



# Infor Operational Pricing Management 1.1.0.2 Reference Guide

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# About This Guide

## Organization

This table shows the chapters of the guide:

Title
1 OPM Daily Processes
2 OPM C# Request Programs
3 SQL Server
4 Application Studio
5 VBA Enabled Excel Workbook
6 Windows Server Data Extract Process

## Related Documentation

Listed below is a complete list of product documentation.

*Infor Operational Pricing Management 1.1.0.2 Installation Guide*

*Infor Operational Pricing Management 1.1.0.2 Operations Guide*

*Infor Operational Pricing Management 1.1.0.2 Reference Guide*

*Infor Operational Pricing Management 1.1.0.2 User Guide*

The most current version of product documentation is always available through the Infor Support Portal located at <https://support.infor.com/>. From the portal Home page, click Search > Browse Documentation > Core Banking, then select the appropriate Product and Release.

The product documentation is updated for each release. It is also updated for each subsequent Service Pack. The Knowledge Base (KB) article which lists all Service Packs and Patches for this Product and Release is 1927810. Select Notify to subscribe to the KB and be notified of subsequent Service Packs. The KB includes information about and a direct link to each individual Service Pack and the Patches. Each Service Pack contains Release Notes and Resolved Issues with specific information about the Service Pack and a complete set product documentation for that release level. Each patch contains Resolved Issues with specific information.

Lastly, if you have comments about Infor documentation, contact [documentation@infor.com](mailto:documentation@infor.com).

## Contacting Infor

If you have questions or issues related to Infor or Infor products, go to the Infor Support Portal located at <https://support.infor.com/>. From there, you can contact Infor or add a new support inquiry known as an Incident.

We recommend you check the site periodically for updated information and product documentation. Additionally, within the Infor Support Portal you can subscribe to product information by clicking on your name in the upper right and then on the Profile Information page, click on Subscriptions.

## OPMMP\_CBS\_Transfer

**Purpose** Daily process to transfer data from the CBS System to the OPM System.

**Detail** CBS Transfer is a program that creates a group of flat files which are stored in a common landing zone. This landing zone is generally pre-configured with the correct security and properties by an administrator. The names of the flat files are provided below. The data from each table is extracted and saved into a “|” delimited format.

Table Name	Flat File Name
CBS.Application	CBS_OPM_Application.txt
CBS.Branch	CBS_OPM_Branch.txt
CBS.Currency	CBS_OPM_Currency.txt
CBS.Currency_Exchange	CBS_OPM_Currency_Exchange.txt
CBS.Deposit_Account	CBS_OPM_Deposit_Account.txt
CBS.Exception_Price	CBS_OPM_Exception_Price.txt
CBS.Group_Account	CBS_OPM_Group_Account.txt
CBS.Institution_Control	CBS_OPM_Institution_Control.txt
CBS.Profile	CBS_OPM_Profile.txt

Table Name	Flat File Name
CBS.Service_Code _Definition	CBS_OPM_Service_Code _Definition.txt
CBS.Standard_Price	CBS_OPM_Standard _Price.txt

**SQL Server Table** N/A

**Reports** N/A

**Abort Codes**

Unless otherwise noted below, review the information that follows the abort code in the program's log. Then correct the conditions causing the error and re-run.

- 21111** Error opening output file.
- 21112** Error executing sql + sqlcode
- 21113** Error writing to output file in header line.
- 21114** Error writing new line to output file.
- 21115** Error closing output file.
- 21120** Error finding extract file location in OPMMP\_Setup.xml. Check OPMMP\_Setup for an entry for ExtractFileLocation, and make sure this location has proper security access.



# OPMMP\_OPM\_Receive

**Program Name** OPMMP\_OPM\_Receive.exe

**Purpose** Daily process to receive data from the CBS System into the OPM System.

**Detail** The OPM Receive program processes a group of flat files stored in a common landing zone. The flat files are created in the CBS Transfer program. This landing zone is usually pre-configured with the correct security and properties by an administrator. The names of the flat files are provided below. The data from each flat file is extracted and stored into the corresponding table.

During the processing of each flat file, the name is altered to include the current timestamp, which allows users to identify if the file has already been processed. Along with the date and time, the number of rows transferred is included in the file name. For example:

*20210315\_123444\_Rows4\_CBS\_OPM\_Application.txt*

The stored procedure OPM.opsp\_Threshold\_Automated\_Build is executed as the last procedure. More information on this stored procedure can be found in the OPM Threshold and Threshold Control section of this guide.

**Execution** This process is generally scheduled using a scheduling program. It runs on the OPM Server.

## SQL Server Table

Flat File Name	Table Name
CBS_OPM_Application.txt	OPM.Application
CBS_OPM_Branch.txt	OPM.Branch
CBS_OPM_Currency.txt	OPM.Currency
CBS_OPM_Currency_Exchange.txt	OPM.Currency_Exchange
CBS_OPM_Deposit_Account.txt	OPM.Deposit_Account
CBS_OPM_Exception_Price.txt	OPM.Exception_Price
CBS_OPM_Group_Account.txt	OPM.Group_Account
CBS_OPM_Institution_Control.txt	OPM.Institution_Control
CBS_OPM_Profile.txt	OPM.Profile

<b>Flat File Name</b>	<b>Table Name</b>
CBS_OPM_Service_Code _Definition.txt	OPM.Service_Code_Definition
CBS_OPM_Standard_Price.txt	OPM.Standard_Price

**Stored Procedures**

OPM.opsp\_Threshold\_Automated\_Build

**Reports**                      N/A

**Abort Codes**

Unless otherwise noted below, review the information that follows the abort code in the program's log. Then correct the conditions causing the error and re-run.

<b>12201</b>	Error executing sql + sqlcode
<b>12202</b>	Null SDR after open of Stored procedure SQL + sql
<b>12203</b>	Error while executing stored procedure. SQL + sql
<b>12215</b>	Error finding extract file location in OPMMP_Setup.xml. Check OPMMP_Setup for an entry for ExtractFileLocation, and make sure this location has proper security access.
<b>12221</b>	Table not found.
<b>12222</b>	Error reading schema data + sql
<b>12223</b>	Error reading input file.
<b>12224</b>	Column not found.
<b>12225</b>	Error reading schema data.
<b>12226</b>	Data row + row + does not have the same number of columns as the header row.
<b>12227</b>	Error renaming input file.
<b>12228</b>	Error writing to staging input table.



## Chapter 2: OPM C# Request Programs

# 2

This chapter lists each of the C# programs and their functions.

The following is a list of all the components that comprise the OPM C# portion of the application. If CBS and OPM will reside on two different servers, the Server column is used to identify the server on which the C# program runs.

Name	Server	Type Description
OPMMP_CBS_Initialization	CBS	Transfer data in CBS tables to flat files used to synchronize CBS and OPM Servers.
OPMMP_OPM_Initialization	OPM	Process flat files and stores them into OPM tables used to synchronize CBS and OPM Servers.
OPMMP_CBS_Transfer ***	CBS	Transfer data in CBS tables to flat files
OPMMP_OPM_Receive ***	OPM	Processes flat files and stores data in OPM tables
OPMMP_OPM_Transfer	CBS	Transfer data in OPM tables to flat files
OPMMP_CBS_Receive	OPM	Processes flat files and stores data in CBS tables
OPMMP_OPM_Control	CBS	Sets the status of the control to ON/OFF
OPMMP_Initialize_LFS_LFP	CBS	Initialize both Last_File_Sent and Last_File_Processed with the same file_id
OPMMP_WorkflowRpt_LFP_Update	CBS	Creates OPM staging workflow reports, updates LFP and purges > 30 days OPM records
OPMMP_CBS_Export_LastFileProcessed	CBS	Synchronize OPM and CBS database by creating flat file.
OPMMP_OPM_Import_LastFileProcessed	OPM	Synchronize OPM and CBS database by processing flat file.
OPMMP_Extract_Data	OPM	Extracts workflows

OPM C# Request Programs

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<b>Name</b>	<b>Server</b>	<b>Type Description</b>
OPMMP_Populate_Staging	OPM	Creates CBS maintenance via the staging input tables
OPMMP_Purge	OPM	Purges staging records that are > 30 days
OPMMP_Workflow_Data_Archive	OPM	C# program Archives and deletes records
OPMMP_Workflow_Purge	OPM	Deletes records from archive tables

\*\*\* See Chapter 1 for details.

# OPMMP\_CBS\_Initialization

**Program Name** OPMMP\_CBS\_Initialization.exe

**Purpose** This program is intended to synchronize the CBS and OPM Servers. This program is intended to only run 1 time during the installation of OPM.

**Detail** OPMMP\_CBS\_Initialization is a program that creates a group of flat files which are stored in a common landing zone. This landing zone is generally pre-configured with the correct security and properties by an administrator. The names of the flat files are provided below. The data from each table is extracted and saved into a “|” delimited format.

**Execution** This process only runs once during the initial setup of OPM. It runs on the CBS Server.

Table Name	Flat File Name
OPM.LAST_FILE_PROCESSED	CBS_OPM_Last_File_Processed.txt
OPM.LAST_FILE_SENT	CBS_OPM_Last_File_Sent.txt
OPM.OPM_CONTROL	CBS_OPM_OPM_Control.txt

**SQL Server Table** N/A

**Reports** N/A

## Abort Information

If the program detects a processing irregularity, check the log for abort details.

**12001** Error opening output file.

**12002** Error executing sql + sqlcode

**12003** Error writing to output file in header line.

- 12004**                      Error writing new line to output file.
  
- 12005**                      Error closing output file.
  
- 12020**                      Error finding extract file location in OPMMP\_Setup.xml. Check OPMMP\_Setup for an entry for ExtractFileLocation, and make sure this location has proper security access.



# OPMMP\_OPM\_Initialization

**Program Name** OPMMP\_OPM\_Initialization.exe

**Purpose** This program is intended to synchronize the CBS and OPM Servers. This program is intended to only run 1 time during the installation of OPM. OPMMP\_OPM\_Initialization is expected to run after CBS\_Initialization.

**Detail** OPMMP\_OPM\_Initialization is a program that processes a group of flat files which are stored in a common landing zone. The flat files are created in the OPMMP\_CBS\_Initialization program. This landing zone is generally pre-configured with the correct security and properties by an administrator. The names of the flat file are provided below. The data from each flat file is extracted and stored into the corresponding table.

During the processing of each flat file, the name is altered to include the current timestamp. This allows the user to know the file has already been processed. Along with the date and time, the number of rows transferred is included. An example would be:

*20210315\_123444\_Rows4\_CBS\_OPM\_Last\_File\_Processed.txt*

**Execution** This process is only run 1 time during the initial setup of OPM. It runs on the OPM Server. CBS Initialization is required to run prior.

## SQL Server Table

Flat File Name	Table Name
CBS_OPM_Last_File_Processed.txt	ST.LAST_FILE_PROCESSED
CBS_OPM_Last_File_Sent.txt	ST.LAST_FILE_SENT
CBS_OPM_OPM_Control.txt	ST.OPM_CONTROL

**Reports** N/A

## Abort Information

If the program detects a processing irregularity, check the log for abort details.

**12201** Error executing sql + sqlcode

<b>12215</b>	Error finding extract file location in OPMMP_Setup.xml. Check OPMMP_Setup for an entry for ExtractFileLocation, and make sure this location has proper security access.
<b>12221</b>	Table not found.
<b>12222</b>	Error reading schema data + sql
<b>12223</b>	Error reading input file.
<b>12224</b>	Column not found.
<b>12225</b>	Error reading schema data.
<b>12226</b>	Data row + row + does not have the same number of columns as the header row.
<b>12227</b>	Error renaming input file.
<b>12228</b>	Error writing to staging input table.

# OPMMP\_OPM\_Transfer

**Program Name** OPMMP\_OPM\_Transfer.exe

**Purpose** Program to transfer data from the OPM System to the CBS System.

**Detail** OPM Transfer is a program that creates a group of flat files which are stored in a common landing zone. This landing zone is generally pre-configured with the correct security and properties by an administrator. The names of the flat files are provided below. The data from each table is extracted and saved into a “|” delimited format.

**Execution** This process is requested after the workbook has completed workflow and pricing steps, and the data is ready to be transferred to the CBS System. It runs on the OPM Server.

Table Name	Flat File Name
ST.AFFCOPY	OPM_CBS_AffCopy.txt
ST.Exception_Price	OPM_CBS_Exception.txt
ST.Profile	OPM_CBS_Profile.txt
ST.Profile_To_Account	OPM_CBS_Profile_To_Account.txt
ST.Standard_Price	OPM_CBS_Standard_Price.txt
ST.LAST_FILE_SENT	OPM_CBS_Last_File_Sent.txt

**SQL Server Table** N/A

**Reports** N/A

## Abort Information

If the program detects a processing irregularity, check the log for abort details.

**21311** Error opening output file.

**21312** Error executing sql + sqlcode

- 21313** Error writing to output file in header line.
  
- 21314** Error writing new line to output file.
  
- 21315** Error closing output file.
  
- 21320** Error finding extract file location in OPMMP\_Setup.xml. Check OPMMP\_Setup for an entry for ExtractFileLocation, and make sure this location has proper security access.

# OPMMP\_CBS\_Receive

<b>Program Name</b>	OPMMP_CBS_Receive.exe
<b>Purpose</b>	Daily process to receive data from the CBS System into the OPM System.
<b>Detail</b>	<p>CBS Receive is a program that processes a group of flat files which are stored in a common landing zone. The flat files are created in the OPM Transfer program. This landing zone is generally pre-configured with the correct security and properties by an administrator. The names of the flat file are provided below. The data from each flat file is extracted and stored into the corresponding table.</p> <p>During the processing of each flat file, the name is altered to include the current timestamp. This allows the user to know the file has already been processed. Along with the date and time, the number of rows transferred is included. An example would be:</p> <p style="text-align: center;"><i>20210315_123444_Rows4_OPM_CBS_ST_AffCopy.txt</i></p>
<b>Execution</b>	This process is requested after the OPM Transfer program has completed. It runs on the CBS Server.

## SQL Server Table

Flat File Name	Table Name
OPM_CBS_ST_AffCopy.txt	OPM.AffCopy
OPM_CBS_ST_Exception_Price.txt	OPM.Exception_Price
OPM_CBS_ST_Profile.txt	OPM.Profile
OPM_CBS_ST_Profile_To_Account.txt	OPM.Profile_To_Account
OPM_CBS_ST_Standard_Price.txt	OPM.Standard_Price
OPM_CBS_ST_Last_File_Sent.txt	OPM.Standard_Price

**Reports** N/A

**Stored Procedures** N/A

### **Sequence of Table Load**

1. OPM.EXCEPTION\_PRICE
2. OPM\_STANDARD\_PRICE
3. OPM.PROFILE
4. OPM.PROFILE\_TO\_ACCOUNT
5. OPM.AFFCOPY
6. OPM\_LAST\_FILE\_SENT

### **Abort Information**

If the program detects a processing irregularity, check the log for abort details.

<b>21401</b>	Error executing sql + sqlcode
<b>21402</b>	Null SDR after open of Stored procedure SQL + sql
<b>21403</b>	Error while executing stored procedure. SQL + sql
<b>21415</b>	Error finding extract file location in OPMMP_Setup.xml. Check OPMMP_Setup for an entry for ExtractFileLocation, and make sure this location has proper security access.
<b>21421</b>	Table not found.
<b>21422</b>	Error reading schema data + sql
<b>21423</b>	Error reading input file.
<b>21424</b>	Column not found.
<b>21425</b>	Error reading schema data.
<b>21426</b>	Data row + row + does not have the same number of columns as the header row.
<b>21427</b>	Error renaming input file.

**21428**

Error writing to staging input table.

**Note:** In the event OPMMP\_CBS\_Receive.exe aborts with 21428 code, check the log to determine which table failed. Once the issue is corrected, resume the run by doing the following:

- 1 Open the OPM\_CBS\_ST\_LAST\_FILE\_SENT.txt flat file in the ETL\_Data subfolder and copy the file\_id value.
- 2 Delete records from loaded tables where the file\_id matches the file\_id copied in step 1. Based on the error log and sequence of loading, only the tables read before the abort was encountered need be corrected.

For example, if the abort occurs in OPM.STANDARD\_PRICE, only the OPM.EXCEPTION\_PRICE needs to be corrected.

- 3 Re-run OPMMP\_OPM\_TRANSFER.exe to create flat files.
- 4 Re-run OPMMP\_CBS\_Receive.exe.

# OPMMP\_CBS\_Export\_LastFileProcessed

<b>Program Name</b>	OPMMP_CBS_Export_LastFileProcessed.exe
<b>Purpose</b>	This program is intended to synchronize the CBS and OPM Servers.
<b>Detail</b>	OPMMP_CBS_Export_LastFileProcessed is a program that creates a flat file which is stored in a common landing zone. This landing zone is generally pre-configured with the correct security and properties by an administrator. The name of the flat file is provided below. The data from the table is extracted and saved into a “ ” delimited format.
<b>Execution</b>	This program should run after the successful execution of the OPMMP_WorkflowRpt_LFP_Update program.

Table Name	Flat File Name
OPM.LAST_FILE_PROCESSED	CBS_OPM_Last_File_Processed.txt

**SQL Server Table** N/A

**Reports** N/A

## Abort Information

If the program detects a processing irregularity, check the log for abort details.

<b>21701</b>	Error opening output file.
<b>21702</b>	Error executing sql + sqlcode
<b>21703</b>	Error writing to output file in header line.
<b>21704</b>	Error writing new line to output file.
<b>21705</b>	Error closing output file.



**21720**

Error finding extract file location in OPMMP\_Setup.xml. Check OPMMP\_Setup for an entry for ExtractFileLocation, and make sure this location has proper security access.

# OPMMP\_OPM\_Import\_LastFileProcessed

<b>Program Name</b>	OPMMP_OPM_Import_LastFileProcessed.exe
<b>Purpose</b>	This program is intended to synchronize the CBS and OPM Servers.
<b>Detail</b>	<p>OPMMP_OPM_Import_LastFileProcessed is a program that processes a flat file which is stored in a common landing zone. The flat file is created in the OPMMP_CBS_Export_LastFileProcessed program. This landing zone is generally pre-configured with the correct security and properties by an administrator. The name of the flat file is provided below. The data from the flat file is extracted and stored into the corresponding table.</p> <p>During the processing of each flat file, the name is altered to include the current timestamp. This allows the user to know the file has already been processed. Along with the date and time, the number of rows transferred is included. An example would be:</p> <p><i>20210315_123444_Rows4_CBS_OPM_Last_File_Processed.txt</i></p>
<b>Execution</b>	This program is expected to run after the successful execution of OPMMP_CBS_Export_LastFileProcessed.

## SQL Server Table

Flat File Name	Table Name
CBS_OPM_Last_File_Processed.txt	ST.LAST_FILE_PROCESSED

**Reports** N/A

## Abort Information

If the program detects a processing irregularity, check the log for abort details.

<b>21801</b>	Error executing sql + sqlcode
<b>21815</b>	Error finding extract file location in OPMMP_Setup.xml. Check OPMMP_Setup for an entry for ExtractFileLocation, and make sure this location has proper security access.
<b>21821</b>	Table not found.

<b>21822</b>	Error reading schema data + sql
<b>21823</b>	Error reading input file.
<b>21824</b>	Column not found.
<b>21825</b>	Error reading schema data.
<b>21826</b>	Data row + row + does not have the same number of columns as the header row.
<b>21827</b>	Error renaming input file.
<b>21828</b>	Error writing to staging input table.



The following is a listing of the SQL stored procedures and functions that are part of the SQL server database OPM\_CB1061.

**Type Legend:**

**SP** stored procedure

**TF** table valued function

**SF** scalar valued function

**VW** view

Type	Schema	Name	Description
TF	OPM	opf_GetErrorData	Returns the fields for a single error row
TF	OPM	opf_GetStagingRecordsFromUpload	Returns records from OPT_Exception_Price_Upload to OPT_Exception_Price_Upload_Staging
TF	OPM	opf_GetStandardStagingRecordsFromUpload	Returns records from OPT_Standard_Price_Upload to OPT_Standard_Price_Upload_Staging
TF	OPM	opf_Util_SplitInts	Splits a delimited string and returns a single field table of INT values
TF	OPM	opf_Util_SplitStrings	Splits a delimited string and returns a single field table of VARCHAR(8000) values
SF	OPM	opf_ConvertToUSD	Convert Currency Amount to USD
SF	OPM	opf_GetErrColumnID	Get Error Column ID on Exception Pricing Spreadsheet

Type	Schema	Name	Description
SF	OPM	opf_GetErrColumnID_Std	Get Error Column ID on Standard Pricing Spreadsheet
SF	OPM	opf_GetMax6015EffDate	Returns the Maximum Effective Date from the Standard Price Table that is less than or equal to today
SF	OPM	opf_LastDayOfMonth	Returns a DATETIME that is the last day of the month for the specified date
SP	CAL	usp_tbl_time_addyear	CAL schema for calendar widget in App Studio
SP	OPM	opsp_Account_search	Searches for Deposit Accounts or Group Accounts
SP	OPM	opsp_Affiliate_Copy_Extract	VC# Extract Program executes when extracting Affiliate Copy Data
SP	OPM	opsp_Affiliate_data	Updates the Affiliate Copy table
SP	OPM	opsp_Affiliate_search	Searches for Affiliates on the Pricing Exception table
SP	OPM	opsp_Archive_Purge	Purges records from Archive_x table based on age parm from Retention_Config table
SP	OPM	opsp_BlockedServices_data	Updates Blocked Services table
SP	OPM	opsp_BlockedServices_search	Searches over the Blocked Services table
SP	OPM	opsp_Data_Archive	Moves records to Archive_x table based on Archive Number of Years Parm from OPT_CONFIG table
SP	OPM	opsp_Delete_Existing_Price_Records_Before_Change_Upload	Delete Existing Records on the OPT_Exception_Price_Upload Table before Uploading New/Updated Records for the Workflow
SP	OPM	opsp_Delete_Existing_Standard_Price_Records_Before_Change_Upload	Delete Existing Records on the OPT_Standard_Price_Upload Table before Uploading New/Updated Records for the Workflow
SP	OPM	opsp_File_Process_Check_Notification	Notify Users if the Extract Process is unable to run because the Last File Sent to the Host has not yet completed processing

Type	Schema	Name	Description
SP	OPM	opsp_FillStagingDefaults	Intermediate Staging Table for Exception Pricing Spreadsheet Validation -- fills default values
SP	OPM	opsp_FillStagingDefaults_Standard	Intermediate Staging Table for Standard Pricing Spreadsheet Validation -- fills default values
SP	OPM	opsp_GetPricingData	Spreadsheet use
SP	OPM	opsp_GetStandardPricingData	Spreadsheet use
SP	OPM	opsp_Get_Workflow_Extended_Status	Determine Extended Status for the Workflow ID
SP	OPM	opsp_Get_Workflow_Extended_Status_Standard	Determine Extended Status for the Workflow ID
SP	OPM	opsp_GetExcelVersion	Retrieves Excel Version Information using parm @SpreadsheetName
SP	OPM	opsp_GetUserByWinId	Retrieves all fields from User_Setup table using parm @UserID
SP	OPM	opsp_Institution_search	Searches over the Institution table
SP	OPM	opsp_Load_Blocked_Services	Blocked Service Upload for Spreadsheet
SP	OPM	opsp_Load_Service_Thresholds	Service Threshold Upload for Spreadsheet
SP	OPM	opsp_Load_Service_Thresholds_Control	Service Threshold Control Upload for Spreadsheet
SP	OPM	opsp_No_Data_Extract_Check_Notification	Notify Users if the Extract Process is unable to run because there is no data to extract and the User specific limit has been exceeded on the OPT_CONFIG Table
SP	OPM	opsp_Off_Check_Notification	Notify Users if the Extract Process is unable to run because the Switch is set to "OFF" on OPM_CONTROL
SP	OPM	opsp_Override_Workflow_Errors	Override Processing for Spreadsheet
SP	OPM	opsp_Price_Upload_Defaults	Default Posting for Price Uploads
SP	OPM	opsp_Price_Upload_Extract	Extract Stored Proc for Pricing Records

Type	Schema	Name	Description
SP	OPM	opsp_Profile_Data	Profile Maintenance table inserts/updates/deletes
SP	OPM	opsp_Profile_Maint_Extract	VC# Extract Program executes when extracting Profile Maint Data
SP	OPM	opsp_Profile_Search	This will search for data on the [OPM].[PROFILE] table, based on profile id, profile, effective date and/or expiration date
SP	OPM	opsp_Profile_submit	Inserts/Updates/Deletes on the Profile Maintenance table
SP	OPM	opsp_Profile_To_Account_Extract	VC# Extract Program executes when extracting Profile To Account Data
SP	OPM	opsp_ProfileAccount_data	Updates the Profile to Account table
SP	OPM	opsp_Retrieve_Blocked_Services	Retrieve Blocked Services for Spreadsheet
SP	OPM	opsp_Retrieve_Exception_Pricing_For_Change	Retrieve Workflow Exception Pricing for Change on Spreadsheet
SP	OPM	opsp_Retrieve_Standard_Pricing_For_Change	Retrieve Workflow Standard Pricing for Change on Spreadsheet
SP	OPM	opsp_Retrieve_Exception_Pricing_For_Inquiry	Retrieve Workflow Exception Pricing for Inquiry on Spreadsheet
SP	OPM	opsp_Retrieve_Standard_Pricing_For_Inquiry	Retrieve Workflow Standard Pricing for Inquiry on Spreadsheet
SP	OPM	opsp_Retrieve_Exception_Pricing_For_Override	Retrieve Workflow Exception Pricing for Override on Spreadsheet
SP	OPM	opsp_Retrieve_Exception_Pricing_For_Review	Retrieve Workflow Exception Pricing for Review on Spreadsheet
SP	OPM	opsp_Retrieve_Standard_Pricing_For_Review	Retrieve Workflow Standard Pricing for Review on Spreadsheet
SP	OPM	opsp_Retrieve_Selection_Criteria	Selection Criteria Retrieval for "Retrieve System Pricing for Change" Start Point on Spreadsheet (as opposed to New Pricing Upload as the Start Point)
SP	OPM	opsp_Retrieve_Service_Thresholds	Retrieve Service Thresholds for Spreadsheet



Type	Schema	Name	Description
SP	OPM	opsp_Retrieve_Service_Thresholds_Control	Retrieve Service Thresholds Control for Spreadsheet
SP	OPM	opsp_Review_Exception_Workflow_Pricing	Mark Workflow Exception Pricing Records and Workflow itself as Reviewed
SP	OPM	opsp_Review_Standard_Workflow_Pricing	Mark Workflow Standard Pricing Records and Workflow itself as Reviewed
SP	OPM	opsp_Select_Exception_Pricing	Retrieve Exception Pricing from OPM.EXCEPTION_Price Depending upon Selection Criteria
SP	OPM	opsp_Select_Standard_Pricing	Retrieve Standard Pricing from OPM.EXCEPTION_Price Depending upon Selection Criteria
SP	OPM	opsp_Submit_Workflow_Pricing_For_Review	Submit Pricing For Review - Spreadsheet
SP	OPM	opsp_Threshold_Automated_Build	Nightly calculation and update of Service_Thresholds table
SP	OPM	opsp_Threshold_data	Updates threshold table
SP	OPM	opsp_Threshold_Deactivate_Auto_Override	Updates pending price upload workflows with Service override options
SP	OPM	opsp_Threshold_search	Searches over the threshold table
SP	OPM	opsp_ThresholdControl_data	Updates data in the threshold control table
SP	OPM	opsp_ThresholdControl_search	Searches over the threshold control table
SP	OPM	opsp_User_Data	Update or Insert records in User_Data table
SP	OPM	opsp_User_Search	Allows user to search the OPM.OPT_User_Setup table
SP	OPM	opsp_validate_staging	Price-Upload default and field validation
SP	OPM	opsp_Workflow_advanced_search	Performs advance search functions over the workflow data
SP	OPM	opsp_Workflow_audit	Returns audit data for workflow

Type	Schema	Name	Description
SP	OPM	opsp_Workflow_data	Update or Insert records in Work_Request_Setup table
SP	OPM	opsp_Workflow_email	Sends email alerts for workflow tasks
SP	OPM	opsp_Workflow_search	Performs search tasks over workflow data
SP	OPM	opsp_Workflow_status	Updates status for workflow
SP	ST	opsp_Affiliate_Copy_Extract_MP	Extracts affiliate copies to be sent to CBS for posting
SP	ST	opsp_Exception_Price_Upload_Extract_MP	Extracts exception price records to be sent to CBS for posting
SP	ST	opsp_Profile_Maint_Extract_MP	Extracts profile records to be sent to CBS for posting
SP	ST	opsp_Profile_To_Account_Extract-Individual_MP	Extracts profile_to_account records to be sent to CBS for posting
SP	ST	opsp_Standard_Price_Upload_Extract_Individual_MP	Extracts standard price records to be sent to CBS for posting
SP	ST	opsp_Execute_Staging_MP_Extracts	Executes all extracts stored procedures
SP	ST	opsp_Purge_30Days_Prior	Purges records > 30 days
VW	CAL	udv_month	Builds structure for month based calendar
VW	CAL	udv_week	Builds week structure for month based calendar
VW	CAL	udv_weeklytime	Builds structure for week based calendar

The following is a listing of the SQL stored procedures and functions that are part of the SQL server database CBS\_CB1061\_DV:

**Type Legend:**

- SP** stored procedure  
**TF** table valued function  
**SF** scalar valued function  
**VW** view

Type	Schema	Name	Description
SP	OPM	opsp_Aff_Exception_Price_To_Staging_Input	Creates affiliate CBS maintenace records
SP	OPM	opsp_Affiliate_Workflow	Creates input for affiliate workflow report
SP	OPM	opsp_Compare_LFS_Counts	Creates input for the comparison report of Last_file_sent and staging tables
SP	OPM	opsp_Exception_Price_To_Staging_Input	Creates exception_price CBS maintenace records
SP	OPM	opsp_Exception_Price_Workflow	Creates input for exception_price workflow report
SP	OPM	opsp_Initialize_LFS_LFP	Creates initial entries to Last_File_Sent and Last_File_Processed tables
SP	OPM	opsp_OPM_Control	Turns status to ON/OFF
SP	OPM	opsp_Profile_To_Account_Workflow	Creates input for profile_to_account workflow report
SP	OPM	opsp_Profile_to_Deposit_Account_History_Staging_Input	Creates deposit account history CBS maintenace records
SP	OPM	opsp_Profile_to_Deposit_Account_to_Staging_Input	Creates deposit account CBS maintenace records
SP	OPM	opsp_Profile_to_Group_Account_History_Staging_Input	Creates group account history CBS maintenace records
SP	OPM	opsp_Profile_to_Group_Account_Staging_Input	Creates group account CBS maintenace records
SP	OPM	opsp_Profile_to_Staging_Input	Creates profile CBS maintenace records

Type	Schema	Name	Description
SP	OPM	opsp_Profile_Workflow	Creates input for profile workflow report
SP	OPM	opsp_Standard_Price_to_Staging_Input	Creates standard price CBS maintenance records
SP	OPM	opsp_Standard_Price_Workflow	Creates input for standard price workflow report
SP	OPM	opsp_Update_Last_File_Processed	Updates Last_File_Processed table with recent file_id from Last_File_Sent
SP	OPM	opsp_Purge_30Dasy_Prior	Purge records > 30 days from OPM staging tables
SP	OPM	opsp_PrepCBStoOPM_DepAcct	Prepare Deposit_Account for OPM Receive.
SP	OPM	opsp_PrepCBStoOPM_ExcPrice	Prepare Exception Price for OPM Receive.
SP	OPM	opsp_PrepCBStoOPM_GrAcct	Prepare Group_Account for OPM Receive.
SP	OPM	opsp_PrepCBStoOPM_StdPrice	Prepare Standard Price for OPM Receive.

This is a list of SQL server tables that are part of the SQL server database OPM\_CB1061.

Table Name	Description
Archive_Affiliate_Copy	Holds the archived records from the Affiliate_Copy table
Archive_Exception_Price_Upload	Holds the archived records from the Exception_Price_Upload table
Archive_Standard_Price_Upload	Holds the archived records from the Standard_Price_Upload table
Archive_Profile_Maint	Holds the archived records from the Profile Maint table
Archive_Profile_To_Account	Holds the archived records from the Profile_To_Account table
Archive_Workflow_Setup	Holds the archived records from the Workflow_Setup
OPT_Affiliate_Copy	Table of Affiliate copy records including source and target: account, service code, origin, effective, and expiration date.
OPT_Audit	Table of actions taken against a workflow, includes user id and user name that performed the action
OPT_Blocked_Services	Tool table of blocked services
OPT_Blocked_Upload_Staging	Temporary location for changes to the Blocked services table. Records will reside here until the commit is completed.
OPT_Config	Server configuration parameters including items such as Archive years, alert limits, and alert e-mail notification
OPT_Extract_Log	Log of extracts activity includes type, message, no data count
OPT_NDM_Trigger	NDM trigger datetime stamp
OPT_Exception_Price_Upload	Exception Price Upload records
OPT_Standard_Price_Upload	Standard Price Upload records
OPT_Exception_Price_Upload_Staging	This is a temporary location for Exception Price Upload records that are being validated. Uploaded records will reside here until the UPLOAD button pressed.

Table Name	Description
OPT_Standard_Price_Upload_Staging	This is a temporary location for Standard Price Upload records that are being validated. Uploaded records will reside here until the UPLOAD button pressed.
OPT_Price_Upload_User_Default	This table contains one row that represents the hardcoded default values for the columns represented.
OPT_ProcessingErrors	This is a temporary location for recording errors found while executing default and validation logic against price upload staging records. This table is returned with the response to the Excel workbook to enable detail error reporting in the workbook
OPT_Profile_Maint	Table of Profile maintenance records
OPT_Profile_To_Account	Table of Profile to Account maintenance records
OPT_Review_Override_Staging	This is a temporary table for storing price upload records from the Excel workbook, while they are being reviewed or overridden. The records are moved to the Price_Upload table when the operation is committed.
OPT_Selection_Criteria	Table of selection criteria uploaded from Excel workbook as part of the Retrieve System Pricing for change function.
OPT_Service_Amounts_Temp	Temp table used in automated threshold tablebuild
OPT_Service_Maxes_Temp1	Temp table used in automated threshold tablebuild
OPT_Service_Maxes_Temp2	Temp table used in automated threshold tablebuild
OPT_Service_Thresholds	Tool table of service thresholds
OPT_Service_Thresholds_Control	Tool table of service threshold controls
OPT_Service_Thresholds_Control_Staging	Tool table used to stage records before updating the OPT_Service_Thresholds_Control table
OPT_Service_Thresholds_Staging	Tool table used to stage records before updating the OPT_Service_Thresholds table
OPT_Spreadsheet	Tool table containing current version info

Table Name	Description
OPT_User_Setup	Table of user information including name, role, User ID, Email ID, and Supervisor's name, User ID, Email ID.
OPT_Workflow_Setup	Workflow detail columns describing the type of workflow, status, requestor, and reviewer information
CURRENCY	Replica of currency table - Currency Information
CURRENCY_EXCHANGE	Replica of currency_exchange table - Currency Exchange Rate.
DEPOSIT_ACCOUNT	Replica of deposit_account table - Deposit Master
DEPOSIT_ACCOUNT_HISTORY	Replica of deposit_account_history table - Deposit History
EXCEPTION_PRICE	Replica of CBS exception pricing table.
GROUP_ACCOUNT	Replica of group_account table Group Master
GROUP_ACCOUNT_HISTORY	Replica of group_account_history table - Group History
INSTITUTION_CONTROL	Replica of institution_control table - INSTITUTION CONTROL
PROFILE	Replica of CBS PROFILE table
STANDARD_PRICE	Replica of CBS standard pricing table.
Util_ProcTimes	Internal table that may be utilized to test performance
ST.AFFCOPY	Affiliate copy staging table
ST.Exception_Price	Exception price staging table
ST.Last_File_Processed	Contains the most recent file_id processed by CBS
ST.Last_File_Sent	Contains the most recent file_id processed by OPM
ST.OPM_Control	Contains the status of OPM transfer to CBS - ON/OFF
ST.PROFILE	Profile staging table
ST.Profile_To_Account	Profile to account staging table
ST.Standard_Price	Standard price staging table

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This is a list of SQL server tables that are part of the SQL server database CBS\_10\_6\_1.

<b>Table Name</b>	<b>Description</b>
OPM.AFFCOPY	Affiliate copy staging table
OPM.Exception_Price	Exception price staging table
OPM.Last_File_Processed	Contains the most recent file_id processed by CBS
OPM.Last_File_Sent	Contains the most recent file_id processed by OPM
OPM.OPM_Control	Contains the status of OPM transfer to CBS - ON/OFF
OPM.PROFILE	Profile staging table
OPM.Profile_To_Account	Profile to account staging table
OPM.Standard_Price	Standard price staging table
OPM.OPMTOCBS_LOG	Identifies which table has been extracted
OPM.TEMP_REPORT_LAST_FILE_SENT	Temporary table for DevExpress reporting only



## Chapter 4: Application Studio

# 4

The user interface panels of Operational Pricing Management consist of Application Studio Components. Details are provided in the following table:

Folder	Subfolder	Panel	Panel functionality
<b>Operations Price Manager</b>	Admin	OPPM User	Add new users to the tool, as well as edit or review the settings of a current user
	Reports		
	Workflow Reports	OPPM Workflow	Add new workflows to the tool
		OPPM New Profile	Add, edit or view New Profile parameters
		OPPM Copy Profile	Add, edit or view Copy Profile parameters
		OPPM Update Profile	Add, edit or view Update Profile parameters. Review (approve or reject) all Profile Maintenance workflows
		OPPM Profile Accounts	Add, edit, remove or view the accounts on a New Profile or Copy Profile workflow
		OPPM Profile Add Accounts	Dialog used to Add Account to a Profile Maintenance workflow
		OPPM Price Uploads	View, Submit or Reject a Price Upload workflow
		OPPM Copy Affiliate	Add, edit, view or review (approve or reject) Copy Affiliate workflow parameters
		OPPM Workflow Audit	Audit workflow actions
		OPPM Price Upload Parameters	Edit or view Price Upload settings for the Price Upload Spreadsheet
	Widget Reports	OPPM Parameter	Dialog to set system parameter values
		OPPM Message	Dialog to display system messages

Folder	Subfolder	Panel	Panel functionality
		OPPM Comment	Dialog to add comments to workflow rejections
		OPPM Calendar	Calendar selection dialog
		OPPM Filter	Dialog to set filter values
		OPPM Confirm	Dialog to confirm an action
		OPPM Selection	Dialog to select a value from a list of available options
		OPPM Filter_SC	Dialog to set service code and origin filters on Copy Affiliate workflows
	Service Reports	OPPM Service Threshold	Edit or Review User Price Threshold override settings
		OPPM Service Threshold Control	Edit Threshold Control settings
		OPPM Blocked Services	Add, edit or review Blocked Services
		OPPM Entry	Home Screen for the OPPM Application

**Style Sheets:**

Folder	Style Sheet	Use
-	Price Manager Dialog	Used in all application dialogs
-	Price Manager Standard	Used in all application reports

The VBA Enabled Excel Spreadsheet provided with Operational Pricing Management uses ADODB connections to communicate with the SQL Server Database to verify spreadsheet integrity as well as User Entitlements prior to allowing the User to perform any actions on the Spreadsheet.

The Spreadsheet uses a number of SQL Server Stored Procedures to retrieve, validate, and upload data into the tables used by Operational Pricing Management.

The spreadsheet functionality is described in detail in the following guides:

*Infor Operational Pricing Management 1.1.0.2 Operations Guide*

*Infor Operational Pricing Management 1.1.0.2 User Guide*



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## Chapter 6: Windows Server Data Extract Process

# 6

The Windows Server Data Extract process is an automated program that runs under the .NET framework. It invokes SQL server stored procedures to extract data from the SQL server and send it to CBS SQL server tables using C# programs.

There are two main interfaces that are used in this product in order to allow the user to configure and execute the OPM extraction process:

- The Configuration Tool, which is used to set the parameters for alerts and the configuration email address that is used to notify the team if an error or alert occurred during the process.
- The Data Transfer program, which is used to configure the server connection for the databases and execute the extraction process manually or automatically.

These two software applications make up the Front-End in which users will interact with this product.

### Server Extract Process Pseudocode

- 1 Check to see if the OPM Control Switch is **On**. If it is **Off**, write a record to the logging table indicating that the extract process was triggered but did not execute because the switch was turned off.
- 2 Check to see if the time since the last switch-off is greater than the user-specified time period for alert. If it is, send an email alert to the user-specified email address indicating that the tool has been switched off for **X** period, which exceeds the user-specified limit.
- 3 If the OPM Control Switch is **On**, check to see if the Extract Timestamp in the LAST\_FILE\_PROCESSED table matches the Extract Timestamp in the LAST\_FILE\_SENT table. If this timestamp does not match, write to the log indicating the status.
- 4 Run extract process if there are records to be processed.
- 5 If the Extract Timestamp in LAST\_FILE\_SENT matches that of LAST\_FILE\_PROCESSED, then begin the extract process by identifying the current system timestamp and saving it as the reference for all records written out.
- 6 If any of the extracts fail, an alert message will be generated.

- 7 If the Record Counts are **Non-Zero** for at least one extract, all records within workflow requests are marked as **Reviewed** where the status on each of the detail records themselves also indicates **Reviewed**.
- 8 Write each record to the corresponding Staging Table for its record type:
  - Pricing
  - Profile
  - Affiliate Copywith the saved system timestamp.
- 9 For each Workflow processed, if all records have been extracted, mark the workflow as **Fully Extracted**. Otherwise, mark the workflow as **Partially Extracted**.
- 10 Once all data has been extracted, write an entry to the LAST\_FILE\_SENT table with this timestamp key as well as the number of records respectively for the Pricing, Profile, and Affiliate Copy record types.
- 11 Records inserted to staging tables will be sent to CBS for processing.