenance process includes resending output files manually and automatically as well as deleting batches of output files and obsolete output files.

Outcome

Obsolete files have been deleted or output files have been resent.

Before you start

You must have registered basic settings for document output management.

Description

Purpose

Administrators often manage incorrect output for multiple users and therefore, central management provided by M3 is beneficial.

Note: If you want to receive alerts when the sending of an output file to an output server failed, you must make some settings in 'Output Service Selection. Open' (MNS204). By specifying a user in the 'Error message receiver' field, a message will be sent to 'Application Message. Open' (CRS420) for each output file whose transfer has failed (first time only). You can then choose to reroute the message, for example, to email or SMS.

How

1 Manual Resending of Output Files

Output files can be resent to the server in 'Manage. Output per Job' (MNS206). By selecting 'Send', the file is resent to the output server. (You can also change the service ID before you resend the file.)

2 Automatic Resending of Output Files

To automatically resend output files (for example, when the output server cannot be reached for some reason), you have to set up the (MNS950) auto job in 'Subsystem Job. Open' (MNS050). The (MNS950) job will, in each run, try to resend each output file having status 'MSG' in (MNS206) for a maximum of three days.

3 Manual Deletion of Output Files

You delete output files manually in (MNS206). By selecting 'Delete', you remove the control record, the output file and the related records and files.

4 Delete Obsolete Files in Batch

You delete obsolete output files in batch via 'Output Data. Delete' (MNS906). You submit the delete job by pressing F10. The delete function can be controlled on a regular basis if the job is controlled in the M3 scheduler.

See Also

"Document Output Management" on page 336

"Processing Manually or Automatically Initiated Document Output" on page 344

"Monitoring Document Output" on page 341

"Define Basic Data for Document Output Management" on page 298

"Define Settings for User-Controlled Document Output" on page 328

"Define Settings for Partner-Controlled Document Output" on page 323

"Define Settings for Object-Controlled Document Output" on page 320

Monitoring Document Output

This document explains how you monitor user-controlled and partner-controlled document output. You track and monitor user-controlled output in 'Output. Manage per Job (MNS206)' and partner-controlled output in 'Output. Manage per Partner' (MNS207). These programs contain the processing status and processing control information.

All output files, which can consist of one or several documents, normally have the same identity as that of the job. This identity is unique for this M3 installation and is used for the physical files when they are distributed to output servers.

Outcome

You can manage document output. If the 'Save output from' control setting in 'Output Server Definition. Open' (MNS204) is activated, then the correctly processed output will save the record, otherwise it will be automatically removed and only faulty records will be stored in (MNS206) or (MNS207).

If the 'Hold output' setting is activated, the output will end up in either (MNS206) or (MNS207) but will not be distributed to the output server until it is manually sent.

You can search for a particular document based on its output status, or the user or time it was ordered. Refer to Maintaining Document Output.

You can also monitor and manage document output errors.

Before you start

You must have registered basic settings for document output management.

Description

Purpose

You can track the output you have ordered within the M3 framework and confirm that it has been delivered to the correct output server.

How

1 User-Controlled Output

'Output. Manage per Job' (MNS206) contains many views for managing user-controlled output. The record in (MNS206) acts as the control record for the output. This record contains the process status, process control and information about technical addresses as well as any messages received from the output server.

You can view the output according to the following:

- 1 = Job number and printer file
- 2 = User, job number and print file
- 3 = User, print file and job number
- 4 = User, user data, job number and print file
- 5 = User, print file, entry date and entry time
- 6 = Status, entry date, entry time, print file and responsible
- 7 = Print file, entry date, entry time and user

2 Partner-Controlled Output

'Output. Manage per Partner' (MNS207) contains views for managing partner-controlled output. Partner-controlled document output always overrides user-controlled output. A new document file is created when partner-controlled output overrides user-controlled output. Sometimes this

results in one file per document and one per media being created. The document data is, in this case, saved in the new partner-controlled file (with its media control settings) rather than in the user-controlled file.

You can view the output according to the following:

- 1 = Partner and job number.
- 2 = Document ID and print file. (If the document has been distributed for output more than once, multiple records will be displayed.)

  You can only search for document identities, such as purchase order number, if the documents are partner-controlled.
- 3 = Print file, media control object 1, media control object 2 and document ID.

  In view 3 you can see the documents that have been distributed to a particular partner.

Since media codes can cause a document to be sent to several output servers, the document may have to be multiplied in order to be distributed to each server. Each document receives a new identity number, which has the same features as the one for user-controlled output. Then, all user-controlled document output ends up in one file and the overriding partner-controlled output ends up in multiple files.

There is a record for each output file in (MNS206), though all partner-controlled files are connected by a single record in (MNS206), namely the one connected to the user-controlled output. The user-controlled records containing output jobs that have partner-related files are marked with an exclamation mark (!). Partner records that are created will also contain '*AUTOCRT' in the 'User data' field. The partner-controlled files can be reached via option 11=Partner.

3 Object-Controlled Output

Object-controlled documents are managed in the same way as user–controlled documents, since the object selection uses the settings for user-controlled documents.

4 Document Output Status

Use view 6 in (MNS206) to monitor document output errors.

The valid document output statuses are:

- OPN = The stream file is not ready and is still open. It cannot be received by a printer yet.
- PND = The stream file has been created and is waiting to be sent to an output service.
- HLD = The stream file is on hold.
- SND = The stream file is being sent to an output service.
- SAV = The stream file has been sent to an output service and has been saved on the hard disk.
- MSG = An error has occurred.

If you position your cursor on the 'MSG' status, all incorrect document outputs will be shown. You can also limit your search for errors by setting the date and time as well as by specifying the printer file and user. Select 'Display' to view the cause of a particular error message.

Example - Partner-Controlled Output

You print a selection of five purchase orders, which you will direct to a printer. Two of these orders have overriding partner-control. The first contains *edi and *fax in its settings and the second contains *mail. The first one will receive the purchase orders as an EDI message with a fax copy, probably for control purposes. The second will receive the order via e-mail.

When the print job is running, three purchase orders will end up in the user-controlled output file to be sent to the printer via the output server. The EDI/ fax document will be multiplied into two files to be distributed via IEC for the EDI version and via FOM for the fax version. The e-mail will remain a single document file that is distributed to the e-mail server via FOM.

This results in one user-controlled output record (with partner-controlled output) marked with an exclamation mark (!) in (MNS206). There will then be three partner-controlled output files connected to the user record in (MNS207), one for EDI, one for fax and one for e-mail.

See Also

"Processing Manually or Automatically Initiated Document Output" on page 344

"Document Output Management" on page 336

"Maintaining Document Output" on page 340

"Define Basic Data for Document Output Management" on page 298

"Define Settings for User-Controlled Document Output" on page 328

"Define Settings for Partner-Controlled Document Output" on page 323

"Define Settings for Object-Controlled Document Output" on page 320

Processing Manually or Automatically Initiated Document Output

This document explains how you initiate document output either manually or automatically.

Outcome

You have initiated a document output. All output files (which can consist of one or more documents) normally have the same identity as the job.

You can track and monitor the output you have initiated throughout the M3 framework and confirm that it has been delivered to the correct output server. Refer to Monitoring Document Output.

Before You Start

You must have registered basic settings for document output management.

Description

Purpose

When

Document output is generally ordered manually by a logged on M3 user. The order can be initiated in several ways, for example, by selecting an option or using a function key for a business transaction or simply invoking a printout program.

You can also initiate document output automatically (by so-called Auto jobs, which automatically initiate the output).

How

Technical View

Depending on the type of output that is created, all document information is sent to the output service from the M3 Business Engine (BE).

You can also send a document creation initiator (BMI) to the output service. The output service retrieves content information from M3 BE using APIs and then creates the document. Content and format are managed according to the rules of the output service.

When output is sent from M3 BE, the document is formatted according to the rules of the output service and then distributed via the appropriate media channel. When sent from a BMI, both content and format are handled according to the rules of the output service.

You may need additional software if the output software cannot handle the required format and/or communication. For instance, fax software and an EDI syntax server is needed in addition to FOM and IEC for fax and EDI formats.

User View

- **Manually Ordered Document Output**

  The manual ordering of output normally starts with a selection screen on which you select the 'from and to' business object values. The transactions that meet the selection criteria will be made into documents. In some cases, you can specify whether only original (first time) outputs or copies (transactions that have already been output) are to be included in the selection.

  All output ordering has a report header panel where you can add information about a particular output. The information specified in this header will be printed on the cover page, if any.

  If the 'Confirm output' field has been selected in 'Output Service Definition. Open (MNS204), the panel for confirming output, 'Output. Select Media' (MNS212), will be displayed when the selected output is complete.

  In (MNS212) you can override the user-controlled settings made in 'Output Definition. Open' (MNS205) to object-controlled settings.

- **Automatically Ordered Document Output**

  Some documents can also be ordered by so-called auto jobs, which automatically initiate output. This is done through the user-controlled media settings where the ordering user is the auto job user. This user and its data are the basis for the output definition search when output is initiated by an auto job.

Logic Read in the Database for Finding Records

When output is ordered manually or automatically, it uses attributes to find the media settings in (MNS205) and the output services to be used in (MNS204). The following attributes are used: company, division, user, printer file and workstation, and location.

To enable flexible setup, the following read logic is applied until a record is found in (MNS205):

Sequence	Division	User	Printer File	Workstation/ Location
1	Filled	Filled	Filled	Filled
2	Filled	Filled	Filled	Blank
3	Filled	Blank	Filled	Blank
4	Filled	Filled	2 first positions of printer file name	Blank
5	Filled	Blank	2 first positions of printer file name	Blank
6	Filled	Filled	Blank	Blank
7	Filled	Blank	Blank	Blank

While the above loop is running, another loop is taking place on the company level, that is, Division is left blank in all instances:

Sequence	Division	User	Printer File	Workstation/ Location
1	Blank	Filled	Filled	Filled
2	Blank	Filled	Filled	Blank
3	Blank	Blank	Filled	Blank
4	Blank	Filled	2 first positions of printer file name	Blank
5	Blank	Blank	2 first positions of printer file name	Blank
6	Blank	Filled	Blank	Blank
7	Blank	Blank	Blank	Blank

When one or several records are found in (MNS205) the process restarts in order to find the output service to use. The media and output selections that have been found are then used in the output process.

If the 'Confirm' setting is selected in (MNS204), you are also allowed to change the media settings for the current output.

You can control whether the output is to be sent to 'Output. Manage per Job' (MNS206) and then held there (distribution is cancelled). This is useful when testing new output services. You can also control whether the output is saved after being sent to the output service (useful for archiving).

See Also

"Document Output Management" on page 336

"Monitoring Document Output" on page 341

"Maintaining Document Output" on page 340

"Define Basic Data for Document Output Management" on page 298

"Define Settings for User-Controlled Document Output" on page 328

"Define Settings for Partner-Controlled Document Output" on page 323

"Define Settings for Object-Controlled Document Output" on page 320

Display Management

6

Create Sorting Orders

This document explains how to create user-defined sorting orders in different programs. The sorting order determines the sorting order of the fields and the search capabilities displayed on the panel.

Outcome

A user-defined sorting order will be created. One or several views will have been connected to the sorting order.

Sorting orders are stored in the CSYVIU table. Sorting orders are connected to sorting options, views and selection tables.

Using sorting orders, you can display only that piece of information that you will need.

Before you start

A view must have been created. See "Create Views" on page 351.

Follow these steps

When creating a sorting order, you can choose whether you want to start it in any program or directly in 'Sorting order. Open' (CRS022).

In some programs, you have the possibility of creating selection tables in 'General Selection Table. Open' (CRS023) and 'Selection Table. Define Fields' (CRS026).

1. To create a sorting order, start 'Sorting order. Open' (CRS022/B).

   Another way of starting (CRS022) is to press F4 twice in the 'Sorting order' field of the program with which you are working, such as 'Delivery. Open Toolbox' (MWS410).
2. If you have started on the (CRS022/B) panel, you fill in the Program field and press Enter.
3. Define a sorting order in the 'Sorting order' field. Press Enter.

4 Fill in the Description and Name fields on the (CRS022/E) panel.

5 In the 'Sorting Option' field on the (CRS022/E) panel, press F4 twice to start 'Sorting Option. Open' (CRS021/B).

In order to create a user-defined sorting order, you need to create (or select) sorting options in 'Sorting Options' (CRS021). In addition, you select the number of filters in (CRS022) and the views in 'View. Open' (CRS020).

To create a sorting option, go to step 9.

6 On the (CRS022/E) panel, fill in the 'Number of filters' field.

This field indicates the number of key fields that will act as filters in the selected sorting option. The fields are selected starting from the first field and then field by field throughout the key definition.

Important: A value must be entered in fields that work as filters if the record should be displayed.

7 In the 'View' field on the E panel, you select the views you want for your sorting order by pressing F4 twice. This starts 'View. Open' (CRS020/B). Make your choice and then press Enter.

8 Pressing Enter opens the (CRS022/E) panel and your chosen view will be displayed. Continue to the next view field if you want to have several views from which to choose. You may choose up to six views for your sorting order.

If you want to create a view of your own, see "Create Views" on page 351.

9 To create a sorting option, click in the 'Sorting Option' field on the (CRS022/E) panel and press F4 twice to start 'Sorting Option. Open' (CRS021/B).

10 On the (CRS021/B) panel, define a sorting option in the 'Sorting option' field and then press Enter.

11 Fill in the Description and Name fields on the (CRS021/E) panel.

12 In the Key field, press F4 twice. In 'Field Group. Display Permitted Fields' (CRS109/B), select the fields you want to be sorting fields.

13 On the E panel, there could also be Descending fields or Aggregation fields, depending on which file you make sorting options for.

The Descending field controls whether or not sorting of the field's values should be descending.

The Aggregation field is displayed for indicates whether to aggregate the records in the list view. The valid alternatives are:

0 = No. Display detailed.

1 = Yes. Aggregate if the information in the selected fields agrees.

Note that times and quantities are totaled during aggregation.

14 In the Field column on the (CRS021/F) panel, define which database fields should be in use. Press F4 twice and choose from between the fields in 'Field Group. Display Permitted Fields' (CRS109/B). In the Value field, you specify the values to test and 'Select/Omit' shows whether these values should be included or omitted.

By limiting the fields and values in this way, the record will be displayed faster than it would have been if no selection had been made.

15 Raise the status of your recently created sorting option by choosing option 20=Activate on the (CRS021/B) panel. Press F5= Refresh to get the new status displayed.

16 On the (CRS021/B) panel, select the sorting option you have created. Press Enter and the (CRS022/E) panel will be redisplayed.

Parameters to set

Program ID/ Panel	Field	The field indicates …
(CRS022/B)	Sorting order	….the current selected sorting order in use. Each sorting order contains a suggested column layout and sorting sequence, plus an optional setup of selections. Press F4=Browse to browse the available sorting orders. User-defined sorting orders can be defined in addition to the standard sorting orders.
(CRS022/B)	Program	…the program in which the sorting order is used. See the field help for valid programs.
(CRS022/E)	Sorting option	….the ID of a unique setup used to sort a file. Sorting options can be used to create user-defined sorting orders. The sorting is controlled by selected sorting fields and by how they are related to each other.
(CRS109/B)	Key field	….the fields that are used to create search paths for user-defined tables. These fields are also used to create the contents of user-defined files.
(CRS021/E)	Descending	….whether sorting of the key field should be descending.
(CRS022/E)	Number of filters	….the number of key fields in the selected sorting option that should act as filters. The fields are selected starting from the first key field and then field by field throughout the key definition. A filter is used to make field selections. If the record should be displayed, a value must be entered in the filter.
(CRS022/F)	View 1-6	…the view that is in use. Views are user defined and determine the sorting order and the column layout.

See also

"Create Views" on page 351

"Create Selection Tables" on page 357

"Create Sorting Order Displayed in Browse Windows" on page 360

Create Views

This document explains how to create user-defined views in different programs. The view controls the information (the fields) displayed on the panel.

Outcome

A user-defined view will be created which helps displaying only that piece of information that the user needs.

The information is stored in the following files:

- View (CSYSTP)
- Key (CSYSTR)

Before you start

You must generate the following:

- A field group in 'Field Group. Open' (CRS108)
- Fields in 'Field Group. Display Permitted Fields' (CRS109)

Follow these steps

1. To create a view, start 'View. Open' (CRS020/B).
2. Fill in the Program field on the (CRS020/B) panel. The field indicates the program in which the view is used.
3. Create a name for 'your' view in the 'View' field.
4. Open the (CRS020/E) panel and fill in the Field column by pressing F4 and then choosing from between the database fields in 'Field Group. Display Permitted Fields' (CRS109/B). The database field selection is dependent upon the given program.
5. Fill in 'Field sequence number' on the (CRS020/E) panel. Here you may change the order in which the database fields should be displayed. To change the order, just switch the numbers.
6. In the 'Field length' column, you may enter a value in order to shorten unnecessarily long fields in M3. If the field is left empty, the field length will follow the M3 standard.
7. Open the F panel and fill in the Description and Name fields. When you press Enter, your new view will be displayed on the (CRS020/B) panel.

Additional Fields on the (CRS020/E) panel

Depending on what program the view is connected to, the fields displayed on the (CRS020/E) panel may vary. In some programs you will find the following fields on the E panel:

- The 'Sorting sequence' field indicates in which order the record should be sorted in a certain view. The sorting order given here will overrule the sorting order defined as the sorting option in use.

- In the 'Maximum value' field, fill in the cumulated maximum value that you want for the record. All values beyond this limit will be highlighted when displayed.
- If you are creating a view for the program 'Delivery. Open Toolbox' (MWS410), the 'Override max value' field will be displayed.

  Here you indicate whether the maximum value entered in the view should be replaced by the corresponding value on the current shipment, when present. Choose from between the following values:

  - 0 = No, do not replace
  - 1 = Yes, replace with the shipment's gross capacity, if present - this alternative is relevant when comparing the maximum capacity of a shipment to the totals of assigned deliveries to it.
  - 2 = Yes, replace with the shipment's remaining capacity, if present - this alternative is relevant when comparing a collection of planned deliveries to what is left of capacity on a shipment.

    Note: This option only applies to columns that contain information relating to the shipment capacity units: weight, volume and the freely defined unit.

Parameters to set

Program ID/ Panel	Field	The field indicates …
(CRS020/B)	Program	…the program in which the view is used. Refer to the field help for valid programs.
(CRS020/B)	View	…the view that is in use. Views are user defined and determine the sorting order and the column layout.
(CRS020/E)	Field	….the information from the file to be displayed. These fields are also used to create the contents of user-defined files.
(CRS020/E)	Field length	…the field length, which also determines the column width. If the field is left empty, the field length will follow the M3 standard.
(CRS020/E)	Field sequence numbers	….the order in which each key field should be displayed.
(CRS020/E)	Sorting sequence	….how the records in the view should be sorted. The information given in this field will overrule the sorting order of the sorting option in use.
(CRS020/E)	Maximum value	….the cumulated maximum value for the records that should be displayed without being highlighted.

Program ID/ Panel	Field	The field indicates …
(CRS020/E)	Override max value	…the value that should be valid instead of the maximum value. This parameter is only relevant when browsing deliveries that are not connected to a shipment.
(CRS020/E)	Number of decimal places	… the number of decimal places displayed in numerical fields containing decimals. You may specify 0 to 6 decimal places. If nothing is entered, the number of decimal places defined in the database is displayed. Note that fields for price, amount, and quantity are often regulated by settings in the system. These settings override the number specified here.
(CRS020/E)	Edit code	… an edit code. You can select a pre-defined edit code to manage how numeric fields should be displayed, for example whether decimal point or comma should be used.

See also

"Create Sorting Orders" on page 348

"Create Selection Tables" on page 357

Sorting Options: Select/Omit

When you create sorting options, you can choose whether a certain field value should be selected or omitted when the sorting order is displayed.

This document describes the rules, valid combinations, and invalid combinations for the ‘Select/Omit’ field on the (CRS021/F) panel.

Outcome

Combinations for the Select/Omit and Operator fields are described.

Sorting options are stored in the CSYSOR table.

Sorting Options: Select/Omit allows you to display records faster when you make selections than when no selections are made. Also, it allows easier search options for relevant information.

Description

- **Valid Alternatives for Select/Omit**

The valid alternatives for the Select/Omit field are:

- O = Omit these fields and their values to display
- S = Select these fields and their values to display
- Blank = This record will have the same value as the record above (O or S)

  Important: It is strongly recommended not to use O = Omit.

- **Valid Alternatives for Operator**

  The alternatives are:

  - EQ = Equal to
  - NE = Not equal to
  - LT = Less than
  - LE = Less than or equal to
  - GT = Greater than
  - GE = Greater than or equal to.

  Important: Avoid using alternative NE.

Rules when S (Select) is used

If you use only Select (S), then selected records and their selected values will be displayed. No other records and values will be displayed.

Note: Only operator EQ is used in these examples.

- **One Select**

S/O	Field		Op	Value
S	OACUNO	Customer no	EQ	1000

Result:

Only records that contain customer 1000 are displayed.

- **Repetitive Select**

S/O	Field		Op	Value
S	OACUNO	Customer no	EQ	1000
S	OACUNO	Customer no	EQ	1001

Result:

Only records that contain customer 1000 and 1001 are displayed

Note: Avoid using different fields when you have repetitive S. Technically it works, but it can be difficult to logically understand the results.

- **Select and Blank**

S/O	Field		Op	Value
S	OACUNO	Customer no	EQ	1000
	OAORTP	CO type	EQ	FFO

Result:

Records that contain customer 1000 with order type FFO are displayed. Blank is the same as ‘and’, referring to the row above.

- **Repetitive Select and Blank**

S/O	Field		Op	Value
S	OACUNO	customer number	EQ	1000
	OAORTP	customer order	EQ	FFO
S	OACUNO	customer number	EQ	1001
	OAORTP	customer order	EQ	FFO

Result:

Records that contain customer 1000 with order type FFO, and customer 1001 with order type FFO, are selected.

Rules when O (Omit) is used

If you use only Omit (O), then omitted records and their omitted values will not be displayed. All other records and values will be displayed.

Important: It is strongly recommended not to use O = Omit.

Note: Only operator EQ is used in these examples.

- **One Omit**

S/O	Field		Op	Value
O	OACUNO	Customer no	EQ	1000

Result:

Records that do not contain customer 1000 are selected.

- **Repetitive Omit**

S/O	Field		Op	Value
O	OACUNO	Customer no	EQ	1000
O	OACUNO	Customer no	EQ	1001

Result:

Records that do not contain customer 1000 and 1001 are selected.

Important: Avoid using different fields when you have repetitive O. Technically it works, but it can be difficult to logically understand the results.

- **Omit and Blank**

  You are not allowed to have blanks after O. M3 will ignore blanks after O.

Rules when Select and Omit are used

Basic Rules

- You cannot have O after S.
- You cannot have O after S.

Note: Only operator EQ is used in these examples.

- **One O, One S**

S/O	Field		Op	Value
O	OACUNO	customer number	EQ	1000
S	OAORTP	customer order	EQ	FFO

Result:

Except for customer 1000, records that contain order type FFO are selected.

- **Repetitive O, One S**

S/O	Field		Op	Value
O	OACUNO	customer number	EQ	1000
O	OACUNO	customer number	EQ	1001
O	OAORTP	customer order	EQ	FFO

Result:

Except for customer 1000 and 1001, records that contain order type FFO are selected.

See also

"Create Sorting Orders" on page 348

Create Selection Tables

This document explains how to create user-defined selection tables in different programs. A selection table makes it possible to select the information displayed on the panel.

Outcome

A user-defined selection table connected to a sorting order will have been created.

With a selection table connected to your sorting order, you will limit the information displayed on the panel even more, and in that way exclude data that is irrelevant for your purposes.

Before you start

A view and a sorting order must have been created. Refer to documents in See Also section.

Follow these steps

You can create sorting order from any program or directly in 'Sorting order. Open' (CRS022).

In order to create a user-defined sorting order, you need to create (or select) sorting options in 'Sorting Options' (CRS021). In addition, you select the number of filters in (CRS022) and the views in 'View. Open' (CRS020).

In some programs, you have the possibility of creating selection tables in 'General Selection Table. Open' (CRS023) and 'Selection Table. Define Fields (CRS026).

Create Selection Tables

In some programs, you may create selection tables from the (CRS022/F) panel. A selection table makes it possible to choose from and to values in different fields and in that way select the information displayed on the panel.

The programs where you can create selection tables are the following:

- 'Item. Open Toolbox' (MMS200)
- 'Delivery. Open Toolbox' (MWS410)
- 'Delivery. Open Line Toolbox' (MWS411)
- 'Delivery. Connect Package' (MWS412)
- 'Goods Receiving DO/RO. Open Toolbox' (MWS442).

1. Start 'Sorting order. Open' (CRS022). The B panel will be displayed.
2. Fill in the Program field and press Enter.
3. Choose option 2=Change in front of your earlier created sorting order and press Enter.

   Note: You cannot open the F panel with option 1=Create/Select.

4. In the Table field on the (CRS022/F) panel, you press F4 twice to start 'General Selection Table. Open' (CRS023).
5. In the Table field on the (CRS023/B) panel, you give the table a name and choose 1=Create. Press Enter.
6. On the E panel, you fill in the Description and Name fields and then press Enter.
7. Pressing Enter opens 'Selection Table. Select Fields' (CRS026/B), which is used to create keys or search paths for user-defined tables. Fill in the Field column by pressing F4 twice to start 'Field Group. Display Permitted Fields' (CRS109/B).
8. Select the key fields you want for your user-defined table. Fill in the 'From Value' and 'To Value' fields.
9. Press F3=End to return to (CRS023/B). Select the table you have created and press Enter. Your selected table will be displayed on the (CRS022/F) panel.
10. There is nothing to enter on the T and E panels. Press Enter.
11. The sorting order you have created will be displayed on the (CRS022/B) panel.

If you have opened (CRS022) from another program, such as (MWS410), you will automatically return to this program where you can select the sorting order you have created. Otherwise, you need to open the program where you want to use the new sorting order.

Note: You can also create selection tables from 'Delivery. Open Toolbox' (MWS410). Use F17= Select to open 'M3 File. Select Fields' (CRS170)

In 'Delivery. Open Toolbox' (MWS410) you may choose whether you want to create a selection table from (CRS170) or from (CRS026). If you have set up a selection table in (CRS026), F17 will work as a quick entry to the selection table.

Parameters to set

Program ID/ Panel	Field	The field indicates …
(CRS022/B)	Sorting order	….the current selected sorting order in use. Each sorting order contains a suggested column layout and sorting sequence, plus an optional setup of selections. Press F4=Browse to browse the present available sorting orders.
(CRS022/E)	View	…the view that is in use. Views are user-defined and determine the sorting order and the column layout.
(CRS022/B)	Program	…the program in which the selection table is used. See the field help for valid programs.
(CRS026/B)	Field	….the fields that are used to create search paths for user-defined tables. These fields are also used to create the contents of user-defined files.
(CRS026/B)	From Value/ To Value	…the from and to values for the specified field.
(CRS022/F)	Table	….the identity of a selection table. Such a table is used to describe which field values in a file should be fulfilled to qualify a record for different purposes.

See also

"Create Views" on page 351

"Create Sorting Orders" on page 348

Create Sorting Order Displayed in Browse Windows

This document explains how to create a user defined sorting order, displayed in browse windows (when you press F4=Prompt for searching).

In some browse windows, you can select sorting order. In 'Sorting Order in Browse Window. Open' (MNS180) you create user defined sorting orders to be displayed in browse windows..

Note: This function requires a good knowledge of M3 tables and logical views.

Outcome

User defined sorting order for browse windows is created.

The user defined sorting orders are stored in the CMNUQL table.

Use this process in browse windows where it is possible to select sorting order.

Before you start

This function requires a good knowledge of M3 tables and logical views.

Follow these steps

1. Start 'Sorting Order in Browse Window. Open' (MNS180).
2. Enter the Object field with MITMAS. Define an ID for the sorting order
3. Open the E panel and fill in name. In the File field you fill in the logical view/file you want to be displayed. This is the master file in this sorting order.
4. If you want more than one logical view to be displayed you can fill a secondary file in the 'Join file' field.
5. Open the F panel. The key fields in the selected master file are displayed here.
6. The Key type fields indicate how the key fields in the file are to be processed when the file is read. EQ = The field should always be read "equal to" depending on where the inquiry is made.
7. Fill in the Join From/To fields.

   Note: Fields that will be joined must contain the same number of positions and be of the same type (for example, numeric).

8. Open the G panel. Here is all fields displayed. Fields with 1/xx is in the master file. Fields with 2/xx is in the secondary file. Select which fields to be displayed and in which sequence by entering 10, 20, 30 in the 'Sequence number' field.
9. Open the H panel, continue to the I panel.
10. The field headings are suggested in the 'Column heading 1 and 2' fields. You can change the content in the field headings in Column 1.

11 The 'Field length' field is used to enter the field length for alphanumeric fields. If left blank, the field length in the database is displayed.

12 Press Next and the sorting order is created.

Parameters to set

Program	Field	This field indicates...
(MNS180/B)	Object	...the table/file for which the browse windows search. Example: the 'Item no' field is browsing for MITMAS records.
(MNS180/B)	Sorting order	...the user defined identity of the sorting order
(MNS180/B)	User	...the user which is allowed to use this sorting order. User 'blank' means all users are allowed.
(MNS180/E)	File	...the logical view (the master view) from where records should be selected
(MNS180/E)	Join to File	...the logical view(the secondary view) from where records should be selected. This is used if you want records to be selected from more than one table
(MNS180/F)	Key field	The key fields included in the view (the master view) that you selected
(MNS180/F)	Key type	...how the key fields in the file are to be processed when the file is read. The valid alternatives are: EQ = The field should always be read "equal to" depending on where the inquiry is made using F4 = Prompt. SE = The field is opened to allow specification of different values in the window where the result of an F4 = Prompt inquiry is displayed. These values are then read "equal to."

Program	Field	This field indicates...
(MNS180/F)	Join type	...how the template retrieves information located in more than one table. These fields are not displayed if you not select 'Join file' on th E panel. The valid alternatives are: 1 = Matching records. Only selects records that are found in all tables. 2 = Records that match the master file. Selects all records in the master table and the matching records from the secondary table. 3 = Records that do not match the master table. Only selects the records in the master table that are unique, that is, the ones that do not have matching records in the secondary table.
(MNS180/F)	Join from/ Join to	...how the different fields are to be combined. The field name should begin with 'x' (where x = 1, 2 or 3) to indicate from which file the field is retrieved. **Note:** Fields that will be joined must contain the same number of positions and be of the same type (for example, numeric).
(MNS180/G)	Sequence number	Where the field should be displayed in the browse window. From left to right.
(MNS180/I)	Field length	This field is used to enter the field length for alphanumeric fields. If left blank, the field length in the database is displayed.
(MNS180/I)	Number of decimal places	...the number of decimal places that the field should contain. The information is only relevant for numerical fields (type S or P).
(MNS180/I)	Column heading 1 and 2	...the contents of the heading line. You can change the default content and fill in a user defined content.

See also

"Create Sorting Orders" on page 348

Connect Information Views from Different Programs

This document explains how you create a connection between information views from different programs. When working in a certain program that starts another program, you will be able to go directly to a specific information view in the started program.

Outcome

A connection between information views in different programs are created.

Sorting orders are stored in the (CSYSVIU) table and views in (CSYSPV). The connections created in (CRS014) are stored in the (CRINPA) table.

You choose the information views that will be displayed when you start a specified program from another (also specified) program. In this way you will get exactly the information you need.

Before you start

Make sure that it is possible to connect information views between the programs. This information will be displayed if you press F4 =Prompt, on the (CRS014/B) panel, in the field 'To Program'.

Follow these steps

Connect Information Views from Different Programs

1. Start 'Information View Program Connection. Open' (CRS014). The B panel is the opening panel.

   Depending on what sorting order you choose on the B panel, the order of the fields displayed will vary. The valid alternatives for the sorting order are:

   1=To program, From program, Responsible

   2= From program, To program, Responsible

   3= Responsible, To program, From program.
2. Choose option 1=Create/Select.
3. On the (CRS014/B) panel in the 'To program' field, you fill in the program that you will reach via the created connection.
4. In the 'From program' field, you fill in the program where you start.
5. Enter your user name in the Responsible field. Press Enter:
6. The E panel is displayed. In the 'Sorting order' field, you choose an sorting order for the started program. Press F4 once to choose an already existing sorting order.

   If you want to create a new sorting order, press F4 once more and you will get to 'Sorting order. Open' (CRS022). See "Create Sorting Orders" on page 348.

   If you do not set a value, M3 will retrieve the same sorting order that was used the last time the To program was started.

7 On the (CRS014/E) panel, fill in the 'View' field for the started program. Press F4 once if you want to select an already existing view.

If you press F4 once more, you will get to 'View. Open' (CRS020) where you can create a new view. See "Create Views" on page 351.

For programs with user-defined sorting orders, the view used in the started program will be the one connected to the sorting order.

8 In the 'Panel sequence' field on the E panel, you specify which panels you want to be displayed, as well as the sequence in which they should appear.

For programs with user-defined sorting orders, the panel sequence used in the started program will be the one connected to the sorting order specified in (CRS014).

9 In the 'Opening panel' field, specify the first panel to be displayed. This panel is valid until changed by the user.

Note that the valid opening panels can differ between programs.

10 The 'List records' field is very important when you have the To program set as (MMS200), (MWS410), etc. Select *NODSP to gain performance.

11 Press Next to display the B panel. Press F14 to activate the connection.

Parameters to set

Program ID/ Panel	Field	The field indicates …
(CRS014/B)	To program	… for which started program the setup is valid.
(CRS014/B)	From program	… for which starting program the setup is valid. If this information is blank, the setup is valid when the To program is started from the menu.
(CRS014/B)	Responsible	… the user for whom the setup is valid. If this information is left blank, the setup will be valid for all users. **Note:** If 'User defined field' is set to *NODSP=Not list initial records, then Responsible should be left blank=valid for all users.
(CRS014/E)	Sorting order	… which sorting order should be used for the started program. If this value is zero, M3 will retrieve the same sorting order that was used the last time the To program was started.
(CRS014/E)	View	… the view in use. Views are user defined and determine what fields are to be displayed, as well as how the data is to be calculated.

Program ID/ Panel	Field	The field indicates …
(CRS014/E)	Panel sequence	…which panels should be displayed, as well as the sequence in which they appear.
(CRS014/E)	Opening panel	… the panel in the started program that will be the opening panel.
(CRS014/E)	List records	… whether the displayed program should prevent an automatic listing of qualified records on the B panel when called from another program, from the menu, or when changing the sorting order. The valid alternatives are: blank = All records listed (standard) *NODSP = Records not listed initially (to gain performance). When *NODSP is activated, the user must refresh the B panel before any records are displayed. The purpose of this is to enable the user to fill in the actual filter values before reading the database, and thereby avoid unnecessary reads in order to gain performance.

See also

"Create Sorting Orders" on page 348

"Create Views" on page 351

Enabling Application Messages

7

Application Messages and Detailed Messages

This document explains what application messages are and how they are used to facilitate and automate your daily work in M3 Business Engine (BE).

It also describes how detailed messages that are connected to an application message can be used to gain in-depth knowledge about the errors that triggered the application message. Note that though application messages are used in all parts of M3 BE, detailed messages are only used in some M3 BE applications.

Before You Start

For information about how the application message functionality is set up, refer to the following document:

Note: The detailed messages are predefined in M3 BE.

Description

Purpose

Application Messages

Application messages are used to notify a responsible person that an incident has occurred that requires attention. The application message can be informational or it can indicate an error or a disruption from the normal work flow. Whatever the nature of the application message, the responsible person must often perform a task in response to the message.

An application message can be used as in the following examples:

- An authorizer is notified that an automatic matching of invoices was not approved, since the price variances between the invoices were outside the tolerance range.
- A person responsible for a work order is notified that work on the order has started.
- A person responsible for a work order is notified that work on the order has started.

- A person responsible for a purchase order is notified that the delivery of goods is delayed.

Application messages are used throughout M3 BE.

Detailed Messages

The incidents that create application messages often result in errors or information that requires action. For example, when a planned manufacturing order will be released, errors can prevent the order from being released.

In such cases the application message can be vague, for example "planned order not released". However, detailed messages can explain in detail each error or incident that occurred when the release of the order failed. These detailed messages are easy to overview, since they are grouped together and are connected to the application message.

When and How

Application Messages

The application message is generated automatically and is displayed for the responsible person in 'Application Message. Open' (CRS420) every time the incident occurs.

The person who is responsible for taking action depends on the type of message. Usually it is the person set as the responsible person, the planner, the approver, or the authorizer for the record that the message refers to, the activity or the workflow in M3 BE.

The application message can also be sent as an e-mail. The responsible person is then notified automatically when the incident occurs and does not have to open (CRS420) to check if any new messages were generated. The message is sent by e-mail if the person's e-mail address is entered in 'e-Mail Address. Open' (CRS111), and the e-mail functionality is activated for the message type in 'Settings – Application Messages' (CRS424).

Detailed Messages

In some cases the detailed messages are generated together with the application message. The detailed messages are displayed in 'Detailed Mail Message. Open' (CMS421). This program can be accessed in the following ways:

- From the menu.
- From the application message by selecting an option in (CRS420).
- From different programs related to the creation of the detailed messages. For example, detailed messages can be generated when you work with the implementation of action logs in M3 Manufacturing if the implementation fails. The detailed messages can then be accessed from the action log in 'Action Log. Open' (CMS050) and from a single action in 'Actions. Open' (CMS051).

When (CMS421) is opened, the detailed message displayed at the top of the list is the first one connected to the application message (except when the program is accessed from the menu). The reference to the application message is the field 'Data ID'. All detailed messages connected to the same application message have the same data ID. Note that while an application message is only displayed for the person who is responsible for it, all detailed messages are displayed for all users.

To avoid spam, the detailed messages are not sent as e-mails.

Also note that when a job is rerun, all detailed messages that were generated when the job was performed the first time are automatically deleted. A practical example of this is when the

implementation of an action log in M3 Manufacturing failed. When the action log is implemented again, all detailed messages that were generated earlier are deleted regardless of whether they are set as corrected.

Temporary Authorization

Application Messages

If the responsible person is away from work, for example due to sickness or vacation, another person can obtain access to process or view the application messages that are generated. This is useful since many application messages demand immediate attention.

When you grant another person authorization, you set up a valid date range and a level of authorization. The available levels are as follows:

- Process the responsible person's application messages. For this level you specify what the person can and cannot do, for example change the status of the application message or grant yet another user temporary authorization.
- Receive and review the responsible person's application messages.
- Receive and review a copy of the responsible person's application message.

You can limit these levels for the user to apply only for a specific application message type.

You set up the temporary authorization in 'Application Message. Connect Authority' (CRS422). This program is accessed by selecting a function key in (CRS420).

Detailed Messages

It is not possible to grant temporary authorization to detailed messages, since these messages are not connected to a specific person.

How to Process the Messages

The messages usually indicate an error that must be corrected or a task that should be performed. You can often access the program where you take action by selecting the option Open (11) for the message in (CRS420) or (CMS421).

By directly accessing the program, the work flow is considerably automated; you do not have to spend time finding out which program to start.

Application Messages

After you have read an application message you can, for example, do the following:

- Plan when to perform the task. If you do not want to take any action immediately, you can set an end date when the message should be dealt with in the 'Action date' field in (CRS420/E). This is used to keep track of the application message. Later during searching, you can sort application messages by action date.
- Perform the task. If there is no detailed message functionality connected to the application message, you can often access the program where you perform the task by selecting the option Open (11) for the message in (CRS420). After the task is performed, you can set the application message as completed by entering a date in 'Completed date' in (CRS420/E).
- If there are detailed messages connected to the application message, you can open these to further investigate what triggered the application message and then correct the detailed

messages one by one. When all of them are corrected, you set the application message as completed as described above. The section Detailed Messages describes how to process detailed messages.

- File the application message if no further action needs to be taken. This can be the case when the application message has status 50=Completed, or if it is only a copy and therefore has status 80=Copy. You file a message by selecting the option File (24) in (CRS420).

Status for Application Messages

You can use status codes to manage application messages. You can also search for and display only the application messages that you are interested in.

The following status codes are available:

- 10=New. The applications message is generated but not opened.
- 20=Opened. The application message is opened in (CRS420).
- 30=Forwarded. The application message is forwarded to the person who has temporary authorization.
- 40=Replied.
- 50=Completed action. The application message has a completed action. A task is completed and a completion date is entered.
- 80=Saved copy of message is sent. The application message has been sent to a person who has temporary authorization. The message that has status 80 is the original message.
- 90=Filed. The application message is filed.

Detailed Messages

After you have read a detailed message you can perform the task needed to correct the message. You access the program where you perform the task by selecting option (11) for the message in (CMS421).

After you are finished, you set the status of the detailed message to 90 (Blocked/expired) to indicate that it is completed. If all detailed messages are corrected, you can set the application message to completed, as described above.

Status for Detailed Message

You can use status codes to manage detailed messages.

- 20=Definite. The detailed message is not corrected.
- 90=Blocked/Expired. The detailed message is corrected and completed.

See Also

Set Up the M3 Application Message System

This document explains how you set up the internal M3 Business Engine (BE) application message functionality.

Application messages are used to automatically notify a responsible person that an incident has occurred in M3 BE that requires attention.

For a detailed description of the concept of application messages, see "Application Messages and Detailed Messages" on page 366.

Outcome

The application messages are generated according to your needs.

- Application messages are stored in the CMAILB table.
- Temporary authorizations are stored in the CMAILA table.

Before you start

The users must be defined in 'User. Open' (MNS150).

Follow these steps

1 Select one of the following alternatives:
   - Generate all available application message types and activate them
   - Set up the display of application messages in 'Application Message. Open' (CRS420)
   - Activate the e-mail functionality for a user
   - Give another user temporary authorization

Generate and Activate Application Message Types

1 Start 'Settings – Application Messages' (CRS424).
2 On the B panel, select the option 'Create Message types' (F14) to generate all available application message types.
3 To activate an application message type, select Change for the type.
4 On the E panel, select the 'Activity code' check box. Press Enter.
5 Repeat the steps above to activate more application message types. Press Enter.

Set Up the Display of Application Messages in (CRS420)

1. Start 'Application Message. Open' (CRS420).
2. On the B panel, select action Settings (F13).
3. On the P panel, select B as the opening panel.
4. Select the date format to use for the application message dates.
5. Enter the number of days that each application message will remain in the system before it is automatically deleted.

   The deletion date is calculated automatically for each application message as the number of days in this field plus the date when the message is created. The message is deleted when (CRS420) is started and the deletion date is equal to or earlier than the current date.

   Note that only application messages that have a status lower than 80 are deleted.
6. Enter a maximum number of application messages that should be displayed on the B panel. Press Next.

   This field is used to maintain high system performance. If the maximum number of application messages is exceeded, a warning is displayed on the B panel. Normally, the value entered here is greater than 1,000 and less than 10,000. If no value is entered in this field and a large number of application messages are managed, the response time might be unacceptable long.

Activate E-Mail

1. Start 'e-mail Address. Open' (CRS111).
2. On the B panel, enter e-mail type Users (4) to indicate that the e-mail refers to a user.
3. On the B panel, enter e-mail type Users (4) to indicate that the e-mail refers to a user.
4. On the E panel, enter the e-mail address. Press Enter.
5. Repeat the steps above to activate e-mails for other users. Press Enter.

See also

"Application Messages and Detailed Messages" on page 366