User's
Manual

PRM
Synchronization Tool

FieldMate
PRM
Plant Resource Manager

IM 01R01A20-01E

YOKOGAWA
Yokogawa Electric Corporation

IM 01R01A20-01E
12th Edition

PRM Synchronization Tool

IM 01R01A20-01E 12th Edition

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Revision Information

A Symbol Marks in the User's Manual

The symbol marks appearing in the user's manual have the following meanings.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



IMPORTANT

Indicates that operating the hardware or software in this manner may damage it or lead to system failure.



NOTE

Draws attention to information essential for understanding the operation and features.

TIP

This symbol indicates information important to understanding the operations and functions.

SEE ALSO

This symbol indicates items to be referred to.

If the reference target is indicated in green, the reference target item can be accessed.

If the reference target is indicated in black, the reference target item cannot be accessed.

1 Overview

PRM Synchronization Tool realizes device information exchange between FieldMate and Plant Resource Manager (PRM). The consolidated database management in PRM is provided by utilizing field device information implemented and acquired by FieldMate

System Configuration

The followings displays sample system configuration

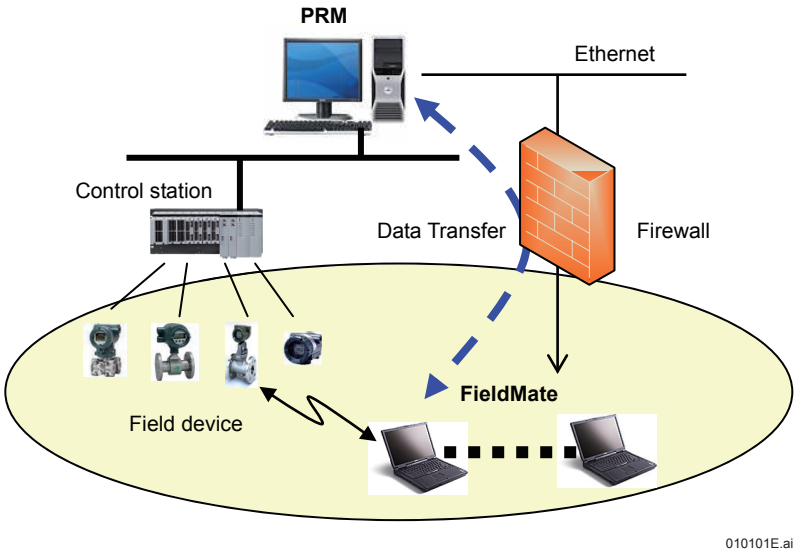


Figure1-1 Establish the connection between FieldMate and the PRM network

PRM Synchronization Tool activities

PRM Synchronization Tool can perform the following activities:

- Restore activity - Select this activity to transfer data records from PRM to FieldMate. This enables users to refer to previous data when performing on-site device tuning using FieldMate.
- Backup activity - After performing device tuning using FieldMate, select this activity to store the FieldMate data to PRM for storage.
- Synchronize activity - Automatically updates information between PRM and FieldMate based on new records.

Device for Tool

Supported communication protocol

FOUNDATION fieldbus

HART

BRAIN

Profibus

ISA100

Modbus

Others

Devices

Devices registered in FieldMate

Devices registered in PRM

Data for Tool

The following data are object of Synchronization Tool

Devices data

NOTE

Descriptions of Device maintenance Information in R2.06 or before are different form the ones in R3.0x.

In this User's Manual, descriptions above are based on R2.06 or before. When R3.0x is used, please refer to Table 1-1.

Table 1-1 PRM/FieldMate Object data

Before FieldMate R2.06	FieldMate R3.0x	PRM Synchronization
Device details		
Device status		
History		
Memo (AXF Verification date)	Attachment-Memo (AXF Verification date)	Memo
	Sticky Note	
	Images	
	Parameter (All Parameters, ZERO Adjustment Parameters)	
Documents	Attachment-Document Link	Documents
Parameter sets (Parameter Manager)	Attachment-PM Data	Parameter sets (Parameter Manager)
DTM data	Attachment-DTM Data	DTM data

IMPORTANT

PRM Synchronization does not support “Parameter sets (Parameter Manager)”data of ISA100 device.

The Parameter Manager data of ISA100 device is lost if you perform “Backup” with checking “Backup Chosen device is eliminated from FieldMate after processing” for ISA100 device.

IMPORTANT

PRM Synchronization does not support data of Calibration Management for Liquid Analyzers function.

TIP

AXF Verification data are synchronized, however these are attached in Memo and cannot be viewed in PRM

2 Operation Preparation

This chapter describes the operation preparation before starting PRM Synchronization Tool.

Software operation condition

PRM R3.02 or later

FieldMate R1.03 or later

Since the new functionality support on PRM and FieldMate needs to be considered such as new DD Menu for e-EDDL and Device Tag Extension Mode, the compatibility between different versions of PRM and FieldMate is shown as below.

PRM R3.01 or earlier and FieldMate R1.02 or earlier are excluded because PRM/FieldMate Synchronization function is not supported.

Table 2-1 Version compatibility between PRM and FieldMate

		FieldMate					
		R1.03	**R2.01.00**	**R2.01.10**	**R2.02, R2.03, R2.04**	**R2.05, R2.06, R3.01, R3.02, R3.03**	**R3.03.10, R3.04.00**
PRM	R3.02	Full support based on FieldMate R1.03 specification ∗1	Limited synchronization support ∗2	Limited synchronization support ∗3	Limited synchronization support ∗3 ∗6	Limited synchronization support ∗3 ∗6 ∗7	Limited synchronization support *3 *6 *7
	R3.03 R3.04	Limited synchronization support ∗3	Limited synchronization support ∗3	Full support based on FieldMate R2.01 specification ∗4	Limited synchronization support ∗3 ∗6	Limited synchronization support ∗3 ∗6 ∗7	Limited synchronization support *3 *6 *7
	R3.05 R3.10	Limited synchronization support ∗3 ∗6	Limited synchronization support ∗3 ∗6	Limited synchronization support ∗3 ∗6	Full support based on FieldMate R2.02/R2.03 / R2.04 specification ∗5	Limited synchronization support ∗7	Limited synchronization support *7
	R3.11 R3.12 R3.20 R3.30 R3.31	Limited synchronization support ∗3 ∗6	Limited synchronization support ∗3 ∗6	Limited synchronization support ∗3 ∗6	Full support based on FieldMate R2.02/ R2.03 /R2.04 specification ∗5	Full support based on FieldMate R2.05/ R2.06/R3.0x specification ∗8	Limited synchronization support
	R4.01 R4.02	Not supported	Not supported	Not supported	Not supported	Not supported	Limited synchronization support

∗1: Except e-EDDL data and Device Tag Display Extension Mode
∗2: Handling of e-EDDL Data is limited
∗3: Handling of e-EDDL Data and Device Tag Extension Mode functionalities are limited. Depending on Device Tag Extension Mode setting, synchronization is not functional.
∗4: Both e-EDDL Data and Device Tag Extension Mode except Long Tag are fully supported by PRM Synchronization tool
∗5: Both e-EDDL Data and Device Tag Extension Mode including Long Tag are fully supported by PRM Synchronization tool

∗6: When Long Tag is specified, synchronization is not functional.
*7: AXF Verification data is not supported.
*8: e-EDDL data, Device Tag Extension Mode including Long Tag and AXF Verification data are fully supported.
Bold line is recommended version combination between PRM and FieldMate.



NOTE

PRM Synchronization Tool is included in the FieldMate R1.03/R2.01 or later. It will be installed simultaneously.

Create a PRM user account with the correct privilege

It is necessary to set User account in PRM security model. There are 3 (three) PRM security models as follows.

- Legacy model
- Standard model
- Strengthened model

SEE ALSO

Refer to Plant Resource Manager Security Guide (IM 30B05A30-01EN) about PRM security model.



IMPORTANT

PRM Synchronization Tool does not support Strengthened model.

The settings User account for each PRM security model are as follows.

The case of Legacy model as PRM security model

PRMUSER account is created in the computer used PRM Synchronization Tool.

1. Log on as a user with administrator on the FieldMate computer.
2. Open the Command Prompt window and then run the following command.

   (FieldMate installed drive):\FM\Tool\PRMSyncSecuritySetting\
   CreateInternalUserAccount.exe –sm legacy
3. PRMUSER account is created.

The case of Standard model as PRM security model

PRM_PROCESS account is created in the computer used PRM Synchronization Tool.

1. Log on as a user with administrator on the FieldMate computer.
2. Access the following folder.

   (FieldMate installed drive) \FM\Tool\PRMSyncSecuritySetting\
   Run CreateInternalUserAccount.exe.
3. PRM_PROCESS account is created.

Establish connection to the PRM network

Use Ethernet to connect the PC where FieldMate was installed to the PRM network which includes the PRM server and the PRM client. The connection needs to be established to allow FieldMate to communicate with PRM's database.



NOTE

Before connecting to the PRM network, make sure that the computer where FieldMate was installed is adequately protected against security threats. Ensure that the latest security patches are installed and an antivirus program is running.

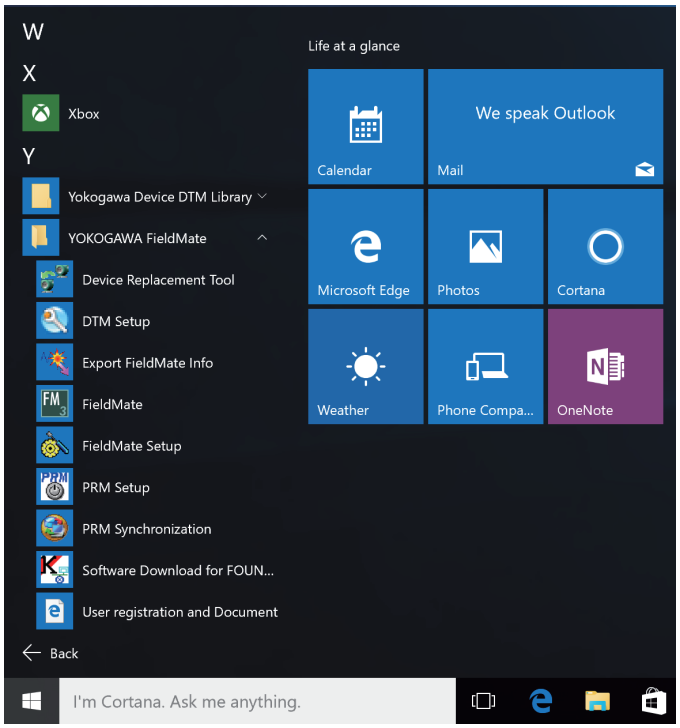
Connect PRM and FieldMate on the network with security such as firewall.

These measures prevent computers in the network to be compromised.

Define PRM Server to connect to

Use FieldMate's PRM Setup Tool to specify the PRM Server where FieldMate will connect to.

To specify the PRM server set in PRM Setup Tool:



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Figure2-1 PRM Setup Tool Start (windows 10)

1. Start PRM Setup Tool with the following procedure.
   - Windows 7: [Start menu] > [All Programs] > [YOKOGAWA FieldMate] > [Tools] > [PRM Setup]
   - Windows 10: [Start menu] > [All App] > [YOKOGAWA FieldMate] > [PRM Setup]
2. Select a connection type:
   - Select [Use One PRM Server] to enter one PRM Server.
   - Select [Use Multiple PRM Servers] to specify multiple servers.

     To add a server, click [Add]. This opens the Connection dialog box where you can enter the Server Set and the PRM Server. Click [OK] to close the Connection dialog box.
3. Click [Apply].
4. From the menu bar, select [File] > [Exit] to close PRM Setup Tool.

3 PRM Synchronization Tool start

This chapter provides detailed steps on how to use the Restore, Backup, and Synchronize activities. The figure below displays a comprehensive view of the PRM Synchronization Tool process flow.

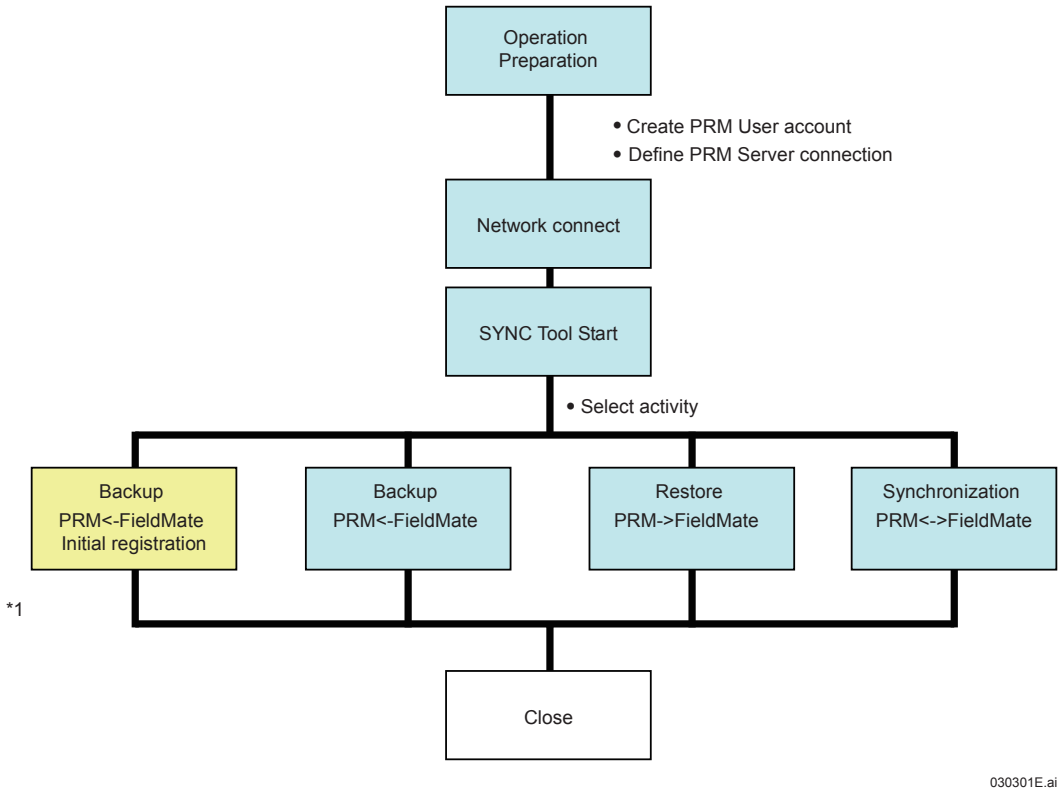


Figure3-1 PRM Synchronization Tool process flow

∗1 Initial Registration

Device registration and data update can be executed for the devices which are not been registered in PRM

NOTE

- Connect the computer FieldMate was installed to the PRM network.
- Close other FieldMate applications before starting the PRM Synchronization Tool. Other FieldMate applications cannot be used at the same time with PRM Synchronization Tool.
- Before the data transfer process, PRM Synchronization Tool adjusts FieldMate's time settings to follow PRM Server's time settings.
- During the data transfer process, devices that are not selected will not be affected.

3-1 Restoring device information from PRM to FieldMate

Select the Restore activity to transfer data records from PRM to FieldMate. This enables users to refer to previous data when performing on-site device tuning using FieldMate.

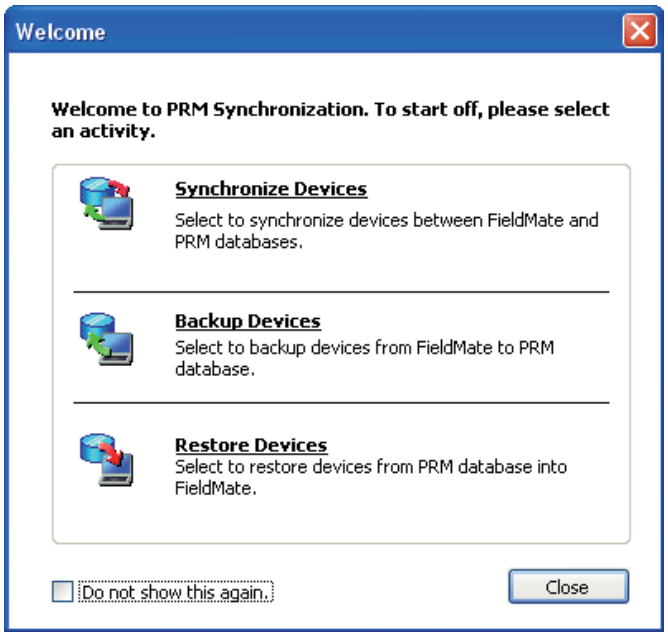
To restore device information:

1. Start PRM Synchronization Tool with the following procedure.
   - Windows 7: [Start menu] > [All Programs] > [YOKOGAWA FieldMate] > [Tools] > [PRM Synchronization]
   - Windows 10: [Start menu] > [All App] > [YOKOGAWA FieldMate] > [PRM Synchronization]

   And then, PRM Login dialog box appears.
2. Enter or select a User Name from the [User Name] drop-down list.
3. Enter your password.
4. Select the name of the PRM Server you want to use in the [Server Set] drop-down list. [Server Set] only appears if more than one PRM Server was defined in PRM Setup Tool.
5. Click [OK] to start PRM Synchronization Tool.
6. In the Welcome dialog box, click [Restore Devices]. This closes the Welcome dialog box and displays the PRM Synchronization Tool window.

TIP

- To skip showing the Welcome dialog box, click [Do not show this again] to display the check mark. The Welcome dialog box will not appear the next time you start PRM Synchronization Tool.
- To enable Welcome dialog box, click [Do not show this again] to remove the check mark: The Welcome dialog box will now appear every time you start PRM Synchronization Tool.
- Aside from the Welcome dialog box, you can also select an activity from the toolbar or the Action menu.



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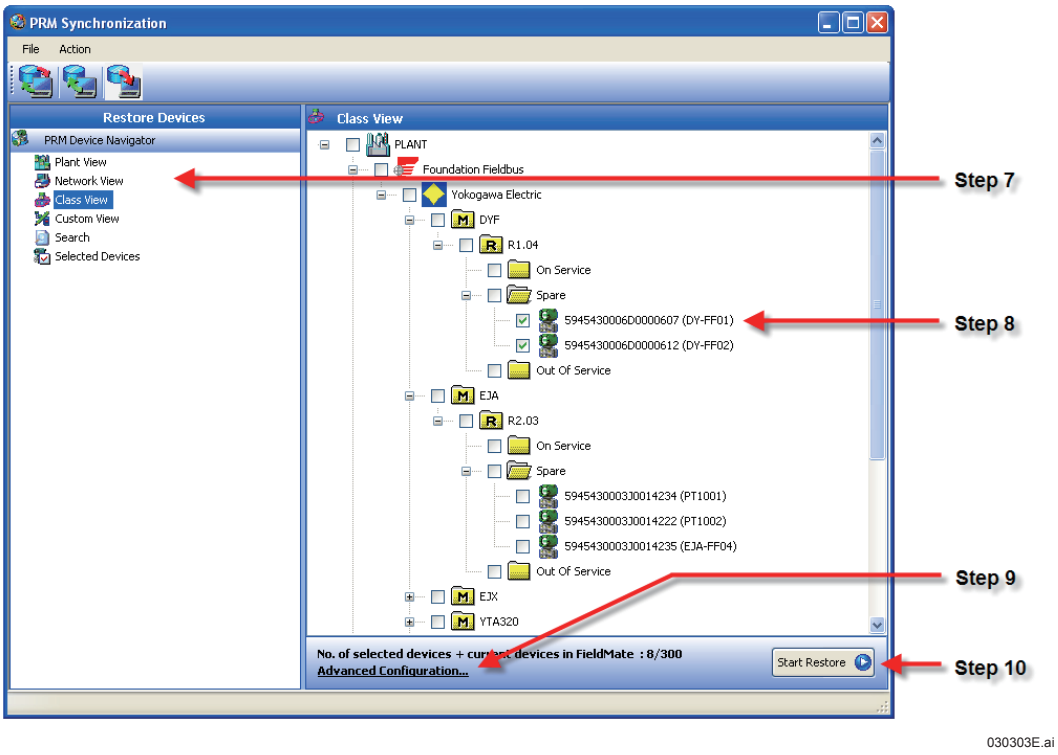
Figure3-2 Welcome dialog box

7. Select a PRM Device Navigator option:
   - [Plant View] to display Plant view in the right pane.
   - [Network View] to display Network view in the right pane.
   - [Class View] to display Class view in the right pane.
   - [Custom View] to display Custom view in the right pane.
   - [Search] to perform a search.
   - [Selected Devices] to display selected devices for Restore.

SEE ALSO

For Search, please see:

"Searching for a device" in 3-4, "Performing advanced configurations and searching devices"



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Figure3-3 PRM Synchronization Tool window - Restore activity

8. In the right pane, click the check boxes corresponding to the devices you want to include in the activity. A check mark appears on the top of the device tag to indicate that the device is selected. Device tags that appear in blue indicate that the device was included in the list of the previous data transfer.
   Device layout displayed in the right pane is not always identical to the ones in PRM.

TIP

To view selected devices, select [Selected Devices] to view them. This will display all selected devices in the right pane.

- To search for devices, select [Search]. This displays the Search pane where you can enter the search keyword in [Values] and then click [Search].

NOTE

The number of selected and current devices in FieldMate should not exceed 500. The total number of selected and current FieldMate devices is displayed at the bottom of the right pane.

9. Click [Advanced Configurations] if you want to change device data options. This opens the Advanced Configurations dialog box.

SEE ALSO

For Advanced Configurations instructions, please see:

"Using Advanced Configurations" in 3-4, "Performing advanced configurations and searching devices"

10. Click [Start Restore]. The Restore Devices in Progress dialog box appears to display the activity progress.

    When you start the activity, a dialog box appears to display the activity progress. Click [Show Details] to display the activity details. Activity details are categorized according to type, date, time, and remarks.

TIP

For Advanced Configurations instructions, please see:

"Using Advanced Configurations" in 3-4, "Performing advanced configurations and searching devices"

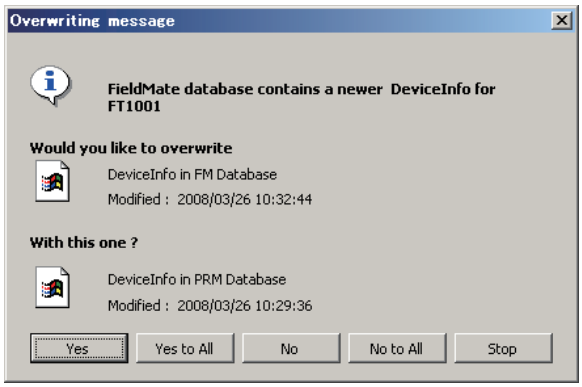
11. When the activity is finished, click [Close].

Handling overwrite messages

During the Restore activity, the Overwriting Message dialog box appears when the device information from FieldMate is different from the device information in PRM. This dialog box enables you to select the overwrite rule.

Table3-1 Situations that trigger the Overwriting Message

PRM Timestamp	FieldMate Timestamp	Result
Same	Same	None.
Newer	Older	Overwriting Message appears.
Older	Newer	Overwriting Message appears.



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Figure3-4 Overwriting Message dialog box

Click on the buttons corresponding to the following options:

- [Yes] to overwrite FieldMate data with PRM data for the current device.
- [Yes to All] to overwrite FieldMate data with PRM data for all devices.
- [No] to discard PRM data and retain FieldMate data for the current device.
- [No to All] to discard PRM data and retain FieldMate data for all devices.
- [Stop] to stop the activity.

NOTE

If an option is not selected within 30 minutes, the data transfer will skip the affected device and proceed with the transfer for the remaining devices.

3-2 Backing up device information from FieldMate to PRM

After performing device tuning using FieldMate, select the Backup activity to transfer device information from FieldMate to PRM. This feature enables FieldMate to make full use of the larger capacity of PRM to store device information. Before proceeding with the activity, you can enable an option to delete selected devices in FieldMate after the data transfer.

Newly-imported devices in PRM appear in the Spare folder of Plant view, in the respective protocol folder in Network view, and under the actual class of the device in Class view. Devices that were included in the previous data transfer will remain in the same view and folder.

To back up device information:

1. Start PRM Synchronization Tool with the following procedure.
   - Windows 7: [Start menu] > [All Programs] > [YOKOGAWA FieldMate] > [Tools] > [PRM Synchronization]
   - Windows 10: [Start menu] > [All App] > [YOKOGAWA FieldMate] > [PRM Synchronization]

   And then, PRM Login dialog box appears.
2. Enter or select a User Name from the [User Name] drop-down list.
3. Enter your password.
4. Select the name of the PRM Server you want to use in the [Server Set] drop-down list. [Server Set] only appears if more than one PRM Server was defined in PRM Setup Tool.
5. Click [OK] to start PRM Synchronization Tool.
6. In the Welcome dialog box, click [Backup Devices]. This closes the Welcome dialog box and displays the PRM Synchronization Tool window.

TIP

Aside from the Welcome dialog box, you can also select an activity from the toolbar or the Action menu.

7. Select a FieldMate Device Navigator option:
   - [All] to display all FieldMate devices in the right pane.
   - [Favorites] to display favorite devices in the right pane.
   - [Search] to perform a search.
   - [Selected Devices] to display selected devices for synchronization.

SEE ALSO

For Favorites, please see:

"Device Navigator" in IM 01R01A01-01E FieldMate Versatile Device Management Wizard

For Search, please see:

"Searching for a device" in 3-4, "Performing advanced configurations and searching devices"

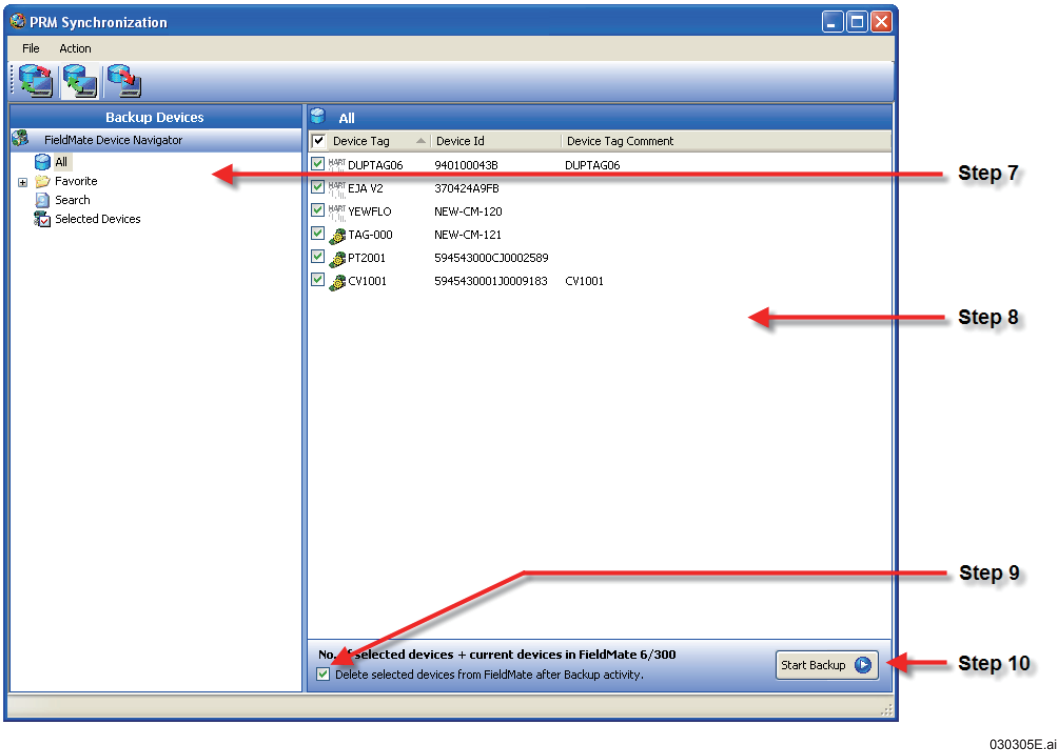


Figure3-5 PRM Synchronization Tool window - Backup activity

8. In the right pane, click the check boxes corresponding to the devices you want to include in the activity. A check mark appears on the top of the device tag to indicate that the device is selected.

TIP

- To view selected devices, select [Selected Devices] to view them. This will display all selected devices in the right pane.
- To view devices marked as favorite, select [Favorites]. This will display all favorite devices in the right pane. The Favorite option appears when you are viewing devices from the FieldMate database during the Synchronize or Backup activity.
- To search for devices, select [Search]. This displays the Search pane where you can enter the search keyword in [Values] and then click [Search].

9. Click the [Delete selected devices from FieldMate after Backup Activity] check box if you want to delete the devices in FieldMate after the activity.
10. Click [Start Backup]. The Backup Devices in Progress dialog box appears to display the activity progress.

    When you start the activity, a dialog box appears to display the activity progress. Click [Show Details] to display the activity details. Activity details are categorized according to type, date, time, and remarks.

TIP

You can also stop the activity at any point in time. To stop the activity, click [Stop] from the Backup Devices in Progress dialog box. When an activity is stopped, the process is halted but the information that was processed before stopping the activity will not be reverted.

11. When the activity is finished, click [Close].

Handling overwrite messages

During the Backup activity, the Overwriting Message dialog box appears when the device information from FieldMate is different from the device information in PRM. This dialog box enables you to select the overwrite rule.

Table3-2 Situations that trigger the Overwriting Message

PRM Timestamp	FieldMate Timestamp	Result
Same	Same	None
Newer	Older	Overwriting Message appears
Older	Newer	Automatic overwrite

SEE ALSO

For handling overwrite prompts, please see:

“Handling overwrite messages“ in 3-1, “Transferring device information from PRM to FieldMate”

TIP

In the case that the PRM has backed up the Sticky Note, Image, and Parameter of the FieldMate R3.0x, file names are as shown here.

Sticky Note: The content of the Sticky Note is shown in the content of the memo. {FieldMate StickyNote}

Image: The image data is recorded as a Memo attachment file. {FieldMate Image}

(The file name is the same as that which the user selected for FM.)

Parameter (All/Zero adjustment parameters): This is recorded as a Memo attachment file. {FieldMate Parameter}

The file name is applied automatically. [User Name]_[Date]([Tag Name]).xml

Example: DefaultUser_20140701103121(TAG002).xml

(The information within {} is the Memo title after the PRM has performed backup.).

3-3 Synchronizing device information between PRM and FieldMate

Select the Synchronize activity to update information between FieldMate and PRM based on new records. Newly-imported devices in PRM appear in the Spare folder of Plant view, in the respective protocol folder in Network view, and under the actual class of the device in Class view. Devices that were included in the previous data transfer will remain in the same view and folder.

To synchronize device information:

1. Start PRM Synchronization Tool with the following procedure.
   - Windows 7: [Start menu] > [All Programs] > [YOKOGAWA FieldMate] > [Tools] > [PRM Synchronization]
   - Windows 10: [Start menu] > [All App] > [YOKOGAWA FieldMate] > [PRM Synchronization]

   And then, PRM Login dialog box appears.
2. Enter or select a User Name from the [User Name] drop-down list.
3. Enter your password.
4. Select the name of the PRM Server you want to use from the [Server Set] drop-down list. [Server Set] only appears if more than one PRM Server was defined in PRM Setup Tool.
5. Click [OK] to start PRM Synchronization Tool.
6. In the Welcome dialog box, click [Synchronize Devices]. This closes the Welcome dialog box and displays the PRM Synchronization Tool window.

TIP

Aside from the Welcome dialog box, you can also select an activity from the toolbar or the Action menu.

7. Select a FieldMate Device Navigator option:
   - [All] to display all FieldMate devices in the right pane.
   - [Favorites] to display favorite devices in the right pane.
   - [Search] to perform a search.
   - [Selected Devices] to display selected devices for synchronization.

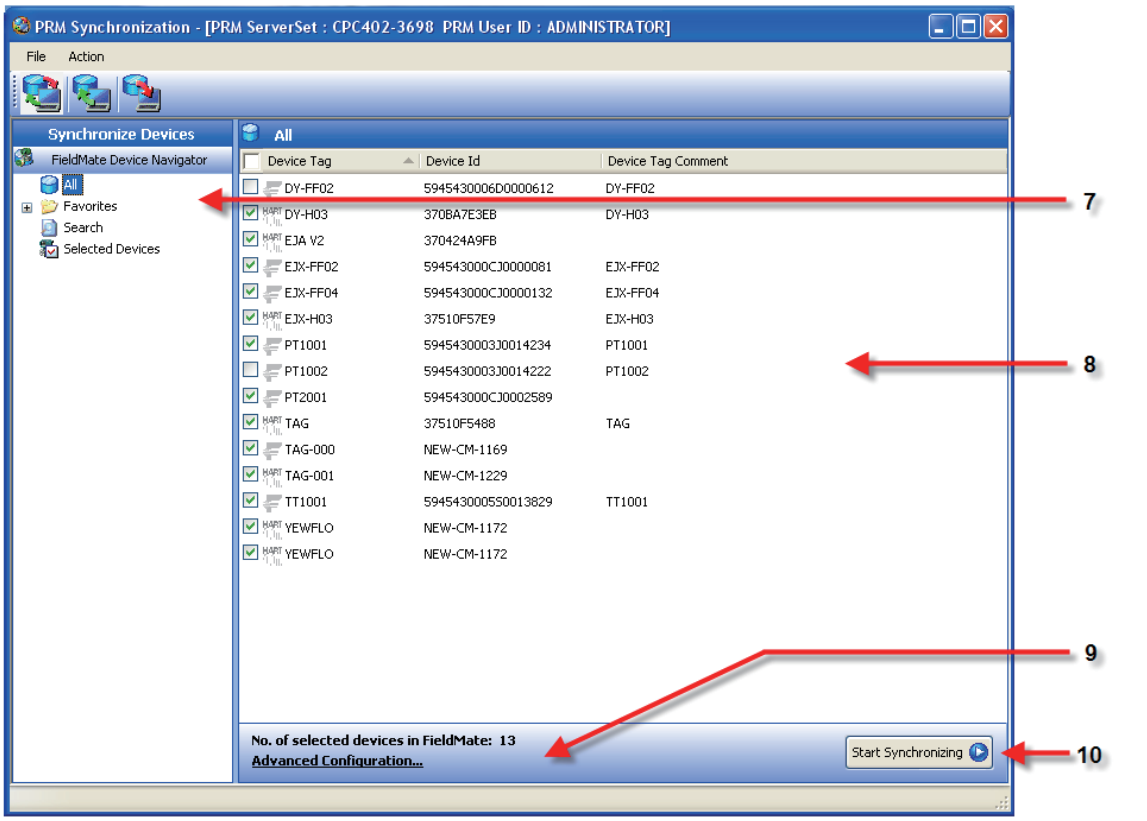
SEE ALSO

For Favorites, please see:

“Device Navigator” in IM 01R01A01-01E FieldMate Versatile Device Management Wizard

For Search, please see:

“Searching for a device” in 3-4, “Performing advanced configurations and searching devices”



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Figure3-6 PRM Synchronization Tool window - Synchronize activity

8. In the right pane, click the check boxes corresponding to the devices you want to include in the synchronization. A check mark appears on the top of the device tag to indicate that the device is selected.

TIP

- To view selected devices, select [Selected Devices] to view them. This will display all selected devices in the right pane.
- To view Favorite devices, select [Favorites]. This will display all favorite devices in the right pane. The Favorite option appears when you are viewing devices from the FieldMate database during the Synchronize or Backup activity.
- To search for devices, select [Search]. This displays the Search pane where you can enter the search keyword in [Values] and then click [Search].

9. Click [Advanced Configurations] if you want to change device data options. This opens the Advanced Configurations dialog box.

SEE ALSO

For Advanced Configurations instructions, please see:

"Using Advanced Configurations" in 3-4, "Performing advanced configurations and searching devices"

10. Click [Start Synchronizing]. The Synchronizing Devices in Progress dialog box appears to display the activity progress.

    When you start the activity, a dialog box appears to display the activity progress. Click [Show Details] to display the activity details. Activity details are categorized according to type, date, time, and remarks.

TIP

You can also stop the activity at any point in time. To stop the activity, click [Stop] in the Synchronize Devices in Progress dialog box. When an activity is stopped, the process is halted but the information that was processed before stopping the activity will not be reverted.

11. When the activity is finished, click [Close].

Handling conflict messages

During the synchronization activity, the Conflict Message dialog box appears when the device information from FieldMate is older than the device information in PRM or when both PRM and FieldMate have new information.

Table3-3 Situations that trigger the Conflict Message

PRM Timestamp	FieldMate Timestamp	Result
Same	Same	None
Newer	Older	Conflict Message appears.
Older	Newer	Automatic overwrite from FieldMate to PRM.
Newer	Newer	Conflict Message appears.

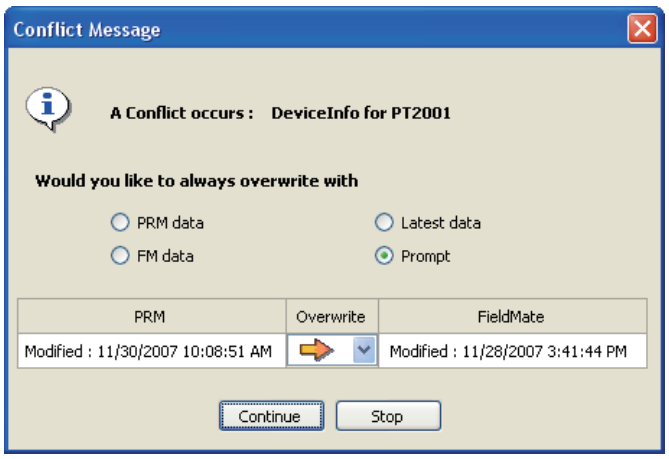


Figure3-7 Conflict Message dialog box

To resolve conflicts, click the following options:

- [PRM Data] to overwrite FieldMate data with PRM data for all devices.
- [FieldMate Data] to overwrite PRM data with FieldMate data for all devices.
- [Latest Data] to overwrite FieldMate older data with PRM newer data, comparing with the latest Update Date.
- [Prompt] to select the overwrite direction for the current device only.
- [Continue] to apply the selected conflict resolution and proceed with the synchronization activity.
- [Stop] to stop the synchronization activity.

NOTE

If an option is not selected within 30 minutes, the data transfer will skip the affected device and proceed with the transfer for the remaining devices.

3-4 Performing advanced configurations and searching devices

PRM Synchronization Tool includes advanced configurations and search options.

Performing advanced configurations

The Advanced Configurations option appears in the Synchronize and Restore activities. This dialog box allows you to select the data to be included in the data transfer. During the data transfer, device details and device status are automatically included. Other data such as history messages, memos, documents, parameter sets, and DTM data can be included or removed manually from the transfer.

When you include maintenance data like history messages, memos, and documents in the data transfer, PRM Synchronization Tool will transfer this information for all selected devices. On the other hand, you can configure Parameter sets and DTM data for each selected device.

The following table summarizes the device data that can or cannot be configured for each activity:

Table3-4 Device data configuration for each activity

Before Data PRM/ FieldMate R2.06	Data FieldMate R3.0x		Restore	Backup	Synchronize
Device details	Device details		Automatically included	Automatically included	Automatically included
Device status	Device status		Automatically included	Automatically included	Automatically included
History	History		All devices	No configuration needed	All devices
Memo	Attachment-Memo	Memo	All devices	No configuration needed	All devices
	Sticky Note				
	Images				
	Parameter				
Documents	Attachment-Document Link	Documents	All devices	No configuration needed	All devices
Parameter sets	Attachment-PM Data	Parameter sets	All or each device	No configuration needed	All or each device
DTM data	Attachment-DTM Data	DTM data	All or each device	No configuration needed	All or each device

The following table provides the default settings for Advanced Configurations:

Table3-5 Advanced Configurations default settings

Before Data PRM/ FieldMate R2.06	Data FieldMate R3.0x		Default settings
History	History		History messages for the last 14 days. Data items include Maintenance alarm, Device Event, Device Configuration, and Operation Log. Maximum of 1000 messages.
Memo	Attachment-Memo	Memo	100 Memos
	Sticky Note		
	Images		
	Parameter		
Documents	Attachment-Document Link	Documents	Included. No configuration is necessary.
Parameter sets	Attachment-PM Data	Parameter sets	Auto-Selection with the [The latest dated 'Do not Archive' set and the latest dated set] option.
DTM data	Attachment-DTM Data	DTM data	Auto-Selection with the [The latest dated 'Do not Archive' set and the latest dated set] option.

NOTE

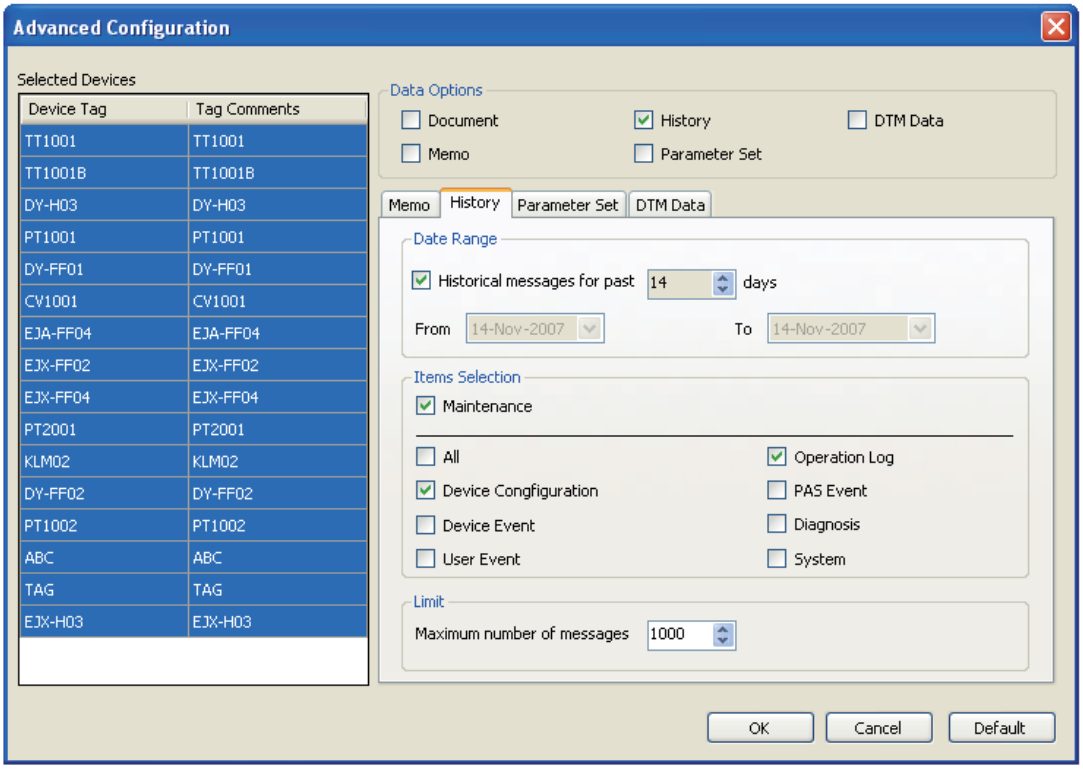
On the first time you open PRM Synchronization Tool, it uses the default Advanced Configuration settings. However, when you apply changes in the Advanced Configuration dialog box, PRM Synchronization Tool will save these settings for reuse in the next operation.

To use the default Advanced Configurations settings again, click [Default].

Also, the saved Advanced Configuration setting for Synchronize activity is different from the Advanced Configuration setting for Restore activity. Each activity can have different Advanced Configuration settings.

History

History messages can be included in the data transfer. When included, you can specify the history message items you want to include.



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Figure3-8 Advance Configuration dialog box - History tab

TIP

PRM Synchronization Tool can include maintenance alarm messages from PRM but cannot acknowledge or create new messages.

To select history messages:

1. Under Data Options, select the [History] check box. A check mark appears and the options in the History tab are enabled.

   The options in the tabs are only enabled after you select the corresponding Data Options check box.

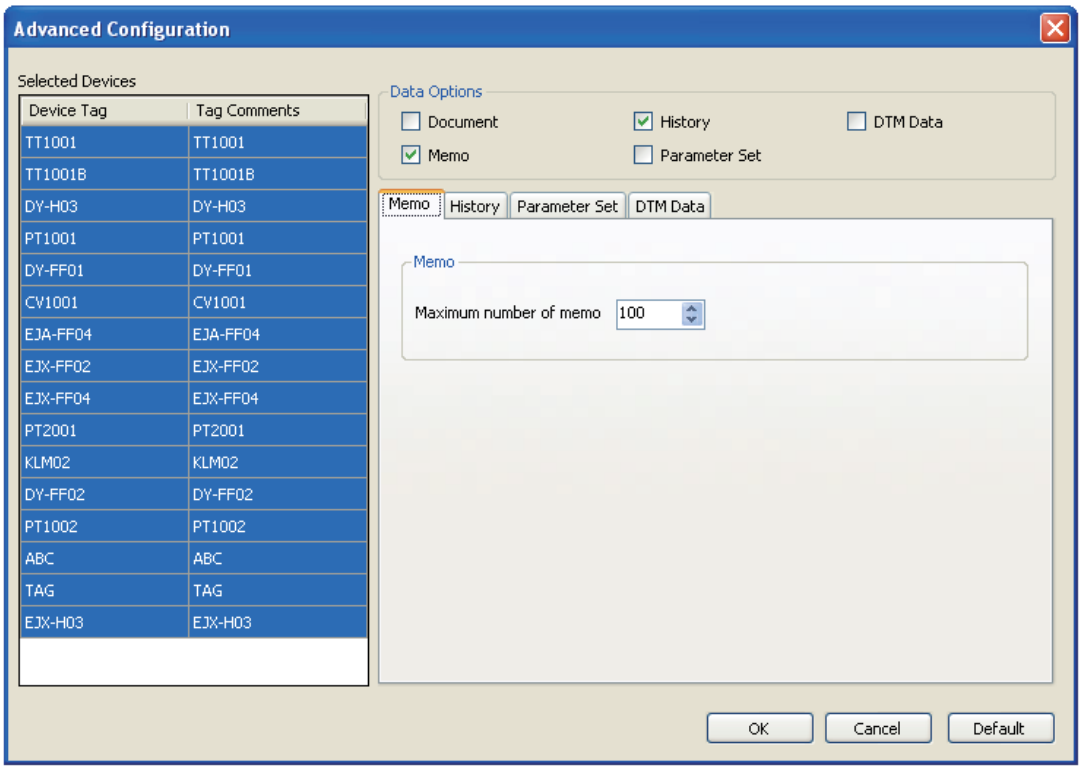
2. Select a date range by either entering the number of days, or by selecting specific dates using the [From] and [To] buttons. The maximum number of days is 14.

3. Under Items Selection, select the messages you want to include.

4. Under Limit, specify the number of messages to include. The maximum is 1000 messages.
5. Click [OK] to apply and save the settings.
   - Click [Cancel] to revert to the previous configuration settings.
   - Click [Default] to use the Advanced configurations default settings.

Memo

You can include a maximum of 1000 memos during data transfer. Both approved and unapproved memos will be transferred from PRM to FieldMate. Memos that are transferred from FieldMate to PRM will be created as unapproved memos.



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Figure3-9 Advanced Configurations dialog box - Memo tab

To select memo:

1. Under Data Options, select the [Memo] check box. A check mark appears and the options in the Memo tab are enabled.

   The options in the tabs are only enabled after you select the corresponding Data Options check box.
2. Enter the number of memos to be included from 1 to 1000.
3. Click [OK] to apply and save the settings.
   - Click [Cancel] to revert to the previous configuration settings.
   - Click [Default] to use the Advanced configurations default settings.

Documents

Documents for all devices can be included in the data transfer. FieldMate can support an unlimited number of documents.

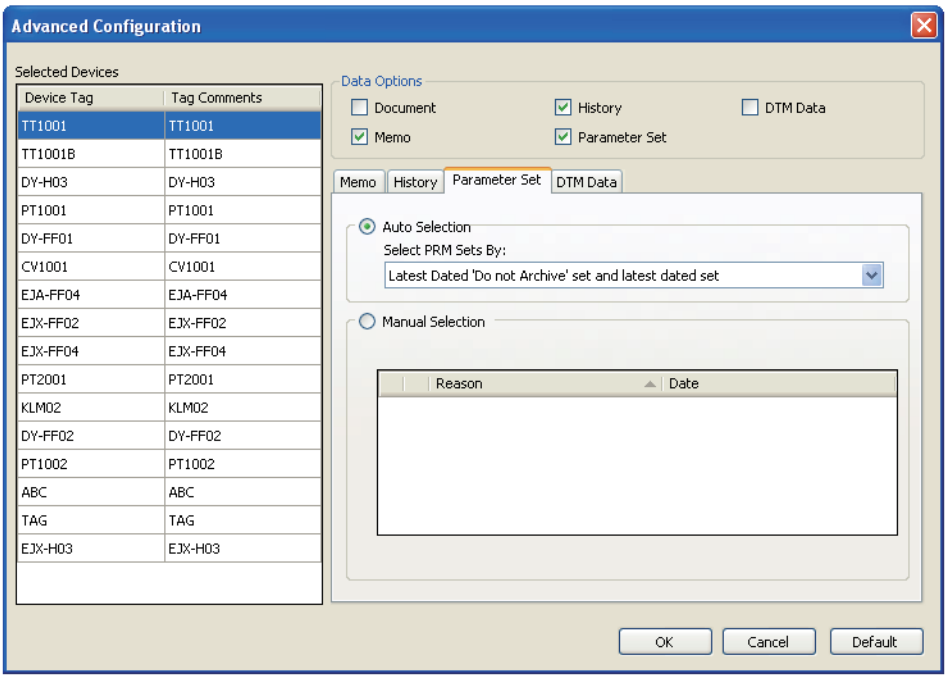
To select documents, you can follow these steps:

1. Under Data Options, select the [Documents] check box. A check mark appears and all documents are included in the transfer.
2. Click [OK] to apply and save the settings.
   - Click [Cancel] to revert to the previous configuration settings.
   - Click [Default] to use the Advanced configurations default settings.

Parameter sets

You can configure the parameter set for each selected device. FieldMate can support up to five parameter sets for each device. When this limit is reached, FieldMate will automatically overwrite the oldest parameter set.

You can select parameter sets either automatically or manually. In the Synchronize activity, both PRM and FieldMate parameter sets can be manually selected. In the Restore activity, only PRM parameter sets can be manually selected.



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Figure3-10 Advanced Configurations dialog box – Parameter set tab

To select parameter sets:

1. Under Data Options, select the [Parameter] check box. A check mark appears and the options in the Parameter tab are enabled.

   The options in the tabs are only enabled after you select the corresponding Data Options check box.

2. Click a Device Tag to select a device.

3. Choose a parameter set selection mode:

   - Click [Auto-Selection] and then select one of the drop-down list options:

Table3-6 Auto-Selection options

Auto- Selection options	Definition
The latest dated 'Do not Archive' set and latest date set	Selects the latest parameter set that has been assigned with the Do not Archive key and the latest dated set option. If the latest parameter set has been assigned with the Do not Archive key, only one parameter set will be selected.
The latest dated 'Do not Archive' set	Selects the latest parameter set that has been assigned with the Do not Archive key.
The latest dated set	Selects the latest parameter set, regardless of the assignment of the Do not Archive key.

   - Click [Manual Selection] and then manually select the parameter sets to be included in the activity. You can select up to five parameter sets.

4. Click [OK] to apply and save the settings.

   - Click [Cancel] to revert to the previous configuration settings.
   - Click [Default] to use the Advanced configurations default settings.

SEE ALSO

For "Do not Archive key", please see:

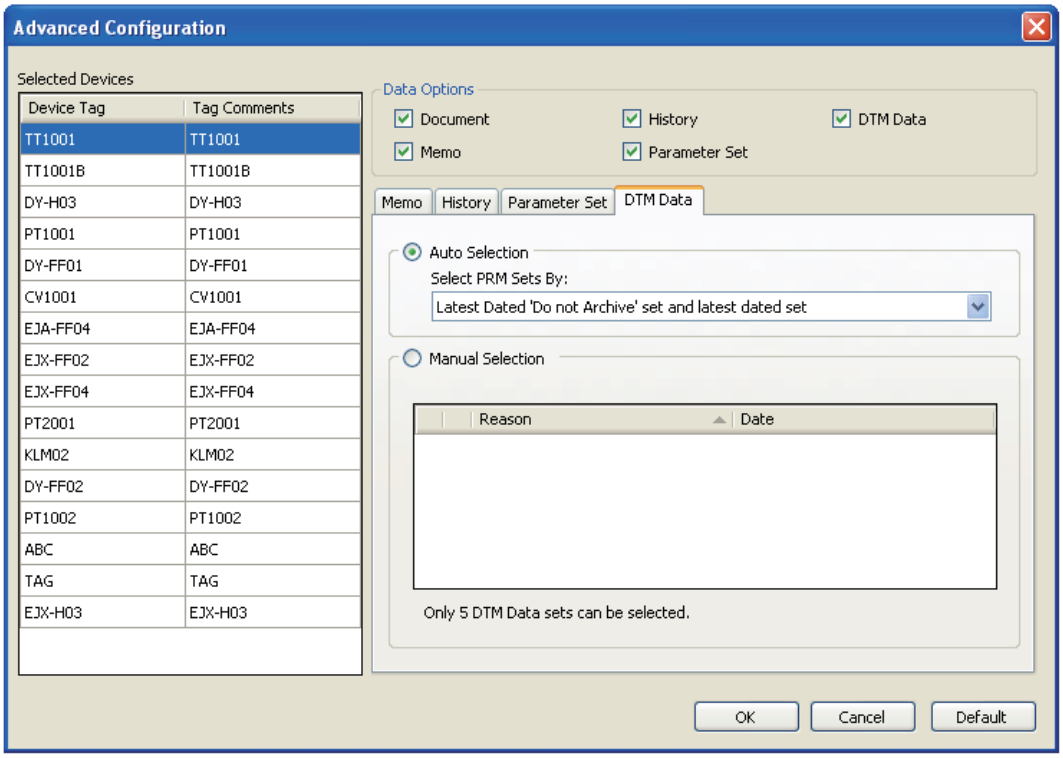
"Performing device parameter adjustment" in A6 IM 33Y05Q10_11E, Plant Resource Manager Reference (for PRM R3 or earlier).

"Managing parameter data" in F1 IM 30B05A10-01EN, Plant Resource Manager Reference (for PRM R4)

DTM data

The method for selecting DTM data is identical to the method for selecting parameter sets. You can configure the DTM data set for each selected device. FieldMate can only support up to five DTM data sets for each device. When this limit is reached, FieldMate will automatically overwrite the oldest DTM data set.

You can select DTM data sets either automatically or manually. In the Synchronize activity, both PRM and FieldMate DTM data sets can be manually selected. In the Restore activity, only PRM DTM data sets can be manually selected.



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Figure3-11 Advanced Configurations dialog box - DTM Data tab

To select DTM data sets, select the [DTM Data] check box under Data Options. A check mark appears and the options in the DTM Data tab are enabled.

SEE ALSO

For selecting DTM data sets instructions, please see:

"Parameter sets" in "Performing advanced configurations"

Searching for a device

The Device Navigator provides a search facility to help you look for devices.

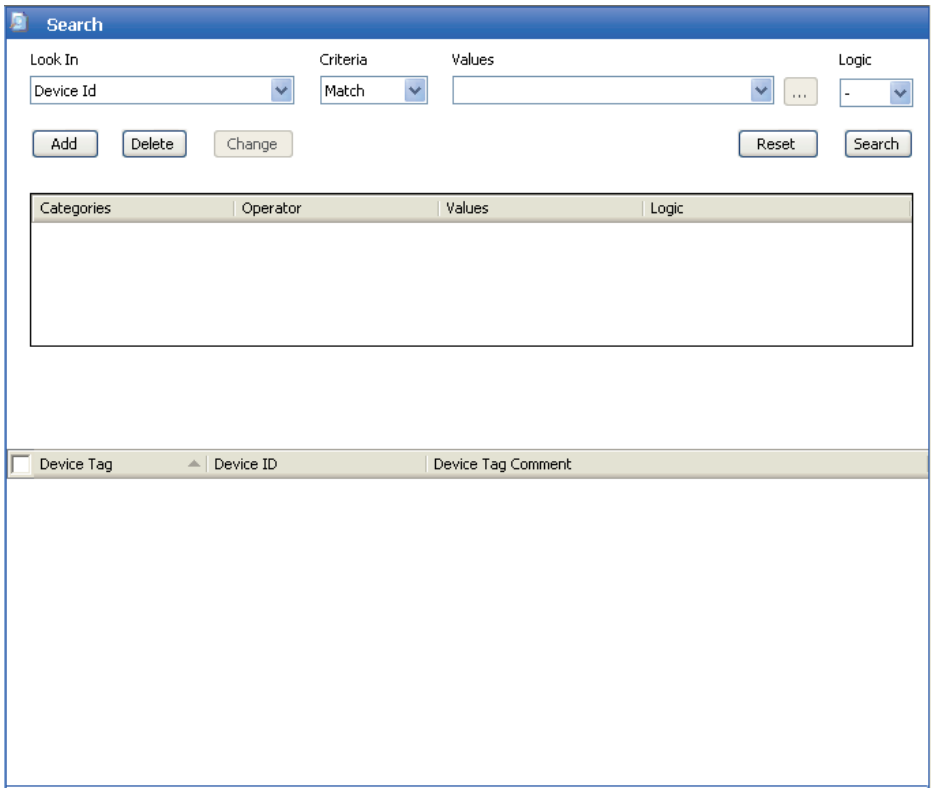


Figure3-12 Search pane

To use search:

1. Select [Search] from the Device Navigator. The Search pane appears.
2. In the Search pane, select a category from the [Look In] drop-down list.
3. Select the search criteria from the [Criteria] drop-down list.
4. Enter the search keyword in [Values] or select a recently-used keyword from the drop-down list.
   - [...] button next to Values is effective when Vendor, Model, Device Revision, Communication Type is selected in Look In to assist user to search available values.

   If necessary, select a logical operator from the [Logic] drop-down list.
   - If several conditions are specified, refer to example below. Bracket ( ) comes before and after OR logic. For example: 1 AND 2 OR 3 AND 4 AND 5 OR 6 means that (1 AND 2) OR (3 AND 4 AND 5) OR 6
5. Click [Add] to insert the search criteria.
6. Click [Search] to start the search based on the search criteria. The search output will be displayed at the bottom of the right pane.
7. Select devices from the search result. To select devices, select the check box next to the device tag. A check mark appears to indicate that the device is selected.
   - To add other search criteria, enter a new keyword and then click [Add].
   - Click [Delete] to remove the search criteria.
   - Click [Change] to apply updates.
   - Click [Reset] to clear both the list and search results.

4 Device Tag Extension Mode

Outline of PRM/FieldMate synchronization compatibilities

Devices with extended device tag are recognized and handled according to HART Device Tag Display Format such as “Tag + Descriptor” or “Descriptor” or “Message” on both PRM and FieldMate sides.

On PRM R3.03 or later and FieldMate R2.01.10 or later, the extended device tag generated as the result of HART Device Tag Display Format in PRM are recognized and fully supported by FieldMate (and vice versa).

NOTE

When it is enabled, settings must be exactly the same on both sides. Otherwise, PRM/FieldMate Synchronization displays an error message and exit.

However, FieldMate does not recognize the Device Tag Extension mode for STARDOM Project Name Support as described example in the following sheet.

Preconditions for PRM/FieldMate Synchronization

This table summarizes the conditions where PRM/FieldMate Synchronization are allowed.

Device Tag Extension mode for STARDOM Project Name Support is ignored when FieldMate synchronizes with PRM.

BRAIN Device Tag Display Format (Tag /Tag+MEMO) provided from FieldMate R3.03.10 is supported from R4.01.

Table 4-1 Preconditions for PRM/FieldMate Synchronization

	Device Tag Extension Mode		FieldMate R1.03/ R2.01.00	FieldMate R2.01.10/R2.02/R2.03/R2.04/R2.05/ R2.06/R3.0x				FieldMate R2.02/ R2.03/ R2.04/ R2.05/ R2.06/ R3.0x
	STARDOM Project Name Support	HART Device Tag Display Format		HART Device Tag Display Format				
				Tag	Tag + Descriptor	Descriptor	Message	Long Tag
PRM R3.02	-	-	√	√	×	×	×	×
PRM R3.03 PRM R3.04 PRM R3.05	Off	Tag	√	√	×	×	×	×
		Tag + Descriptor	×	×	√	×	×	×
		Descriptor	×	×	×	√	×	×
		Message	×	×	×	×	√	×
	On	Tag	√	√	×	×	×	×
		Tag + Descriptor	×	×	√	×	×	×
		Descriptor	×	×	×	√	×	×
		Message	×	×	×	×	√	×
PRM R3.05 PRM R3.10 PRM R3.11 PRM R3.12 PRM R3.20 PRM R3.30 PRM R3.31 PRM R4.01 PRM R4.02	Off	Long Tag	×	×	×	×	×	√ Note
	On							

√: Synchronization is effective.
×: Synchronization is not effective.
Note: When Long Tag is specified for HART6,7 devices, setting of HART5 devices follows the bold line of individual Device Tag Extension Mode shown above.

Synchronizing Devices with HART Device Tag Display Format

The same Device Tag Extension Mode needs to be set on PRM and FieldMate. Even if the user renames the device tag on one side, it is updated to the other side after the synchronization as long as the HART Device Tag Display Format of the device is consistent with the HART Device Tag Display Format on the other side.

Sample case is shown as below, if HART Device Tag Display Format is set to “Tag+Descriptor” and all the devices in the database are registered or updated with the same mode, then the following outcomes can be expected.

Table 4-2 Sample case with same setting mode

PRM devices Current mode: Tag+Descriptor	Operation and Outcome	FieldMate devices Current mode: Tag+Descriptor
EJX004-PIPE02 Registered mode: Tag+Descriptor	Restore OK →	[Not exist]
[Not exist]	← Backup OK	EJA005-PIPE02 Registered mode: Tag+Descriptor
EJA001-PIPE01 Registered mode: Tag+Descriptor	Sync OK →	EJA001-PIPE01 Registered mode: Tag+Descriptor
	← Sync OK	

Registering devices using PRM/FieldMate Synchronization means that the devices do not exist in PRM database originally and the devices are imported from FieldMate.

In HART Device Tag Display Format is enabled, it can be expected that the device tags of the devices imported to PRM do match the device tags shown in FieldMate.

However, if the HART Device Tag Display Format of the device in the database does not match the mode of the other side, then the synchronization of the device is prohibited.

Table 4-3 Sample case with different device setting mode

PRM devices Current mode: Tag+Descriptor	Operation and Outcome	FieldMate devices Current mode: Tag+Descriptor
EJX006 Registered mode: Tag	Prohibit Restore →	[Not exist]
[Not exist]	← Prohibit Backup	EJA007 Registered mode: Tag
EJX002 Registered mode: Tag	Prohibit Sync →	EJX002-PIPE01 Registered mode: Tag+Descriptor
	← Sync OK	
EJA003-PIPE02 Registered mode: Tag+Descriptor	Sync OK →	EJA003 Registered mode: Tag
	← Prohibit Sync	

Synchronizing Devices in STARDOM Upstream Project

TIP

The followings describes sample case and operation work flow only for STARDOM user.

In STARDOM upstream project, the synchronization between PRM and FieldMate works except the project name portion of the extended device tag. Project name is ignored.

Table 4-4 Sample case with project setting mode

PRM devices Current mode: Tag+Descriptor+Project Name	Operation and Outcome	FieldMate devices Current mode: Tag+Descriptor
[Not exist] (Backup as “EJA005-PIPE02”)	Backup OK ←	EJA005-PIPE02 Registered mode: Tag+Descriptor
EJX004-PIPE02_WELL01 Registered mode: Tag+Descriptor+Project Name	Restore OK →	[Not exist] (Restored as “EJX004-PIPE02”)
EJA001-PIPE01_WELL01 Registered mode: Tag+Descriptor+Project Name	Sync OK →	EJA001-PIPE01 Registered mode: Tag+Descriptor
	Sync OK ←	

In STARDOM upstream project, since the devices imported from FieldMate do not contain device path information, it is also expected that the device tags of the imported devices do not contain the project name, and the device tags can be updated with the project name only after Plug & Play.

If the device has been synchronized before, renaming the device tag on one side will still update the device tag on the other side properly after synchronization. The same behavior can be expected for the other way around.

Table 4-5 Sample operation flow with project setting mode

Step	Procedure	PRM Current mode: Tag+Descriptor+Project Name	Direction	FieldMate Current mode: Tag+Descriptor	Outcome
1	Before Sync	EJX004-PIPE02_WELL01		[Not exist]	
2	Restore device to FieldMate	EJX004-PIPE02_WELL01	→	EJX004-PIPE02	Device is restored without the project name portion
3	Rename the device tag on FieldMate	EJX004-PIPE02_WELL01		EJX004-PIPE02 ↓ EJX001-PIPE01	Device is renamed on FieldMate
4	Synchronize device back to PRM	EJX004-PIPE02_WELL01	←	EJX001-PIPE01	
5	After Sync	EJX001-PIPE01_WELL01		EJX001-PIPE01	Device is updated in PRM while keeping the project name portion

Appendix

References

1. FieldMate Versatile Device Management Wizard (IM 01R01A01-01E).
2. Plant Resource Manager Reference (IM 30B05A10-01EN)

Revision Information

- Title : FieldMate: PRM Synchronization Tool
- Manual No. : IM 01R01A20-01E

Revision No.	Revised Date	Major Changes
1st Edition	April 2008	Newly published
2nd Edition	January 2009	FieldMate R2.01
3rd Edition	April 2009	FieldMate R2.01.10
4th Edition	June 2010	FieldMate R2.02
5th Edition	February 2011	FieldMate R2.03
6th Edition	September 2011	FieldMate R2.04
7th Edition	August 2012	FieldMate R2.05
8th Edition	May 2013	FieldMate R2.06
9th Edition	October 2014	FieldMate R3.01
10th Edition	August 2016	FieldMate R3.02
11th Edition	April 2018	FieldMate R3.03.10
12th Edition	November 2018	FieldMate R3.04.00