Infor CloudSuite Business APS Database Reference Guide

11/23/16

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About This Guide

APS uses two database structures: a Microsoft Structured Query Language (SQL) Server database and one or more planner . The SQL Server database is the main repository of APS data and provides the main interface between APS and Infor CloudSuite. In addition, the SQL Server database supports the Scheduler feature. The planner database(s) support the Planner synchronization and order promise features.

This document provides detailed SQL Server and planner database schema information, which you need for integrating the APS system with any MRP, order entry, or tracking system you already have in place.

Note: Use the *APS Getting Started* manual for instructions on installing the system, creating and sizing databases, and setting up the APS Analyzer application.

Note: See the *APS Integration Guide* for detailed descriptions of APS architecture, syntax of functional API calls, and customization capabilities.

System Requirements and Prerequisite Knowledge

For the most up-to-date list of software and hardware requirements for Infor products, see the *Guide to Technology*. This document also lists typical system administration tasks you should be familiar with before attempting to install and administer Infor products.

Contacting Infor

If you have questions about Infor products, go to the Infor Xtreme Support portal at http://www.infor.com/inforxtreme.

If we update this document after the product release, we will post the new version on this Web site. We recommend that you check this Web site periodically for updated documentation.

If you have comments about Infor documentation, contact documentation@infor.com.

Chapter 3: SQL Server Database Schema

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The APS database system consists of two database structures: a SQL Server database and one or more planner databases (see Chapter 1, "APS Architecture," in the *APS Integration Guide*, for a discussion of how these databases interact). This chapter describes information about the SQL schema:

- general system tables
- input tables relevant to the APS system
- tables populated by Planner output
- tables populated by Scheduler output

Note: APS does not use all tables in the SQL schema, and it does not use all fields within tables that are used. This document does not list tables or fields that are not used.

Database Overview

Datasets and Member Tables

The tables in the APS SQL Server database are organized into datasets (see Chapter 1, "APS Architecture," in the *APS Integration Guide*, for a discussion of datasets). A dataset is a set of similar data items (for example, shifts, orders, and so on). This section lists the APS datasets and their member tables. This relationship is defined through the RELRECS table.

Note: APS does not use all tables listed here. The tables detailed in this chapter are the only tables used by APS.

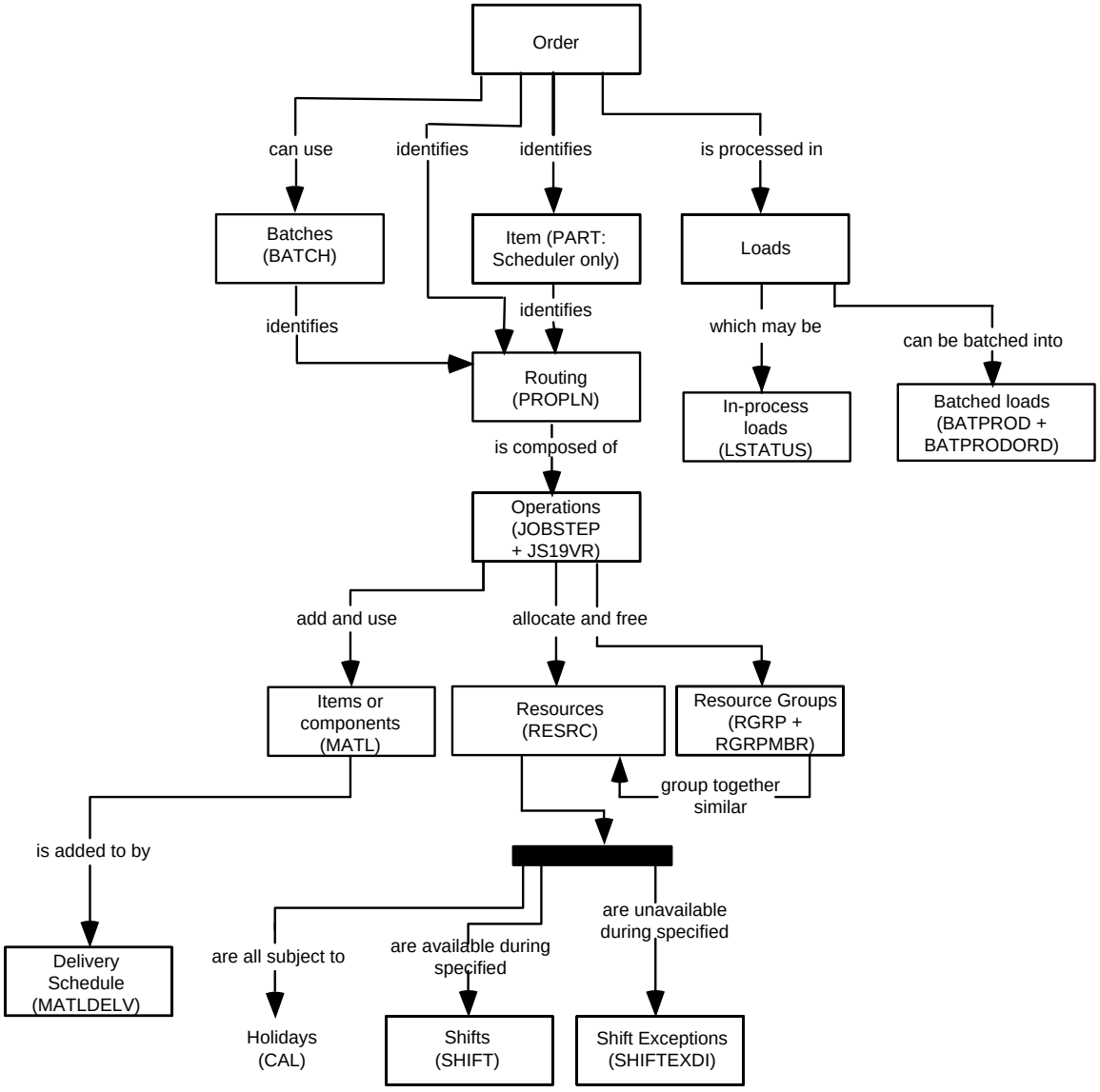
Dataset Name	Description	Member Tables
AGVFLEET	AGV fleet information. (Not Used)	AGVFLEET, ASTATUS, OPCOSTAGV, OVCOSTAGV
AGVSYS	AGV system information. (Not Used)	AGVBEND, AGVCP, AGVROUT, AGVSEG, AGVSYS

Dataset Name	Description	Member Tables
ALTNO	Alternative based information.	ABOPTS, ALTERN, ALTPLAN, ALTSCHED, APSSITE, ERDB
ATTRIB	User-defined load attribute information.	ATTRIB
BATCH	Batch information.	BATCH, BATPROD, BATPRODORD
CAL	Work schedule information.	CAL
CONTROL	Planning interval and multi-site information.	PLANINT
CONVSYS	Conveyor system information. (Not Used)	CONBEND, CONCP, CONROUT, CONSEG, CONSYS, OPCOSTCON, OVCOSTCON
DEFINITION	Database definition.	FDBVER, FIELDS, RELRECS
DEMAND	Demand information. (Not Used)	DEMAND, LATECOSTDE
LOCAL	Non-alternative based information.	ALTCHG, ALTCHGDTL, ALTSUM, APPCFG, GNTHLCAT, GNTHLCRIT, GNTSELCAT, GNTSELMBR, ERDBGW, ERRORLOG, PROBDEF, REPPAR
LOOKUP	Lookup table information.	LOOKUP
MATL	Material and delivery schedule information.	LATECOSTMA, MATL, MATLALT, MATLATTR, MATLDELV, MATLSHIP, MATLGRP, MATLPBOMS, MATLPPS, MATLRULE, OPCOSTMATL, OVCOSTMATL, PBOM, PBOMMATLS
OBSSTAT	User-defined observed statistics information. (Not Used)	OBSSTAT
ORDER	Order information.	EFFECT, LATECOSTOR, OPRULE, ORDATTR, ORDER, OSMATL, ORDGRP, SCHEDOP, TODEMAND, TOODP, TOSUPPLY
OUTPUT	Alternative output.	All output tables except ALTSUM
PART	Item information (used only by the Scheduler).	LATECOSTPA, PART
PLAN	Planner output tables.	DOWNPLAN, INVPLAN, JOBPLAN, MATLPLAN, ORDPLAN, RESPLAN, WAIT
POOL	Pool information. (Not Used)	POOL, OPCOSTPOOL, OVCOSTPOOL, WIPBEND
PROCPLN	Routing (all operations) information.	BOM, JOBSTEP, JSxxVR, PROCPLN
PULL	Pull information. (Not Used)	LATECOSTPU, PULL

Dataset Name	Description	Member Tables
RESBRK	Breakdown information. (Not Used)	RESBRK
RESGRP	Resource group information.	CNPGRP, OPCOSTRGR, OVCOSTRGR, RGRP, RGRPMBR, RGATTR
RESMNT	Maintenance information. (Not Used)	RESMNT
RESRC	Single and Multi-Capacity resource information. (MCR-related tables not used)	MCR, MCRSTATUS, OPCOSTRES, OPCOSTMCR, OVCOSTMCR, OVCOSTRES, RESATTR, RESRC, RESPAIR, RESSEND
SHIFT	Shift information.	SHIFT, SHIFTEXDI
STATUS	In-process load status information.	LSTATUS
TPSTAT	User-defined time-persistent value information. (Not Used)	TPSTAT
TRNFLEET	Transporter fleet information. (Not Used)	OPCOSTTRAN, OVCOSTTRAN, TRNFLEET, TSTATUS,
TRNSYS	Transporter system information. (Not Used)	TRNBEND, TRNCP, TRNROUT, TRNSEG, TRNSYS
USERINS	User insert information. (Not Used)	USERINS
USERSYM	User-defined symbols information. (Not Used)	USERSYM
VARIABLE	User-defined global variable information. (Not Used)	VARIABLE

Table Relationship Diagram

The diagram below illustrates the relationships between the major SQL tables in the APS system.



The set of particular activities to produce the item is the *routing*, which is identified by either the order or the item (for the Planner, the MATLPPS table defines the routing used by the item).

The routing is composed of individual *operations* (or operations). Each routing allocates and/or frees *resources (machines, crew, fixtures, etc)*.

Resources can be logically grouped in *resource groups*.

An operation may also add to or delete from the number of units in a consumable *material* inventory. You can place resources on a *shift* to limit their availability to particular periods of time. The *holiday* and *maintenance* components can also limit resource availability. The *delivery schedule* component adds to material levels on specific dates and times.

Planner/Scheduler Table Usage

Some tables are used by the Scheduler, some are extracted to the planner database for the Planner, and some are used by both the Scheduler and the Planner.

Table Name	Extracted to Planner	Used by Scheduler
ALTPLAN	Y	
APPCFG	Y	Y
APSSITE	Y	Y
ATTRIB		Y
BATCH		Y
BATPROD		Y
BATPRODORD		Y
BOM		Y
CAL	Y	Y
EFFECT	Y	
JOBSTEP	Y	Y
JSATTR	Y	Y
JS19VR	Y	Y
LOOKUP		Y
LSTATUS		Y
MATL	Y	Y
MATLALT	Y	
MATLATTR	Y	
MATLDELV	Y	Y
MATLGRP	Y	
MATLRULE	Y	
MATLPBOMS	Y	
MATLPPS	Y	
OPRULE	Y	
ORDATTR	Y	
ORDER	Y	Y
ORDGRP	Y	
OSMATL	Y	
PART		Y

Table Name	Extracted to Planner	Used by Scheduler
PBOM	Y	
PBOMMATLS	Y	
PLANINT	N	Y
PROBDEF		Y
PROCPLN		Y
RESATTR	Y	
RGRP	Y	Y
RGRPMBR	Y	Y
RESRC	Y	Y
RESPAIR	Y	
RESSEND	Y	
RGATTR	Y	
SCHEDOP	Y	
SHIFT	Y	Y
SHIFTEXDI	Y	Y

Data Types

The table below describes the data types used in schema descriptions in this chapter.

Data Types	Codes	Definitions
CHARACTER n	C	A character string of length n. APS uses CHAR(1) (that is, n=1) for one-character codes and flags.
DATETIME	D	mm dd yy, indicating the month, day, and year for a particular date, and hh mm, indicating the hour and minute (in military time) for a particular time.
FLOAT	F	A real number with a decimal point.
INTEGER	I	An integer ranging in value from -2,147,483,648 to 2,147,483,647
SMALLINT	S	A small integer ranging in value from -32,768 to 32,767
VARCHAR user-defined types	V	A character string in a user-defined data type. The length of the string class is defined as part of the user-defined type

Global Database Columns

Each table in the APS SQL Server database contains six fields that are populated automatically as you add records:

- NoteExistsFlag
- CreatedBy
- UpdatedBy
- CreateDate
- RecordDate
- RowPointer

Planner Database Notes

The Planner runs against the planner database, which is populated automatically via equivalent, mapped fields in the SQL Server database.

Dependencies

Some planning constructs are distributed throughout several tables in the SQL database. Because of this, when you enter data for the Planner in the SQL database, you must make sure all data associated with a particular construct is present in all appropriate SQL tables.

The table below lists each SQL database table that contains Planner data and the prerequisite SQL tables you must first populate.

SQL Table	Prerequisites	Notes
APPCFG	None	
APSSITE	None	
ALTPLAN	None	
BATCH	None	
BATPROD	None	
BATPRODORD	None	
CAL	None	The CAL.CALID field, the SHIFT.SHIFTID field and the SHIFTEXDI.SHIFTEXID field must be unique across all three of these tables.
EFFECT	None	

SQL Table	Prerequisites	Notes
JOBSTEP	RGRP, RGRPMBR, JS19VR	The resource groups specified must already exist. The corresponding record in the JS19VR table should be added before the JOBSTEP record.
JSATTR	JOBSTEP	The operation for the attribute must already exist.
JS19VR	RGRP, RGRPMBR	The resource group specified must already exist.
MATL	None	
MATLALT	MATL	The material and the alternate material must already exist.
MATLATTR	MATL	The material for the attribute must already exist.
MATLDELV	MATL	The material must already exist. The MATLDELV.ORDERID field and the ORDER.ORDERID field must be unique across these two tables.
MATLGRP	MATL	The material must already exist.
MATLRULE	MATL, SITE, EFFECT	The material and site must already exist. The effectivity must already exist if specified.
MATLPBOMS	MATL, PBOM	The material and the planner BOM must already exist.
MATLPPS	MATL, PROCPLN	The material and the routing must already exist.
OPRULE	None	
ORDATTR	ORDER	The order for the attribute must already exist.
ORDER	MATL	The material must already exist. The MATLDELV.ORDERID field and the ORDER.ORDERID field must be unique across these two tables.
ORDGRP	ORDER	The order must already exist.
OSMATL	ORDER, MATL	The order and the material must already exist.
PROCPLN	JOBSTEP, EFFECT	The first operation for the routing must already exist. The effectivity must already exist if specified. All of the operations for the routing should be added before the routing.
PBOM	EFFECT	The effectivity must already exist if specified.
PBOMMATLS	PBOM, MATL	The planner BOM and the material must already exist.
RESATTR	RESRC	The resource for the attribute must already exist.
RGRP, RGRPMBR	RESRC	The resources in the resource group must already exist.
RESRC	SHIFT	The shifts for the resource must already exist.
RGATTR	RGRP, RGRPMBR	The resource group for the attribute must already exist.
RESPAIR	RESRC	The resources referenced must already exist.
RESSEND	RESRC	The resources referenced must already exist.

SQL Table	Prerequisites	Notes
SCHEDOP	ORDER, PROCPLN, JOBSTEP, RESRC	The order, operation, and resource must already exist. The order referenced must specify a routing in the PROCPLANID field and that routing must already exist.
SHIFT	None	The CAL.CALID field, the SHIFT.SHIFTID field and the SHIFTEXDI.SHIFTEXID field must be unique across all three of these tables.
SHIFTEXDI	RESRC, SHIFT	The resource must already exist. The shift must already exist if specified. The CAL.CALID field, the SHIFT.SHIFTID field and the SHIFTEXDI.SHIFTEXID field must be unique across all three of these tables.

Planner Data Population Sequence

If you are using the transaction-based data transfer paradigm (discussed in in the *APS Getting Started Guide*), you must enter this data into the SQL database in the following sequence (tables listed at the same number are interchangeable within that step):

Seq	Tables
1	APPCFG, ALTPLAN, OPRULE, APSSITE, CAL, SHIFT, EFFECT
2	RESRC
3	RESATTR, RESPAIR, RESSEND, SHIFTEXDI
4	RGRP
5	RGRPMBR, RGATTR
6	JS19VR
7	JOBSTEP
8	PROCPLN
9	MATL
10	MATLATTR, MATLGRP, MATLPPS, MATLALT, MATLRULE
11	PBOM
12	PBOMMATLS, MATLPBOMS
13	MATLDELV, ORDER
14	ORDATTR, ORDGRP, OSMATL, SCHEDOP

Table Types

General System Tables

These tables contain information identifying datasets within alternatives, data flow between the SQL and planner databases, and parameters for the Scheduler and Planner.

ABOPTS
ALTCHG
ALTCHGDTL
ALTERN
ALTPLAN
ALTSCHED
APPCFG
APSSITE
ERDB
ERDBGW
FIELDS
PLANINT
PROBDEF
RELRECS

Input Tables

The input database tables are related to datasets and alternatives as indicated by a three-digit dataset number, which is appended to the table name. However, tables that were created specifically for an alternative generally have the same number as the alternative (for example, the BOM table for alternative 002 will have the name BOM002).

Note: Two of these tables, ORDER and MATLDELV, also function as output tables.

ATTRIB
BATCH
BATPROD
BATPRODORD
BOM
CAL
EFFECT
JOBSTEP
JS19VR
JSATTR
LOOKUP
LSTATUS
MATL
MATLALT

MATLATTR
MATLDELV
MATLGRP
MATLPBOMS
MATLPPS

MATLRULE
OPRULE
ORDATTR
ORDER
ORDGRP
OSMATL
PART
PBOM

PBOMMATLS
PROCPLN
RESATTR
RESPAIR
RESRC
RESSEND
RGATTR
RGRP
RGRPMBR
SCHEDOP
SHIFT
SHIFTEXDI

Planner Output Tables

These tables are populated after the Planner runs and the APS Gateway Processor pulls the planner output data back into the SQL Server database. The output database tables are associated with datasets and alternatives as indicated by a three-digit dataset number, which is appended to the table name.

ALTPLAN
DOWNPLAN
ERRORLOG
INVPLAN
JOBPLAN
MATLPLAN
MSLPLAN
ORDPLAN
POEXCEPT
RESPLAN
TODEMAND
TOODP

TOSUPPLY
WAIT

Scheduler Output Tables

These tables are populated after the Scheduler runs. The output database tables are associated with datasets and alternatives as indicated by a three-digit dataset number, which is appended to the table name.

ALTSCHED
ALTSUM
BATTIME
BATWAIT
DOWN
JOB
JOBLNKS
LOADPERF
LOADSUM
MATDELOUT
MATSCHD
MATSUM
ORDIND
ORDPERF
ORDSUM
PARTSUM
RESLOAD
RESSCHD
RESSUM
RGLOAD
RGRPSUM
TRACELOG

Internal Tables

These tables are used internally by APS.

SessionContextNames
TrackRows

Table Descriptions

This section lists the database tables in the SQL Server database that APS uses. This is not a complete list of all tables in the APS database. The tables are listed in alphabetical order by table name.

ABOPTS

List of alternatives.

Column Name	Description	Type	Default Value	Constraint or Range
ALTNO	Alternative number.	SMALLINT (key)	0	0 to 999

ALTCHG

Alternative changes to implement in Infor CloudSuite. The APS Analyzer Alternative Change Manager screen populates this table.

Column Name	Description	Type	Default Value	Constraint or Range
ACCEPTFG	Change sent to Infor CloudSuite.	CHAR(1) (ApsFlagType)	N	Y/N
ALTCHGID	Internal identifier for the change. Joins to the ALTCHGDTL table.	INTEGER	None	
CHGTYPE	Type of change.	INTEGER	None	0-999
DSNUM	Dataset number.	INTEGER (key)	None	0-999
PARAM1-PARAM10	Variable parameters.	VARCHAR (ApsMaxIDType)	None	
STATUS	Status field, for use by Infor CloudSuite to keep track of the changes that have been processed in the production database. The system writes to this field (APS does not). 0=Change has not yet been processed. 1=Change has been processed and accepted. 3=Change has been processed and rejected.	SMALLINT	0	0-3

ALTCHGDTL

List of fields that were changed in the APS Analyzer session. The APS Analyzer Alternative Change Manager screen populates this table.

Column Name	Description	Type	Default Value	Constraint or Range
ALTCHGID	Internal identifier for the change.	INTEGER (key)	None	
FIELDNAME	The name of the field that was changed.	VARCHAR (ApsFieldType)	None	
NEWVALUE	The new value of the field after the change.	VARCHAR (ApsMaxIDType)	None	
OLDVALUE	The original value of the field before the change.	VARCHAR (ApsMaxIDType)	None	

ALTERN

This table associates alternatives with datasets. Each xxxNUM column defines the dataset number used with the alternative specified in ALTNO. See Chapter 1, "APS Architecture," in the *APS Integration Guide*, for a discussion of alternatives and datasets.

Column Name	Description	Type	Default Value	Constraint or Range
ALTNO	Alternative number.	SMALLINT (key)	next num	0-999
ATRIBNUM	Attribute dataset.	SMALLINT	0	0-999
AUXNUM	Auxiliary dataset.	SMALLINT	0	0-999
BATNUM	Batch dataset.	SMALLINT	0	0-999
BREAKNUM	Breakdown dataset.	SMALLINT	0	0-999
CALNUM	Work schedule (calendar) dataset.	SMALLINT	0	0-999
CONNUM	Control dataset.	SMALLINT	0	0-999
CONVNUM	Conveyor dataset.	SMALLINT	0	0-999
DEMNUM	Demand dataset.	SMALLINT	0	0-999
DESCR	Alternative description.	VARCHAR (ApsDescriptType)	None	None
LOOKTABNUM	Lookup table dataset.	SMALLINT	0	0-999

Column Name	Description	Type	Default Value	Constraint or Range
MATLNUM	Material dataset.	SMALLINT	0	0-999
OBSNUM	Observed statistic dataset.	SMALLINT	0	0-999
ORDNUM	Order dataset.	SMALLINT	0	0-999
PARTNUM	Part dataset.	SMALLINT	0	0-999
POOLNUM	Pool dataset.	SMALLINT	0	0-999
PROCNUM	Routing dataset.	SMALLINT	0	0-999
PULLNUM	Pull order dataset.	SMALLINT	0	0-999
RESERVD	Alternative in use by.	VARCHAR (ApsDescriptType)	None	None
RESNUM	Resource dataset.	SMALLINT	0	0-999
RGRPNUM	Resource group dataset.	SMALLINT	0	0-999
RMNTNUM	Maintenance dataset.	SMALLINT	0	0-999
SHIFTNUM	Shift dataset.	SMALLINT	0	0-999
STATUSNUM	Status dataset.	SMALLINT	0	0-999
TPSNUM	Time persistent dataset.	SMALLINT	0	0-999
TRNCNUM	Transporter system dataset.	SMALLINT	0	0-999
TRNFNUM	Transporter fleet dataset.	SMALLINT	0	0-999
UINSNUM	User insert dataset.	SMALLINT	0	0-999
USYMNUM	User symbol dataset.	SMALLINT	0	0-999
VARNUM	Variable dataset.	SMALLINT	0	0-999

ALTPLAN

Alternative-level data used only by the Planner. The LASTSYNCH and NEXTOODP fields are populated after the Planner runs.

Column Name	Description	Type	Default Value	Constraint or Range
ALTNO	Alternative number.	SMALLINT (key)	None	0 to 999
BUFSCALE	Use to increase or decrease resource category buffer times preceding and following operations. The default value (1) leaves individual resource category buffers unchanged. A value of zero eliminates all buffers.	FLOAT	1	0 to 100
DEBUGLVL	Debug log flags. See Debug Flags on page 124.	INTEGER	3	≥ 0
DEMANDTIME	The number of minutes after the start of the day on which the demand orders from Infor CloudSuite are planned to be due. For example, a value of 90 means a demand with a due date of 1/8/2003 is due at 01:30 on 1/8/2003. Used for integration with Infor CloudSuite.	INTEGER	0	0 to 1440
EMAIL	The email address to receive dispatch lists and/or purchasing needs lists from the APS Planner. If a resource- or item-specific email address is specified (in the MATL or RESRC table), this alternative-level address is overridden. For information about automated messaging in APS, see the *APS Integration Guide*.	VARCHAR	blank	None
FEXPTIME	Global reduction of the fixed lead time. This value is applied only if the SSFLAGS field sets the Use Expedited Lead Time flag and the expedited lead time value in the MATL table is blank. Enter the number of hours to reduce the fixed lead time for all purchased items in this alternative.	FLOAT	0	0-999999
HORIZONOFFSET	Located immediately before the audit columns	NOT NULL	0	>=0

Column Name	Description	Type	Default Value	Constraint or Range
INFCAP	Infinite resource capacity after. The number of hours after which every resource category has infinite on-shift capacity and is not constraining. Operations still complete in the same amount of time, but all resources can work on an infinite number of operations concurrently. Set this parameter to 0 to make all resource categories infinite over the entire planning window (that is, after zero hours). The default setting is 999999, which indicates the resource is finite.	FLOAT	999999	0 to 999999
INFMATL	Infinite purchased items after. The amount of time after which all purchased items are not constraining. After this time, the system does not delay any operations due to lack of purchased items. However, the system still tracks purchased item inventories. This field acts as a global lead time setting for all purchased items. If you set this parameter to zero, all purchased items are not constraining within lead time during the entire planning period. The default setting is 999999, which indicates that all purchased items are constraining within lead time for the entire planning period.	FLOAT	999999	0 to 999999
ITERDAYS	The number of days to use as the Planner's limit of how close to the optimal date to attempt to plan the demand. When the resynchronization plans a demand, the system may perform several iterations of pull planning within a time window, dividing the window in half with each iteration until a feasible plan is found that is within the ITERDAYS number of days of the optimal projected date.	INTEGER	7	1-9999
ITERDAYSCTP	The number of days to use as the system's limit of how close to the optimal date to attempt to plan the demand when planning with the order promise/CTP function.	INTEGER	7	1-9999
LASTSYNCH	Date of last resynchronization. This field is populated after the Planner runs.	DATETIME	Current timestamp	None

Column Name	Description	Type	Default Value	Constraint or Range
LATEPULL	Use latest pull. If selected, the system uses the resource or resource combination that leaves the most slack (finishes the operation latest), instead of using the first resource or resource combination that works. If not selected, the system uses the first resource or resource combination which, if used to schedule an operation, would leave enough time to schedule all remaining operations.	CHAR(1) (ApsFlagType)	Y	Y/N
NEXTOODP	Next incrementing number the Planner assigns to the next transfer order.	INTEGER	1	
NEXTODPNUM	Next incrementing number the Planner will use in naming remote transfer orders. This field is populated after the Planner runs and the APS Gateway Service pulls the output data back from the planner database.	INTEGER	1	None
NOSOFFSET	Earliest start time for new orders, specified as an offset from the current time. When the Planner plans the order, it does not allow any processing, such as lead time or resource capacity, until after the specified time. This parameter applies only to demand orders with a DUEDATE of 0.	FLOAT	0	$\geq$ 0
NOSTIME	Earliest start time for new orders, specified as a specific time. When the Planner plans the order, it does not allow any processing, such as lead time or resource capacity, until after the specified time.	DATETIME	Current time-stamp	None
NUMDB	Maximum number of temporary (what-if) copies of the planner database that can exist at the same time. If multiple workstations run the order promise/CTP function simultaneously, the available memory on the server may be exceeded. Use this field to limit the number of concurrent database copies to within your server's memory capacity.	INTEGER	5	1 to 999999
PLANGRAN	The smallest unit of time APS will plan (in minutes). If a particular operation requires less time than the granularity setting, APS plans 1 unit of granularity anyway. Set this value as large as possible (to the smallest total operation time) to maximize system performance. Common granularities are 1, 6, 15, 30, and 60 minutes.	INTEGER	6	1 to 999999

Column Name	Description	Type	Default Value	Constraint or Range
PLANHORIZ	The number of hours into the future you want APS to plan production and reserve capacity. APS does not plan any order to complete outside this window. If an order is requested for completion past the plan horizon, or if there is insufficient capacity or purchased items to satisfy the order within the window, APS blocks the order. Too small a plan horizon can result in many blocked orders. Too wide a plan horizon can slow APS performance. For example, with a horizon of 48 hours, an order requested for Wednesday morning may be planned to start no earlier than two days ***before*** the request/promise date (Monday morning). And the order may be planned to complete no more than 48 hours ***past*** the request date (Friday morning).	FLOAT	4380 (6 months)	1 to 999999 For example, a one year horizon would be set to 8760 (24 x 365)
PULLITERS	Pull iterations. Maximum number of resource options to examine on a pull (backward) planning pass. We recommend you set this value to 0 to allow the system to find the fastest resource combination.	INTEGER	0	0-999999999
PUSHITERS	Push iterations. Max. number of resource options the system examines on a push (forward) planning pass. We recommend you set this value to 0 to allow the system to find the fastest resource combination.	INTEGER	0	0-999999999
PUSHSLACK	Remove push slack. When you push-schedule an order, APS starts with a known start date and plans operations in the order they appear in the process of the routing, and arrives at a completion date for the order when all operations are planned. This process creates slack in the plan. To remove this slack, you can enable this option, which pull-plans all push-planned orders from their calculated completion dates.	CHAR(1) (ApsFlag-Type)	Y	Y/N

Column Name	Description	Type	Default Value	Constraint or Range
SEARCHITERS	When you use the detailed CTP process (the ol_usch_orderctp API), the Planner returns the current inventory, the supply quantity available by request date, and the production quantity available by request date. To determine the quantity that can be manufactured by the request date, the system performs a binary search to approximate the result. The SEARCHITERS field allows you to limit the number of binary search iterations the Planner will use.	SMALLINT	4	4-10
SSFLAGS	Single-site global flags controlling information at a site. See the list of bit settings titled "Single-Site Global Flags," on page 1-132, for descriptions of bit settings.	INTEGER	4	≥ 0
STATUS	Planner status codes. 0=Planner has not been run 1=Complete/Successful 2=Failed	SMALLINT	0	0-2
SUPPLYTIME	The number of minutes after the start of the day on which the external supply orders (for example, purchase orders and transfer orders) from Infor CloudSuite are planned to be due. The Planner also uses this value to adjust the due dates it calculates for subcomponent demands. For example, a value of 90 means a demand with a due date of 1/8/2003 is due at 01:30 on 1/8/2003. Used for integration with Infor CloudSuite.	INTEGER	0	0-1440

Column Name	Description	Type	Default Value	Constraint or Range
SUPPLYTOL	Tolerance factor that allows the Planner to consume an existing supply before its actual availability. **Positive number**: the system searches for supplies starting from the demand's due date/time + the tolerance number of hours. For example, if the demand's due date is 3/5/2004 at 9:00, a value of 4 means the demand can use any supplies that are available between the current date/time and 3/5/2004 at 13:00. **Negative number**: the system searches for supplies starting from the demand's due date at 00:00 (midnight) + (24 hours * the positive tolerance value). For example, if the demand's due date is 3/5/2004 at 15:00, a value of -4 means the demand can use any supplies that are available up to 3/9/2004 at 00:00. In the same example, a value of -1 means the demand can use any supplies available up to 3/5/2004 at 24:00 (the same day). This value is applied to an item only if the SSFLAGS field sets the Use Supply Usage Tolerance flag (bit6) and if the supply tolerance value in the MATL table is blank.	FLOAT	0	None
TFMULT	Time fence multiplier. When an order's due date is within the Time Fence defined on the item record, that order cannot consume inventory of that item, up to a limit. The system uses the Time Fence Multiplier field to calculate this limit by multiplying this value by the Minimum Inventory value. For example, enter 1 to reserve all safety stock defined by the Minimum Inventory value. Enter 0 to reserve ALL inventory supply. Enter 0.5 to reserve half the safety stock quantity. Enter 2 to reserve twice the safety stock quantity.	FLOAT	1	0-999999
TIMENOW	Current fixed time, to be used in analysis.	DATETIME	Current time-stamp	None
UIFLAGS	Options that control planned order and dispatch list messaging from the APS Analyzer user interface. See the list of bit settings titled "Messaging Flags," on page 132 for descriptions of bit settings.	INTEGER	0	≥ 0

Column Name	Description	Type	Default Value	Constraint or Range
USETNFG	Use TIMENOW value.	CHAR(1) (ApsFlagType)	N	Y/N
VEXPTIME	Global reduction of the variable (per-piece) lead time. This value is applied only if the SSFLAGS field sets the Use Expedited Lead Time flag and the expedited lead time value in the MATL table is blank. Enter the number of hours to reduce the variable lead time for all purchased items in this alternative.	FLOAT	0	0-999999

ALTSCHED

Alternative-level data used only by the Scheduler. This table allows the Scheduler to monitor the status of its input and output data in the database.

Column Name	Description	Type	Default Value	Constraint or Range
ACTCLDATE	The date and time the statistics were actually cleared during a Scheduler run.	DATETIME	None	None
ACTNUMRUNS	Actual number of runs.	SMALLINT	0	None
ACTSTDATE	Actual start date of the Scheduler run.	DATETIME	None	None
ALTNO	Alternative number.	SMALLINT (key)	None	000-999
CLEARDATE	The date and time to clear the Scheduler's collected data (such as summary information, schedule records, etc.). You clear statistics to remove bias introduced by the initial conditions of the Scheduler run.	DATETIME	None	None
EFACTOR	Efficiency factor. A rating of the actual shop floor performance compared with a standard performance. This number allows discrepancies between standard times and actual times to be reconciled globally. Operation times are divided by the efficiency factor. If it is > 1, operation time is decreased; if < 1, operation time is increased; if = 1, no change.	FLOAT	1.0	
ENDDATE	End date.	DATETIME	None	None

Column Name	Description	Type	Default Value	Constraint or Range
GLBSEQRL	The global sequencing scheme by which requests entering queues are ranked. Sequencing priority is globally specified using this rule. If necessary, you can specify the sequencing rule for a particular component, such as a resource, and thereby override the global setting. See Global Request Queue Sequencing Rules table on page 1-121.	SMALLINT	1	1-39
IGNUNCOMFG	Ignore unconfirmed orders. See also ORDER.STATUSCD.	CHAR(1) (ApsFlagType)	N	Y/N
INTFG	Input exists flag (does input data exist for this alternative?)	CHAR(1)	N	Y/N
LASTSCHED	The date the Scheduler last finished a scheduling run.	DATETIME	Current time-stamp.	None
LOADMATLFG	Controls whether the Scheduler constrains on availability of materials.	CHAR(1) (ApsFlagType)	Y	Y/N
NUMRUNS	Number of Scheduler runs for this alternative.	SMALLINT	1	≥ 1 (Should always be 1)
ORDRELRL	Rule indicating how to release orders when more than one is scheduled at the same time. See Order Release Rules table on page 113.	SMALLINT	1	0-39
OUTBIT1-OUTBIT6	Output tables masks.	INTEGER	0	None
OUTFG	Flag indicating whether input and output are compatible. B=Bogus I=Incomplete (I/O match, but raw data is not valid O=I/O (do not match, but raw data is valid) P=Perfect	CHAR(1) (ApsFlagType)	N	B,I,O,P
PLANORDFG	Schedule planned orders? If Y, the Scheduler considers planned orders (generated by the Planner) in the scheduling calculation.	CHAR(1)	N	Y/N
STARTDATE	The date and time the Scheduler run should start.	DATETIME	None	None
STATINVAL	Statistics invalid? flag.	CHAR(1) (ApsFlagType)	N	Y/N

Column Name	Description	Type	Default Value	Constraint or Range
STATUS	Status of the scheduling run for this alternative. 0=Schedule has not been run 1=Complete/ Successful 2=Failed 3=In process	SMALLINT	0	0-3
TRACDATE	Start date and start time of trace message collection.	DATETIME	None	None
TRACELVL	The detail level of trace messages. 0=Minimal: status messages. 1=Limited: event-by-event trace messages and status messages. 2=Extensive: detailed trace messages, event-by-event trace messages, and status messages.	SMALLINT	0	0-2
TREDATE	Date and time that trace message collection will end.	DATETIME	None	None

ALTSUM

Alternative summary. Summary statistics on the performance of a single alternative. Used to generate the alternative summary report and graphs.

Column Name	Description	Type	Default Value	Constraint or Range
ALTNO	Alternative number.	SMALLINT	None	0-999
MAXLATE	Maximum order lateness.	FLOAT	None	Any FLOAT
MAXMKSPAN	Maximum order make span time.	FLOAT	None	≥ 0.0
MAXORDPR	Maximum processing time for orders.	FLOAT	None	≥ 0.0
MAXORDWT	Maximum waiting time for orders.	FLOAT	None	≥ 0.0
MAXTARD	Maximum order tardiness.	FLOAT	None	≥ 0.0
MEANLATE	Mean order lateness.	FLOAT	None	Any FLOAT
MEANMKSPAN	Mean order make span time.	FLOAT	None	≥ 0.0
MEANORDPR	Average processing time for orders.	FLOAT	None	≥ 0.0
MEANORDWT	Average waiting time for orders.	FLOAT	None	≥ 0.0
MEANTARD	Mean order tardiness.	FLOAT	None	≥ 0.0
MINLATE	Minimum order lateness.	FLOAT	None	Any FLOAT

Column Name	Description	Type	Default Value	Constraint or Range
MINMKSPAN	Minimum order make span time.	FLOAT	None	≥ 0.0
MINORDPR	Minimum processing time for orders.	FLOAT	None	≥ 0.0
MINORDWT	Minimum waiting time for orders.	FLOAT	None	≥ 0.0
MINTARD	Minimum order tardiness.	FLOAT	None	≥ 0.0
NLDPROC	Average number of loads processing.	FLOAT	None	≥ 0.0
NLDSYS	Average number of loads in system.	FLOAT	None	≥ 0.0
NLDWAIT	Average number of loads waiting.	FLOAT	None	≥ 0.0
NORDCOMP	Number of orders completed.	INTEGER	None	≥ 0
NORDERS	Number of orders.	INTEGER	None	≥ 0
NORDLATE	Number of late orders.	INTEGER	None	≥ 0
PARTS	Total items produced.	INTEGER	None	≥ 0
RATE	Items produced per time interval.	FLOAT	None	≥ 0.0
REPNO	Replicate number.	SMALLINT	None	> 0
SDLATE	Standard deviation of order lateness.	FLOAT	None	≥ 0.0
SDMKSPAN	Standard deviation of order make span.	FLOAT	None	≥ 0.0
SDORDPR	Standard deviation of processing time.	FLOAT	None	≥ 0.0
SDORDWT	Standard deviation of waiting time.	FLOAT	None	≥ 0.0
SDTARD	Standard deviation of order tardiness.	FLOAT	None	≥ 0.0
TOTALTIME	Simulation time interval.	FLOAT	None	≥ 0.0

APPCFG

Application configuration data (data that is independent of alternatives and global for the whole application). The Scheduler and Planner use this table as necessary.

Column Name	Description	Type	Default Value	Constraint or Range
DESCR	planner database description.	VARCHAR (ApsDescriptType)	None	None
JSAUXBIT	Operation auxiliary bit mask.	INTEGER	0	None
MAXLDINSYS	Maximum loads in system.	INTEGER	5000	> 0
MAXLDSIZE	Maximum load size.	INTEGER	250	> 0

Column Name	Description	Type	Default Value	Constraint or Range
MSFLAGS	Multi-site flags (no flags defined—use 0).	INTEGER	0	≥ 0
READDATAFG	Read input from database.	CHAR(1)	N	Y/N
TIMEZONE	If you are using APS in a multi-site environment, this is the local site's time zone code.	VARCHAR (ApsTimeZone Type)	None	See Timezone Codes on page 122 for valid codes.
WRITTHRESH	Number of writes/ database commit.	SMALLINT	1000	> 0

APPSTRING, APPSTRLIST

These tables contain information for international localization, such as the field and screen labels on the APS Analyzer application. These tables are populated automatically when you create a database and do not require any intervention unless you wish to customize the field and screen labels.

APSSITE

Site information, used for multi-site communication.

The APS Analyzer user interface also requires a record in this table, regardless of whether you are using multi-site (set the FLAGS field to 1 if you are not using multi-site).

Column Name	Description	Type	Default Value	Constraint or Range
ALTNO	Alternative number to which this site record applies. You should have an APSSITE record for each alternative that will be used across sites.	VARCHAR (ALTNO plus SITE are the key)	None	None
APSHOST	Machine name where the APS Server Service is running.	VARCHAR (Aps HostnameType)	None	None
APSPORT	TCP/IP port number on which the APS Server Service is running.	INTEGER	None	5000-65000
DESCR	Site description.	VARCHAR (Aps DescriptType)	(blank)	None

Column Name	Description	Type	Default Value	Constraint or Range
ERDBHOST	Machine name where the planner database is running. The Planner uses this and ERDBPORT to connect to the site. Make sure this name matches (including case) the name defined in the planner record.	VARCHAR (Aps HostnameType)	None	None
ERDBPORT	TCP/IP port number on which the planner database is running. The Planner uses this and ERDBHOST to connect to the site.	INTEGER	None	5000-65000
FLAGS	Flags – identifies site as local or remote. 0=Remote site 1=Local site	INTEGER	0	≥ 0
PRIORITY	Priority code for resynchronizing sites. The Planner synchronizes sites in ascending order (priority 0 is first, followed by 1, and so on).	INTEGER	0	None
SITEID	An identifier for the site. Could be the local site or a remote site. The SITEID for a given site must match (including case) the SITEID for the same site as defined at all the remote sites.	VARCHAR (ALTNO plus this field are the key)	None	Cannot be longer than the length of an order ID minus 13 characters
SQLDBNAME	SQL database name used for this site.	VARCHAR	None	None
SQLHOST	Machine name that contains the SQL Server for this site.	VARCHAR	None	None

ATTRIB

User-defined load attribute information.

Column Name	Description	Type	Default Value	Constraint or Range
ATTRIBID	Attribute name	VARCHAR	None	None
DESCR	Attribute description	VARCHAR	None	None
PARTID	Loads associated with this attribute	VARCHAR	All	All, valid part, family, subfamily name
SIZE	Length of string	INTEGER	4	>1
TYPECD	Type of attribute	VARCHAR	Real	Character, Integer, Real, String
VALUE	Initial value	VARCHAR	0.0	Expression

BATCH

Batch definition information for Scheduler batches.

Column Name	Description	Type	Default Value	Constraint or Range
BATDEFID	Batch definition name	VARCHAR(ApsBatchType)	None	None
DESCR	Batch definition description	VARCHR(ApsDescriptType)	None	None
PROCPLANID	Routing ID	VARCHAR (Aps ProcplanType)	None	None
LOCREMFG	Remote flag	VARCHAR(ApsFlagType)	Remote	None
SEPRL	Separation rule - how jobs get separated to form batches: 0 = Same 1 = Item 2 = Setupgroup 4 = Attribute (from Items form) 5-39 = User-defined	VARCHAR(ApsBatchSepRIType)	0	0 - 39
SATRIBID	Name of the attribute if rule 4 used for SEPRL. This is automatically set by Infor CloudSuite to SEP	VARCHAR(ApsAttribType)	SEP	None
MINQUAN	Minimum quantity at which a batch load will be released	VARCHAR(ApsFloatType)	1.0	None
MAXQUAN	Minimum quantity at which a batch load will be released	VARCHAR(ApsFloatType)	1.0	None
QUANRL	Rule that defines defines how the arriving job affects the quantity for a forming batch load: 0 = One per Job 1 = One per Item 2 = Attribute (three Release attributes from Items form will be multiplied together) 3 = Constant (uses Value) 8-39 = User defined	VARCHAR(ApsBatchQuanRlType)	0	0 - 39
QATRIBID	Name of the attribute if rule 2 used for QUANRL (this is set automatically by Infor CloudSuite to REL)	VARCHAR(ApsAttribType)	REL	None
QVALUE	Value that is used if rule 3 is used for QUANRL	VARCHAR(ApsFloatType)	0	None

Column Name	Description	Type	Default Value	Constraint or Range
OVERRL	A rule indicating the conditions under which a forming batch load should be released during an override check: 0 = Time Out (waiting exceeds the value in OVTHRESH) 1 = Dynamic Slack (dynamic slack is smaller than or equal to OVTHRESH) 2-39 = User-defined	VARCHAR(ApsBatchOverRlType)	0	0 - 39
OVTHRESH	Number used in the override check whose interpretation depends on the OVERRL	VARCHAR(ApsFloatType)	0	None
ADDOVFG	A check box indicating whether a batch override check should be performed when a job arrives to the batch. The check will only occur if the minimum quantity has been reached	VARCHAR(ApsFlagType)	0	None
PEROVFG	A check box indicating whether periodic override checks are enabled. If enabled, checks will occur at the start of the Scheduling run and every OVCYCLE hours after that	VARCHAR(ApsFlagType)	0	None
OVCYCLE	A number indicating the time interval (in hours) between periodic override checks. This is used only if PEROVFG is enabled	VARCHAR(ApsDurationType)	0	None
JOB	Infor CloudSuite job ID	VARCHAR(20)	None	None
SUFFIX	Infor CloudSuite job suffix	INTEGER	0	>= 0
ITEM	Infor CloudSuite item ID	VARCHAR(30	None	None

BATPROD

User-defined batch production definition, which batches specific orders together.

Column Name	Description	Type	Default Value	Constraint or Range
BATPRODID	User-defined batch combinations (auto-numbered	INTEGER	None	> 500
BATDEFID	Batch definition	VARCHAR (ApsBatchType)	None	None

Column Name	Description	Type	Default Value	Constraint or Range
BATCHDATE	Time batch formed	DATETIME	Current Time	None
PROCPLANID	Process plan ID	VARCHAR(ApsProcPlanType)	None	None

BATPRODORD

Specific orders that are batched together in a batched production definition.

Column Name	Description	Type	Default Value	Constraint or Range
BATPRODID	User-defined batch combinations (auto-numbered	INTEGER	None	> 500
ORDERID	Order ID	VARCHAR(ApsOrderType)	None	None
JSID	Jobstep ID	VARCHAR(ApsJobstepType)	None	None

BATTIME

Start time and duration of batches.

Column Name	Description	Type	Default Value	Constraint or Range
BATDEFID	Batch definition	VARCHAR (ApsBatchType)	None	None
BATID	Batch ID	INTEGER	None	> 0
REPNO	Replicate number	SMALLINT	None	> 0
BATSTRT	Batch start time	FLOAT	None	>= 0.0
TIMEBAT	Batch duration	FLOAT	None	>= 0.0

BATWAIT

Keeps track of time spent waiting for batches to form.

Column Name	Description	Type	Default Value	Constraint or Range
BATDEFID	Batch definition	VARCHAR (ApsBatchType)	None	None
BATID	Batch ID	INTEGER	None	> 0
REPNO	Replicate number	SMALLINT	None	> 0
ORDERID	Order ID	VARCHAR(ApsOrderType)	None	None
LOADID	Load ID	SMALLINT	None	> 0
TIMEWAIT	Time waited to form batch	FLOAT	None	>= 0.0
WAITSTRT	Time when waiting started	FLOAT	None	>= 0.0

BOM

Bill of material information for Scheduler work orders. The Scheduler reads BOM information only from this table. You must enter BOM information for work orders in this table (for the Scheduler) and in the PBOM-related tables (for use by the Planner).

Column Name	Description	Type	Default Value	Constraint or Range
JSID	Operation ID.	VARCHAR (key) (ApsJobstepType)	None	None
EFFDATE	The date from which this material is to be included in the BOM.	DATETIME	1900-01-01	None
MATERIALID	ID of material to be manufactured.	VARCHAR (key) (ApsMaterialType)	None	None
OBSDATE	The date after which this material is no longer part of the BOM.	DATETIME	9999-01-01	None
PROCPLANID	ID of routing associated with this operation.	VARCHAR (key) (ApsProcplanType)	None	None

Column Name	Description	Type	Default Value	Constraint or Range
QUANCD	How the quantity is to be treated. L=Per load P=Per item	CHAR(1) (key)	L	L,P
QUANTITY	Quantity. Quantity can be negative if the material is produced as a by-product of the step.	FLOAT	0	None

CAL

Calendars/work schedules (exceptions, in which all resources on all shifts are unavailable).

Column Name	Description	Type	Default Value	Constraint or Range
CALID	Calendar or shift ID.	VARCHAR (ApsCalidType)	None	None
ENDDATE	Calendar or shift end date.	DATETIME	None	None
STARTDATE	Calendar or shift start date.	DATETIME (key)	None	None

DOWN

Projected down times for a resource. Used by the Scheduler. This table is similar to the DOWNPLAN table for the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
DOWNCD	The reason the resource is unavailable. B=Breakdown M=Maintenance S=Shift	CHAR(1) (ApsCodeType)	None	B,M,S
ENDDATE	End date.	DATETIME	None	None
RESID	Resource ID.	VARCHAR (Aps ResourceType)	None	None
STARTDATE	Start date.	DATETIME	None	None

DOWNPLAN

Resource down periods. This table contains a record for each unavailable period on each resource in the plan.

Column Name	Description	Type	Default Value	Constraint or Range
DOWNCD	Cause of down period. S=Standard shift O=Overtime shift D=Downtime exception	CHAR(1)	None	S,O,D
ENDDATE	End date of down period.	DATETIME	None	None
RESID	Resource ID.	VARCHAR (key)	None	None
STARTDATE	Start date of down period.	DATETIME (key)	None	None

EFFECT

Effectivity definitions used to determine which bill of material, route, or remote build site should produce an item. Only the Planner uses effectivities.

Column Name	Description	Type	Default Value	Constraint or Range
CONDITION	Effectivity condition. A lower code has a higher priority (if multiple effectivities evaluate to true, the one with the lowest code is used). See Effectivity Rules table on page 113.	SMALLINT	0	0-11
DATETYPE	Effectivity date type. 0=ORDER.ARIVDATE 1=ORDER.REQUDATE 2=ORDER.DUEDATE 3=Estimated (an approximation based on standard leadtimes)	SMALLINT	0	0-3
DESCR	Effectivity description.	VARCHAR (ApsDescriptType)	(blank)	None
EFFECTID	Effectivity ID.	VARCHAR (key) (ApsEffectType)	None	None

Column Name	Description	Type	Default Value	Constraint or Range
ENDDATE	Specify the date for the end of the effectivity horizon (or enter 1/1/2037 not to consider the end of the horizon).	DATETIME	None	None
STARTDATE	Specify the date for the beginning of the effectivity horizon (or enter 1/1/80 not to consider the beginning of the horizon).	DATETIME	None	None
VALUE	Effectivity value. Comparison value referenced by the effectivity condition (CONDITION).	VARCHAR (ApsEffvalType)	None	None

ERDB

Planner database connection information for the alternative. Multiple planner databases can exist for a single alternative, but multiple alternatives cannot exist for a single planner database.

Column Name	Description	Type	Default Value	Constraint or Range
ALTNO	Alternative number attached to this planner database (-1 if not in use).	SMALLINT	0	0 to 999 (must be unique in this table)
HOSTNAME	Planner database host name. Make sure this name matches (including case) the planner host name defined in the SITE record.	VARCHAR (key) (ApsHostnameType)	(blank)	None
PORTNO	Planner database port number.	INTEGER (key)	(blank)	5000-65000
STATUSNO	Current status of this planner database. -1=down 0=OK 1=reload in progress 2=resync running (busy) 3=flush APS gateway (refresh Planner) in progress	INTEGER	None	-1-3

ERDBGW

ERDB Gateway table for SQL data that will be copied to planner databases. APS enters a reference to new SQL data into this table. Periodically, the APS Gateway Service calls the APS Gateway

Processor, which reads the ERDBGW table and moves the data to the corresponding tables in the planner database. The RowPointer is the key in this table.

Column Name	Description	Type	Default Value	Constraint or Range
ACTIONCD	Transaction type. I=Insert U=Update D=Delete	CHAR(1) (ApsCodeType)	None	I,U,D
ALTNO	Alternative number affected by this transaction.	SMALLINT	None	0 to 999
CHNGDATE	Date and time transaction occurred.	DATETIME	Current timestamp	None
KEY1	Key of the type to be deleted.	VARCHAR (ApsMaxIDType)	(blank)	None
KEY2	2nd field for delete (if needed).	VARCHAR (ApsMaxIDType)	(blank)	None
KEY3	3rd field for delete (if needed).	VARCHAR (ApsMaxIDType)	(blank)	None
ROW	RowPointer for row of data to transfer.	DECIMAL	None	None
TABLEID	SQL table containing data to transfer.	VARCHAR (ApsTableType)	None	None

ERRORLOG

Error log to which APS writes any errors that occur during a run of the Planner's reload_erdb (bulk reload) API or the Gateway Processor.

Note: If a data error occurs while the Gateway Processor is processing insert/update/delete transactions from the ERDBGW table, APS logs an error in the ERRORLOG table and removes the transaction from the ERDBGW table. APS does not notify you when it logs this error; therefore, you should check the ERRORLOG table frequently during integration and implementation. See the TRACELOG for Scheduler messages.

Column Name	Description	Type	Default Value	Constraint or Range
ERRALTNO	Alternative number.	SMALLINT	-1	None
ERRCODE	Error code. In most cases, this is the return code from the functional API that failed.	LONG	0	None
ERRDATE	Date error occurred.	DATETIME	Current timestamp	None

Column Name	Description	Type	Default Value	Constraint or Range
ERRFUNC	Function or program where error occurred.	VARCHAR (30)	None	None
ERRMSG	The descriptive error message.	VARCHAR (512)	None	None
ERRPROC	Process where error occurred. GWP=Gateway Processor RELOAD=Bulk Reload API=APS Server API Call	VARCHAR (10)	(blank)	GWP, RELOAD, API
KEY1-KEY3	Additional information about the error.	VARCHAR (ApsMaxIDType)	(blank)	None

FIELDS

This table is populated automatically when you create a database and does not require any intervention.

GNTHLCAT, GNTHLCRIT, GNTSELCAT, GNTSELMBR

These tables are used internally to support the Gantt Chart screens within the APS Analyzer and do not require any intervention.

INVPLAN

Inventory plan. This table contains a record for each supply or demand affecting material inventory.

Column Name	Description	Type	Default Value	Constraint or Range
DEMAND	Quantity to be manufactured (after scrap/ shrinkage) or delivered.	FLOAT	None	None
DUEDATE	Promise/due date. For supply orders, date promised by the vendor. For demand orders, the completion date and time agreed to by the customer and the order entry person.	DATETIME	None	None

Column Name	Description	Type	Default Value	Constraint or Range
MATLTAG	Material tag of the source supply for all schedule events in the Planner that are associated with the supply usage (used internally for joining with MATLPLAN).	INTEGER (key)	None	None
ORIGQTY	Total, original demand quantity (before the system adjusted it for scrap and shrinkage).	FLOAT	0	None
SCHDATE	Date and time of schedule event (such as delivery).	DATETIME	None	None
SCHFLAGS	Schedule flags. See the Schedule Flags table on page 126.	INTEGER	None	0-67108863
SCHTYPE	Schedule type flags. See the Schedule Types table on page 126.	INTEGER	0	None
SUPMATLTAG	The ID of the order from which supply was used.	INTEGER	0	None
SUPPLY	Supply quantity adjusted by events occurring after the original demand that created the supply.	FLOAT	None	None
WIPJSID	The ID of the operation where the work-in-process inventory was consumed. The quantity of WIP consumed appears in the DEMAND field. This information is reported on the Order Detail screen and on the Order Summary with Operations report in the APS Analyzer.	VARCHAR (ApsJobstepType	(blank)	None

JOB

Jobs (operations). Contains information about allocations (operations) the Scheduler has scheduled and loads the operations have generated.

Column Name	Description	Type	Default Value	Constraint or Range
ARIVDATE	Operation begin wait date and time.	DATETIME	None	None
BATCHID	Batch ID.	INTEGER	None	None
COOLEND	End date and time of cooling.	DATETIME	None	None
ENDCD	End code for this load. E=Load ended at this time. P=Load was in process at this time. W=The load was waiting to start at this time.	CHAR(1) (ApsCodeType)	None	E,P,W

Column Name	Description	Type	Default Value	Constraint or Range
ENDDATE	End date and time.	DATETIME	None	None
JOBTAG	An auto-generated incrementing number representing a routing/operation. For joining to the RESSCHD table.	INTEGER	None	None
JSID	Operation ID.	VARCHAR (Aps JobstepType)	None	None
LOADID	Load ID.	SMALLINT	None	None
LOADSIZE	Load size.	INTEGER	None	None
MOVEEND	End date and time of move.	DATETIME	None	None
ORDERTAG	An auto-generated number representing the routing used in this load and its associated order. Defined by the Scheduler in the ORDIND table.	INTEGER	None	None
PROCTIME	Processing time.	FLOAT	None	None
SEQNUM	Sequence number.	INTEGER	None	None
SETUPTIME	Setup time actually scheduled for this job (output from the Scheduler).	FLOAT	None	None
SETUPEND	End date and time of setup portion.	DATETIME	None	None
STARTCD	Start code for this load: N=Load was never started. P=Load was in process at this time. S=The load was started at this time.	CHAR(1) (ApsCodeType)	None	N,P,S
STARTDATE	Start date and time.	DATETIME	None	None
STATUSCD	Status code.	CHAR(1)	None	N=Never started

JOBLNKS

Information about the relationship of loads that are created at operations, such as the accumulate/split operation.

Column Name	Description	Type	Default Value	Constraint or Range
PRED	Predecessor job tag.	INTEGER	None	None
SUCC	Successor job tag.	INTEGER	None	None

JOBPLAN

Information about each operation in the plan. This table contains a record for every operation in the plan.

Column Name	Description	Type	Default Value	Constraint or Range
DURATION	Duration of operation in hours (duration between start date and end date, not including interruptions).	FLOAT	None	None
ENDDATE	End date and time of operation.	DATETIME	None	None
JOBTAG	Unique for each operation in the plan.	INTEGER (key)	None	None
JSID	Operation ID.	VARCHAR (Aps JobstepType)	None	None
MATLTAG	Material (item) tag of the source supply for all schedule events in the Planner that are associated with the supply usage (for joining with MATLPLAN).	INTEGER	None	None
QUANTITY	Quantity built (after scrap/shrinkage).	FLOAT	None	None
SEQNO	Operation index (operation number) in routing.	SMALLINT	None	None
STARTDATE	Start date/time of operation.	DATETIME	None	None

JOBSTEP

Standard operation information (attributes of operations).

Note: When inserting an operation for the Planner, you must insert the JS19VR record for it before the JOBSTEP record.

Column Name	Description	Type	Default Value	Constraint or Range
ALOCRL	Rule for allocating resources, resource groups, and materials (as they become available). See Resource, Resource Group, and Material Allocation Rules on page 114.	SMALLINT	11	0-39
ALTJSID	Alternate operation ID, used only by the Scheduler. The Scheduler uses the alternate operation if the allocation of the current operation fails, and the SELECTRL is set to 1 or 2. If you define an alternate operation, make sure to set SELECTRL to 1 or 2.	VARCHAR	(blank)	None
DESCR	Operation description.	VARCHAR (ApsDescriptType	(blank)	None
EFFDATE	The date from which this operation is to be included in the routing.	DATETIME	1753-01-01	None
FLAGS	Enter **4** to enable resource reallocation on this operation (in the event the originally allocated resource is off-shift or busy on another job). Enter **0** to disable resource reallocation on this operation.	INTEGER (ApsBitFlagsType)	0	None
FREECHCKFG	Check attempts to free a resource? With this rule enabled, the system ensures the load that frees a resource is the same one that holds that resource. Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
HOLDTEMPFG	Hold temporary resources? Use the default setting for this field (N).	CHAR(1)	N	Y/N
JSID	Operation ID.	VARCHAR (key) (ApsJobstepType)	None	None
NEXTJSID	ID of the operation to be performed after this one completes (blank if this operation is the last one).	VARCHAR (ApsJobstepType)	(blank)	None
OBSDATE	The date after which this operation is no longer part of the routing.	DATETIME	9999-12-31	None

Column Name	Description	Type	Default Value	Constraint or Range
PROCPLANID	Routing ID for this operation.	VARCHAR (key) (ApsProcplanType)	None	None
RESACTN1 – RESACTN6	Codes indicating how the corresponding resource (RESID1-6) should be allocated and/or freed. A=Free resource after allocation B=Free resource before allocation E=Free resource at end of operation H=Allocate resource prior to start of operation S=Allocate resource prior to start of operation and free resource at end of operation O=Allocate the resource prior to the start of the operation, but only consider operations that were processed for this load (that is, operations that were skipped due to not being in effect according to the Effective Date). This code is used internally for integration to Infor CloudSuite.	CHAR(1)	(blank, no action)	A,B,E,H,S,O
RESID1 – RESID6	IDs of resources/ groups.	VARCHAR (ApsRefType)	(blank)	None
RESNMBR1 – RESNMBR6	Number of units that apply to the corresponding RESACTN.	SMALLINT	0	≥ 0
RESSCHDFG	Resource schedule? flag. Indicates whether data collection for resource schedules should reflect the processing of this operation. Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
SELECTRL	Rule specifying the conditions that must be true to execute this operation. Use the default rule (0) for this field unless you have defined an alternate operation in ALTJSID. 0=Always select current operation. 1=Select current operation only if the first resource listed on the operation is available. Otherwise use the ALTJSID. 2=Select current operation only if the first resource listed on the operation is available or if the first resource listed on the current and alternative operations are not available. Otherwise use the ALTJSID. 3-39=User defined	SMALLINT	0	0-39

Column Name	Description	Type	Default Value	Constraint or Range
STEPEXP	Step time expression. The time (in hrs.) needed to operate a load on this operation. (Such as the time needed to complete one piece.) Use an expression such as 17/60 for 17 minutes. For use by the Scheduler.	VARCHAR (ApsExprType)	0.0	None
STEPEXPRL	Step time expression rule that determines the usage of the STEPEXP value. For use by the Scheduler. For the values the Scheduler uses, see Operation Step Time Rules on page 116.	SMALLINT	0	0-39
STEPTIME	Step time expression. The time (in hrs.) needed to operate a quantity or portion of a quantity on this operation. (Such as the time needed to complete one piece.) This field works with STEPTMRL, and is for use by the Planner.	FLOAT	0	≥ 0.0
STEPTMRL	Step time expression rule (for determining the move time). For use by the Planner. 0=Fixed. Use total operation time 1=Per piece. Use operation time multiplied by the number of items 2=User-defined, Fixed 3=User-defined, per piece Values 2 and 3 signal the Planner to use your custom operation duration calculation for this operation. See Appendix C, "Customizing the System," in the *APS Integration Guide* for more information.	SMALLINT	0	0-3
TYPE	Operation type. Use the default value for this field. Only type 19 operations are used by the Planner (see the JS19VR table).	SMALLINT	19	0-39.

JS19VR

Additional details about the operation. This operation type performs the following steps: incurs move time, allocates required materials and resources, performs setup on a selected resource, performs the operation, frees resources, incurs cool time, and adds to inventory for mfg. materials. This table is the source for populating the attributes of an operation in the Planner. The records in this table correspond to the records in the JOBSTEP table.

Note: When using the planner and inserting an operation, you must insert the JS19VR record for it before the JOBSTEP record.

Column Name	Description	Type	Default Value	Constraint or Range
BASEDCD	What setup is based on. F=changes in item family H=changes in item, family, or subfamily (hierarchy) O=changes in order name R=changes in order or operation P=changes in item name J=changes in item or operation S=changes in item subfamily	CHAR(1) (ApsCodeType)	P	F,H,O,R,P,J,S
COOLTIME	Cooling time (Buffer Out). Delay in hours between completion of this operation and start of the following one. Note that buffers and overlap are opposing actions. If both are used, buffers negate overlap--if COOLTIME > 0 for the overlap operation, or the MOVETIME > 0 for the operation following the overlap operation, overlapping is ignored.	FLOAT	0	≥ 0
CRSBRKRL	Operation cross breaks flag. This value controls how a single operation may be interrupted across schedule breaks. 0=Cross shift breaks only. Operation can be stopped in one shift time period and restarted in another shift. 1=Cross shift breaks and other orders. Operation can be stopped in one shift time period and restarted in the same time period. 2=No breaks. Operation must be completed in one contiguous time period.	SMALLINT	0	0-2
INVENTORY	WIP inventory for this routing and operation.	FLOAT	0	≥ 0

Column Name	Description	Type	Default Value	Constraint or Range
JSID	Operation ID. This field maps to the Operation and Rte22Opr fields in the planner database. If you are using the ol_uadd_operation API call to interface directly with the planner database, you must prepend the Route ID to all Operation IDs. APS concatenates the two values automatically when moving data between SQL and the planner database, but when you interface directly with the planner database, you must provide the combined ID (using the full width of the Route ID). For example, if the Route ID is 1000, and the Operation ID is 1200, you must provide 1000(spaces)2000 as the Operation ID.	VARCHAR (key) (ApsJobstepType)	None	None
LENGTH	Length from the starting character in PARTID used for the comparison (see START field).	SMALLINT	240	1-240
MOVETIME	Operation Buffer in. Delay in hours between completion of the previous operation and start of this operation. The Planner uses the sum of this time and the largest of the categories' pre-buffer times to calculate total pre-buffer time. Note that buffers and overlap are opposing actions. If both are used, buffers negate overlap--if COOLTIME > 0 for the overlap operation, or the MOVETIME > 0 for the operation following the overlap operation, overlapping is ignored.	FLOAT	0	≥ 0

Column Name	Description	Type	Default Value	Constraint or Range
OLTYPE	Operation overlap type, used by the Planner and Scheduler. This value enables a time overlap between two operations. (it defines when to start the second operation). Note that buffers and overlap are opposing actions. If both are used, buffers negate overlap--if COOLTIME > 0 for the overlap operation, or the MOVETIME > 0 for the operation following the overlap operation, overlapping is ignored. 0=no overlap 1=start overlap window after setup and cycle time for OprOvlValue items has completed 2=start after OLVALUE percent of setup + cycle time have completed 3=start after OLVALUE percent of cycle time has completed 4=start after OLVALUE hours of setup + cycle time have completed 5=start after OLVALUE hours of cycle time have completed 6=parallel operations and upon completion the main operation continues to next operation 7=parallel operations and upon completion the main operation waits for all other parallel operations to complete before continuing to next operation	SMALLINT	0	0-5
OLVALUE	Operation overlap value, used with OLTYPE.	FLOAT	0	≥ 0
PROCPLANID	Routing ID.	VARCHAR (key) (ApsProcplanType)	None	None
QTIME	Queue time. The time (in hrs) an item is in queue while waiting to start this operation.	FLOAT	0	≥ 0
RGID	Resource or resource group to set up (normally the same resource/ group specified in JOBSTEP.RESID1).	VARCHAR (ApsResgroupType)	(blank)	None
RSETUPID	Resource required for setup.	VARCHAR (ApsResrefType)	(blank)	None
SETUPTIME	Setup time for the operation, in hours. Used only for the Planner.	FLOAT	0	≥ 0

Column Name	Description	Type	Default Value	Constraint or Range
SPLITSIZE	Operation split size parameter. If zero, splitting is disabled. Used only for the Scheduler.	FLOAT	0	≥ 0
START	Starting character in PARTID when determining if a change in setup is required.	SMALLINT	1	1-240
STIMEXP	An expression for the number of hours needed to set up the resource for the operation.	VARCHAR (ApsExprType)	0	None
STIMEXPRL	Setup step time rule. See Operation Step Time Rules on page 116.	SMALLINT	5	0-39
TABID	Lookup table to use when calculating setup time.	VARCHAR (ApsLtableType)	(blank)	None
WHENRL	Rule controlling when the schedule incurs setup time for this operation. 0=Always incur setup time prior to processing the load 1=Based on BASEDCD value 2=Incurred if the item or operation changes from the last load to the current load 3-39=User defined	SMALLINT	1	0-39

JSATTR

Operation attribute values.

Column Name	Description	Type	Default Value	Constraint or Range
PROCPLANID	Routing ID for this operation.	VARCHAR (key)	None	None
JSID	The operation ID to which these attributes apply.	VARCHAR	None	None
ATTID	The ID of this operation attribute. Can be any descriptive value (such as LastPM for "last preventive maintenance" date).	VARCHAR	None	None
ATTVALUE	The value of the operation attribute represented by ATTID (for example, for the LastPM example above, the value might be a date value).	VARCHAR	(blank)	None

LOADPERF

Load performance. Information used to generate the load performance report and graphs.

Column Name	Description	Type	Default Value	Constraint or Range
COMPCD	Completion code. C=Completed P=In process	CHAR(1) (ApsCodeType)	None	C,P
COMPDATE	Completion date/time.	DATETIME	None	None
LATENESS	Number of hours late.	FLOAT	None	Any FLOAT
LOADID	Load ID.	SMALLINT	None	> 0
LOADSIZE	Load size.	INTEGER	None	> 0
ORDERID	Order ID.	VARCHAR (ApsOrderType)	None	None
ORDTYP	Order type. D=Demand P=Pull R=Release S=Scheduled	CHAR(1) (ApsCodeType)	None	D,P,R,S
PARTID	Item ID.	VARCHAR (ApsPartType)	None	None
PROCTIME	Total processing time.	FLOAT	None	≥ 0.0
REPNO	Replicate number.	SMALLINT	None	> 0
WAITTIME	Total waiting time.	FLOAT	None	≥ 0.0

LOADSUM

Load summary. Information used to generate the load summary report and graphs.

Column Name	Description	Type	Default Value	Constraint or Range
MKSPANAVG	Load make span time average.	FLOAT	None	≥ 0.0
MKSPANMAX	Load make span time maximum.	FLOAT	None	≥ 0.0
MKSPANMIN	Load make span time minimum.	FLOAT	None	≥ 0.0
MKSPANOBS	Load make span number of observations.	INTEGER	None	≥ 0
MKSPANSD	Load make span time standard deviation.	FLOAT	None	≥ 0.0

Column Name	Description	Type	Default Value	Constraint or Range
PROCAVG	Load processing time average.	FLOAT	None	≥ 0.0
PROCMAX	Load processing time maximum.	FLOAT	None	≥ 0.0
PROCMIN	Load processing time minimum.	FLOAT	None	≥ 0.0
PROCOBS	Load processing number of observations.	INTEGER	None	≥ 0
PROCSD	Load processing time standard deviation.	FLOAT	None	≥ 0.0
REPNO	Replicate number.	SMALLINT	None	> 0
WAITAVG	Load waiting time average.	FLOAT	None	≥ 0.0
WAITMAX	Load waiting time maximum.	FLOAT	None	≥ 0.0
WAITMIN	Load waiting time minimum.	FLOAT	None	≥ 0.0
WAITOBS	Load waiting number of observations.	INTEGER	None	≥ 0
WAITSD	Load waiting time standard deviation.	FLOAT	None	≥ 0.0

LOCALE, LOCALSTR

These tables contain information for international localization, such as the field and screen labels on the APS Analyzer application. These tables are populated automatically when you create a database and do not require any intervention unless you wish to customize the field and screen labels.

LOOKUP

Stores lookup information for the Scheduler. You can use lookup tables for a variety of purposes, including specification of item-based operation times, resource setup times, and time to move between two points.

Column Name	Description	Type	Default Value	Constraint or Range
DESCR	Description.	VARCHAR (ApsDescriptType)	(blank)	None
INDEX1	Index in the left column of lookup table. (For example, routing ID, item ID, location, etc.)	VARCHAR (key) (ApsLtabvalType)	None	None

Column Name	Description	Type	Default Value	Constraint or Range
INDEX2	Index in the top row of lookup table. (For example, operation ID, item ID, location, etc.)	VARCHAR (key) (ApsLtabvalType)	None	None
TABID	Table name or ID.	VARCHAR (key) (ApsLtableType)	None	None
VAL	Value of this cell in lookup table.	FLOAT	0.0	≥ 0.0

LSTATUS

Status information about the current load being processed. Contains initial information about the position of each released load in its routing, the resources it is holding, and whether it is waiting or processing.

Column Name	Description	Type	Default Value	Constraint or Range
BATDEFID	Batch load-Batch definition. Use the default value for this field.	VARCHAR (ApsBatchType)	(blank)	None
BATID	Batch load-Batch ID. Use the default value for this field.	INTEGER	0	≥ 0
BATJS	Batch load-Operation. Use the default value for this field.	VARCHAR (ApsJobstepType)	(blank)	None
CURJS	Current Operation.	VARCHAR (ApsJobstepType)	None	None
GROUPID1-GROUPID6	Resource held-group.	VARCHAR (Aps ResgroupType)	(blank)	None
LOADID	Load ID.	SMALLINT	1	≥ 1
LOADSIZE	Load Size.	INTEGER	1	≥ 1
MBINDEX1-MBINDEX6	Resource held-index. 0=a resource (from a group or alone) 1 or greater=index of the MCR named with this ID	INTEGER	0	≥ 0

Column Name	Description	Type	Default Value	Constraint or Range
ORDID	Order.	VARCHAR (ApsOrderType)	None	None
PRIORITY	Load priority.	SMALLINT	0	0-9999
REMTIME	Remaining setup (as applicable) and operate time.	FLOAT	0	≥ 0.0
RESRCID1-RESRCID6	Resources held-Resource.	VARCHAR (ApsResrefType)	(blank)	None
STATUSCD	Status code. P=processing W=waiting	CHAR(1) (ApsCodeType)	W	P,W

MATDELOUT

Material delivery summary. Information used in generating material delivery summary reports and graphs.

Column Name	Description	Type	Default Value	Constraint or Range
MATERIALID	Material name.	VARCHAR (ApsMaterialType)	None	None

MATL

Materials/items—classes of consumable inventory and/or storage. This table also represents the initial quantity of material inventory on hand. The Scheduler uses the MATL table only to represent

component materials (it uses the PART table for finished items). The Planner uses the MATL, MATLPPS, and MATLALT tables.

Column Name	Description	Type	Default Value	Constraint or Range
ADDSELRL	Rule that ranks add-to-material requests when selecting those requests from the material add queue. Used with ASELVAL. See Add-to-Material Request Selection Rules on page 109 for rules.	SMALLINT	0	0-39
ADDSEQRL	Rule indicating how add-to-material requests are sequenced in the request queue. Used with ASEQATRID. See Resource and Material Request Queue Sequencing Rules on page 117 for rules.	SMALLINT	0	0-39
ASELVAL	Add queue value. Used with ADDSELRL.	FLOAT	0	None
ASEQATRID	Add queue attribute. Used with ADDSEQRL.	VARCHAR (ApsAttribType)	(blank)	None
CAPACITY	Capacity (max. inventory). Used with MINCAP. The inventory range reports inventory levels only within the low and high range.	FLOAT	10.0	> 0.0
CATEGORY	Item category. Informational field you can use as a filter for item reports.	INTEGER	0	None
DELPRI	Do deliveries have priority over add-to-material requests? Use the default setting for this field.	CHAR(1) (ApsCodeType)	Y	Y/N
DELVRULE	Rule that defines how to process deliveries that have a quantity that will exceed available space. 0=Deliver maximum and discard excess 1=Deliver maximum and wait for excess as space becomes available 2=Deliver entire excess when all necessary space is available 3=Wait for space for entire delivery	SMALLINT	1	0-3
DESCR	Description of the material.	VARCHAR (ApsDescriptType)	None	None

Column Name	Description	Type	Default Value	Constraint or Range
EPODATE	Earliest planned purchase receipt date. Your vendors may have temporary problems meeting their lead times for certain items. This date temporarily overrides the item's standard and expedited lead times to ensure that the Planner creates the planned order for this item with the appropriate lead time in this situation. When the Planner creates a planned order for this item, it determines that the item can be received either by the current date + lead time or by this EPODATE, whichever is later.	DATETIME	1980-01-01	None
FINALQFG	Output flag—collect final queue information in the MATADDQ and MATREMQ tables? Use the default setting for this field.	CHAR(1) (ApsFlagType)	N	Y/N
FLAGS	Planner item flags. See the list of bit settings titled "Planner Part Flags," on page 1-131, for bit settings descriptions. Typical integer settings: 0=manufactured item 1=purchased item 16=phantom item 33=unconstrained purchased item	INTEGER (ApsBitFlagsType)	0	≥ 0
FEXPLTIME	Expedited fixed lead time. This value is applied only if the MATL.FLAGS field sets the Use Expedited Lead Time flag. Enter the fixed expedited lead time (in hours) for this purchased item. Expedited lead time for an item is calculated as FEXPLTIME + VEXPLTIME * quantity requested.	FLOAT	0	0-999999
FLEADTIME	Fixed lead time (hours) for purchased items. Lead time for an item is calculated as FLEADTIME + (VLEADTIME * quantity requested). For manufactured items, the system assumes lead time as an average value compared to actual schedules.	FLOAT	0	0-999999
INITCOST	Initial cost.	FLOAT	0	≥ 0
LEVELFG	Output flag—collect level data for this material? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N

Column Name	Description	Type	Default Value	Constraint or Range
LOWLEVEL	The lowest level of the item in any bill of material (BOM) for this item. An item that does not appear in a BOM or an item that is not a sub component of another item has a low-level code of zero (0). A low-level code greater than zero indicates that the item is a component of another item (that is, it appears in the BOM for another item). This field is used for integration to Infor CloudSuite.	INTEGER	0	0-255
MATERIALID	Material or item ID.	VARCHAR (key) (ApsMaterialType)	None	None
MINCAP	Minimum inventory. See CAPACITY for description.	FLOAT	0	None
MOVEIN	The number of days earlier than the current due date that the purchase order would need to be rescheduled before the reschedule PO notice is generated in the POEXCEPT table.	FLOAT	0	0-999999
MOVEOUT	The number of days later than the current due date that the purchase order would need to be rescheduled before the reschedule PO notice is generated in the POEXCEPT table.	FLOAT	0	0-999999
ORDMAX	Order lot size maximum for manufactured items. When planning the end item of the order, APS breaks the item quantity into multiple lots of the maximum size specified in this parameter. The last lot will contain the remainder of the original quantity, adjusted by any ORDMIN/ORDMULT calculations. ORDMAX is applied before future supply, inventory, scrap/shrinkage, or ORDMIN/ORDMULT. If ORDMAX is less than minimum lot size, it is ignored.	FLOAT	0	≥ 0
ORDMIN	Order minimum. Minimum and multiple are lot sizes for manufactured items and the supply order sizes recommended for purchased items. Zero indicates that the system does not enforce minimum or multiple.	FLOAT	0	≥ 0.0
ORDMULT	Order multiple. See ORDMIN for description.	FLOAT	0	≥ 0.0

Column Name	Description	Type	Default Value	Constraint or Range
PREC	Number of decimal places used to describe quantities of this item. Zero indicates discrete items.	SMALLINT	5	0-16
QUEFG	Output flag—collect queue length data for this material? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
QUONHAND	Current on-hand inventory. The numeric amount of a specific item remaining in inventory once a specific operation occurs (work-in-process inventory). It displays the current inventory level of the named item, at the named route operation.	FLOAT	0	≥ 0.0
REMSELRL	Rule indicating how remove-from-material requests are selected. Used with RSELVAL. See Remove-from-Material Request Selection Rules on page 1-110.	SMALLINT	0	0-39
REMSEQRL	Rule indicating how remove-from-material requests are sequenced. Used with RSEQATRID. See Resource and Material Request Queue Sequencing Rules on page 117.	SMALLINT	0	0-39
RSELVAL	Value associated with the REMSELRL rule.	FLOAT	0	None
RSEQATRID	Name of an attribute associated with the REMSEQRL rule.	VARCHAR (ApsAttribType)	(blank)	None
SCHEDFG	Output flag--collect schedule data for this material? Only jobs for orders with ORDER.SCHEDFG=Y will be included in the material schedule data. Collected data is stored in output table MATSCHD. Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
SCHEDONLYFG	If the ALTSCHED.LOADMATLFG field is set to N, the Scheduler does not constrain on material availability. If LOADMATLFG is No, set this field to Y for materials required by the Scheduler (materials used to tie cross-referenced jobs together).	CHAR(1) (ApsFlagType)	N	Y/N
SCRAP	Scrap factor. Quantity of this material expected to be lost during production.	FLOAT	0	≥ 0.0

Column Name	Description	Type	Default Value	Constraint or Range
SHIFTID	Acquisition schedule shift ID. This ID refers to a special shift with infinite resource capacity that you define in the SHIFT table. See the *APS Getting Started* manual for information about acquisition schedules.	VARCHAR	(blank)	None
SHIPPRI	Do material shipments have priority over remove-from-material requests?	CHAR(1) (ApsCodeType)	Y	Y/N
SHIPRULE	Rule indicating how to process shipments that have a quantity greater than the available units. 0=Ship quantity on-hand/ disregard units not available 1=Ship max. quantity/ship balance as available 2=Ship max. quantity/ship balance as available 3=Wait for all	SMALLINT	0	0-3
SHRINK	Shrinkage factor. Percentage of this material expected to be lost during production.	FLOAT	0	$0 \leq x < 100$
SUMFG	Output flag—collect summary data for this material in the MATSUM table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
SUPPLYTOL	Tolerance factor that allows the Planner to consume an existing supply before its actual availability. **Positive number**: the system searches for supplies starting from the demand's due date/time + the tolerance number of hours. For example, if the demand's due date is 3/5/2004 at 9:00, a value of 4 means the demand can use any supplies that are available between the current date/time and 3/5/2004 at 13:00. **Negative number**: the system searches for supplies starting from the demand's due date at 00:00 (midnight) + (24 hours * the positive tolerance value). For example, if the demand's due date is 3/5/2004 at 15:00, a value of -4 means the demand can use any supplies that are available up to 3/9/2004 at 00:00. In the same example, a value of -1 means the demand can use any supplies available up to 3/5/2004 at 24:00 (the same day). This value is applied to a particular item only if the MATL.FLAGS field sets the Use Supply Usage Tolerance flag.	FLOAT	0	None

Column Name	Description	Type	Default Value	Constraint or Range
TFRULE	Time fence rule. In some situations, orders due in the future may consume inventory and supply, causing shorter-term (CTP) orders to be promised later than necessary. You can specify a time fence inside which Planner should allocate inventory and supply to longer-term orders. Any orders that are due outside this time fence will not use available inventory or supply. The quantity of inventory to reserve is defined in the ALTPLAN.TFMULT field. Rule values are as follows: 0=No time fence. 1=Use Lead Time: the length of the fence is defined by the end item's lead time. 2=Use accumulated lead time: the length of the fence is defined by the accumulated lead time for the end item + the lead times for all its components. 3=Use specific value: the length of the fence is defined by the value in the TFVALUE field.	INTEGER	0	0-3
TFVALUE	Time fence value. If TFRULE is set to 3, this is the length (in hours) of the time fence, from 0-999999.	FLOAT	0	0-999999
UNITMEAS	Unit of measure, used on reports.	VARCHAR (ApsDescriptType)	(blank)	None
VEXPLTIME	Per-item expedited lead time. This value is applied only if the MATL.FLAGS field sets the Use Expedited Lead Time flag. Enter the variable expedited lead time (in hours) for this purchased item. Expedited lead time for an item is calculated as FEXPLTIME + VEXPLTIME * quantity requested.	FLOAT	0	0-999999
VLEADTIME	Per-item lead time for purchased items. This value is the lead time in hours for one item (variable by the quantity). See FLEADTIME for description.	FLOAT	0	0-999999
WAITFG	Output flag—collect waiting time data for this material? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N

MATLALT

Alternate materials to use if the purchased item is not available within the need date for a pull-planning run. Alternate items are not considered during push-planning runs. Used with MATL and MATLPPS tables to represent item information. Used only by the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
ALTMATLID	ID for alternative material.	VARCHAR (ApsMaterialType)	None	None
MATERIALID	Material ID.	VARCHAR (key) (ApsMaterialType)	None	None
SEQNO	Sequence number for the item in the list.	INTEGER (key)	None	None

MATLATTR

Material attributes. Used only by the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
ATTID	Attribute ID. A unique name to identify the item attribute.	VARCHAR (key) (ApsAttribType)	None	None
ATTVALUE	Attribute value. Describes a characteristic of an item.	VARCHAR (ApsAttvalType)	(blank)	None
MATERIALID	Material ID.	VARCHAR (key) (ApsMaterialType)	None	None

MATLDELV

Supply orders (usually for purchased items). A schedule of material deliveries that will add to a material level at specified times.

The MATLDELV table is an input and an output table; the Planner writes details of transfer supply orders to this table.

Column Name	Description	Type	Default Value	Constraint or Range
AUTOPLANFG	Auto-plan flag. Controls whether a new order is planned automatically when it arrives in the planner database.	CHAR(1) (ApsFlagType)	N	Y/N
AMOUNT	The amount to add to the named material at the specified date and time, and at each cycle interval. If adding this amount exceeds the capacity of the material, the system uses MATL. DELVRULE to determine how to process the delivery.	VARCHAR (ApsExprType)	1.0	None
CATEGORY	Order category. Use categories to filter the listed orders for order reports.	INTEGER	0	None
COSTUNIT	The cost per delivered unit, to be added to the WIP cost of the material.	VARCHAR (ApsExprType)	0	None
CUSTOMER	Customer ID.	VARCHAR	(blank)	None
CYCLE	The time between deliveries (an expression that represents the number of simulated hours between delivery releases).	VARCHAR (ApsExprType)	INFINITY	None
DELVDATE	For supply orders, the date promised by the vendor. For demand orders, the completion date and time agreed to by the customer and the order entry person.	DATETIME	None	None
DESCR	Order description.	VARCHAR (ApsDescriptType)	(blank)	None
FLAGS	Order flags. See the list of bit settings titled "Order Flags," on page 1-129, for more information.	INTEGER (ApsBitFlagsType)	1	≥ 0
MATERIALID	Name of the material the delivery is for.	VARCHAR (ApsMaterialType)	None	None
MAXTOGEN	Maximum number of deliveries to generate using this delivery schedule entry.	INTEGER	1.0	≥ 0
ORDERID	ID of the order that is delivering this supply. This column joins to TOSUPPLY.RORDERID.	VARCHAR (key) (ApsOrderType)	None	None
ORDTYPE	Order type.	INTEGER	0	≥ 0

MATLGRP

Material groups. Used only by the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
GROUPID	Unique ID for the item or material group.	VARCHAR (key) (ApsMatlgrpType)	None	None
MATERIALID	ID of a member material in the group.	VARCHAR (ApsMaterialType)	None	None
SEQNO	Sequence of this material in the group.	INTEGER (key)	None	None

MATLPBOMS

Defines the BOMs an item can use. You must enter BOM information for demand orders in this table (and in the other PBOM-related tables). You must also enter BOM information for work orders in the BOM table (for use by the Scheduler).

Column Name	Description	Type	Default Value	Constraint or Range
MATERIALID	Material or item ID.	VARCHAR (key) (ApsMaterialType)	None	None
PBOMID	Planning BOM that can be used by the item specified in the MATERIALID field.	VARCHAR (key) (ApsPbomType)	None	None

MATLPLAN

Material plan. This table contains a record for each item occurrence in the plan. This table is a summary of the schedule event records in the planner database for a particular level in the bill of material for a particular order.

Column Name	Description	Type	Default Value	Constraint or Range
ADJQTY	The quantity to plan, adjusted for scrap and shrinkage.	FLOAT (ApsFloatType)	1753-01-01	None
ENDDATE	End date of last operation.	DATETIME	None	None

Column Name	Description	Type	Default Value	Constraint or Range
FLAGS	Material plan flags. See “Material Plan Flags (MATLPLAN.FLAGS)” on page 129.	INTEGER	0	0-1
LOADID	Load ID, used with maximum lot sizes. If an order is split based on the MATL.ORDMAX value, each line item will have a unique LOADID. See the description of ORDMAX for more information.	INTEGER	N	Y/N
MATERIALID	Item ID to be manufactured or purchased.	VARCHAR (Aps MaterialType)	None	None
MATLTAG	Unique for each item occurrence in the plan.	INTEGER (key)	None	None
NEEDDATE	The date this component part or safety stock order is needed.	DATETIME	1753-01-01	None
ORDERID	ID of order causing the manufacture or purchase. (Joins with ORDERID in ORDER table.)	VARCHAR (ApsOrderType)	None	None
ORIGQTY	The original quantity demanded.	FLOAT (ApsFloatType)	0	None
PASSCD	An alpha character representing the type of planning pass that was the final pass during the planning of this item: **A**: Pull planned from demand’s Due date (or from Request date if pull-up order). Time Fence was enabled. **B**: Pass A failed (that is, it projected a start date that is in the past); pull planned with time fence disabled. **C**: Pass B failed and the order is a Pull-Up order; pull planned from the Request date (with Time Fence enabled). **D**: Pass C failed and the order is a Pull-Up order; pull planned from the Request date (with Time Fence disabled). **E**: Pass B failed; push planned with Time Fence disabled. **F**: Pass E succeeded; pull planned from the projected date calculated by the push (with Time Fence enabled) to optimize plan. **G**: Pass E failed; pull planned from the end of the plan horizon with Time Fence enabled.	CHAR (1) (ApsCodeType)	None	None
PASSITERS	The total count of the number of pull planning and push planning passes that occurred during planning of this item.	INTEGER	0	None

Column Name	Description	Type	Default Value	Constraint or Range
PBOMID	Parent BOM ID.	VARCHAR (ApsPbomType)	None	None
PJSID	Parent operation ID.	VARCHAR (ApsJobstepType)	None	None
PMATLTAG	Parent material tag (parent item occurrence of the item occurrence in MATLTAG).	INTEGER	None	None
PROCPLANID	Routing ID.	VARCHAR (Aps ProcplanType)	None	None
PSEQNO	Not currently used (added for future APS enhancement).	INTEGER	0	None
RELDATE	Release date of the item.	DATETIME	1753-01-01	None
STARTDATE	Start date of first operation.	DATETIME	None	None

MATLPPS

Defines the routings an item can use. Used with MATL and MATLALT tables to represent item information. Used only by the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
MATERIALID	Material or item ID.	VARCHAR (key) (ApsMaterialType)	None	None
PROCPLANID	Routing that can be used by the item specified in the MATERIALID field.	VARCHAR (key) (ApsProcplanType)	None	None

MATLRULE

Material site rules. Used only by the Planner. See Chapter 2, "Using APS in a Multi-Site Environment," in the *APS Integration Guide*, for more information about this table.

Column Name	Description	Type	Default Value	Constraint or Range
EFFECTID	Identifies the material Effectivity statement (EFFECT.CONDITION and VALUE) that should be evaluated for using the remote site. If this value is blank, the default "on-time" rule is used (use the site that reports the best on-time delivery).	VARCHAR (key) (ApsEffectType)	(blank)	If blank, Planner uses bid/response method to determine effectivity.
FLEADTIME	Fixed lead time (hours). Lead time for an item is calculated as FLEADTIME + (VLEADTIME * quantity requested).	FLOAT	0	0-999999
LMATLID	Key to the MATERIALID field in the MATL table. It defines the ID for the item at the local site. This ID must match (including case) the RMATLID for the item at the remote sites.	VARCHAR (key) (ApsMaterialType)	None	None
RMATLID	Material ID at the remote site (may be different than the ID at the site that originated the order). This ID must match (including case) the LMATLID for the item at the local site.	VARCHAR (ApsMaterialType)	None	None
RSITEID	Site ID where the item can be produced.	VARCHAR (key) (ApsSiteType)	None	None
TIMEOUT	The number of seconds the Planner will wait for a response from a remote site before using the FLEADTIME/ VLEADTIME values. Make sure this value is sufficient—we recommend at least 60 seconds. At the start of a global planning run, the Planner checks the connection at all sites to verify they are ready; if the TIMEOUT value is reached before a connection is made, the planning run fails.	INTEGER	60	1-9999
TRANSIT	Average transit time (in hrs) to the remote site. The transfer order need date is modified to reflect transit time based on this value.	FLOAT	0	0-9999

Column Name	Description	Type	Default Value	Constraint or Range
UOMSCALE	Unit of measure conversion scale for the remote site. For example, if Site A demands 1 gallon of material from Site B, where Site B measures the material in liters, the UOMSCALE at Site A would be 2.2. The UOMSCALE at Site B would be 0.455.	FLOAT	1	0-999999999
VLEADTIME	Variable lead time (hours). See also FLEADTIME.	FLOAT	0	0-999999

MATSCHD

Material schedule (jobs affecting inventory).

Column Name	Description	Type	Default Value	Constraint or Range
AMOUNT	Amount of change (negative values indicate material being removed from inventory).	FLOAT	None	None
CHNGDATE	Date of change.	DATETIME	None	None
JOBTAG	The load that changed the inventory level. Also appears in the JOB table.	INTEGER	None	None
LEVEL	Current material level.	FLOAT	None	None
MATERIALID	Material ID.	VARCHAR (Aps MaterialType)	None	None
SEQNUM	Sequence number for this table.	INTEGER	None	None

MATSUM

Material summary. General data used to generate material summary reports.

Column Name	Description	Type	Default Value	Constraint or Range
ENDAQLN	Current queue length.	FLOAT	None	≥ 0.0
ENDLEV	Current level of material.	FLOAT	None	≥ 0.0
ENDRQLN	Current queue length.	FLOAT	None	≥ 0.0

Column Name	Description	Type	Default Value	Constraint or Range
MATERIALID	Material ID.	VARCHAR (Aps MaterialType)	None	None
MAXAQLN	Queue length maximum.	FLOAT	None	≥ 0.0
MAXAQTM	Waiting time maximum.	FLOAT	None	≥ 0.0
MAXLEV	Material level maximum.	FLOAT	None	≥ 0.0
MAXRQLN	Queue length maximum.	FLOAT	None	≥ 0.0
MAXRQTM	Waiting time maximum.	FLOAT	None	≥ 0.0
MEANAQLN	Queue length average.	FLOAT	None	≥ 0.0
MEANAQTM	Waiting time average.	FLOAT	None	≥ 0.0
MEANLEV	Material level average.	FLOAT	None	≥ 0.0
MEANRQLN	Queue length average.	FLOAT	None	≥ 0.0
MEANRQTM	Waiting time average.	FLOAT	None	≥ 0.0
MINAQLN	Queue length minimum.	FLOAT	None	≥ 0.0
MINAQTM	Waiting time minimum.	FLOAT	None	≥ 0.0
MINLEV	Material level minimum.	FLOAT	None	≥ 0.0
MINRQLN	Queue length minimum.	FLOAT	None	≥ 0.0
MINRQTM	Waiting time minimum.	FLOAT	None	≥ 0.0
NLOADSWTAQ	Waiting time number of observations.	INTEGER	None	≥ 0
NLOADSWTRQ	Waiting time number of observations.	INTEGER	None	≥ 0
REPNO	Replicate number.	SMALLINT	None	> 0
SDAQLN	Add queue length standard deviation.	FLOAT	None	≥ 0.0
SDAQTM	Add waiting time standard deviation.	FLOAT	None	≥ 0.0
SDLEV	Material level standard deviation.	FLOAT	None	≥ 0.0
SDRQLN	Remove queue length standard deviation.	FLOAT	None	≥ 0.0
SDRQTM	Remove waiting time standard deviation.	FLOAT	None	≥ 0.0
STARTLEV	Starting level of material.	FLOAT	None	≥ 0.0
TIMEINT	Time interval.	FLOAT	None	≥ 0.0
TIMEMAT	Average time-in-material.	FLOAT	None	≥ 0.0

MSLPLAN

On-hand inventory at the time of the last full run of the Planner. This table allows the APS Analyzer to display inventory to reflect the effects of planned usage and purchased or manufactured supply (note that the MATL.QUONHAND value may have changed since the last Planner run to represent the *current* on-hand inventory).

Column Name	Description	Type	Default Value	Constraint or Range
MATERIALID	Material or item ID	VARCHAR	None	None
STARTLEV	On-hand inventory at the time of the last full Planner synchronization. This value may not be the current on-hand inventory (current on-hand inventory is represented in the MATL.QUONHAND field).	FLOAT	None	≥ 0.0

OPRULE

Order priority rules that define the sequence in which the Planner plans orders during a synchronization. Multi-site transfer supply orders will always be processed first, followed by the sequenced local orders. If no OPRULE record is present, the Planner sequences the orders alphanumerically by order ID. Used only by the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
RULESEQ	The number used to sequence the application of the order sequence rules. The Planner processes the rule with the lowest sequence number first.	SMALLINT (key)	None	None
RULETYPE	Rule type that determines how the Planner selects orders to join the sequenced list of orders that are to be planned. See "Order Priority Rules" on page 1-112 for rule descriptions.	INTEGER	None	0-21
RULEVALUE	Order priority value associated with rule type. The contents of this field depend on the RULETYPE number: 0-3: n/a (date-based) 4: order ID. 5-9: order group ID 10-13: order category ID 14-21: order attribute ID and value, separated by a space or tab. 22-25: customer ID.	VARCHAR (ApsRulevalType)	(blank)	None

ORDATTR

Order attributes. Used only by the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
ATTID	Attribute ID. Unique name to identify the order attribute.	VARCHAR (key) (ApsAttribType)	None	None
ATTVALUE	Order attribute value. Describes a characteristic of an order.	VARCHAR (ApsAttvalType)	None	None
ORDERID	Order ID.	VARCHAR (key) (ApsOrderType)	None	None

ORDER

Information about work orders. APS supports only one material or item per order record. The Scheduler requires an associated PART record for each Order.

The ORDER table is an input and an output table; the Planner writes details of transfer demand orders to this table.

Column Name	Description	Type	Default Value	Constraint or Range
AUTOPLANFG	Auto-plan flag. Controls whether a new order is planned automatically when it arrives in the planner database.	CHAR(1) (ApsFlagType)	N	Y/N
ARIVDATE	Order arrival (entry) date. The system calculates this date if not provided.	DATETIME	Current time-stamp	None
CATEGORY	Value used to to filter listed orders in the Analysis objects and order reports (the OPRULE.RULETYPE field provides the ranking for the category).	INTEGER	0	None
CUSTOMER	Customer ID, used for reports.	VARCHAR (ApsCustomer Type)	(blank)	None
DESCR	Description.	VARCHAR (Aps DescriptType)	(blank)	None

Column Name	Description	Type	Default Value	Constraint or Range
DUEDATE	Promise/due date. For supply orders, date promised by the vendor. For demand orders, the completion date and time agreed to by the customer and the order entry person.	DATETIME	None	None
EXCESSCD	Code indicating how to process left-over quantity when division between loads leaves a remainder. A=Excess added to the last load N=A new load is created with the excess quantity W=A new load is created with the quantity of all other loads	CHAR(1) (ApsCodeType)	A	A,N,W
FLAGS	Order flags. See the list of bit settings titled "Order Flags," on page 129, for bit settings descriptions. Example integer values: 0=Typical demand order. 1=Typical supply order. 6=Single level floating work order. 256=Typical replenishment (restock) order.	INTEGER	0	≥ 0
LDPERF	Output Flag—Collect load summaries? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
LOADSIZE	The number of items in a whole load. This entry and the EXCESSCD field determine how the order quantity specified in ORDSIZE is divided into one or more loads.	INTEGER	1	≥ 1
MATERIALID	Material (order line item) ID. Lists an item number and a quantity to be produced. Used only by the Planner.	VARCHAR (ApsMaterialType)	(blank)	None
ORDERID	Name of order. (Joins with ORDERID in MATLPLAN table.)	VARCHAR (key) (ApsOrderType)	None	None
ORDSIZE	Order line item quantity to release (delivery amount).	FLOAT	1.0	≥ 0.0

Column Name	Description	Type	Default Value	Constraint or Range
ORDTYPE	Order type. Used by the Order Analysis screen in the APS Analyzer to categorize orders—they have no effect on the Planner. Also, when you retrieve Planner output data into Infor CloudSuite, you use this code (see the *APS Integration Guide* for more information). The system reserves ordtype 10 and 50 for internal use. You can use only ordtype 100 and greater. Predefined types: 10 - Planned order (reserved for internal use) 50 - Supply/delivery (reserved for internal use) 100 - scheduled work order 200 - customer order 210 - EDI order 220 - Web order 230 - MPS order 240 - firmed work order 245 - component demand for firmed scheduled job (used in APS) 250 - released work order 255 - component demand for released scheduled job (used in APS) 260 - production order 270 - transfer order 300 - forecast order 310 - replenishment/safety stock order	INTEGER	0	≥ 0
ORPERF	Output Flag—Collect order performance information in the ORDPERF table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
PARTID	Item ID (required for Scheduler and Planner, although only used by Scheduler). An order makes a single item.	VARCHAR (ApsPartType)	None	None
PLANONLYFG	Planner only order?	CHAR(1) (ApsFlagType)	N	Y/N
PRIORITY	A weighting factor giving this order a priority value in relation to other orders. The priority breaks ties between orders with the same release date. This value is the load priority for the loads belonging to this order.	INTEGER	0	0-9999
PROCPLANID	Routing ID (for the Scheduler, the order makes an item with a one-level routing).	VARCHAR (Aps ProcplanType)	(blank)	None

Column Name	Description	Type	Default Value	Constraint or Range
REFORDERID	When the demand is cross-referenced to a supply order or replenishment demand order, this field contains the ID of the cross-referenced order.	VARCHAR (ApsOrderType)	(blank)	None
RELDATE	Date and time the order will be released into production.	DATETIME	None	None
REQUDATE	Request date. Completion date and time originally requested by a customer for an order. Not used for supply orders.	DATETIME	Current time-stamp	None
SCHEDFG	Output Flag—Collect order schedule information in the RESSCHD table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
SCHEDONLYFG	Order only processed by the Scheduler?	CHAR(1) (ApsFlagType)	N	Y/N
STATUSCD	Order Status Code (the Planner uses only the N code). I=In-process order N=New order U=Uncon-firmed order (APS releases these orders only if the ALTSCHD.IGNUNCOMFG field is set to "N.") X=Explicit release (not supported)	CHAR(1) (ApsCodeType)	N	I,N,U,X

ORDGRP

Defines the orders that belong to a group. Used only by the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
GROUPID	Order group ID. Order Group names may not end in -l, -a, -r, -p, or -s due to a sequencing rule restriction.	VARCHAR (key) (ApsOrdgrpType)	None	None
ORDERID	Order ID. Defines the orders that belong to the group specified in GROUPID.	VARCHAR (ApsOrderType)	None	None
SEQNO	Sequence in group.	INTEGER (key)	None	None

ORDIND

Order information used to join scheduler tables to generate schedules and dispatch lists.

Column Name	Description	Type	Default Value	Constraint or Range
DUEDATE	Due date of this scheduled order.	DATETIME	None	None
ORDERID	Order ID.	VARCHAR (ApsOrderType)	None	None
ORDERTAG	Order – routing tag (assigned by the Scheduler). This number also appears in the JOB and MATSCHD tables.	INTEGER	None	None
PROCPLANID	Routing ID.	VARCHAR (Aps ProcplanType)	None	None
RELDATE	Release date.	DATETIME	None	None

ORDPERF

Order performance. Information used to generate the order performance report and graphs.

Column Name	Description	Type	Default Value	Constraint or Range
COMPCD	Completion flag.	CHAR(1) (ApsCodeType)	None	C=Completed P=In process
COMPDATE	Actual completion date.	DATETIME	None	None
LATENESS	Number of hours late (difference between ORDPLAN.DUEDATE and ORDPERF.COMPDATE).	FLOAT	None	Any FLOAT
MAKESPAN	Order makespan.	FLOAT	None	≥ 0.0
NUMPARTS	Number of items in order.	INTEGER	None	> 0
ORDERID	Order ID.	VARCHAR (ApsOrderType)	None	None
ORDTYP	Order type. D=Demand P=Pull R=Release S=Scheduled	CHAR(1) (ApsCodeType)	None	D,P,R,S

Column Name	Description	Type	Default Value	Constraint or Range
PARTID	Item ID.	VARCHAR (ApsPartType)	None	None
PROCTIME	Total processing time.	FLOAT	None	≥ 0.0
REPNO	Replicate number.	SMALLINT	None	> 0
STARTCD	Started flag. S=Order started after beginning of simulation N=Order never started P=Order was in process at beginning of simulation	CHAR(1) (ApsCodeType)	None	S,N,P
STARTDATE	Actual start date.	DATETIME	None	None
WAITTIME	Total waiting time.	FLOAT	None	≥ 0.0

ORDPLAN

Order calculation dates. This table contains a record identifying the projected date for every planned order.

Note: Planned orders are referenced in the ORDER table (see the Input tables section) as ORDTYPE 10. By setting PLANORDFG to Y in the ALTSCHED table, you can configure the Scheduler to consider planned orders in the scheduling calculation.

Column Name	Description	Type	Default Value	Constraint or Range
CALCDATE	Calculated completion date of the order (also referred to as the CTP date).	DATETIME	None	None
ORDERID	Order ID.	VARCHAR (key) (ApsOrderType)	None	None
DUEDATE	The demand date requested.	DATETIME	1753-01-01	None

ORDSUM

Order summary. Information used to generate the order summary report and graphs.

Column Name	Description	Type	Default Value	Constraint or Range
LATEAVG	Order lateness time average.	FLOAT	None	Any FLOAT
LATEMAX	Order lateness time maximum.	FLOAT	None	Any FLOAT
LATEMIN	Order lateness time minimum.	FLOAT	None	Any FLOAT
LATEOBS	Order lateness number of observations.	INTEGER	None	≥ 0
LATESD	Order lateness time standard deviation.	FLOAT	None	≥ 0.0
MKSPANAVG	Order make span time average.	FLOAT	None	≥ 0.0
MKSPANMAX	Order make span time maximum.	FLOAT	None	≥ 0.0
MKSPANMIN	Order make span time minimum.	FLOAT	None	≥ 0.0
MKSPANOBS	Order make span number of observations.	INTEGER	None	≥ 0
MKSPANSD	Order make span time standard deviation.	FLOAT	None	≥ 0.0
PROCAVG	Order processing time average.	FLOAT	None	≥ 0.0
PROCMAX	Order processing time maximum.	FLOAT	None	≥ 0.0
PROCMIN	Order processing time minimum.	FLOAT	None	≥ 0.0
PROCOBS	Order processing number of observations.	INTEGER	None	≥ 0
PROCSD	Order processing time standard deviation.	FLOAT	None	≥ 0.0
REPNO	Replicate number.	SMALLINT	None	> 0
TARDAVG	Order tardiness time average.	FLOAT	None	≥ 0.0
TARDMAX	Order tardiness time maximum.	FLOAT	None	≥ 0.0
TARDMIN	Order tardiness time minimum.	FLOAT	None	≥ 0.0
TARDOBS	Order tardiness number of observations.	INTEGER	None	≥ 0
TARDSD	Order tardiness time standard deviation.	FLOAT	None	≥ 0.0
WAITAVG	Order waiting time average.	FLOAT	None	≥ 0.0
WAITMAX	Order waiting time maximum.	FLOAT	None	≥ 0.0
WAITMIN	Order waiting time minimum.	FLOAT	None	≥ 0.0
WAITOBS	Order waiting number of observations.	INTEGER	None	≥ 0
WAITSD	Order waiting time standard deviation.	FLOAT	None	≥ 0.0

OSMATL

Outsourced Materials. Used only by the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
FLAGS	Flags that tell whether to plan components of purchased items. 0=plan all components 1=plan mfg. components only 2=plan purch. components only 3=skip all (don't plan components)	INTEGER	3	≥ 0
MATLERIALID	Material ID. Defines the items for this ORDERID that are purchased.	VARCHAR (key) (ApsMaterialType)	None	None
ORDERID	Order ID.	VARCHAR (key) (ApsOrderType)	None	None

PART

Items. Used only by the Scheduler.

Column Name	Description	Type	Default Value	Constraint or Range
DESCR	Description.	VARCHAR (ApsDescriptType)	(blank)	None
ENDMATLID	Name for the material inventory storage area for this item when it is completed. Leave this field blank.	VARCHAR (ApsMaterialType)	(blank)	None
FAMILY	ID used to group related items.	VARCHAR (ApsPartType)	(blank)	None
PARTID	Item ID.	VARCHAR (ApsPartType)	None	None
PERFFG	Output flag—collect performance data for this item? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
PROCPLANID	ID of the routing used to manufacture this item.	VARCHAR (ApsProcplanType)	(blank)	None
PTTABLE	Lookup table for this item.	VARCHAR (ApsLTableType)	(blank)	None

Column Name	Description	Type	Default Value	Constraint or Range
STRTMATLID	Name for the raw material required for this item. Leave this field blank.	VARCHAR (ApsMaterialType)	(blank)	None
SUBFAMILY	ID used to group related items.	VARCHAR (ApsPartType)	None	None
SUMFG	Output flag—collect load performance data for this item? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N

PARTSUM

Item summary. Information used to generate the item summary report and graphs.

Column Name	Description	Type	Default Value	Constraint or Range
LATEAGV	Item lateness average.	FLOAT	None	Any FLOAT
LATEMAX	Item lateness maximum.	FLOAT	None	Any FLOAT
LATEMIN	Item lateness minimum.	FLOAT	None	Any FLOAT
LATEOBS	Item lateness number of observations.	INTEGER	None	≥ 0.0
LATESD	Item lateness standard deviation.	FLOAT	None	Any FLOAT
MKSPANAVG	Load make span time average.	FLOAT	None	≥ 0.0
MKSPANMAX	Load make span time maximum.	FLOAT	None	≥ 0.0
MKSPANMIN	Load make span time minimum.	FLOAT	None	≥ 0.0
MKSPANOBS	Load make span number of observations.	INTEGER	None	≥ 0.0
MKSPANSD	Load make span time standard deviation.	FLOAT	None	≥ 0.0
PARTID	Item ID.	VARCHAR (ApsPartType)	None	None
PIPAVG	Number of items in process average.	FLOAT	None	≥ 0.0
PIPMAX	Number of items in process maximum.	FLOAT	None	≥ 0.0
PIPMIN	Number of items in process minimum.	FLOAT	None	≥ 0.0
PIPSD	Number of items in process standard deviation.	FLOAT	None	≥ 0.0
PROCAVG	Load processing time average.	FLOAT	None	≥ 0.0
PROCMAX	Load processing time maximum.	FLOAT	None	≥ 0.0
PROCMIN	Load processing time minimum.	FLOAT	None	≥ 0.0

Column Name	Description	Type	Default Value	Constraint or Range
PROCOBS	Load processing number of observations.	INTEGER	None	≥ 0.0
PROCSD	Load processing time standard deviation.	FLOAT	None	≥ 0.0
REPNO	Replicate number.	SMALLINT	None	> 0
WAITAVG	Load waiting time average.	FLOAT	None	≥ 0.0
WAITMAX	Load waiting time maximum.	FLOAT	None	≥ 0.0
WAITMIN	Load waiting time minimum.	FLOAT	None	≥ 0.0
WAITOBS	Load waiting number of observations.	INTEGER	None	≥ 0.0
WAITSD	Load waiting time standard deviation.	FLOAT	None	≥ 0.0

PBOM

Defines a bill of material. Used only by the Planner. You must also enter BOM information for work orders into the BOM table (for use by the Scheduler).

Column Name	Description	Type	Default Value	Constraint or Range
BOMID	Bill of Material ID.	VARCHAR (key) (ApsPbomType)	None	None
DESCR	BOM description.	VARCHAR	(blank)	None
EFFECTID	Name of the effectivity rule that specifies when to use this BOM. An effectivity rule is needed only when an item has multiple BOMs.	VARCHAR (ApsEffectType)	(blank)	None

PBOMMATLS

Planning BOM's component materials. Used only by the Planner. You must also enter BOM information for work orders in the BOM table (for use by the Scheduler).

Column Name	Description	Type	Default Value	Constraint or Range
ALTID	Alternate item group identifier. This ID defines a set of alternate items for this bill of material. Any items with the same MERGETO point and the same ALTID are considered to be a set of alternate items.	INTEGER	0	0-999999999
BOMFLAGS	BOM flags (defines BOM/item association). 0=normal quantity 1=per lot quantity	INTEGER	0	≥ 0
BOMID	Bill of Material ID.	VARCHAR (key) (ApsPbomType)	None	None
EFFDATE	The date from which this material is to be included in the BOM.	DATETIME	1900-01-01	None
MATLERIALID	Material ID of a BOM child item.	VARCHAR (ApsMaterialType)	None	None
MERGEFROM	Merge from point. If a selected item is a child item, this field shows the operation in the child item's route (the number of the step in the process) where it becomes available to the parent. This field is set automatically to the child item's last operation, when the child item is added to the bill.	INTEGER	999	1-999999
MERGETO	Merge to point. The parent item operation (step number in the process) where the component or material is required.	INTEGER	1	1-999999
OBSDATE	The date after which this material is no longer part of the BOM.	DATETIME	9999-01-01	None
QUANTITY	BOM item quantity.	FLOAT	1	None
REFORDERID	When the bill of material item is cross-referenced to a supply order or replenishment demand order, this field contains the ID of the cross-referenced order.	VARCHAR (ApsOrderType)	(blank)	None

Column Name	Description	Type	Default Value	Constraint or Range
SCRAP	Scrap quantity (known quantities of scrap components during assembly that the system will never report in scrap transactions).	FLOAT	0	≥ 0
SEQNO	Number that identifies a row in the database, used in the situation where a particular material is used more than once in a BOM. When transferring data to APS, initialize this number to zero and increment it for each record. Or you can initialize it to zero each time the BOMID changes.	INTEGER (key)	0	0-999999999
SHRINK	Shrinkage factor (percentage of quantity to be scrapped during assembly).	FLOAT	0	≥ 0 and < 100

PLANINT

Contains the Planning Intervals definitions. The Scheduler uses this information to create load profile output data.

Column Name	Description	Type	Default Value	Constraint or Range
DESCR	Description	VARCHAR (ApsDescriptType)	(blank)	None
NUMUNITS	Number of units.	SMALLINT	1	≥ 1
SEQNUM	Sequence number.	SMALLINT (key)	0	≥ 0
UNITCD	Unit code.	CHAR(1) (ApsCodeType)	W	D=Day M=Month W=Week

POEXCEPT

Contains exception messages for planning orders.

Column Name	Description	Type	Default Value	Constraint or Range
ORDERID	The order ID of the order to move in or out.	VARCHAR (ApsOrderType)	None	None
MESGTYPE	The exception message type. 1=Move PO In 2=Move PO Out 3=PO not needed 4=Safety stock order for manufactured item is late	SMALLINT	None	1-3
NEWDATE	The date you should change the order's due date to.	DATETIME	None	None

PROBDEF

Project problem configuration table. Defines the output data the Scheduler should collect for running reports, for all alternatives. Used only by the Scheduler.

Column Name	Description	Type	Default Value	Constraint or Range
CURRENTFG	Problem configuration.	CHAR(1) (ApsFlagType)	N	Y/N
LOADPERF	Load performance data.	CHAR(1) (ApsFlagType)	N	Y/N
GANTTFG	Gantt chart data.	CHAR(1) (ApsFlagType)	N	Y/N
MATLLVFG	Material levels.	CHAR(1) (ApsFlagType)	N	Y/N
MATLQUEFG	Material queue length data.	CHAR(1) (ApsFlagType)	N	Y/N
MATLSUMFG	Material summary data.	CHAR(1) (ApsFlagType)	N	Y/N
MATLWAITFG	Material waiting times.	CHAR(1) (ApsFlagType)	N	Y/N
OSRAWFG	Observed statistics-raw data.	CHAR(1) (ApsFlagType)	N	Y/N
OSSUMFG	Observed statistics-summary data.	CHAR(1) (ApsFlagType)	N	Y/N

Column Name	Description	Type	Default Value	Constraint or Range
ORDPERFFG	Order performance data.	CHAR(1) (ApsFlagType)	N	Y/N
ORDSUMFG	Order summary data.	CHAR(1) (ApsFlagType)	N	Y/N
PRTPRFFG	Item performance data.	CHAR(1) (ApsFlagType)	N	Y/N
PRTSUMFG	Item summary data.	CHAR(1) (ApsFlagType)	Y	Y/N
DESCR	Problem configuration description.	VARCHAR (ApsDescriptType)	none	
RESQUEFG	Resource queue length data.	CHAR(1) (ApsFlagType)	N	Y/N
RESSTAFG	Resource states data.	CHAR(1) (ApsFlagType)	N	Y/N
RESSUMFG	Resource summary data.	CHAR(1) (ApsFlagType)	N	Y/N
RESWAITFG	Resource waiting times.	CHAR(1) (ApsFlagType)	N	Y/N
RESGRQUFG	Resource group queue length data.	CHAR(1) (ApsFlagType)	N	Y/N
RESGRSUMFG	Resource group summary data.	CHAR(1) (ApsFlagType)	N	Y/N
RESGRUTFG	Resource group utilization data.	CHAR(1) (ApsFlagType)	N	Y/N
RESGRWTFG	Resource group waiting times.	CHAR(1) (ApsFlagType)	N	Y/N

PROCPLN

Attributes of a routing and the first operation in the routing. Each JOBSTEP record identifies its routing; therefore, refer to the JOBSTEP table to determine the remaining operations associated with a routing.

Column Name	Description	Type	Default Value	Constraint or Range
DESCR	Routing description.	VARCHAR (ApsDescriptType)	(blank)	None
EFFECTID	Effectivity ID.	VARCHAR (ApsEffectType)	(blank)	None
FIRSTJS	First operation in this routing.	VARCHAR (ApsJobstepType)	None	None
PROCPLANID	Name of routing.	VARCHAR (key) (ApsProcplanType)	None	None
SCHEDONLYFG	Scheduler only routing?	CHAR(1) (ApsFlagType)	N	Y/N

RGRP

Resource groups/categories. A resource group allows you to classify resources that can perform the same function as a group, without member resources losing their individual identity. The system can use a resource group when a load on an operation needs a resource from a group of resources, but does not need a specific resource in the group. The system selects a resource from the resource group and gives it to the load. The member resources may be working different shifts, have different current setups, or have different processing rates.

Column Name	Description	Type	Default Value	Constraint or Range
ALLOCATR	Member selection attribute.	VARCHAR (ApsAttribType)	(blank)	None
ALLOCRL	Member selection rule. Used for selecting a particular resource member from among other members. See Resource Group Member Selection Rules on page 116.	SMALLINT	0	0-39

Column Name	Description	Type	Default Value	Constraint or Range
BUFFERIN	Category buffer in. A pre-operation delay in hours. This delay must occur before an order can begin processing any operation requiring this resource category. Delay of the order begins when it completes the previous operation. During the buffer-in time, the delayed job does not utilize resources in this resource group.	FLOAT	0	0 to 999999
BUFFEROUT	Category buffer out. A post-operation delay in hours. This delay must occur after an order completes processing any operation requiring this resource category. The order must undergo the delay before it can start processing at the next operation. During the buffer-out time, the delayed job does not utilize resources in this resource group. The Planner uses the sum of this time and the largest of the categories' post-buffer times to calculate the total post-buffer time.	FLOAT	0	0 to 999999
DESCR	Resource group description.	VARCHAR (ApsDescriptType)	(blank)	None
FLAGS	Use queue time while infinite? 0=Do not use 1=Use queue time while infinite 2=Allow resource reallocation 3=Use queue time while infinite AND allow resource reallocation	INTEGER	1	≥ 0
INFCAP	Infinite capacity after. After this number of hours, the resource has infinite on-shift capacity and is not constraining. At that time, the system schedules the first resource in the category for all work, perhaps performing many planned tasks at once. If set to 0, resources are infinitely available. Default setting is 999999, which means resources are finitely available.	FLOAT	999999	999999
INFINITEFG	Infinite resource group flag—does this resource group have infinite capacity? Y=Resource group has infinite capacity N=Resource group has finite capacity based on the defined member resources (RESID1-20) (Used only by the Scheduler)	CHAR(1) (ApsFlagType)	N	Y/N
LOADFG	Output Flag—Load profile report flag. Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N

Column Name	Description	Type	Default Value	Constraint or Range
QUEFG	Output Flag—collect queue length data for this category in the RGRPQLN table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
REALLOCFG	Allocate another resource from the group to a load that has lost the original allocation due to an interruption?	CHAR(1) (ApsFlagType)	N	Y/N
RGID	Name of resource group.	VARCHAR (key) (ApsResgroup Type)	None	None
SLTYPE	Resource group type (used by Infor CloudSuite integration).	CHAR(1) (ApsCodeType)	M	M=Machine L=Labor
SUMFG	Output flag — allow summary date for this category in the RGRPQLN table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
UTILFG	Output flag — collect utilization data for this category in the RGRPUT table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
WAITFG	Output flag — collect waiting time data for this category in the RGRPQT table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N

RGRPMBR

Resource members of a resource group.

Column Name	Description	Type	Default Value	Constraint or Range
RGID	Resource group ID.	VARCHAR (ApsResgroup Type)	None	None
RESID	Resource ID that is a member of the resource group specified in the RGID column.	VARCHAR (ApsResource Type)	None	None
SEQNO	A number that represents the sequence in which this member resource appears in the list. The "Select in Sequence" and "Cyclic" allocation rules (in RGRP.ALLOCRL) use this number to determine which resource to allocate.	INTEGER	None	None

RELRECS

This table is populated automatically when you create a database and does not require any intervention.

RESATTR

Resource attributes. Used only by the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
ATTID	Resource attribute ID.	VARCHAR (key) (ApsAttribType)	None	None
ATTVALUE	Resource attribute value. Describes a characteristic of a resource.	VARCHAR (ApsAttvalType)	(blank)	None
RESID	Resource ID.	VARCHAR (key) (ApsResourceType)	None	None

RESLOAD

Profile of the resource load by planning period.

Column Name	Description	Type	Default Value	Constraint or Range
BACKLOG	Backlog.	FLOAT	None	None
CUMCAP	Cumulative capacity from the beginning of the Scheduler run to the end of the planning interval.	FLOAT	None	None
CUMLOAD	Cumulative hours the resource was loaded from the beginning of the Scheduler run to the end of the planning interval.	FLOAT	None	None
LOADHOURS	Number of hours the resource was loaded within the planning interval.	FLOAT	None	None
MAXHOURS	Maximum possible hours in the planning interval.	FLOAT	None	None
NUMDAYS	Number of days in the planning interval.	SMALLINT	None	None
PLNHOURS	Number of planning hours (the hours the resource is actually available when shift exceptions are considered).	FLOAT	None	None

Column Name	Description	Type	Default Value	Constraint or Range
RESID	Resource ID.	VARCHAR (Aps ResourceType)	None	None
STARTDATE	Start of the planning interval.	DATE	None	None
STDHOURS	Standard hours the resource is available in the planning interval (through standard shifts).	FLOAT	None	None
TIMEBLK	Time the resource was blocked.	FLOAT	None	None
TIMEIDLE	Time the resource was idle.	FLOAT	None	None
TIMEOFF	Time the resource was off-shift.	FLOAT	None	None
TIMEPROC	Time the resource was processing.	FLOAT	None	None
TIMESETUP	Time the resource was being set up.	FLOAT	None	None

RESPAIR

Lists of invalid resource pairs. An invalid pair is two resources that cannot be used on the same operation.

Column Name	Description	Type	Default Value	Constraint or Range
RESID	The first resource in the invalid pair.	VARCHAR	None	None
PAIRRESID	The second resource in the invalid pair.	VARCHAR	None	None

RESPLAN

Resource plans. This table contains a record for every resource consumed in the plan.

Column Name	Description	Type	Default Value	Constraint or Range
ENDDATE	End date/time of resource usage.	DATETIME	None	None
FLAGS	Inventory plan flags. All other resources for this operation use the same flag. See the Schedule Flags table on page 1-124.	INTEGER	None	0-67108863

Column Name	Description	Type	Default Value	Constraint or Range
GROUPID	Resource group ID.	VARCHAR (Aps ResgroupType)	None	None
JOBTAG	ID of the operation (operation) in the plan (for joining with JOBPLAN).	INTEGER (key)	None	None
RESID	Resource ID.	VARCHAR (key) (Aps ResourceType)	None	None
STARTDATE	Start date/time of resource usage.	DATETIME	None	None

RESRC

Information about resources (machines, crew, or fixtures).

Column Name	Description	Type	Default Value	Constraint or Range
ALLOCCD	Allocation code. Determines the system's action when the resource is interrupted during operation processing. Other factors affect this action, including whether the resource was allocated from a group, and what the HOLDTEMPFG flag on the operation is set to. P=Permanent T=Temporary	CHAR(1) (ApsCodeType)	P	P,T
DESCR	Resource description.	VARCHAR (ApsDescriptType)	(blank)	None
EMAIL	The email address to receive dispatch lists for this resource from the APS Planner. Each resource can have a different email address, or you can specify a global email address for all resources (and all planned orders for items) in the ALTPLAN.EMAIL field. For more information about dispatch list messaging, see the *APS Integration Guide.*	VARCHAR	(blank)	None
FINALQFG	Output flag—collect final queue data for this resource in the RESQ table? Use the default value for this field.	CHAR(1) (ApsFlagType)	N	Y/N

Column Name	Description	Type	Default Value	Constraint or Range
INFINITEFG	This field specifies this resource as having infinite capacity while on shift. The Scheduler selects the resource to perform the jobstep and creates the appropriate load records; however, it does not constrain the jobstep based on other work the resource may have in its queue.	CHAR(1) (ApsFlagType)	N	Y/N
JSSETUP	Operation this resource was initially set up for.	VARCHAR (ApsJobstepType)	(blank)	None
LOADFG	Output flag— Collect load profile data for this resource in the RESLOAD table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
MAXORUN	The time (in hrs.) this resource may work on the current load beyond the end of a shift. See also SHIFT.OVERRUNFG	FLOAT	0	≥ 0.0
MSGFG	This field enables or disables the dispatch list messaging functionality. Select the type of messaging to perform using the ALTPLAN. UIFLAGS parameter. For more information about automated messaging with APS, see the *APS Integration Guide*.	CHAR(1) (ApsFlagType)	N	Y/N
MUSTCOMPFG	Must an operation on this resource complete by the end of the shift?	CHAR(1) (ApsFlagType)	N	Y/N
ORDRSETUP	Order that this resource was initially set up for.	VARCHAR (ApsOrderType)	(blank)	None
OTMULT	Multiplier used to adjust the labor cost of any overtime period this resource encounters. Use the default value for this field.	FLOAT	1	≥ 0.0
PARTSETUP	Item this resource was initially set up for.	VARCHAR (ApsPartType)	(blank)	None
QUEFG	Output flag. Collect output queue length data for this resource in the RESTATE table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
RESID	Resource ID. A resource is considered always available if no shifts are assigned to it.	VARCHAR (key) (Aps ResourceType)	None	None

Column Name	Description	Type	Default Value	Constraint or Range
RESTYPE	Resource type description. You can use it to create a highlight in the APS Analyzer Gantt chart to highlight bars belonging to a particular resource type. For example: Fixture, Machine, Operator, etc.	VARCHAR (ApsRestypeType)	Machine	None
SCHEDFG	Output flag — collect schedule data for this resource in the RESSCHD table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
SELRL	Rule that controls how requests for this resource are selected. See Resource Request Selection Rules on page 1-119.	SMALLINT	0	0-39
SELVALUE	Selection value, used with SELRL.	FLOAT	0	None
SEQATRID	A load's attribute, used with SEQRL.	VARCHAR (ApsAttribType)	(blank)	None
SEQRL	Rule that controls how requests for this resource are sequenced in the request queue. During operation processing, if the system cannot allocate a required resource to a load, a request for it goes in the request queue. See Resource and Material Request Queue Sequencing Rules on page 117.	SMALLINT	0	0-39
SETUPDEL	Number of hours allowed to pass before selecting a non-zero setup time request.	FLOAT	0	None
SHIFTID1-SHIFTID4	Shifts on which the resource is placed.	VARCHAR (ApsShiftType)	(blank)	None
STATEFG	Output flag — collect state data for this resource in the RQLN table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
SUMFG	Output flag — collect summary data for this resource in the RESSUM table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N
SUPER	Super resource? A super resource is capable of performing an infinite number of tasks during on-shift time.	CHAR(1) (ApsFlagType)	N	Y/N
WAITFG	Output flag — collect waiting time data for this resource in the RQLN table? Use the default setting for this field.	CHAR(1) (ApsFlagType)	Y	Y/N

RESSCHD

Resource schedules. This table represents the operations the Scheduler has scheduled and the resources those operations have allocated. Each row indicates a period of time in which a resource is allocated to a load. There can be multiple resource schedule records for a single operation occurrence (for example, in the case of a shift interrupt and resume). When the end of setup occurs, the Scheduler writes a resource schedule record with an ENDCD of U for any allocated resources. The resource schedule record for the operate portion of the operation will have a corresponding STARTCD of U.

Column Name	Description	Type	Default Value	Constraint or Range
ENDCD	The status at the ending of the allocation. A=Normal free of a "free after" resource B=Normal free of a "free before" resource F=Normal free H=Resource held over to next operation I=Resource freed due to an interruption P=Resource freed due to end of run U=End of setup portion of a type 19 operation	CHAR(1)	None	A,B,F,H,I,P,U
ENDDATE	The date and time the Scheduler ended allocating this resource to this operation.	DATETIME	None	None
GROUPID	Resource group ID.	VARCHAR (Aps ResgroupType)	None	None
JOBTAG	Job tag identifying a specific operation in a routing.	INTEGER	None	None
RESID	Resource ID.	VARCHAR (Aps ResourceType)	None	None
SEQNUM	Sequence number of this JOBTAG within a set of JOBTAGS or within the entire table.	INTEGER	None	None
STARTCD	Status at the beginning of the allocation. A=Allocate K=Keep (resource being held from a previous operation) P=Allocated by an in-process load (at the start of the run) R=Resumed from an interruption U=Start of operate portion after the setup portion for a type 19 operation X=Resumed from an interruption that occurred at the start of the run	CHAR(1) (ApsCodeType)	None	A,K,P,R,U,X

Column Name	Description	Type	Default Value	Constraint or Range
STARTDATE	The date and time the Scheduler started allocating this resource to this operation.	DATETIME	None	None
STATUSCD	Resource status code. S=Setup O=Operate	CHAR(1) (ApsCodeType)	None	S,O

RESSEND

Lists of invalid resource sends. An invalid send is a resource that cannot be used on any operation following an operation where the other resource is used (resources that cannot be used in a series of two operations). For example, resource B cannot receive items in a downstream operation from resource A.

Column Name	Description	Type	Default Value	Constraint or Range
RESID	The first resource in the invalid send.	VARCHAR	None	None
SENDRESID	The second resource in the invalid send.	VARCHAR	None	None

RESSUM

Resource summary. General data used to generate resource summary report and graphs.

Column Name	Description	Type	Default Value	Constraint or Range
BREAKAVG	Breakdown time average.	FLOAT	None	≥ 0.0
BREAKMAX	Breakdown time maximum.	FLOAT	None	≥ 0.0
BREAKMIN	Breakdown time minimum.	FLOAT	None	≥ 0.0
BREAKOBS	Breakdown time number of observations.	INTEGER	None	≥ 0
BREAKSD	Breakdown time standard deviation.	FLOAT	None	≥ 0.0
CURSTATE	Current resource state.	SMALLINT	None	≥ 0
ENDQLEN	Current queue length.	FLOAT	None	≥ 0.0
MAINTAVG	Maintenance time average.	FLOAT	None	≥ 0.0
MAINTMAX	Maintenance time maximum.	FLOAT	None	≥ 0.0
MAINTMIN	Maintenance time minimum.	FLOAT	None	≥ 0.0

Column Name	Description	Type	Default Value	Constraint or Range
MAINTOBS	Maintenance time number of observations.	INTEGER	None	≥ 0
MAINTSD	Maintenance time standard deviation.	FLOAT	None	≥ 0.0
MAXQLEN	Queue length maximum.	FLOAT	None	≥ 0.0
MAXQTIME	Waiting time maximum.	FLOAT	None	≥ 0.0
MEANQLEN	Queue length average.	FLOAT	None	≥ 0.0
MEANQTIM	Waiting time average.	FLOAT	None	≥ 0.0
MINQLEN	Queue length minimum.	FLOAT	None	≥ 0.0
MINQTIME	Waiting time minimum.	FLOAT	None	≥ 0.0
NJOBSPR	Number of jobs processed.	INTEGER	None	≥ 0.0
NLOADSWT	Waiting time number of observations.	INTEGER	None	≥ 0.0
ONSHFTUTIL	On-shift utilization (TIMEPROC/ TIMEONSHIFT).	FLOAT	None	≥ 0.0
OVERAVG	Overtime average.	FLOAT	None	≥ 0.0
OVERMAX	Overtime maximum.	FLOAT	None	≥ 0.0
OVERMIN	Overtime minimum.	FLOAT	None	≥ 0.0
OVEROBS	Overtime number of observations.	INTEGER	None	≥ 0.0
OVERSD	Overtime standard deviation.	FLOAT	None	≥ 0.0
REPNO	Replicate number.	SMALLINT	None	> 0
RESID	Resource ID.	VARCHAR (Aps ResourceType)	None	None
SDQLEN	Queue length standard deviation.	FLOAT	None	≥ 0.0
SDQTIM	Waiting time standard deviation.	FLOAT	None	≥ 0.0
TIMEBLK	Time blocked (2).	FLOAT	None	≥ 0.0
TIMEBREAK	Time breakdown (4).	FLOAT	None	≥ 0.0
TIMEIDLE	Time idle (3).	FLOAT	None	≥ 0.0
TIMEMAINT	Time maintenance (5).	FLOAT	None	≥ 0.0
TIMEOFF	Time off-shift (6).	FLOAT	None	≥ 0.0
TIMEONSHFT	Total on-shift time for resource.	FLOAT	None	≥ 0.0
TIMEPROC	Time busy (0).	FLOAT	None	≥ 0.0
TIMESETUP	Time setup (1).	FLOAT	None	≥ 0.0

RGATTR

Resource group attributes.

Column Name	Description	Type	Default Value	Constraint or Range
ATTID	Resource group attribute ID.	VARCHAR (key) (ApsAttribType)	None	None
ATTVALUE	Attribute value. Describes a characteristic of a resource group.	VARCHAR (ApsAttvalType)	(blank)	None
RGID	Resource group ID.	VARCHAR (key) (Aps ResgroupType)	None	None

RGLOAD

Resource group load profile.

Column Name	Description	Type	Default Value	Constraint or Range
BACKLOG	Backlog.	FLOAT	None	None
CUMCAP	Cumulative capacity.	FLOAT	None	None
CUMLOAD	Cumulative load hours.	FLOAT	None	None
LOADHOURS	Load hours.	FLOAT	None	None
MAXHOURS	Maximum possible hours.	FLOAT	None	None
NUMDAYS	Number of days in interval.	SMALLINT	None	None
NUMMEMB	Number of members.	SMALLINT	None	None
PLNHOURS	Planned hours.	FLOAT	None	None
RGID	Resource group ID.	VARCHAR (Aps ResgroupType)	None	None
STARTDATE	Start of planning interval.	DATE	None	None
STDHOURS	Standard hours.	FLOAT	None	None
TIMEBLK	Time blocked.	FLOAT	None	None

Column Name	Description	Type	Default Value	Constraint or Range
TIMEFAIL	Time failed.	FLOAT	None	None
TIMEIDLE	Time idle.	FLOAT	None	None
TIMEOFF	Time off-shift.	FLOAT	None	None
TIMEPROC	Time processing.	FLOAT	None	None
TIMESETUP	Time being set up.	FLOAT	None	None

RGRPSUM

Resource group summary. Data used to generate the resource group summary report and graphs.

Column Name	Description	Type	Default Value	Constraint or Range
BLOCK	Time in blocked state (2).	FLOAT	None	≥ 0.0
BREAKD	Time in breakdown state (4).	FLOAT	None	≥ 0.0
BUSY	Time in busy state (0).	FLOAT	None	≥ 0.0
CURBLOCK	Current number in block state.	SMALLINT	None	≥ 0
CURBREAK	Current number in breakdown state.	SMALLINT	None	≥ 0
CURBUSY	Current number in busy state.	SMALLINT	None	≥ 0
CURIDLE	Current number in idle state.	SMALLINT	None	≥ 0
CURMAINT	Current number in maintenance state.	SMALLINT	None	≥ 0
CUROFF	Current number in off-shift state.	SMALLINT	None	≥ 0
CURQUE	Current queue length.	SMALLINT	None	≥ 0
CURSET	Current number in setup state.	SMALLINT	None	≥ 0
CURUTIL	Current resource group utilization (busy + blocked + setup).	SMALLINT	None	≥ 0
IDLE	Time in idle state (3).	FLOAT	None	≥ 0.0
MAINT	Time in maintenance state (5).	FLOAT	None	≥ 0.0
OFFSHFT	Time in off-shift state (6).	FLOAT	None	≥ 0.0
ONSHFTUTIL	On-shift resource utilization (sum of busy time for all resources in group / TIMEONSHFT).	FLOAT	None	≥ 0.0
QUEAVG	Queue length average.	FLOAT	None	≥ 0.0
QUEMAX	Queue length maximum.	FLOAT	None	≥ 0.0

Column Name	Description	Type	Default Value	Constraint or Range
QUEMIN	Queue length minimum.	FLOAT	None	≥ 0.0
QUESD	Queue length standard deviation.	FLOAT	None	≥ 0.0
REPNO	Replicate number.	SMALLINT	None	> 0
RGID	Resource group ID.	VARCHAR (Aps ResgroupType)	None	None
SETUP	Time in setup state (1).	FLOAT	None	≥ 0.0
TIMEONSHFT	Total time on shift for all resources in the group.	FLOAT	None	≥ 0.0
UTILAVG	Resource group utilization average.	FLOAT	None	≥ 0.0
UTILMAX	Resource group utilization maximum.	FLOAT	None	≥ 0.0
UTILMIN	Resource group utilization minimum.	FLOAT	None	≥ 0.0
UTILSD	Resource group utilization standard deviation.	FLOAT	None	≥ 0.0
WAITAVG	Waiting time average.	FLOAT	None	≥ 0.0
WAITMAX	Waiting time maximum.	FLOAT	None	≥ 0.0
WAITMIN	Waiting time minimum.	FLOAT	None	≥ 0.0
WAITOBS	Waiting time number of observations.	INTEGER	None	≥ 0
WAITSD	Waiting time standard deviation.	FLOAT	None	≥ 0.0

SCHEDOP

Scheduled operations (for scheduled work orders in which the resource usage is frozen for the Planner). Used only by the Planner.

Column Name	Description	Type	Default Value	Constraint or Range
ENDDATE	The date and time this allocation ends.	DATETIME	None	None
ENDFG	Last schedule record for this operation/ resource? The STARTFG and ENDFG fields specify the starting and ending blocks of time in which a resource is used for the operation.	CHAR(1) (ApsFlagType)	N	Y/N
GROUPID	Resource group ID through which the specified resource was allocated.	VARCHAR (ApsResgroup Type)	None	None

Column Name	Description	Type	Default Value	Constraint or Range
JSID	Operation being performed in this schedule event (the operation in which this resource is allocated).	VARCHAR (ApsJobstepType)	None	None
ORDERID	Order ID for this schedule event.	VARCHAR (key) (ApsOrderType)	None	None
RESID	Resource allocated in this schedule event.	VARCHAR (key) (ApsResourceType)	None	None
STARTDATE	The date and time this allocation begins.	DATETIME (key)	None	None
STARTFG	First schedule event for this operation/ resource?	CHAR(1) (ApsFlagType)	N	Y/N

SHIFT

Standard shifts or acquisition schedules. A shift specifies the set of shift intervals (time periods) used to determine when resources on that shift are “on” or available to perform operations. You must specify shifts in terms of weeks. This weekly pattern repeats for all weeks in the Planner or Scheduler time frame. A week starts Sunday morning at 00:00:00 and runs until Saturday at midnight. All resources within a week not specified with an interval period are assigned as down. Daily cycles do not automatically repeat. You must define each daily interval separately.

Column Name	Description	Type	Default Value	Constraint or Range
DESCR	Shift interval description.	VARCHAR (ApsDescriptType)	(blank)	None
EDAY	Code representing the day the shift/ calendar ends. 1=Sunday 2=Monday … 7=Saturday	SMALLINT	7	1-7
ETIME	Shift/calendar end time. Format: hh:mm[:ss]	CHAR(8)	24:00	00:00-24:00
MUSTCOMPFG	Must a resource using this interval complete in this period?	CHAR(1) (ApsFlagType)	Y	Y/N
OVERRUNFG	If Y, the MAXORUN field for a resource using this shift interval applies.	CHAR(1) (ApsFlagType)	Y	Y/N

Column Name	Description	Type	Default Value	Constraint or Range
PREMFG	Are labor resources on this shift considered premium labor?	CHAR(1) (ApsFlagType)	N	Y/N
SDAY	Code representing the day the shift/ calendar starts. 1=Sunday 2=Monday … 7=Saturday	SMALLINT (key)	1	1-7
SHIFTID	Shift ID.	VARCHAR (key) (ApsShiftType)	None	None
STIME	Shift/calendar start time. Format: hh:mm[:ss]	CHAR(8) (key)	00:00	00:00-24:00

SHIFTEXDI

Exception periods to the standard shifts for a particular resource. Use this table to define periods of work for a particular resource during normally down-shift periods or periods of down-time during normally up-shift periods.

Column Name	Description	Type	Default Value	Constraint or Range
DESCR	Shift exception description.	VARCHAR (Aps DescriptType)	(blank)	None Note: Default length for the equivalent ERDB field ShfCom permits only 1 character.
ENDDATE	Calendar end date and time when the RESORTYPE resource uses the shift specified in SHIFTID.	DATETIME	None	None
RESORTYPE	Resource that can be used by the shift specified in the SHIFTID field.	VARCHAR (Aps RestypeType)	None	Must be a resource ID
SHIFTEXID	Unique ID of shift exception.	VARCHAR (key) (ApsShiftexType)	None	None

Column Name	Description	Type	Default Value	Constraint or Range
SHIFTID	Shift ID of an existing shift that is "up" during the hours of the exception (for overtime exceptions). For example, say the RESORTYPE resource normally works on M-F, 7am - 3pm and you want it to work on SECOND shift (M-F, 3pm - 11pm) during the week of July 23-27. In this case, the SHIFTID should reference the SECOND shift (and the date range would be 7/23 00:00 - 7/27 24:00). For downtime exceptions, you must refer to a shift that is on the resource's list of standard shifts.	VARCHAR (ApsShiftType)	None	Must be an existing shift ID defined in the SHIFT table.
STARTDATE	Calendar start date and time when the RESORTYPE resource uses the shift specified in SHIFTID	DATETIME	None	None
TYPECD	Application type. Used only in the APS Analyzer Gantt Chart.	CHAR(1) (ApsCodeType)	R	R (only type R-Resource is supported)
WORKFG	Does the shift exception extend or reduce normal working hours? Y=Overtime N=Downtime	CHAR(1) (ApsFlagType)	N	Y/N

TODEMAND

This table contains a record for every transfer demand order for shipping to remote sites.

Column Name	Description	Type	Default Value	Constraint or Range
FLAGS	Remote order flags (will always be 0).	INTEGER	0	$\geq$ 0
LORDERID	Local transfer order ID.	VARCHAR (key) (ApsOrderType)	None	None
RORDERID	Remote (parent) order ID.	VARCHAR (ApsOrderType)	None	None
RSITEID	Site ID for remote order.	VARCHAR (ApsSiteType)	None	None

TOODP

Transfer OrderDashPart (naming of remote orders). This table contains a record for every OrderDashPart record. This table is used as a lookup table for remote order IDs. See Chapter 2, "Using APS in a Multi-Site Environment," in the *APS Integration Guide*, for more information about this table.

Column Name	Description	Type	Default Value	Constraint or Range
LORDERID	Local Order ID.	VARCHAR (key) (ApsOrderType)	None	None
LPARTID	Local item ID.	VARCHAR (key) (ApsPartType)	None	None
RORDERID	Remote order ID. Alias for TOODP.LORDERID and RORDERID. The actual remote order name used.	VARCHAR (key) (ApsOrderType)	None	None

TOSUPPLY

This table contains a record for every transfer supply order received from remote sites.

Column Name	Description	Type	Default Value	Constraint or Range
FLAGS	Remote order flags (will always be 0).	INTEGER	0	$\geq$ 0
LORDERID	Local parent order ID.	VARCHAR (key) (ApsOrderType)	None	None
RORDERID	Remote (parent) order ID. This column joins to MATLDELV.ORDERID.	VARCHAR (key) (ApsOrderType)	None	None
RSITEID	Site ID for remote order.	VARCHAR (ApsSiteType)	None	None

TRACELOG

Log file for trace (status) messages from a Scheduler run.

Column Name	Description	Type	Default Value	Constraint or Range
MSG	Trace message text.	VARCHAR (512)	None	None
MSGDATE	Date and time message was logged.	DATETIME	Simulation event	None
MSGTYPE	Message type. T=Trace message W=Warning E=Error	CHAR(1) (ApsCodeType)	None	T,W,E
SEQNUM	Sequence number that ensures trace records for the same scheduled time are sorted in the correct sequence.	INTEGER	None	None

WAIT

Waiting time for the Planner. This table contains a record for every lateness cause for every order in the plan. You must enable bit0 in the ALTPLAN.SSFLAGS field before running the Planner in order to capture this information.

Column Name	Description	Type	Default Value	Constraint or Range
DELAY	Duration of the delay in hours for the ITEMID.	FLOAT	None	None
ITEMCD	The reason for the lateness. G=A resource for this group was not available M=A necessary material was not available	CHAR(1) (key) (ApsCodeType)	None	G,M
ITEMID	Group ID or material ID that is causing the order to be late.	VARCHAR (key) (Aps MaterialType)	None	None
JSID	Operation ID that is being made late.	VARCHAR (key) (Aps JobstepType)	None	None
MATLTAG	Material tag – identifies the schedule record involved with the material consumption (for joining with MATLPLAN).	INTEGER (key)	None	None

Rules and Flags

Add-to-Material Request Selection Rules (MATL.ADDSELRL)

Code	Description
0	No selection rule; use the sequencing rule; consider all requests.
1	Use the sequencing rule dynamically; consider all requests.
2	Consider only the first load (request) ranked by the sequencing rule.
3	Consider only the first load (request) by applying the sequencing rule dynamically.
4	Consider only the first n loads (requests), where n is specified in MATL.ASELVAL.
5	Consider only the first n loads (requests) by applying the sequencing rule dynamically, where n is specified in MATL.ASELVAL.
6	Apply the sequencing rule dynamically, only consider requests having values less than MATL.ASELVAL. Note: If the sequencing rule for the request queue is a “high to low” value type rule (i.e., LIFO, Highest Attribute Value, High Priority, Long Any Jobstep, Long current Jobstep or Large Load) only requests with values greater than MATL.ASELVAL will be considered.
7	Select the request with the highest load priority. If tied, select the request with the smallest dynamic slack—dynamic slack is critical if it is less than the threshold specified for the material in MATL.ASELVAL.
8–39	User-defined rules.

Batch Override Rules (BATCH.OVERRL)

Code	Description
0	Time out (waiting exceeds value in OVTHRESH).
1	Dynamic slack is smaller than or equal to OVTHRESH.
2–39	User-defined rules.

Batch Release Rules (BATCH.QUANRL)

Code	Description
0	Count one per load.
1	Count the quantity in the load.
2	Count based on the attribute specified.
3	Count based on the number in the Value field.
4	Count based on the quantity in the load plus the number in the Value field.
5	Count based on the quantity in the load multiplied by the number in the Value field.
6	Count based on the specified attribute plus the quantity in the load.
7	Count based on the specified attribute multiplied by the quantity in the load.
8–39	User-defined rules.

Batch Separation Rules (BATCH.SEPRL)

Code	Description
0	Process all loads in the same batch.
1	Process each load for a part in a separate batch.
2	Process loads with part in different part families in different batches.
3	Process loads with part in different part subfamilies in different batches.
4	Process loads for part in batches according to the separation attribute.
5–39	User-defined rules.

Remove-from-Material Request Selection Rules (MATL.REMSELRL)

Code	Description
0	No selection rule; use the sequencing rule; consider all requests.
1	Use the sequencing rule dynamically; consider all requests.
2	Consider only the first load (request) ranked by the sequencing rule.
3	Consider only the first load (request) by applying the sequencing rule dynamically.

Code	Description
4	Consider only the first n loads (requests), where n is specified in **Remove Queue-Value.**
5	Consider only the first n loads (requests) by applying the sequencing rule dynamically, where n is specified in **Remove Queue-Value.**
6	Apply the sequencing rule dynamically, only consider requests having values less than **Remove** value type rule (i.e., LIFO, Highest Attribute Value, High Priority, Long Any Operation, Long Current Operation or Large Load) only requests with values greater than **Remove Queue-Value** will be considered.
7	Select the request with the highest load priority. If tied, select the request with the smallest dynamic slack—dynamic slack is critical if it is less than the threshold specified for the material in the **Remove Queue-Value** field.
8–39	User-defined rules.

Order Priority Rules (OPRULE.RULETYPE)

Code	Description
0	The remaining orders are next, sorted by arrival date
1	The remaining orders are next, sorted by request date
2	The remaining orders are next, sorted by promise date
3	The remaining orders are next, sorted alphabetically
4	This order is next
5	The orders in this order group are next, subsorted as listed in the order group
6	As last, but subsorted by arrival date
7	As last, but subsorted by request date
8	As last, but subsorted by promise date
9	As last, but subsorted alphabetically
10	Orders in this order category are next, subsorted by arrival date
11	As last, but subsorted by request date
12	As last, but subsorted by promise date
13	As last, but subsorted alphabetically
14	Orders with this property are next, subsorted by arrival date
15	As last, but subsorted by request date
16	As last, but subsorted by promise date
17	As last, but subsorted alphabetically
18	Orders whose property values are greater than the SeqRuleValue are next, subsorted by arrival date
19	As last, but subsorted by request date
20	As last, but subsorted by promise date
21	As last, but subsorted alphabetically
22	Orders for this customer are next, subsorted by arrival date
23	As last, but subsorted by request date
24	As last, but subsorted by promise date
25	As last, but subsorted alphabetically

Order Release Rules (ALTSCHED.ORDRELRL)

Code	Description
0	High priority loads.
1	Low priority loads.
2	Earliest order due date.
3	Least number of operations.
4	Least estimated processing time.
5	Least static slack (remaining time to due date).
6	Least average static slack per Operations (static slack/number of operations).
7	Least average static slack per processing time (static slack/processing time).
8	Smallest order size.
9	Largest order size.
10-39	User-defined rules.

Effectivity Rules (EFFECT.CONDITION)

When evaluating effectivities, APS always considers the effectivity date range (STARTDATE/ENDDATE). Use the CONDITION field to add a secondary condition beyond the date (rules 0 through 10). To use only the date range effectivity, use rule 11. To ignore the date range and only use a rule (0-10), use a large date range such as 1/1/1980 to 1/1/2030.

Code	Description
0	Order ID = Value.
1	Order ID ≥ Value.
2	Order Attribute ID and Attribute Value = Value.
3	Order Attribute ID and Attribute Value ≥ Value.
4	Order Group ID = Value.
5	Order Category = Value.
6	Order Attribute ID and Attribute Value < Value.
7	Order Group ID ≥ Value.
8	Order Category > Value.
9	Line Item Quantity ≥ Value.
10	Line Item Quantity < Value.

Code	Description
11	Always evaluate to true.

You can configure type 3 to use up discontinued components with a value such as SERNO 200060 (use this new bill of material only if the order's first serial number is greater than or equal to 200060). For types 2, 3, and 6, the effectivity value is really an "id value," so use leading zeros on all attribute values since 20 will sort greater than 100. Use 020 and 100.

Resource, Resource Group, and Material Allocation Rules (JOBSTEP.ALLOCRL)

Code	Description
0	All/any sequence. Allocate all resources and resource groups in any order, one at a time, as they become available.
1	All/in specified sequence. Allocate all resources and resource groups in the order specified, one at a time, as they become available.
2	All/group. Allocate all resources and resource groups specified together as a group, but don't allocate until all are available.
3	All/items. Allocate resources, resource groups, and materials all at once when they become available.
4	All/group/order integrity[2]. Allocate all resources and resource groups specified together as a group, but don't allocate until all are available, and maintain order integrity on the first resource[1] listed.
5	All/group/order-operation integrity[2]. Allocate all resources and resource groups specified together as a group, but don't allocate.
6	All/group/item integrity[3]. Allocate all resources and resource groups specified together as a group, but don't allocate until all are available, and maintain item integrity on the first resource[1] listed.
7	All/group/item-operation integrity[3]. Allocate all resources and resource groups specified together as a group, but don't allocate until all are available, and maintain item integrity, at the operation, on the first resource[1] listed.
8	One. Allocate any one of the resources and resource groups specified when available.
9	One/item. Allocate any one of the resources and resource groups, as well as the materials specified, when available.
10	All/group/queue. Allocate all resources and resource groups specified together as a group, but don't allocate until all are available. When a load arrives at the operation, force it into the appropriate resource queues. This ensures that the Resource Selection rule considers all applicable loads.

Code	Description
11	All/items/queue. Allocate resources, resource groups, and materials all at once when they become available. When a load arrives at the operation, force it into the appropriate resource, add-to-material, and remove-from-material queues. This ensures that the selection rules consider all applicable loads.
12-39	User defined.

[1]"The first resource listed" means *single-capacity* resource only. In addition, for the item and order integrity rules, the resource must be set up for the item; that is, have undergone a non-zero setup time which changed its setup status.

[2]Integrity is defined as allocating all known loads with some defined characteristic, before allocating any other loads. For order integrity this means that all loads of an order will be allocated before loads of any other orders. Order integrity rules are based on the number of loads which enter the system via orders. Any processing which changes the number of loads (i.e., Accumulate/Split, Produce (load)) prior to an operation employing these allocation rules could cause the system to gridlock. Also, mixing Order Integrity and Order-Operation Integrity rules for a single resource can cause gridlock.

[3]Integrity is defined as allocating all known loads with some defined characteristics before allocating any other loads. For item integrity this means that all known loads (loads that have entered the system) will be allocated before other loads. The item integrity rules are based on the number of items in the system. Any processing which changes the number of items in a load (i.e., Change-Load-Size) prior to an operation which employs these allocation rules could cause the system to gridlock. Also, mixing Item Integrity and item-Operation Integrity rules for a single resource can cause gridlock.

Operation Step Time Rules (JOBSTEP.STEPEXPRL)

Code	Description
0	Total operation time. Total operation time is determined by evaluating the expression in JOBSTEP.STEPEXP or JS19VR.STIMEXP (as applicable).
1	Item cycle time. Expression is cycle time per item.
2	Routing lookup table (per load). Use time from item lookup table, organized by: routing, jsid (per load).
3	Routing lookup table (per item). Use time from item lookup table, organized by: routing, jsid (per item).
4	Setup lookup table. Use lookup table specified in JS19VR.TABID, where the “from” and “to” strings are determined by the option specified in JS19VR.BASEDCD.
5	Fixed setup time. Use time expression specified in JOBSTEP.STEPEXP or JS19VR.STIMEXP (as applicable).
6	Move lookup table. Used internally.
7	Loads per hour.
8	Items per hour.
9	Pre setup table. Use lookup table specified in JS19VR.TABID, where the “from” and “to” strings are determined by the option specified in JS19VR.BASEDCD and adjust setup time by subtracting idle time prior to event.
10	Pre setup fixed. Use time expression specified in JOBSTEP.STEPEXP or JS19VR.STIMEXP (as applicable) and adjust setup time by subtracting idle time prior to event.
11-39	User defined.

Resource Group Member Selection Rules (RGRP.ALLOCRL)

Code	Description
0	Select the required number of members/resources searching in the sequence that the resource group members are listed in the group definition.
1	Select the number of members/resources that are reserved for this order. If the required number is not available, then available members/resources are chosen based on least current utilization. *Note:* The member /resource must undergo a non-zero time setup when the order being processed changes.
2	Select randomly the number of required members/resources.
3	Select the number of members/resources that have the least mean utilization. Ties are broken based on the order that resource group members are listed.

Code	Description
4	Select the number of members/resources that have the minimum setup time for the first downstream operation. Ties are broken based on the order the resource group members are listed.
5	Select the number of members/resources cyclically starting with the next resource listed after the previously selected one, and select the appropriate number of available members/resources.
6	Select the member/resource that has had the longest continuous idle period prior to this request.
7	Select the member/resource with index equal to the number in the RGRP.ALLOCATR field. If that member/resource is unavailable, wait for it. *Note:* A resource group member's "index" comes from the order resources that are listed in the group definition.
8–39	User-defined rules.

Resource and Material Request Queue Sequencing Rules (RESRC.SEQRL and MATL.ADDSEQRL)

Code	Description
0	Defaults to global sequencing rule (ALTSCHED.GLBSEQRL).
1	First to arrive.
2	Last to arrive.
3	High priority loads.
4	Low priority loads.
5	Earliest order due date.
6	Earliest order release date.
7	Shortest time for current operation.
8	Longest time for current operation.
9	Longest time for any subsequent operation.
10	Least number of remaining operations.
11	Least estimated remaining processing time.
12	Least static slack (remaining time to due date).
13	Least average static slack per remaining operations (static slack / remaining no. of operations).

Code	Description
14	Least average static slack per remaining processing time (static slack / remaining process time).
15	Least dynamic slack (remaining time to due date minus the remaining processing time).
16	Least average dynamic slack per remaining operations (dynamic slack / number of remaining operations).
17	Least average dynamic slack per remaining processing time (dynamic slack / remaining processing time).
18	Adjust dynamic slack to more heavily weight the loads in danger of becoming late (if dynamic slack ≥ 0, then divide by remaining processing time, else multiply by remaining processing time).
19	Smallest load size.
20	Largest load size.
21	High value of a specified attribute.
22	Low value of a specified attribute.
23	Due date minus the remaining processing time.
24–39	User-defined rules.

Resource Request Queue Selection Rules (RESRC.SELRL)

Code	Description
0	No selection rule; use the sequencing rule; consider all requests.
1	Use the sequencing rule dynamically; consider all requests.
2	Calculate minimum setup time for this resource based on the first downstream setup operation; consider all requests.
3	Consider requests for loads from the same order the machine is currently set up for, if any such loads exist. If none exist, the sequencing rule is applied dynamically, and the entire list is considered.
4	Consider only the first load (request) ranked by the sequencing rule.
5	Consider only the first load (request) by applying the sequencing rule dynamically.
6	Consider only the first load (request) by applying minimum setup.
7	Consider only the first *n* loads (requests), where *n* is specified in RESRC.SELVALUE.
8	Consider only the first *n* loads (requests) by applying the sequencing rule dynamically, where *n* is specified in RESRC.SELVALUE.
9	Consider only the first *n* loads (requests) by applying minimum setup, where *n* is specified in RESRC.SELVALUE.
10	Apply the sequencing rule dynamically, only consider requests having values less than or equal to RESRC.SELVALUE. *Note:* If the sequencing rule for the request queue is a “high to low” value type rule (i.e., LIFO, Highest Attribute Value, High Priority, Long Any Operation, Long Current Operation or Large Load) only requests with values *greater than* RESRC.SELVALUE will be considered.
11	Select the request with the highest load priority. If tied, select the request with the smallest dynamic slack—dynamic slack is critical if it is less than the threshold specified for the resource in RESRC.SELVALUE. If tied, select the request with minimum downstream setup.
12	After allocating *n* loads under the same setup, select the non-zero setup time request[1] with minimum downstream setup, where *n* is specified in RESRC.SELVALUE.
13	After allocating *n* loads under the same setup, select the non-zero setup time request[1] with the longest waiting time, where *n* is specified in RESRC.SELVALUE.
14	Same as rule 12 except that change-over volume is based on number of items processed, not loads allocated.
15	Same as rule 13 except that change-over volume is based on number of items processed, not loads allocated.
16	After spending *n* hours in processing loads under the same setup, where *n* is specified in RESRC.SELVALUE, select the non-zero setup time request[1] with minimum downstream setup time. *Note:* Processing time does not include the setup time incurred for the first load.
17	After spending *n* hours in processing loads under the same setup, where *n* is specified in RESRC.SELVALUE, select the non-zero setup time request[1] that has been waiting the longest. *Note:* Processing time does not include the setup time incurred for the first load.

Code	Description
18	Same as rule 16 except that change over is based elapsed time, not processing time.
19	Same as rule 17 except that change-over is based on elapsed time, not processing time.
20	Use the sequencing rule dynamically, but put requests for interrupted loads at the front of the request queue. Furthermore, if an interrupted load was being processed by the “selecting” resource, its request is placed at the very front of the queue.
21-39	User-defined rules.

[1] If there are no non-zero setup time requests, zero setup time requests will be selected until the next non-zero setup time load arrives.

Global Request Queue Sequencing Rules (ALTSCHED.GLBSEQRL)

Code	Description
1	First to arrive.
2	Last to arrive.
3	High priority loads.
4	Low priority loads.
5	Earliest order due date.
6	Earliest order release date.
7	Shortest time for current operation.
8	Longest time for current operation.
9	Longest time for any subsequent operation.
10	Least number of remaining operations.
11	Least estimated remaining processing time.
12	Least static slack (remaining time to due date).
13	Least average static slack per remaining operations (static slack / remaining no. of operations).
14	Least average static slack per remaining processing time (static slack / remaining process time).
15	Least dynamic slack (remaining time to due date minus the remaining processing time).
16	Least average dynamic slack per remaining operations (dynamic slack / number of remaining operations).
17	Least average dynamic slack per remaining processing time (dynamic slack / remaining processing time).
18	Adjust dynamic slack to more heavily weight the loads in danger of becoming late (if dynamic slack > 0, then divide by remaining processing time, else multiply by remaining processing time).
19	Smallest load size.
20	Largest load size.
21	High value of a specified load attribute.
22	Low value of a specified load attribute.
23–39	User-defined rules.

Timezone Codes

Valid codes for the APPCFG.TIMEZONE field. Codes correspond to Microsoft-specified registry keys in HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\WINDOWS NT\CurrentVersion\Time Zones. Adjustments for daylight-saving time are made automatically based on the TIMEZONE code.

Afghanistan Standard Time

Alaskan Standard Time

Arab Standard Time

Arabian Standard Time

Arabic Standard Time

Atlantic Standard Time

AUS Central Standard Time

AUS Eastern Standard Time

Azores Standard Time

Canada Central Standard Time

Cape Verde Standard Time

Caucasus Standard Time

Cen. Australia Standard Time

Central America Standard Time

Central Asia Standard Time

Central Europe Standard Time

Central European Standard Time

Central Pacific Standard Time

Central Standard Time

China Standard Time

Dateline Standard Time

E. Africa Standard Time

E. Australia Standard Time

E. Europe Standard Time

E. South America Standard Time

Eastern Standard Time

Egypt Standard Time

Ekaterinburg Standard Time

Fiji Standard Time

FLE Standard Time

GMT Standard Time

Greenland Standard Time

Greenwich Standard Time

GTB Standard Time

Hawaiian Standard Time

India Standard Time

Iran Standard Time

Israel Standard Time

Korea Standard Time

Mexico Standard Time

Mid-Atlantic Standard Time

Mountain Standard Time

Myanmar Standard Time

N. Central Asia Standard Time

Nepal Standard Time

New Zealand Standard Time

Newfoundland Standard Time

North Asia East Standard Time

North Asia Standard Time

Pacific SA Standard Time

Pacific Standard Time

Romance Standard Time

Russian Standard Time

SA Eastern Standard Time

SA Pacific Standard Time

SA Western Standard Time

Samoa Standard Time

SE Asia Standard Time

Singapore Standard Time

South Africa Standard Time

Sri Lanka Standard Time

Taipei Standard Time

Tasmania Standard Time

Tokyo Standard Time

Tonga Standard Time

US Eastern Standard Time

US Mountain Standard Time

Vladivostok Standard Time

W. Australia Standard Time

W. Central Africa Standard Time

W. Europe Standard Time

West Asia Standard Time

West Pacific Standard Time

Yakutsk Standard Time

Debug Flags (ALTPLAN.DEBUGLVL)

Descriptions of the planner database bit settings for the debug flags. These flags control the messages that appear in the log file, ol_sched.txt. The SQL Server field accepts an integer value that can set any combination of the bit settings. To determine the bits to set, you must convert the integer value.

Internal Reference	Bit Setting	Integer Equivalent	Description (when bit is ON)
STARTUP	0	1	Startup information such as heap memory requirements.
WARNING	1	2	Warning information such as orders that are not able to be planned and the item that caused the blockage.
ORDERID	2	4	At beginning of the planning of the order, print order id, need date, line items, and quantity.
PUSHPULL	3	8	For each level of the BOM, print the item, need date, and quantity.
USEWHAT	4	16	Supply, wip, inventory, manufacturing quantity, and need date (or planned date if not a manufactured item)
OPNEEDED	5	32	The operation being examined and the time window to fit.
FINALRES	6	64	Resources planned after choosing correct iteration at this level, the time window needed, and whether it is in the final plan.
ALLRES	7	128	All resources planned at this level, the time window needed, and whether it is in the final plan.

Internal Reference	Bit Setting	Integer Equivalent	Description (when bit is ON)
CHECKBOM	8	256	Perform recursion checks whenever a bill of material is updated. This option slows down the loading of BOMs, and is therefore discouraged if the source data from Infor CloudSuite is considered clean.
EVENTAT	9	512	For this schedule event, print the start time, duration, and schedule flags.
ORDCHNGE (mutually exclusive with Bit11)	10	1024	Check for the existence of file %OLXCFG%\ol_dba\ol_cfg\keydebug.txt; if that file exists, print: -k <order id> -d <new debug level> change debuglevel for this order only -e <terminate after pass> ‘a’, ‘b’, ‘c’, ‘d’, ‘e’, ‘f’ of scheduling this order Pass information: a: normal pull or pull with queuetime set (if set) b: pull without queuetime (if pull with queuetime failed) c: pullup order (if set) d: push e: pull to push date (third pass) f: push (if third pass failed) g: pull to end of horizon (if first push failed)
PRTCHNGE (mutually exclusive with Bit10)	11	2048	Check for the existence of file %OLXCFG%\ol_dba\ol_cfg\keydebug.txt; if it exists, print -k <item id> for this item, action taken on entire order -d <new debug level> change debug level for this order only
MODEL1	12	4096	Internal use only
MODEL2	13	8192	Internal use only
MODEL3	14	16384	Internal use only
SUPPLY	15	32768	Information about item-event swapping between orders.
TIMEFENCEINFO	16	65536	Information about how what quantities were protected by the Time Fence functionality. Use it to diagnose why supply or inventory was not used.
CRITPATH	17	131072	Information about the critical path calculations

Schedule Flags (INVPLAN.SCHFLAGS)

Internal Reference	Bit Setting	Integer Equivalent	Description (when bit is ON)
FROZEN	1	2	This flag marks frozen schedule records transferred to the planner from the Scheduler. These schedule records denote periods of time where resources are already allocated. They persist between resynchronizations of the Planner.
XFRPURCHASE	2	4	During a run of global planning, if the system cannot find a transfer item at a remote site, an XFRPURCHASE record is created.
EXPEDITED	4	16	This flag indicates that the associated Schedule Type flags (PURCHASE, MRPPART) were applied within standard lead time. The item needs to be expedited.
SUPTOLERANCE	5	32	This flag, when combined with EXPEDITED, indicates that the usage date was earlier than the availability of the supply.
XREF	6	64	Used for SUPPLY and REPLENISH records (as flagged in the SCHTYPE column) when creating a cross-referenced supply. Used for USESUP records that use a cross-referenced supply. Used for MFG records that were created when a cross-referenced supply was used.
DELSWAP	7	128	Identifies a record that the system moved because its parent order was deleted.

Schedule Types (INVPLAN.SCHTYPE)

Internal Reference	Integer	Description (when bit is ON)
USEFIN	1	This flag indicates that finished goods inventory is consumed. A record with this flag set contains details concerning the inventory usage: the item consumed, the quantity consumed, the date of the usage, the demand order, and the effective BOM.
USEWIP	2	This flag indicates that in-process inventory is consumed. A schedule record with this flag set contains details concerning the WIP usage: the (unfinished) item consumed, the route and operation of the unfinished item, the quantity consumed, the date of the usage, the demand order, and the effective BOM.
USESUP	3	This flag indicates that an item supply is consumed. Item supplies may result from supply orders (transfer or otherwise), replenishment orders, minrun excess, BOM byproducts, or excess from a purchase demand. A schedule record with this flag set contains details concerning the supply usage: the item consumed, the quantity consumed, the date of the usage, the demand order, and the effective BOM.

Internal Reference	Integer	Description (when bit is ON)
XFRSUPPLY	4	This flag indicates the receipt of a supply of items from a transfer order. A schedule record with this flag set contains details concerning the supply: the item supplied, the quantity supplied, the receipt date, and the transfer (supply) order.
SUPPLY	5	This flag indicates the receipt of a supply of items from a supply order. A schedule record with this flag set contains details concerning the supply: the item supplied, the quantity supplied, the receipt date, and the supply order.
MFG	6	This flag indicates the completion of the item's manufacture. The item may have been manufactured to directly satisfy a demand order or as a subcomponent in a BOM. A schedule record with this flag set contains details concerning the manufacture: the item manufactured, the quantity manufactured, the date produced, the order responsible for the manufacture, the route, and the effective BOM. A record with this flag set must be distinct from the record corresponding to the end of the last operation in the item's route. The demand quantities on the regular operation records (including the final one) show demand quantities that may differ from the final amount manufactured due to scrap and shrinkage calculations. A record with this flag set will be included for each instance of manufacture to indicate the actual quantity produced. (Note: this record will **not** be a supply usable by other orders). This record is dated at the end of the Merge From operation after the buffer out time.
PURCHASE	7	This flag indicates the usage of a supply of purchased items from a purchase request. A purchase request occurs when a quantity of a purchased item is required for which there is no available finished goods inventory or existing supply. A schedule record is written to indicate the creation (and usage) of a new supply originated by a purchase request (constrained by the lead time for the item). There may be excess supply from this purchase request available to other demands if the minimum order quantity for the item exceeds the requirements of the order that originated the purchase request. A schedule record with this flag set contains details concerning the purchase: the item requested, the quantity required by the order, the excess quantity, the receipt/usage date, the order requiring the item, and the effective BOM.
UNCONSTRAINED	8	This flag indicates the usage of an unconstrained item for which there is no existing inventory or existing supply. APS treats an unconstrained item as a purchased item with zero lead time. A schedule record is written to indicate the creation (and usage) of a new supply of the item. Because the item is considered to have no lead-time, it will always be available when required. There may be excess supply from this request available to other demands if the minimum order quantity for the item exceeds the requirements of the order that originated the request. A schedule record with this flag set contains details concerning the request: the item requested, the quantity required by the order, the excess quantity, the receipt/usage date, the order requiring the item, and the effective BOM.
REPLENISH	9	Some demand orders may be flagged as replenishment orders. These orders do not consume any manufactured or delivered end items. End items demanded by replenishment orders are treated as supply available to other demands. This schedule flag marks the end-item supply records of replenishment orders. A schedule record with this flag set contains details concerning the supply: the item supplied, the quantity supplied, the supply date, the replenishment order, and the effective BOM.

Internal Reference	Integer	Description (when bit is ON)
BYPRODUCT	10	This flag indicates the creation of a by-product from a BOM (negative BOM quantity). APS treats this by-product as a supply that other demands may use. A schedule record with this flag set contains details concerning the by-product supply: the item supplied, the quantity supplied, the date the by-product is produced, the order responsible for the by-product, and the effective BOM.
USEMFG	11	This flag indicates that a manufactured subcomponent is consumed. In this instance, the subcomponent does **not** come from inventory or existing supply, but is manufactured specifically for this order. A schedule record with this flag set contains details concerning the usage: the item consumed, the quantity consumed, the date of the usage, the demand order, and the effective BOM.
FORCEFIN	12	This flag indicates that finished goods inventory for an unrestricted manufacturing item is consumed, and the inventory level is now negative. A schedule record with this flag set contains details concerning the inventory usage: the item consumed, the quantity consumed, the date of the usage, the demand order, and the effective BOM.
MRPPART	13	This flag indicates the completion of an MRP item's production using lead time consideration only with no capacity demand. The item may have been produced to directly satisfy a demand order or as a subcomponent in a BOM. A schedule record with this flag set contains details concerning the production: the item produced, the quantity produced, the date production started, the lead time duration, the order responsible for the production, and the effective BOM.

Resource Plan Flags (RESPLAN.FLAGS)

Internal Reference	Bit Setting	Integer Equivalent	Description (when bit is ON)
START	0	1	This flag and bit 1 (END) identify the beginning and end of an operation, though they are present on all types of schedule records. Only the schedule segment including the start of the operation has bit 0 set.
END	1	2	(See bit 0.) Only the schedule segment including the end of the operation has bit 1 set.

Material Plan Flags (MATLPLAN.FLAGS)

Internal Reference	Bit Setting	Integer Equivalent	Description (when bit is ON)
CRITPATH	0	1	This flag tags schedule events that are determined to be on the "critical path" to planning an end item demand. This information is used to display an demand's critical path graphically on the Order Details screen in the Analyzer.
ALTPART	1	2	This flag identifies this item as an alternate item in the bill of material.
MSITERECURSE	2	4	This flag identifies a recursive multi-site situation. The system does not support site-to-site recursion on a single order line. That is, an item at one site cannot require a component from a site that was a supply site higher in the item's bill of material. An example of site-to-site recursion is: Part A at Site1 requires Part B at Site2; Part B at Site2 requires Part C at Site1.
MINRUNDEL	3	8	When an order is deleted that has minrun excess supply used by other orders, the schedule record(s) for that minrun excess supply are transferred to one of the consuming orders. This flag marks such transferred schedule records.

Order Flags (ORDER.FLAGS, MATLDELV.FLAGS)

Descriptions of the planner database bit settings for order flags. The SQL Server field accepts an integer value that can set any combination of the bit settings. To determine the bits to set, you must calculate the appropriate integer.

The Planner algorithm sets bits 3, 4, and 5; you cannot change these settings. After the Planner attempts to plan the order, bit3 is set. If final inventory is pegged to the order and no work is planned, bit4 is set. If the order cannot be planned within the plan horizon with the given material and capacity, bit5 is set.

Internal Reference	Bit Setting	Integer Equivalent	Description (when bit is ON)
SUPPLY	0	1	Supply order.
SKIPMFG (mutually exclusive with bit 21)	1	2	Skip manufactured components.
SKIPPUR (mutually exclusive with bit 21)	2	4	Skip purchased components.
SCHEDULED	3	8	Order has been planned.

Internal Reference	Bit Setting	Integer Equivalent	Description (when bit is ON)
SHIPPABLE	4	16	Order is shippable.
BLOCKED	5	32	Order is blocked (unable to push plan the order in the time between the current date and the end of the plan horizon).
NOFIN	6	64	Order may not use final inventory.
NOSUP	7	128	Ignore supply orders.
REPLENISH (mutually exclusive with bit 20)	8	256	(Demand) order that creates a supply at completion that can be used by other demand orders.
NOSCRAP	9	512	Do not adjust for scrap.
NOLOTSIZE	10	1024	Do not adjust for lot size.
PULLUP	11	2048	Pull-up order. A pull-up order attempts to plan to the original request date, but not at the expense of other orders given the current order priority queue. If the Planner cannot meet the request date, it plans the order to the due date, as with normal orders.
FROZEN	12	4096	Frozen order--do not plan the operations. For example, use for released, scheduled order.
XFRDEMAND	13	8192	Transfer demand to a remote site.
XFRSUPPLY	14	16384	Transfer supply from a remote site.
MINRUNDEL	15	32768	Not used.
RESERVEFORCTP	16	65536	Reserve supply created from this order for use after but not during a full run of the Planner. Used for forecasts; when forecasts occur at multiple levels of the BOM, end items do not consume lower level components' forecast supply. Also converts any inventory "used" to reserved supply at time 0, and converts any planned supply "used" to reserved supply (at the same time). New production is also reserved.
CTPQTYZERO	17	131072	Compute the quantity of the item that can be built by the requested date (used internally and only for Supply Chain Management integration).
STOPAFTERPUSH	18	262144	Do not remove push slack.
XREF	19	524288	This supply order is cross-referenced to a specific demand order. This supply order can be used only if the demand order's ORDER.REFORDERID or PBOMMATL.REFORDERID column contains the supply order's order ID. No other demand order can use this supply order.
FIXEDSUPPLY (mutually exclusive with bit 8)	20	1048576	This flag is intended for integration with Infor CloudSuite. Plan the supply from the demand order to be available at a fixed date (the demand order's end date).

Internal Reference	Bit Setting	Integer Equivalent	Description (when bit is ON)
FIXEDDEMANDS	21	2097152	This flag is intended for integration with Infor CloudSuite. Plan the component demands and expect the components to be available at the start date of the operation in which they are needed (unless the ALTPLAN.SSFLAGS bit 9 is ON, in which case the components are due at the start of the order).
NOENDITEM	22	4194304	Used internally for processing FIXEDDEMANDS flag.
BATCHPLAN	23	8388608	Used internally to improve performance by processing incremental plans in a batch, instead of individually.
COPRODUCT	24	16777216	This flag is intended for integration with Infor CloudSuite. It is used to identify co-product job orders, so that special planning logic can be applied.
NOCTPDUEDATE	25	33554432	Internal use
STATUSSTOPPED	26	67108864	Order status is stopped
STATUSPLANNED	27	134217728	Order status is planned
STATUSCREDITHOLD	28	268435456	Order status is credit hold

Planner Item Flags (MATL.FLAGS)

Descriptions of the planner database bit settings for planner item flags. The SQL Server field accepts an integer value that can set any combination of the bit settings. To determine the bits to set, you must calculate the appropriate integer.

Internal Reference	Bit Setting	Integer Equivalent	Description (when bit is ON)
PURCHASED	0	1	Purchased item.
SKIPMFG	1	2	Skip manufactured components (but schedule end-item demand).
SKIPPUR	2	4	Skip purchased components (but schedule end-item demand).
SKIPBLOTHRU	3	8	Skip this item (blow-through item, where an order for the item is constrained only on the components).
SKIPPHANTOM	4	16	Skip this item unless it is an end item (phantom item).
UNCONSTRAIN	5	32	Unconstrained item with lead time of zero (for example, floor stock).
UNRESMFGPART	6	64	Unrestricted manufactured item (when an unrestricted item is needed, and bit6 (don't use inventory) of the order flag for the order is not set, always pull this item from inventory. This flag will allow inventory to go negative).

Internal Reference	Bit Setting	Integer Equivalent	Description (when bit is ON)
MRPPART	7	128	MRP item (the item is produced using std. leadtime, no resources are consumed or allocated, and the components are all needed at the start of this leadtime).
SUPPLYTOL	8	256	Allow supply usage within tolerance beyond required time.
EXPLEADTIME	9	512	Use expedited lead time.
SUPSWITCH	10	1024	Allow manufactured item supply switching.
REORDERPOINT	11	2048	Reorder point item (unconstrained item, used only for integration with Infor CloudSuite).

Single-Site Global Flags (ALTPLAN.SSFLAGS)

Descriptions of the planner database bit settings for global planning flags. The SQL Server field accepts an integer value that can set any combination of the bit settings. To determine the bits to set, you must calculate the appropriate integer.

Internal Reference	Bit Setting	Integer Equivalent	Description
WAITTIMES	0	1	Collect order wait times.
PRTMAXALL	1	2	Apply "order maximum" lot size throughout the bill of material (in addition to end item quantities). Order maximum is defined in MATL.ORDMAX.
PURCHSUPSWITCH	2	4	Allow purchased item supply switching.
MFGSUPSWITCH	3	8	Allow manufactured item supply switching.
ALTPARTUSELATEPULL	4	16	Use latest pull for alternate items.
EXPLEADTIME	5	32	Use expedited lead times.
SUPPLYTOL	6	64	Use supply usage tolerances.
POEXCEPTIONS	7	128	Generate purchase order exceptions.
NOPASSBD	8	256	Suspend the item’s Time Fence on optimization pull-planning pass after a push plan (setting this bit to off forces the system always to run with the Time Fence enabled).
JITSCHEDULING	9	512	Components will be used at the start of the operation in which they are needed (otherwise, they are used at the start of the order).
JOBSUPSWITCH	10	1024	Allow the system to reallocate on-hand inventory to short-term demands that, during the Planning run, had been satisfied by job orders and production schedule releases. The system runs this process after each Planning run, and in a "push" planning mode starting from the current date/time.

Internal Reference	Bit Setting	Integer Equivalent	Description
SSRESERVEFORCTP	11	2048	Prevents recursive backflow transfer demands from eroding safety stock
TOPDOWNSUPJOBFIRM	12	4096	Calculate firm sub-job end dates
TOPDOWNSUBJOBREL	13	8192	Calculate released sub-job end dates
ZEROOPR	14	16384	Generate output data for operations with zero duration
FORECASTBD	15	32768	Forecast orders will not perform passes B and D
USEPLANOUTFORSCHED	16	65536	Use Planning output for Scheduling
MFGSS2	17	131072	Use two-phase planning logic
MFGSSTIMENOW	18	262144	Internal use
INCSUPINREADYCALC	19	524288	Include supply in ready calculation
PLANSTOPPEDJOBS	20	1048576	Plan stopped jobs
PLANSTOPPEDCOS	21	2097152	Plan stopped customer orders
PLANPLANNEDCOLINES	22	4194304	Plan planned customer order lines
PLANCREDITHOLDCOS	23	8388608	Plan credit hold customer orders

Chapter 4: Database Relationships

4

The APS database system consists of two database structures: a SQL Server database and one or more planner databasess (see Chapter 1, "APS Architecture," in the *APS Integration Guide*, for a discussion of how these databases interact).

This chapter provides the mapping between the two databases from the SQL database perspective (SQL-to-ERDB) as well as from the planner database perspective (ERDB-to-SQL). All tables are listed in alphabetical order.

SQL-Planner Database Mapping

ALTPLAN

SQL Column	Planner Database Field	Notes
ALTNO	AlgSQLAltNo	
BUFSCALE	AlgBufScale	
DEBUGLVL	AlgDebugLevel	
FEXPTIME	AlgPrtFExpTime	
HORIZONOFFSET	HorizonOffset	
INFCAP	AlgInfCapAfter	
INFMATL	AlgInfMtlAfter	
LASTSYNCH	AlgFullBeg(0)	
LATEPULL	AlgPullAllIters	
NEXTODPNUM	AlgNxtOdpNum	
NOSOFFSET	AlgOrdOffset	
NOSTIME	AlgOrdStartTime	
NUMDB	AlgMaxNumWhatIf	
PLANGRAN	AlgGranMins	
PLANHORIZ	AlgHorizonSys	
PULLITERS	AlgPullIters	
PUSHITERS	AlgPushIters	
PUSHSLACK	AlgThirdPass	
SEARCHITERS	AlgSearchIters	
SSFLAGS	AlgSSiteFlags	
SUPPLYTOL	AlgPrtSupplyTol	
TFMULT	AlgTFMult	
TIMENOW/USETNFG	TimeNow	
VEXPTIME	AlgPrtVExpTime	

APPCFG

SQL Column	Planner Database Field	Notes
DESCR	OlxTitle	
MSFLAGS	AlgMSiteFlags	

APSSITE

SQL Column	Planner Database Field	Notes
ERDBHOST	SitHost	
ERDBPORT	SitPort	
FLAGS	SitFlags	
PRIORITY	SeqSite	
SITEID	Site	

CAL

SQL Column	Planner Database Field	Notes
CALID	Shift	
ENDDATE	ShfDuration	
STARTDATE	ShfAvailable	

EFFECT

SQL Column	Planner Database Field	Notes
CONDITION	EffType	
DATETYPE	EffDate	
EFFECTID	Effectivity	
ENDDATE	EffEnd	
STARTDATE	EffBegin	
VALUE	EffValue	

ERDB

SQL Column	Planner Database Field	Notes
ALTNO	AlgSQLAltno	

INVPLAN

SQL Column	Planner Database Field	Notes
DEMAND	IpnDemandQty	
MATLTAG	Ipn2Mpn	
SCHDATE	InvPlan	
SCHFLAGS	IpnFlags	
SCHTYPE	IpnType	
SUPMATLTAG	Ipn2Supply	
SUPPLY	IpnSupplyQty	

JOBPLAN

SQL Column	Planner Database Field	Notes
ENDDATE	(calculated)	Maximum of the OpnEndDate values for the operation
JSID	OpnStep	
MATLTAG	Opn2Mpn	
QUANTITY	OpnQuantity	
STARTDATE	(calculated)	Minimum of OperPlan values for the operation

JOBSTEP

SQL Column	Planner Database Field	Notes
EFFDATE	OprEffDate	
JSID	Rte22Opr, Operation	
OBSDATE	OprObsDate	

SQL Column	Planner Database Field	Notes
PROCPLANID	Route	
RESID1 – RESID6	Opr22Cat	
RESNMBR1 – RESNMBR6	Opr22Cat	
STEPTIME	OprCycle	
STEPTMRL	OprFlags	

JS19VR

SQL Column	Planner Database Field	Notes
COOLTIME	OprBufPost	
CRSBRKRL	OprCrossBreaks	
INVENTORY	RteOprInitInv	
JSID	Operation	
MOVETIME	OprBufPre	
OLTYPE	OprOvlType	
OLVALUE	OprOvlValue	
PROCPLANID	Route	
QTIME	OprQueueTime	
SETUPTIME	OprSetup	
SPLITSIZE	OprSplitSize	For future expansion; not used by the Planner.

JSATTR

SQL Column	Planner DatabaseField	Notes
PROCPLANID	Route	
JSID	Rte22Opr, Operation	
ATTID	OprAttId	
ATTVALUE	OprAttValue	

MATL

SQL Column	Planner Database Field	Notes
CAPACITY	PrtInvRange(1)	
CATEGORY	PrtCategory	
FLAGS	PrtFlags	
FEXPLTIME	PrtFExpLeadTime	
FLEADTIME	PrtFLeadTime	

SQL Column	Planner Database Field	Notes
LOWLEVEL	PrtLowLevel	
MINCAP	PrtSafetyStock	
MOVEIN	PrtMoveInLimit	
MOVEOUT	PrtMoveOutLimit	
ORDMAX	PrtMax	
ORDMULT	PrtMultiple	
ORDMIN	PrtMinimum	
PREC	PrtPrecision	
QUONHAND	PrtInventory	
SCRAP	PrtLossQuantity	
SHIFTID	PrtAcqShift	
SHRINK	PrtLossPercent	
SUPPLYTOL	PrtSupplyTol	
TFRULE	PrtTFRule	
TFVALUE	PrtTFValue	
UNITMEAS	PrtUnitMeas	
VEXPLTIME	PrtVExpLeadTime	
VLEADTIME	PrtVLeadTime	

MATLALT

SQL Column	Planner Database Field	Notes
ALTMATLID	PrtAltPart	
MATERIALID	Part	

MATLATTR

SQL Column	Planner Database Field	Notes
ATTID	PrtAttId	
ATTVALUE	PrtAttValue	
MATERIALID	Part	

MATLDELV

SQL Column	Planner Database Field	Notes
AMOUNT	OrdLinQuantity	
CATEGORY	OrdCategory	
DELVDATE	OrdPromDate	
FLAGS	OrdFlags	
MATERIALID	OrdLineItem	
ORDERID	Order	

MATLGRP

SQL Column	Planner Database Field	Notes
GROUPID	PrtGroup	
MATERIALID	Prtg22Prt	

MATLPBOMS

SQL Column	Planner Database Field	Notes
MATERIALID	Part	
PBOMID	Prt22Bom	

MATLPLAN

SQL Column	Planner Database Field	Notes
ADJQTY	MpnAdjQty	
LOADID	MpnLoad	
MATERIALID	Mpn2Prt	
MATLTAG	MatlPlan	
NEEDDATE	MpnNeedDate	
ORDERID	Mpn2Ord	
ORIGQTY	MpnOrigQty	
PASSCD	MpnLoadPass	
PASSITERS	MpnLoadIters	
PBOMID	Mpn2Bom	
PMATLTAG	MpnParentTag	
PROCPLANID	Mpn2Rte	

MATLPPS

SQL Column	Planner Database Field	Notes
MATERIALID	Part	
PROCPLANID	Prt22Rte	

MATLRULE

SQL Column	Planner Database Field	Notes
EFFECTID	PrsEffectivity	
FLEADTIME	PrsDefFLeadTime	
LMATLID	Part, Prt22Sit	
RMATLID	PrsRemotePart	
RSITEID	Site	
TIMEOUT	PrsTimeOutSecs	
TRANSIT	PrsTransitTime	
UOMSCALE	PrsUomScale	
VLEADTIME	PrsDefVLeadTime	

OPRULE

SQL Column	Planner Database Field	Notes
RULESEQ	SeqQueue	
RULETYPE	SeqRuleType	
RULEVALUE	SeqRuleValue	

ORDATTR

SQL Column	Planner Database Field	Notes
ATTID	OrdAttId	
ATTVALUE	OrdAttValue	
ORDERID	Order	

ORDER

SQL Column	Planner Database Field	Notes
ARIVDATE	OrdArivDate	
CATEGORY	OrdCategory	
DUEDATE	OrdPromDate	
FLAGS	OrdFlags	
MATERIALID	Fro2Prt	
ORDERID	Order	
ORDSIZE	FroQuantity	
REFORDERID	OrdRefOrder	
REQUDATE	OrdRequDate	
RELDATE	OrdStrtDate	

ORDGRP

SQL Column	Planner Database Field	Notes
GROUPID	OrdGroup	
ORDERID	Ordg22Ord	

ORDPLAN

SQL Column	Planner Database Field	Notes
CALCDATE	OrdCalcDate	
ORDERID	Order	

OSMATL

SQL Column	Planner Database Field	Notes
FLAGS	OppFlags	

SQL Column	Planner Database Field	Notes
MATLERIALID	Ord22PrtPur	
ORDERID	Order	

PBOM

SQL Column	Planner Database Field	Notes
BOMID	Bom	
EFFECTID	BomEffectivity	

PBOMMATLS

SQL Column	Planner Database Field	Notes
ALTID	BomPrtAltId	
BOMFLAGS	BomPrtFlags	
BOMID	Bom	
EFFDATE	BomPrtEffDate	
MATLERIALID	Bom22Prt	
MERGEFROM	BomPrtMergeFrom	
MERGETO	BomPrtMergeTo	
OBSDATE	BomPrtObsDate	
QUANTITY	BomPrtQty	
REFORDER	BomPrtRefOrder	
SCRAP	BomPrtLosstQty	
SHRINK	BomPrtLossPct	

POEXCEPT

SQL Column	Planner Database Field	Notes
ORDERID	OrdPOExcept	
NEWDATE	OrdPOExceptDate	

PROCPLN

SQL Column	Planner Database Field	Notes
EFFECTID	RteEffectivity	
PROCPLANID	Route	

RESATTR

SQL Column	Planner Database Field	Notes
ATTID	ResAttId	
ATTVALUE	ResAttValue	
RESID	Resource	

RGRP

SQL Column	Planner Database Field	Notes
BUFFERIN	CatBufPre	
BUFFEROUT	CatBufPost	
FLAGS	CatFlags	
INFCAP	CatInfCapAfter	

RGRPMBR

SQL Column	Planner Database Field	Notes
RGID	Category	
RESID	Cat22Res	

RESPAIR

SQL Column	Planner Database Field	Notes
RESID	Resource	
PAIRRESID	ResPairvio	

RESPLAN

SQL Column	Planner Database Field	Notes
ENDDATE	OpnEndDate	
FLAGS	OpnFlags	
RESID	Opn22Res	
STARTDATE	OperPlan	

RESRC

SQL Column	Planner Database Field	Notes
RESID	Resource	
SHIFTID1-SHIFTID4	Res22Shf, Shf22Res	
SUPER	ResFlags	

RESSEND

SQL Column	Planner Database Field	Notes
RESID	Resource	
SENDRESID	ResSendvio	

RGATTR

SQL Column	Planner Database Field	Notes
ATTID	CatAttId	
ATTVALUE	CatAttValue	
RGID	Category	

SCHEDOP

SQL Column	Planner Database Field	Notes
ORDERID	Fro2Ord	
JSID	FroOperation	
GROUPID	Fro2Cat	
RESID	Res22Fro	
STARTDATE	FrozenOp	
ENDDATE	FroEndDate	
STARTFG	FroFlags	
ENDFG	FroFlags	

SHIFT

SQL Column	Planner Database Field	Notes
EDAY, ETIME	ShfDuration	
SDAY, STIME	ShfAvailable	

SHIFTEXDI

SQL Column	Planner Database Field	Notes
ENDDATE	ShfDuration	
RESORTYPE	Shf22Res	
SHIFTEXID	Shift	

SQL Column	Planner Database Field	Notes
SHIFTID	Shf2Shf	
STARTDATE	ShfAvailable	
WORKFG	ShfType	

TODEMAND

SQL Column	Planner Database Field	Notes
FLAGS	RmoFlags	
LORDERID	(Order with XfrParent)	
RORDERID	RemoteOrder	
RSITEID	RmoSite	

TOODP

SQL Column	Planner Database Field	Notes
LORDERID	OrderDashPart	
LPARTID	OrderDashPart	LORDERID and LPARTID are concatenated to form OrderDashPart.
RORDERID	OdpRemoteOrder	

TOSUPPLY

SQL Column	Planner Database Field	Notes
FLAGS	RmoFlags	
LORDERID	(Order with XfrChildren)	
RORDERID	RemoteOrder	
RSITEID	RmoSite	

WAIT

SQL Column	Planner Database Field	Notes
DELAY	OrdWaitHrs	
ITEMID	OrdWaitCat or OrdWaitMtl	
JSID	OrdWaitOper	
MATLTAG	OrdWaitTag	

Planner Database-SQL Mapping

Refer to the *APS Getting Started* manual for information on changing the length of character fields or the maximum number of each Planner Database Field component.

Bill of Material

Planner Database Field	SQL Table.SQL Column	Notes
Bom	PBOM.BOMID	
Bom22Prt	PBOMMATLS.MATERIALID	
Bom22Prtp	None	
BomAttId	None	
BomAttValue	None	
BomEffectivity	PBOM.EFFECTID	
BomFlags	None	
BomPrtFlags	PBOMMATLS.BOMFLAGS	
BomPrtAltId	PBOMMATLS.ALTID	
BomPrtEffDate	PBOMMATLS.EFFDATE	
BomPrtLossPct	PBOMMATLS.SHRINK	
BomPrtLossQty	PBOMMATLS.SCRAP	
BomPrtMergeFrom	PBOMMATLS.MERGEFROM	
BomPrtMergeTo	PBOMMATLS.MERGETO	
BomPrtObsDate	PBOMMATLS.OBSDATE	
BomPrtRefOrder	PBOMMATLS.REFORDERID	
BomPrtQty	PBOMMATLS.QUANTITY	
Prt22Bom	MATLPBOMS.PBOMID	

Categories

Planner Database Field	SQL Table.SQL Column	Notes
Cat22Res	RGRP.RESID1 – RGRP.RESID20	
CatAttId	RGATTR.ATTID	
CatAttValue	RGATTR.ATTVALUE	
CatBufPost	RGRP.BUFFEROUT	
CatBufPre	RGRP.BUFFERIN	
Category	RGRP.RGID	

Planner Database Field	SQL Table.SQL Column	Notes
CatInfCapAfter	RGRP.INFCAP	
Opr22Cat	JOBSTEP.RESID1 – JOBSTEP.RESID6, JOBSTEP.RESNMBR1 – JOBSTEP.RESNMBR6	RESNMBR determines the number of RESIDs.

Effectivity

Planner Database Field	SQL Table.SQL Column	Notes
EffAttId	None	
EffAttValue	None	
EffBegin	EFFECT.STARTDATE	
EffDate	EFFECT.DATETYPE	
Effectivity	EFFECT.EFFECTID	
EffEnd	EFFECT.ENDDATE	
EffFlags	None	
EffType	EFFECT.CONDITION	
EffValue	EFFECT. VALUE	

Frozen Operations

Planner Database Field	SQL Table.SQL Column	Notes
FrozenOp	None	
FroEndDate	SCHEDOP.ENDDATE	
FroFlags	SCHEDOP.STARTFG, ENDFG	
FroQuantity	ORDER.ORDSIZE	
FroOperation	SCHEDOP.JSID	
Fro2Cat	SCHEDOP.GROUPID	
Fro2Ord	SCHEDOP.ORDERID	
Fro2Prt	ORDER.MATERIALID	
Res22Fro	SCHEDOP.RESID	

Inventory Plans

Planner Database Field	SQL Table.SQL Column	Notes
InvPlan	INVPLAN.SCHFLAGS	
IpnStartDate	None	
IpnType	INVPLAN.SCHTYPE	

Planner Database Field	SQL Table.SQL Column	Notes
IpnFlags	None	
IpnOrigQty	INVPLAN.ORIGQTY	
IpnSupplyQty	INVPLAN.SUPPLY	
IpnDemandQty	INVPLAN.DEMAND	
IpnAvailQty	None	
IpnStep	None	
Ipn2Supply	INVPLAN.SUPMATLTAG	
Ipn22IpnSup	None	

Items (Parts)

Planner Database Field	SQL Table.SQL Column	Notes
Part	MATL.MATERIALID	
Prt22Prtg	None	
PrtAcqShift	MATL.SHIFTID	
PrtAltPart	MATLALT.ALTMATLID	
PrtAttId	MATLATTR.ATTID	
PrtAttValue	MATLATTR.ATTVALUE	
PrtCategory	MATL.CATEGORY	
PrtEPODate	MATL.EPODATE	
PrtFExpLeadTime	MATL.FEXPLTIME	
PrtVExpLeadTime	MATL.VEXPLTIME	
PrtFlags	MATL.FLAGS	
Prtg22Prt	MATLGRP. MATERIALID	
PrtgAttId	None	
PrtgAttValue	None	
PrtgCom	None	
PrtgFlags	None	
PrtGroup	MATLGRP.GROUPID	
PrtInventory	MATL.QUONHAND	
PrtSafetyStock	MATL.MINCAP	
PrtInvRange(1)	MATL.CAPACITY	
PrtFLeadTime	MATL.FLEADTIME	
PrtVLeadTime	MATL.VLEADTIME	
PrtLossPercent	MATL.SHRINK	
PrtLossQuantity	MATL.SCRAP	
PrtLowLevel	MATL.LOWLEVEL	
PrtMinimum	MATL.ORDMIN	
PrtMultiple	MATL.ORDMULT	
PrtMax	MATL.ORDMAX	
PrtMoveInLimit	MATL.MOVEIN	
PrtMoveOutLimit	MATL.MOVEOUT	

Planner Database Field	SQL Table.SQL Column	Notes
PrtPrecision	MATL.PREC	
PrtTFRule	MATL.TFRULE	
PrtTFValue	MATL.TFVALUE	
PrtUnitMeas	MATL.UNITMEAS	
PrtSupplyTol	MATL.SUPPLYTOL	

Lateness Causes

Planner Database Field	SQL Table.SQL Column	Notes
OrdWaitCat	WAIT.ITEMID	
OrdWaitFlags	None	
OrdWaitHrs	WAIT.DELAY	
OrdWaitMtl	WAIT.ITEMID	
OrdWaitOper	WAIT.JSID	
OrdWaitPart	None	
OrdWaitTag	WAIT.MATLTAG	

Material Plans

Planner Database Field	SQL Table.SQL Column	Notes
MatlPlan	MATLPLAN.MATLTAG	
MpnParentTag	MATLPLAN.PMATLTAG	
MpnNeedDate	MATLPLAN.NEEDDATE	
MpnFlags	None	
MpnOrigQty	MATLPLAN.ORIGQTY	
MpnAdjQty	MATLPLAN.ADJQTY	
MpnLoad	MATLPLAN.LOADID	
MpnLoadPass	MATLPLAN.PASSCD	
MpnLoadIters	MATLPLAN.PASSITERS	
Mpn2Rte	MATLPLAN.PROCPLANID	
MpnParentStep	None	
Mpn2Bom	MATLPLAN.PBOMID	
MpnParentSeqNo	None	
Mpn2Ord	MATLPLAN.ORDERID	
Ord22Mpn	None	
Mpn2Prt	MATLPLAN.MATERIALID	
Prt22Mpn	None	
Mpn22Ipn	None	
Ipn2Mpn	INVPLAN.MATLTAG	

Planner Database Field	SQL Table.SQL Column	Notes
Mpn22Opn	None	
Opn2Mpn	None	

Miscellaneous Inputs

Planner Database Field	SQL Table.SQL Column	Notes
AlgBufScale	ALTPLAN.BUFSCALE	
AlgClearOnFull	None	Set to 1.
AlgDebugLevel	ALTPLAN.DEBUGLVL	
AlgGranMins	ALTPLAN.PLANGRAN	
AlgHorizonSys	ALTPLAN.PLANHORIZ	
AlgInfCapAfter	ALTPLAN.INFCAP	
AlgInfMtlAfter	ALTPLAN.INFMATL	
AlgIterDays	ALTPLAN.ITERDAYS	
AlgIterDaysCTP	ALTPLAN.ITERDAYSCTP	
AlgMaxNumWhatIf	ALTPLAN.NUMDB	
AlgMSiteFlags	APPCFG.MSFLAGS	
AlgNxtJobTag	None	
AlgNxtOdpNum	ALTPLAN.NEXTODPNUM	
AlgNxtSchTag	None	
AlgOrdOffset	ALTPLAN.NOSOFFSET	
AlgOrdStartTime	ALTPLAN.NOSTIME	
AlgPrtSupplyTol	ALTPLAN.SUPPLYTOL	
AlgPrtFExpTime	ALTPLAN.FEXPTIME	
AlgPrtVExpTime	ALTPLAN.VEXPTIME	
AlgPullAllIters	ALTPLAN.LATEPULL	
AlgPullIters	ALTPLAN.PULLITERS	
AlgPushIters	ALTPLAN.PUSHITERS	
AlgRunScale	ALTPLAN.EFFICIENCY	NOTE: This field is not functional at this time.
AlgSQLAltNo	ERDB.ALTNO, ALTPLAN.ALTNO, ALTERN.ALTNO	
AlgSQLDSN	None	
AlgSearchIters	ALTPLAN.SEARCHITERS	
AlgSSiteFlags	ALTPLAN.SSFLAGS	
AlgThirdPass	ALTPLAN.PUSHSLACK	
AlgTimeZone	ALTPLAN.TIMEZONE	

Planner Database Field	SQL Table.SQL Column	Notes
AlgTFMult	ALTPLAN.TFMULT	
ApsStatus	None	
CliPortNumber	None	
NewHorizon	ALTPLAN.HORIZONOFFSET	
OlxTitle	APPCFG.DESCR	
TimeNow	ALTPLAN.USETNFG, ALTPLAN.TIMENOW	

Miscellaneous Outputs

Planner Database Field	SQL Table.SQL Column	Notes
AlgFullBeg(0)	ALTPLAN.LASTSYNCH	
AlgFullEnd	None	
AlgGlblBeg	None	
AlgGlblEnd	None	
AlgIncrBeg	None	
AlgIncrEnd	None	
ApiCounts	None	
ApiTimers	None	
RptCounts	None	
RptTimers	None	
StatisticsSince	None	
UtlCounts	None	

Operations

Planner Database Field	SQL Table.SQL Column	Notes
Operation	JS19VR.JSID, JOBSTEP.JSID	In the JOBSTEP table, JSID maps to Operation and Rte22Opr.
Opr22Oprg	None	
OprAttId	None	
OprAttValue	None	
OprBufPost	JS19VR.COOLTIME	
OprBufPre	JS19VR.MOVETIME	
OprCrossBreaks	JS19VR.CRSBRKRL	
OprCycle	JOBSTEP.STEPTIME	
OprEffDate	JOBSTEP.EFFDATE	
OprFlags	JOBSTEP.STEPTMRL, JOBSTEP.FLAGS	JOBSTEP.STEPTMRL controls bit0 and bit1. JOBSTEP.FLAGS controls bit2.
OprObsDate	JOBSTEP.OBSDATE	
OprOvlType	JS19VR.OLTYPE	

Planner Database Field	SQL Table.SQL Column	Notes
OprOvlValue	JS19VR.OLVALUE	
OprQueueTime	JS19VR.QTIME	
OprSetup	JS19VR.SETUPTIME	

Operation Plans

Planner Database Field	SQL Table.SQL Column	Notes
OperPlan	JOBPLAN.STARTDATE RESPLAN.STARTDATE	Calculated as the minimum of the OperPlan values for the operation.
OpnEndDate	JOBPLAN.ENDDATE RESPLAN.ENDDATE	Calculated as the maximum of the OpnEndDate values for the operation.
OpnFlags	None	
OpnQuantity	JOBPLAN.QUANTITY	
OpnStep	None	
Opn22Res	RESPLAN.RESID	
Res22Opn	None	

Orders

Planner Database Field	SQL Table.SQL Column	Notes
OppFlags	OSMATL.FLAGS	
Ord22Ordg	None	
Ord22PrtPur	OSMATL.MATLERIALID	
OrdArivDate	ORDER.ARIVDATE	
OrdAttId	ORDATTR.ATTID	
OrdAttValue	ORDATTR.ATTVALUE	
OrdCalcDate	ORDPLAN.CALCDATE	
OrdCategory	ORDER.CATEGORY, MATLDELV.CATEGORY	
Order	ORDER.ORDERID, MATLDELV.ORDERID	
OrdFlags	ORDER.FLAGS MATLDELV.FLAGS	
Ordg22Ord	ORDGRP.ORDERID	
OrdgAttId	None	
OrdgAttValue	None	
OrdgCom	None	
OrdgFlags	None	

Planner Database Field	SQL Table.SQL Column	Notes
OrdGroup	ORDGRP.GROUPID	
OrdLinCalcDate	None	
OrdLineItem	ORDER.MATERIALID MATLDELV.MATERIALID	
OrdLinPromDate	None	
OrdLinQuantity	ORDER.ORDSIZE MATLDELV.AMOUNT	
OrdPromDate	ORDER.DUEDATE MATLDELV.DELVDATE	
OrdRefOrder	ORDER.REFORDERID	
OrdRequDate	ORDER.REQUDATE	
OrdStrtDate	ORDER.RELDATE	

PO Exception Messages

Planner Database Field	SQL Table.SQL Column	Notes
OrdPOExcept	POEXCEPT.ORDERID	
OrdPOExceptDate	POEXCEPT.NEWDATE	

Remote Orders and Relation to Local Orders

Planner Database Field	SQL Table.SQL Column	Notes
OdpRemoteOrder	TOODP.RORDERID	
OrderDashPart	TOODP.LORDERID TOODP.LPARTID	LORDERID and LPARTID are concatenated to form OrderDashPart.
RemoteOrder	TOSUPPLY.RORDERID, TODEMAND.RORDERID	
RmoCom	None	
RmoFlags	TOSUPPLY.FLAGS, TODEMAND.FLAGS	
RmoSite	TOSUPPLY.RSITE, TODEMAND.RSITE	
XfrChildren	TOSUPPLY.LORDERID	Order with XfrChildren populates LORDERID.
XfrParent	TODEMAND.LORDERID	Order with XfrParent populates LORDERID.

Remote Sites and Remotely Built Items

Planner Database Field	SQL Table.SQL Column	Notes
PrsDefFLeadTime	MATLRULE.FLEADTIME	
PrsDefVLeadTime	MATLRULE.VLEADTIME	
PrsEffectivity	MATLRULE.EFFECTID	
PrsRemotePart	MATLRULE.RMATLID	
PrsTimeoutSecs	MATLRULE.TIMEOUT	
PrsTransitTime	MATLRULE.TRANSIT	
PrsUomScale	MATLRULE.UOMSCALE	
Prt22Sit	MATLRULE.LMATLID	LMATLID maps to Part and Prt22Sit.

Planner Database Field	SQL Table.SQL Column	Notes
SeqSite	APSSITE.PRIORITY	
SitAlarms	APSSITE.ALARMS	
Site	APSSITE.SITEID	
SitEmail	APSSITE.NOTIFY	
SitFlags	APSSITE.FLAGS	
SitHost	APSSITE.ERDBHOST	
SitPort	APSSITE.ERDBPORT	
SitQueue	APSSITE.QUEUEID	

Resources

Planner Database Field	SQL Table.SQL Column	Notes
Res22Shf	RESRC.SHIFTID1 - RESRC.SHIFTID4	SHIFTID1-4 map to Res22Shf and Shf22Res.
ResAttId	RESATTR.ATTID	
ResAttValue	RESATTR.ATTVALUE	
ResFlags	RESRC.SUPER	
Resource	RESRC.RESID	
ResPairvio	RESPAIR.PAIRESID	
ResSendvio	RESSEND.SENDRESID	
Shf22Res	RESRC.SHIFTID1 - RESRC.SHIFTID4	SHIFTID1-4 map to Res22Shf and Shf22Res.

Routes

Planner Database Field	SQL Table.SQL Column	Notes
Prt22Rte	MATLPPS.PROCPLANID	
Route	PROCPLAN.PROCPLANID	
Rte22Opr	JOBSTEP.JSID	JSID maps to Operation and Rte22Opr.
Rte2Prt	None	
RteAttId	None	
RteAttValue	None	
RteEffectivity	PROCPLAN.EFFECTID	
RteFlags	None	
RteOprInitInv	JS19VR.INVENTORY	

Sequence Rules and Queue

Planner Database Field	SQL Table.SQL Column	Notes
SeqQueue	None	
SeqRuleType	OPRULE.RULETYPE	

Planner Database Field	SQL Table.SQL Column	Notes
SeqRuleValue	OPRULE.RULEVALUE	
Sequence	None	

Shifts

Planner Database Field	SQL Table.SQL Column	Notes
Shf2Shf	SHIFTEXDI.SHIFTID	
ShfAttId	None	
ShfAttValue	None	
ShfAvailable	SHIFTEXDI.STARTDATE, CAL.STARTDATE SHIFT.SDAY, SHIFT.STIME	
ShfDuration	SHIFTEXDI.ENDDATE, CAL.ENDDATE SHIFT.EDAY, SHIFT.ETIME	
ShfFlags	None	Set to 1 for CAL table; set to 0 otherwise.
ShfType	SHIFTEXDI.WORKFG	In ERDB: Y=1, N=-2
Shift	SHIFT.SHIFTID, CAL.CALID	
Shf22Res	SHIFTEXDI.RESORTYPE	Must be a resource ID.

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