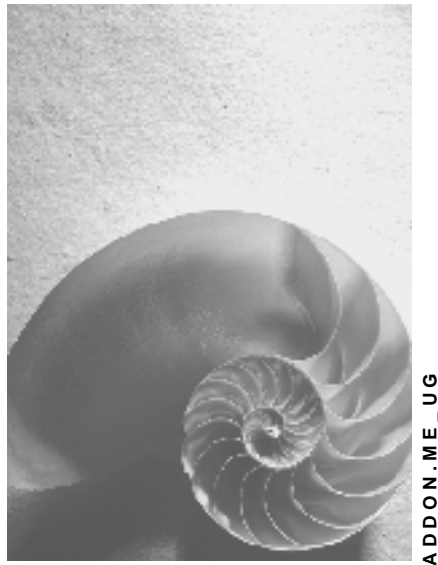


SAP Mobile Infrastructure 2.5 Upgrade



Release MI 2.5



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Icons in Body Text

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Additional icons are used in SAP Library documentation to help you identify different types of information at a glance. For more information, see *Help on Help* → *General Information Classes and Information Classes for Business Information Warehouse* on the first page of any version of *SAP Library*.

Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Cross-references to other documentation.
Example text	Emphasized words or phrases in body text, graphic titles, and table titles.
EXAMPLE TEXT	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example text	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.

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SAP Mobile Infrastructure 2.5 Upgrade

Purpose

If you are using an older release of *SAP Mobile Infrastructure (SAP MI)*, you can use this guide to upgrade to a more recent release of *SAP MI*. The following cases are possible:

- [Upgrade from Release ME 1.0 to MI 2.5 \[Page 11\]](#)
- [Upgrade from Release ME 2.1 SP<xx> to MI 2.5 \[Page 21\]](#)



SP<xx>: greater than or equal to SP01

Upgrade Notes



Read the SAP Notes about upgrading before you start to upgrade your software. These SAP Notes contain the latest information about the upgrade as well as corrections to the upgrade documentation.

Make sure that you have the latest version of each SAP Note. You can find the SAP Notes on the *SAP Service Marketplace* at service.sap.com/notes or in *SAPNet - R/3 Frontend*.

SAP Notes Required:

SAP Note Number	Definition
670644	UPGRADE: SAP Mobile Infrastructure 2.5 – Composite Note
792223	Released MI client/server landscape for SAP ME 2.1/MI 2.5



We recommend that you perform the upgrade centrally by having system administration collect all the mobile devices and perform the upgrade for example on a weekend. An old SAP MI Client Component should not exchange data or be synchronized with a new SAP MI Server Component.

In the future we will offer further upgrade paths that minimize the downtime.



For more information about API changes see the JavaDoc for *SAP MI* (see the **Help** of the *SAP NetWeaver Developer Studio* → *Mobile Development Kit*).

History of Changes



Make sure you use the **current** version of the Upgrade Guide.

You can find the current version of the Upgrade Guide on the *SAP Service Marketplace* at service.sap.com/instguides.

The following table provides an overview of the most important changes in prior versions.

Version	Important Change
	First version of the SAP Mobile Infrastructure 2.5 Upgrade Guide
14.07.2005	Updated version for 2.5 SPS13

Constraints

You can only use this upgrade guide if the *SAP Web AS* on which the *SAP MI Server Component* is running is isolated. In the future, other upgrade scenarios will also be covered.



SAP Mobile Infrastructure

Purpose

The *SAP Mobile Infrastructure (SAP MI)* is a technology solution of *SAP NetWeaver* on which *SAP Solutions for Mobile Business* is based. With the *SAP MI*, however, you can also make applications that are not SAP-based mobile.

The *SAP MI* is installed locally on a mobile device and is equipped with a Web server, a database layer and its own business logic. Staff working remotely can therefore work offline and do not have to wait for a network connection to complete time-critical business applications. The *SAP MI* offers tools for synchronization and data replication that make the data of the mobile device consistent with that of the backend.

SAP MI is based on the following open industry standards:

- Java
- eXtensible Markup Language (XML)

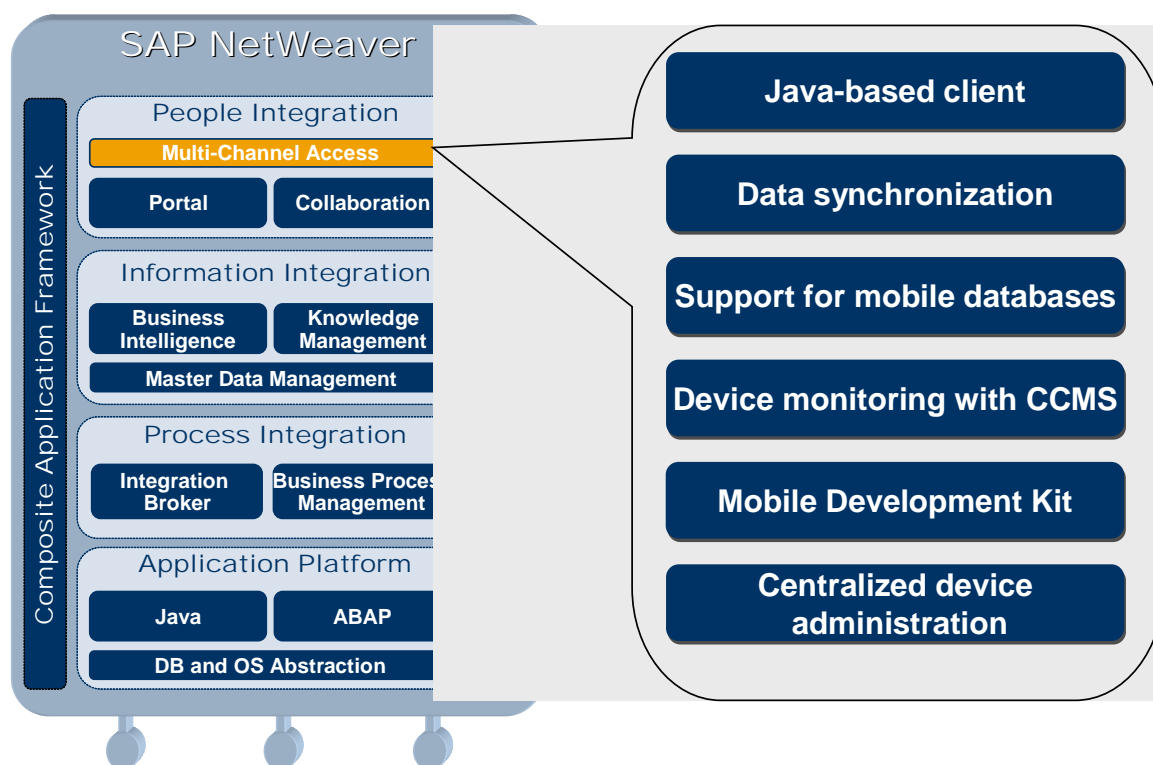
SAP MI is also equipped with a Java virtual machine and offers an open programming model with which mobile applications can be developed.

This open system architecture makes the platform independent of both the mobile devices and the network and supports mobile devices such as Personal Digital Assistants (PDAs), laptops and Smart Phones.

SAP MI can run on both a standard browser and on a user interface that is not based on a browser.

Integration

Components of the SAP MI within SAP NetWeaver



Features

SAP MI includes the following areas:

Area	Description
SAP MI Web Console [External]	The SAP MI Web Console, which is the central tool for deploying mobile applications, offers a number of different functions for administration and monitoring:
Synchronization [External]	Synchronization ensures a safe and compressed transfer of data between the mobile device and the backend. When you create a mobile application, application development can decide how it would like to create the data packages for synchronization.
Multiple Usage of a Mobile Device [External]	SAP MI allows multiple users to share one mobile device or one user to work with multiple mobile devices.
Configuration of Mobile Devices using Device Configurations [External]	Administrators can configure mobile devices with device configurations without having direct access to the device.
SAP MI in Computing Center Management System [External]	With the Computing Center Management System (CCMS), the administrator can monitor the systems of the SAP MI.

Mobile Component Descriptor [External]	Application developers can create a Mobile Component Descriptor that describes the properties of a mobile component and that is shipped together with the installation file.
User-Specific Data Filtering	The application developer can define which data of an application the user should access (read, write or change) in every mobile application developed based on the <i>SAP MI</i> . This data is filtered and provided to the user in the SAP MI Client Component.
Localization	Depending on the user settings and logon data, the currency, date, time and number formats are displayed for each specific country in the selected language. The end user can make the following settings: <ul style="list-style-type: none"> • Language • Country • Time zone • Daylight saving time For more information see Editing User Settings [External] .
Mobile Development Kit	The <i>SAP MI</i> offers an open programming model with a copious JavaServer Pages (JSP) library for developing mobile applications. Examples of <i>mySAP Mobile Business</i> applications based on the <i>SAP MI</i> are: <ul style="list-style-type: none"> • SAP Mobile Sales • SAP Mobile Asset Management • SAP Mobile Time and Travel A complete list of the <i>mySAP Mobile Business</i> applications can be found in the <i>SAP Service Marketplace</i> at service.sap.com/mobile . <i>SAP MI</i> also supports the Abstract Window Toolkit (AWT) platform. AWT is part of the Java Foundation Classes (JFC) and provides Java developers with a framework and routines for graphic user interfaces. For more information see SAP Mobile Development Kit (MDK) [External] .
Security	To ensure confidential and sensitive data is protected as securely on the mobile devices as on the network devices in your company, <i>SAP MI</i> supports a number of security standards. You can find more information on the SAP Service Marketplace at service.sap.com/securityguide .



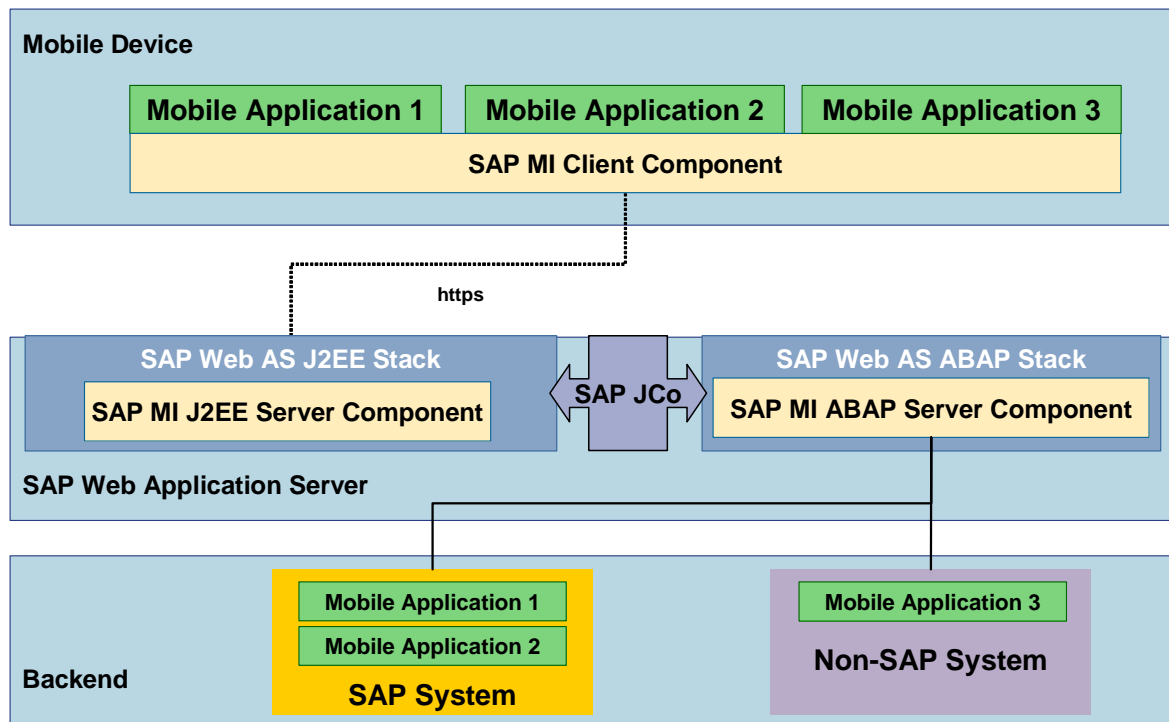
For reasons of simplicity, the following abbreviations are used in this documentation:

Abbreviation	Full Name
SAP MI	SAP Mobile Infrastructure
SAP MI Client Component	SAP Mobile Infrastructure Client Component
SAP MI Server Component	SAP Mobile Infrastructure Server Component
SAP MI ABAP Server Component	SAP Mobile Infrastructure ABAP Server Component
SAP MI J2EE Server Component	SAP Mobile Infrastructure J2EE Server Component

SAP Web AS	SAP Web Application Server
SAP JCo	SAP Java Connector

System Architecture

The following graphic shows the system architecture of *SAP MI*:



SAP MI contains the following technical components:

SAP MI Client Component

The SAP MI Client Component provides a mobile application with the following services:

- UI programming models

The standard programming model for mobile applications is *Java Server Pages (JSP)*. Alternatively, you can also use the Abstract Window Toolkit (AWT) as a pure Java programming model. The SAP ME 1.0 programming model *microITS* is still supported.

- Framework services

The framework services are provided to the mobile applications as Java APIs. The most important APIs are used for

- Data synchronization
- Data persistence
- Reading and writing replicated data
- Logging and tracing
- Configuration of applications and framework

SAP MI Server Component

The SAP MI Server Component contains the following components:

- **SAP MI J2EE Server Component**

The SAP MI J2EE Server Component is an integral component of the Java stack of the SAP Web AS.

- It passes the data containers from the SAP MI Client Component to the SAP MI ABAP Server Component
- With the SAP MI Web Console, it provides an administration interface to manage the mobile devices and components.

- **SAP MI ABAP Server Component**

The SAP MI ABAP Server Component is an integral component of the ABAP stack of the *SAP Web AS*.

The SAP MI ABAP Server Component is responsible for:

- Queuing and acknowledgement of synchronized data containers
 - Calling the application logic
- The application logic can be called synchronously or asynchronously, depending on the application.

- Data replication

Data replication defines data packages for individual mobile devices (data allocation), computes the data to be newly replicated on the device (delta comparison), finds and solves conflicts between the mobile device and the server application (conflict management) and provides a number of monitoring tools.

- Deploying the mobile applications to the mobile devices

Mobile applications are automatically deployed to a mobile device when the mobile device is synchronized. This process is controlled centrally by the SAP MI Web Console. It permits the system administrator to assign application versions based on users or roles and thus gives an overview of the mobile devices, error logs and so on, in the field.

- **SAP Mobile Development Kit (SAP MDK)**

The SAP Mobile Development Kit (MDK) offers the developer useful documentation and tools for developing mobile applications based on *SAP MI*. The MDK is part of the *SAP NetWeaver Developer Studio*.

Backend

The backend of a mobile application comprises Customizing and repository objects. Both kinds of objects are transported using the standard mechanisms of the SAP Change & Transport System.



Checking Versions of the SAP MI Components

Use

With the current versions of the SAP MI components, you can check if the latest support package was already applied or an upgrade already carried out.

Procedure

Checking the Versions of the Applications on the SAP MI Client Component

1. Start the SAP MI Web Console (see [Starting the SAP MI Web Console \[External\]](#)).
2. On the tab page choose *Administration* → *Mobile Device Administration*.
3. Set a filter to display the desired entries, such as *Application: MEPATCH*.

The current version of an application is displayed under *Version*.

Alternatively, end users can check the versions on their mobile device:

1. Start the SAP MI (see [Starting the SAP MI \[External\]](#)).
2. Choose *Info*.

The current versions of the installed applications are displayed.

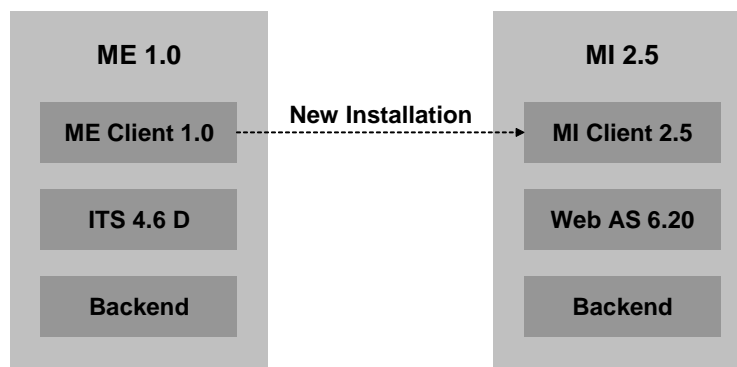


Upgrade from Release ME 1.0 to MI 2.5

Purpose



If you are using Release ME 1.0, you can upgrade to Release MI 2.5 in order to use the functions contained there.

Upgrade from ME 1.0 to MI 2.5



Process Flow

Technical Component	Action
SAP MI Client Component	1. Performing Synchronization [Page 24] .

SAP MI Server Component	 <p>The <i>SAP ITS</i> is no longer supported.</p> <ol style="list-style-type: none"> 2. Delete the Internet service <i>WAF_SYNC</i>. 3. Install <i>SAP Web AS 6.40</i> (latest support package).  <p>If you already installed the <i>SAP Web AS</i>, upgrade to <i>SAP Web AS 6.40</i> (latest support package).</p> <p>For more information about installing or upgrading the <i>SAP Web AS</i>, see the <i>SAP Service Marketplace</i> at service.sap.com/instguides → <i>SAP Web Application Server</i>.</p> <ol style="list-style-type: none"> 4. Creating Property Files sapurl_link_0002_0002_0007
SAP MI Client Component	<ol style="list-style-type: none"> 5. Uninstall the old release of the <i>SAP MI Client Component</i> (see Uninstalling the SAP MI Client Component [Page 25]) 6. Upload the framework files with the latest versions (see Uploading Framework Files [Page 26]) 7. Installing the SAP MI Client Component [Page 28] sapurl_link_0002_0005_000
Mobile Application	<ol style="list-style-type: none"> 8. Upload all the applications that are entered in table BWAFVER to the <i>SAP MI Web Console</i> (see Comparison of the Fields of BWAFVER with the SAP MI Web Console [Page 19] and Uploading Mobile Applications [Page 20]).



Performing Synchronization

Use

You must synchronize the mobile device in order to make the mobile applications assigned to you available on your mobile device. In daily operations you will also perform synchronization in order to transfer new and changed data from the *SAP MI Client Component* to the backend and vice versa.

If you cannot use online synchronization, you can use various data carriers such as memory sticks, diskettes and DVDs. In this case the system only synchronizes application data. The system can **not** install any new applications with data carrier synchronization.

Prerequisites

You started the *SAP MI Client Component* on the mobile device and logged on.

If you want to synchronize using the data carrier, you must satisfy the following requirements:

- The administrator activated data carrier synchronization, see [Setting Up Data Carrier Synchronization \[External\]](#).
- At least one mobile application is installed on the mobile device.

Procedure

Synchronization with Online Connection

1. On the *SAP MI* start page, choose *Synchronize*.
2. If necessary, enter the synchronization password.
The system displays a Synchronization log.
3. Choose *Continue*.
The system offers the mobile applications on your device and generates one link for each application.
4. Restart the device to activate the new mobile applications. You only have to restart the *SAP MI* on Windows32 operating systems.
A link is now displayed on the start page of the *SAP MI* for each application. You can call the mobile application using this link.

Data Carrier Synchronization

1. If you want to use data carrier synchronization, connect the data carrier with the mobile device or place it in the drive.
2. On the *SAP MI* start page, choose *Data Carrier Synchronization*.
3. Enter the synchronization files (file extension **.mis*) you want to read and choose *Continue*.



If you have not received the appropriate files from your administrator, you can skip this point.

4. If you received the data on more than one data carrier, change the data carrier if necessary in order to read in further files.
5. Select a data carrier and start synchronization.
The system creates one or more synchronization files with the file extension **.mis* in a suitable size for the data carrier.
6. Rcarrier.
7. Copy the data to the data carrier. If you want to use a CD or DVD, copy the files to a temporary directory and then burn them on the appropriate data carrier.
8. Give the administrator the data carrier. The administrator can then synchronize it with the backend.



Creating Property Files

Use

With this procedure you can provide the MI Sync Servlet with the necessary connection data for the *SAP MI ABAP Server Component*.

Prerequisites

As administrator, you must perform these steps on the computer on which the *J2EE Engine* is installed. You also need a user and password with authorization for the administration of the *J2EE Engine*.

Procedure

Creating Property Files

1. Start the J2EE Engine.
2. Start the J2EE Visual Administrator and connect to the J2EE Engine. To do this you need the administrator password.
3. Choose the service *Configuration Adapter* from the *Server* → *Services* menu.
Choose the *Runtime* tab page and then the *Display Configuration* tab page.
4. Navigate in the tree to *Configurations* → *apps* → *sap.com* → *com.sapmarkets.mesyncjco* → *appcfg*
5. Change into editing mode by confirming the popup with *Yes*.
6. Use the secondary mouse button to choose *appcfg* and choose *Create Subnode*



You must provide a property file for each *SAP Web AS* (SAP MI ABAP server component) you want to connect to. This file must contain the application server and system number of the corresponding *SAP Web AS*.

7. Make the following entries:

Entries in the *Create* window

Field	Entry
Dropdown Box	Select <i>File Entry</i> .
Name	<p><sysid>.props, for example, <i>abc.props</i></p> <p>The name of the property file must be identical to the system ID of the <i>SAP Web AS</i> to which you want to connect. For example, if the system ID of the <i>SAP Web AS</i> is <i>m25</i>, the name of the file must be <i>m25.props</i>.</p> <p>Enter the name of the file in lowercase letters.</p>
Display	<p>Select <i>Text</i> in the dropdown box and specify the content of the file, for example:</p> <pre>ashost=myserver sysnr=06</pre>

Alternatively you can upload a file that already exists. Choose *Upload* to do this. The name and the contents of the file you uploaded appear in the window.

8. Choose *Create* to generate the properties file.
9. Change into the display mode and leave the J2EE Visual Administrator.

Testing Synchronization

To test if synchronization is principally working without having to install the SAP MI Client Component, call the following URL in your browser:

```
http://<Server>:<Port>/meSync/servlet/meSync?~sysid=<System ID>&~login=<User name>&~password=<Password>&~client=<Client>&~language=<Language>&~acknowledge=X&~test=true&
```



```
http://p59298:50000/meSync/servlet/meSync?~sysid=u6b&~login=tester&~password=test&~client=800&~language=de&~acknowledge=X&~test=true&
```

If the test was successful, the browser displays a message containing a time that, for example, looks like:

```
&WAF_SYNC&STATUS=&Execution Time =103129& HeaderType = MEREPLICATION  
&MORE_PACKAGES_WAITING = &
```

If the test fails, the system generates an error message.

Alternatively, you can test synchronization using a configured client.



Uninstalling the SAP MI Client Component

Use

With this procedure you can uninstall the *SAP MI Client Component* on your mobile device.

Procedure

Uninstalling on Windows 32 Platforms

1. End *SAP MI* on your mobile device by clicking the *SAP MI* icon in the Windows menu bar with the secondary mouse button and choosing *Exit*.
2. Choose *Windows Start* → *Programs* → *SAP Mobile Infrastructure* → *Uninstall*.
3. Follow the instructions given on the screen.

The *SAP MI Client Component* is now uninstalled.



Under *Windows Task Manager* → *Processes*, monitor the *java.exe*. If it takes too long until the *java.exe* finishes or if the deinstallation program informs you that files to be updated are still being used, end the *java.exe* in the Windows Task Manager.

Uninstalling on Pocket PC 2002 /Windows Mobile 2003

1. Delete the shortcut *MobileEngine.Ink/MobileInfrastructure.Ink* under *Start* → *Programs* → *File Explorer* → *My Device* → *Windows* → *AutoStart*.
2. Restart the mobile device.
3. Choose *Start* → *Settings* → *System* → *Remove Programs*.
4. Select and delete the following entries:
 - a. *SAP AG ME/MI<Release>*
 - b. *SAP AG, NSIcom CrEme...*
5. Manually delete files and folders that could not be deleted automatically in the *File Explorer*.
6. Restart the mobile device.



Uploading Framework Files

Use

This procedure enables you to upload the *SAP MI* framework files to the SAP MI Web Console. The framework files contain the runtime environment for mobile applications.

Prerequisites

- You have saved the framework files you want in a folder of your choice.
- The Mobile Component Descriptor (MCD) is available in the system. If the MCD is not yet available and you have a suitable transport file, you can transport it to your system using transaction *STMS*. You can find information about transports in the documentation for the Transport Management System.

For more information about MCDs see [Mobile Component Descriptor \[External\]](#).

- You started the SAP MI Web Console (see [Starting the SAP MI Web Console \[External\]](#)).

Procedure

1. Choose  for the framework file you want to upload.

Upload the required files:

- **MOBILEENGINE_AWT** (only if you are using applications with runtime environment *AWT*), application type **Framework**
- **MOBILEENGINE_JSP** (only if you are using applications with runtime environment *JSP*), application type **Framework**
- **JAVAVM** (only if you are using a PDA), application type **JVM**

The files for the various processors adhere to this naming convention:

`CrEme<Version>_<Processor>_<Version of operating system>_<Name of operating system>_minimal.CAB`

- Version of CrEme: e.g. 324 for Version 3.24 or 325b13 for Version 3.25b13
- Processor: Prior to Version 3.25: **xsc** for XScale, **PXA** and others or **ARM** for Strong ARM; as of Version 3.25 **ax** for all processors
- Version of operating system: **CE 30** for Pocket PC 2002 and Windows CE 3.x or **CE4x** for Windows Mobile 2003 or Windows CE.Net 4.x
- Name of operating system: **PFC** for Pocket PC or **HFC** for Windows CE



When using JVM files, note the comments under [Prerequisites \[External\]](#).


- **SSL** (only if you are using the *SAP MI* security components), application type **SSL**



If you upload additional framework files for different platforms and languages, they are also called either **MOBILEENGINE_AWT** or **MOBILEENGINE_JSP**.

2. Enter the following data only:


Field	Purpose
-------	---------

Version for Role-Based Assignment	If there are different versions of an application, you can select one here. The system then automatically uses this version when processing roles (see Assigning Applications to the Users of a Role [External]). There is no input field for the version in the role editor.
Build Number	You can specify the build number of the application to establish at a later date which build of a mobile application you uploaded.
Use IP Instead of Host Name	Access to the host using the IP. If the mobile devices cannot access the host on which the installation files are stored using the host name, select this field. In this case the IP address is used for the download link instead of the host name.
Domain in URL	If the mobile devices can only reach the host on which the installation files are stored using their fully qualified name in the network, enter the network domain in this field.
Protocol	Enter the protocol to be used when the files are downloaded to the mobile device, e. g. <code>http</code> or <code>https</code> .
Application File	Depending on the language required, your operating system, and the runtime environment previously chosen, you choose the appropriate framework files.  If the SAP MI Web Console is run in a J2EE cluster, the mobile components are stored on only a single node of the cluster. In this case you must manually copy the mobile components to all the other nodes of the cluster, see Copying Mobile Components to All Nodes of the J2EE Cluster [External] .

For more information about the other fields, see [Mobile Component Descriptor \[External\]](#) You should only change it using the procedure described there.



You can add multiple installation files (such as Setup.exe for Win32, CAB files for WinCE) to the entry created here. The installation routine for the SAP MI Client Component installation selects the installation file that is appropriate for the operating system.

Choose  in the line with the created entry. Define the corresponding runtime environment, operating system and language again and select the file. Choose *Change*.

3. Choose *Change*.

Result

The framework files have been uploaded. If the end user has worked through the [Installing SAP MI Client Component \[Page 28\]](#) procedure, the framework files are visible in the SAP MI Web Console at *Administration* → *Manage Mobile Devices*.



Installing the SAP MI Client Component from the Internet

Use

With this procedure you install the *SAP MI Client Component* on your mobile device. If your *SAP MI* administrator gave you a CD or DVD for the installation, you can use it to perform the installation; see [Installing the SAP MI Client Component from CD or DVD \[External\]](#).



You can find more information about installing **Linux** operating systems in SAP Note 754221.

Procedure

1. If you are using a proxy server, check your browser settings and configure them again if needed. The settings depend on the network infrastructure you are using.
 - To change the settings on Windows32 operating systems (Internet Explorer):
Choose *Tools* → *Internet Options* → *Connections* → *LAN settings*.
 - To change the settings on Pocket PC 2002:
Choose *Start* → *Settings* → *Connections* → *Connections* → *Work* → *Change* → *Proxy settings*.
 - To change the settings on Windows Mobile 2003:
Choose *Start* → *Settings* → *Connections* → *Connections* → *Proxy settings*.
2. Enter the following URL in Internet Explorer on your mobile device:
http://<Server>:<Port>/sap/bc/bsp/sap/me_fw_install/install.htm.
<Server>: SAP Web AS name
<Port>: SAP Web AS standard port



For more information about determining the server and port, see [Determining the Server and Port \[External\]](#).



If an error message occurs, read SAP Note 434918.

The Installation Wizard home page appears.

3. If you want to use automatic device recognition, choose *Continue*. If your mobile device runs on another operating system, choose *Select Others*.



Depending on your operating system, you may need to specify the runtime environment.

4. Enter data as required on the Installation Wizard screens.



WinCE installation: You can select the *SSL* option irrespective of whether you want to install a Java Virtual Machine.

Win32 installation: See [Configuration of Security \[External\]](#) and SAP Note **580497**.

5. On the *Download* screen, choose the links displayed one after another to download the installation files to your mobile device. Under certain circumstances, you only have to download one file.

A *File Download* dialog box appears.

6. Choose *Save this program to disk* and then *OK*.
7. Choose any directory for the installation files and store the installation files there.
8. Run the installation files that you have just saved.

When Installing On PDAs:

The *SAP MI Client Component* is installed on your mobile device.

When Installing On Windows32 Operating Systems:

1. Another Installation Wizard opens.
2. Follow the instructions given on the screen.

Once you have entered all the data in the Installation Wizard, the system installs the *SAP MI Client Component* on your mobile device.

Result

The installation program has created an entry for starting SAP MI on your mobile device.

If you are using a PDA, restart your mobile device. For all other mobile devices, restart the SAP MI. For more information, see [Starting the SAP MI \[External\]](#).



Comparison of the Fields of BWAFVER with the SAP MI Web Console

In the procedure [Uploading Mobile Applications \[Page 20\]](#) you upload all the applications entered in Table **BWAFVER** to the SAP MI Web Console.

Field Comparison

Fields of Table BWAFVER	Fields in the SAP MI Web Console
APPLNAME	Application
VERSION	Version
DEFAULT	Use this version for assignment with roles
LINK	Link in the SAP MI home page
APPLTYPE	Application type
WEB_SERVER	---
WEB_PATH	Application file



Uploading Mobile Applications

Use

This procedure enables you to upload the installation files for mobile applications that are not yet available in the SAP MI Web Console. The uploaded files are available there for further editing.

Prerequisites

- You have obtained the installation files required for the mobile application and saved these to a folder of your choice in Windows Explorer. For more information about the storage location of the installation files, see the respective mobile application documentation on the *SAP Service Marketplace* at service.sap.com/instguides.
- The Mobile Component Descriptor (MCD) is available in your system. If the MCD is not yet available and you have a suitable transport file, you can transport it to your system with Transaction *STMS*. You can find information about transports in the documentation for the Transport Management System.

If there is no transport file for the MCD, you might have to create an MCD yourself; see [Mobile Component Descriptor \[External\]](#).

- You started the SAP MI Web Console (see [Starting the SAP MI Web Console \[External\]](#)).

Procedure


- Choose  *Change* for the mobile component you want to upload.



If the list does not contain an entry for the mobile component, first create an MCD for the component; see [Mobile Component Descriptor \[External\]](#).

- Enter the following data:

Field	Meaning
Version for Role-Based Assignment	If there are different versions of an application, you can select a version here. The system then automatically uses this version when processing roles (see Assigning Applications to a Role [External]). There is no input field for the version when editing roles.
Build Number	You can specify the build number of the application to establish at a later date which build of a mobile application you uploaded.
Use IP instead of host name	Access to the host using the IP. If the mobile devices cannot access the host on which the installation files are stored using the host name, select this field. In this case the IP address is used for the download link instead of the host name.
Domain in URL	If the mobile devices can only reach the host on which the installation files are stored using their fully qualified name in the network, enter the network domain in this field.
Protocol	Enter the protocol to be used when the files are downloaded to the mobile device, e. g. <code>http</code> or <code>https</code> .


<p>Application File</p>	<p>Use the Explorer to navigate to the storage location of the required file and select it.</p> <p>The selected operating system and language are of no importance since there is a file for each operating system and each language.</p>  <p>If the SAP MI Web Console is run in a J2EE cluster, the mobile components are stored on only a single node of the cluster. In this case you must manually copy the mobile components to all the other nodes of the cluster, see Copying Mobile Components to All Nodes of the J2EE Cluster [External].</p>
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For more information about the other fields, see [Mobile Component Descriptor \[External\]](#) You should only change it using the procedure described there.

3. Choose *Change*.



If you want to upload a new version of the application, you do not need to create a new entry. You can simply change the existing entry.

Choose  in the line with the entry to be changed. Change the version, enter the corresponding runtime environment and select the installation file. Choose *Change*.

Result

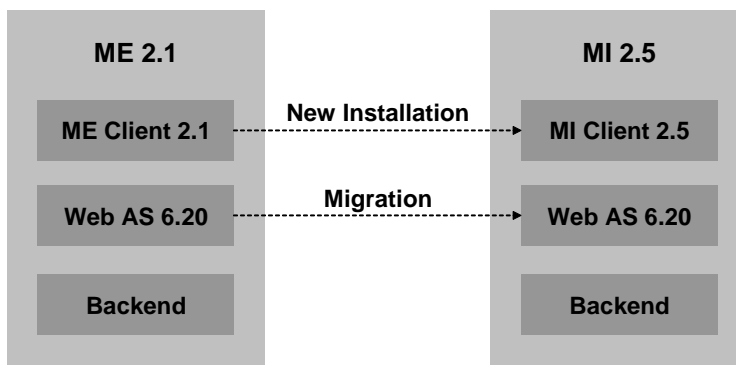
The application files have been uploaded. Then you need to deploy the uploaded files on the mobile device (see [Assigning Applications To Users \[External\]](#)).

Upgrade from Release ME 2.1 SP<xx> to MI 2.5

Purpose



If you are using Release ME 2.1 SP<xx>, you can upgrade to Release MI 2.5 in order to use the functions contained there.

Upgrade from Release ME 2.1 to MI 2.5



Process Flow

Technical Component	Action
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SAP MI Server Component	<ol style="list-style-type: none"> 1. Saving Application Files [Page 22]  When upgrading from ME 2.1 SP01, you must save the application files manually. See SAP Note 613674. 2. Upgrade to <i>SAP Web AS 6.40</i> (latest support package). For more information about installing or upgrading the <i>SAP Web AS</i>, see the <i>SAP Service Marketplace</i> at service.sap.com/instguides → <i>SAP Web Application Server</i>. 3. Creating Property Files [Page 22] 4. Restoring Application Files [Page 24]  When upgrading from ME 2.1 SP01, you must restore the application files manually. See SAP Note 613674.
SAP MI Client Component	<ol style="list-style-type: none"> 5. Performing Synchronization [Page 24] 6. Uninstall the old release of the <i>SAP MI Client Component</i> (see Uninstalling the SAP MI Client Component [Page 25]) 7. Upload the framework files with the latest versions (see Uploading Framework Files [Page 26]) 8. Installing the SAP MI Client Component <code>apurl_link_0003_0007_0007</code>



Saving Application Files

Prerequisites

You started the SAP MI Web Console (see [Starting the SAP MI Web Console](#)).

Procedure

1. Choose tab *Upload Application* → *Save/Restore Application Files*.
2. Choose *Add New Backup*.

Result

The system creates a new backup and inserts an entry with a new backup number.



Creating Property Files

Use

With this procedure you can provide the MI Sync Servlet with the necessary connection data for the SAP MI ABAP Server Component.

Prerequisites

As administrator, you must perform these steps on the computer on which the *J2EE Engine* is installed. You also need a user and password with authorization for the administration of the J2EE Engine.

Procedure

Creating Property Files

1. Start the J2EE Engine.
2. Start the J2EE Visual Administrator and connect to the J2EE Engine. To do this you need the administrator password.
3. Choose the service *Configuration Adapter* from the *Server* → *Services* menu.
Choose the *Runtime* tab page and then the *Display Configuration* tab page.
4. Navigate in the tree to *Configurations* → *apps* → *sap.com* → *com.sapmarkets.mesyncjco* → *appcfg*
5. Change into editing mode by confirming the popup with *Yes*.
6. Use the secondary mouse button to choose *appcfg* and choose *Create Subnode*



You must provide a property file for each *SAP Web AS* (SAP MI ABAP server component) you want to connect to. This file must contain the application server and system number of the corresponding *SAP Web AS*.

7. Make the following entries:

Entries in the *Create* window

Field	Entry
Dropdown Box	Select <i>File Entry</i> .
Name	<p><sysid>.props, for example, <i>abc.props</i></p> <p>The name of the property file must be identical to the system ID of the <i>SAP Web AS</i> to which you want to connect. For example, if the system ID of the <i>SAP Web AS</i> is <i>m25</i>, the name of the file must be <i>m25.props</i>.</p> <p>Enter the name of the file in lowercase letters.</p>
Display	<p>Select <i>Text</i> in the dropdown box and specify the content of the file, for example:</p> <pre>ashost=myserver sysnr=06</pre>

Alternatively you can upload a file that already exists. Choose *Upload* to do this. The name and the contents of the file you uploaded appear in the window.

8. Choose *Create* to generate the properties file.
9. Change into the display mode and leave the J2EE Visual Administrator.

Testing Synchronization

To test if synchronization is principally working without having to install the SAP MI Client Component, call the following URL in your browser:

```
http://<Server>:<Port>/meSync/servlet/meSync?~sysid=<System
ID>&~login=<User
name>&~password=<Password>&~client=<Client>&~language=<Language>&~ack
nowledge=X&~test=true&
```



```
http://p59298:50000/meSync/servlet/meSync?~sysid=u6b&~login
=tester&~password=test&~client=800&~language=de&~acknowledg
e=X&~test=true&
```

If the test was successful, the browser displays a message containing a time that, for example, looks like:

```
&WAF_SYNC&STATUS=&Execution Time =103129& HeaderType = MEREPLICATION
&MORE_PACKAGES_WAITING = &
```

If the test fails, the system generates an error message.

Alternatively, you can test synchronization using a configured client.



Restoring Application Files

Use

This procedure restores the saved application files in the SAP MI Web Console.

Prerequisites

You started the SAP MI Web Console (see [Starting the SAP MI Web Console](#)).

Procedure

10. Choose tab *Upload Application* → *Save/Restore Application Files*.
A list of all backups is displayed.
11. To restore the application files, select the latest backup and choose *Restore*.



Performing Synchronization

Use

You must synchronize the mobile device in order to make the mobile applications assigned to you available on your mobile device. In daily operations you will also perform synchronization in order to transfer new and changed data from the *SAP MI Client Component* to the backend and vice versa.

If you cannot use online synchronization, you can use various data carriers such as memory sticks, diskettes and DVDs. In this case the system only synchronizes application data. The system can **not** install any new applications with data carrier synchronization.

Prerequisites

You started the SAP MI Client Component on the mobile device and logged on.

If you want to synchronize using the data carrier, you must satisfy the following requirements:

- The administrator activated data carrier synchronization, see [Setting Up Data Carrier Synchronization \[External\]](#).

- At least one mobile application is installed on the mobile device.

Procedure

Synchronization with Online Connection

1. On the *SAP MI* start page, choose *Synchronize*.
2. If necessary, enter the synchronization password.
The system displays a Synchronization log.
3. Choose *Continue*.
The system offers the mobile applications on your device and generates one link for each application.
4. Restart the device to activate the new mobile applications. You only have to restart the *SAP MI* on Windows32 operating systems.
A link is now displayed on the start page of the *SAP MI* for each application. You can call the mobile application using this link.

Data Carrier Synchronization

1. If you want to use data carrier synchronization, connect the data carrier with the mobile device or place it in the drive.
2. On the *SAP MI* start page, choose *Data Carrier Synchronization*.
3. Enter the synchronization files (file extension **.mis*) you want to read and choose *Continue*.



If you have not received the appropriate files from your administrator, you can skip this point.

4. If you received the data on more than one data carrier, change the data carrier if necessary in order to read in further files.
5. Select a data carrier and start synchronization.
The system creates one or more synchronization files with the file extension **.mis* in a suitable size for the data carrier.
6. Rcarrier.
7. Copy the data to the data carrier. If you want to use a CD or DVD, copy the files to a temporary directory and then burn them on the appropriate data carrier.
8. Give the administrator the data carrier. The administrator can then synchronize it with the backend.



Uninstalling the SAP MI Client Component

Use

With this procedure you can uninstall the *SAP MI Client Component* on your mobile device.

Procedure

Uninstalling on Windows 32 Platforms

1. End *SAP MI* on your mobile device by clicking the *SAP MI* icon in the Windows menu bar with the secondary mouse button and choosing *Exit*.
2. Choose *Windows Start* → *Programs* → *SAP Mobile Infrastructure* → *Uninstall*.
3. Follow the instructions given on the screen.

The *SAP MI Client Component* is now uninstalled.



Under *Windows Task Manager* → *Processes*, monitor the *java.exe*. If it takes too long until the *java.exe* finishes or if the deinstallation program informs you that files to be updated are still being used, end the *java.exe* in the Windows Task Manager.

Uninstalling on Pocket PC 2002 /Windows Mobile 2003

1. Delete the shortcut *MobileEngine.Ink/MobileInfrastructure.Ink* under *Start* → *Programs* → *File Explorer* → *My Device* → *Windows* → *AutoStart*.
2. Restart the mobile device.
3. Choose *Start* → *Settings* → *System* → *Remove Programs*.
4. Select and delete the following entries:
 - a. *SAP AG ME/MI<Release>*
 - b. *SAP AG, NSIcom CrEme...*
5. Manually delete files and folders that could not be deleted automatically in the *File Explorer*.
6. Restart the mobile device.



Uploading Framework Files

Use

This procedure enables you to upload the *SAP MI* framework files to the *SAP MI Web Console*. The framework files contain the runtime environment for mobile applications.

Prerequisites

- You have saved the framework files you want in a folder of your choice.
- The Mobile Component Descriptor (MCD) is available in the system. If the MCD is not yet available and you have a suitable transport file, you can transport it to your system using transaction *STMS*. You can find information about transports in the documentation for the Transport Management System.

For more information about MCDs see [Mobile Component Descriptor \[External\]](#).

- You started the *SAP MI Web Console* (see [Starting the SAP MI Web Console \[External\]](#)).

Procedure

1. Choose  for the framework file you want to upload.

Upload the required files:

- **MOBILEENGINE_AWT** (only if you are using applications with runtime environment *AWT*), application type **Framework**

- **MOBILEENGINE_JSP** (only if you are using applications with runtime environment *JSP*), application type **Framework**
- **JAVAVM** (only if you are using a PDA), application type **JVM**

The files for the various processors adhere to this naming convention:

CrEme<Version>_<Processor>_<Version of operating system>_<Name of operating system>_minimal.CAB

- Version of CrEme: e.g. 324 for Version 3.24 or 325b13 for Version 3.25b13
- Processor: Prior to Version 3.25: **xsc** for XScale, **PXA** and others or **ARM** for Strong ARM; as of Version 3.25 **ax** for all processors
- Version of operating system: **CE 30** for Pocket PC 2002 and Windows CE 3.x or **CE4x** for Windows Mobile 2003 or Windows CE.Net 4.x
- Name of operating system: **PPC** for Pocket PC or **WPC** for Windows CE




When using JVM files, note the comments under [Prerequisites \[External\]](#).

- **SSL** (only if you are using the *SAP MI* security components), application type **SSL**



If you upload additional framework files for different platforms and languages, they are also called either **MOBILEENGINE_AWT** or **MOBILEENGINE_JSP**.

2. Enter the following data only:


Field	Purpose
Version for Role-Based Assignment	If there are different versions of an application, you can select one here. The system then automatically uses this version when processing roles (see Assigning Applications to the Users of a Role [External]). There is no input field for the version in the role editor.
Build Number	You can specify the build number of the application to establish at a later date which build of a mobile application you uploaded.
Use IP Instead of Host Name	Access to the host using the IP. If the mobile devices cannot access the host on which the installation files are stored using the host name, select this field. In this case the IP address is used for the download link instead of the host name.
Domain in URL	If the mobile devices can only reach the host on which the installation files are stored using their fully qualified name in the network, enter the network domain in this field.
Protocol	Enter the protocol to be used when the files are downloaded to the mobile device, e. g. http or https .
Application File	Depending on the language required, your operating system, and the runtime environment previously chosen, you choose the appropriate framework files.  If the SAP MI Web Console is run in a J2EE cluster, the mobile components are stored on only a single node of the cluster. In this case you must manually copy the mobile components to all the

	other nodes of the cluster, see Copying Mobile Components to All Nodes of the J2EE Cluster [External] .
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For more information about the other fields, see [Mobile Component Descriptor \[External\]](#) You should only change it using the procedure described there.



You can add multiple installation files (such as Setup.exe for Win32, CAB files for WinCE) to the entry created here. The installation routine for the SAP MI Client Component installation selects the installation file that is appropriate for the operating system.

Choose  in the line with the created entry. Define the corresponding runtime environment, operating system and language again and select the file. Choose *Change*.

3. Choose *Change*.

Result

The framework files have been uploaded. If the end user has worked through the [Installing SAP MI Client Component \[Page 28\]](#) procedure, the framework files are visible in the SAP MI Web Console at *Administration* → *Manage Mobile Devices*.



Installing the SAP MI Client Component from the Internet

Use

With this procedure you install the *SAP MI Client Component* on your mobile device. If your *SAP MI* administrator gave you a CD or DVD for the installation, you can use it to perform the installation; see [Installing the SAP MI Client Component from CD or DVD \[External\]](#).



You can find more information about installing **Linux** operating systems in SAP Note 754221.

Procedure

1. If you are using a proxy server, check your browser settings and configure them again if needed. The settings depend on the network infrastructure you are using.
 - To change the settings on Windows32 operating systems (Internet Explorer):
Choose *Tools* → *Internet Options* → *Connections* → *LAN settings*.
 - To change the settings on Pocket PC 2002:
Choose *Start* → *Settings* → *Connections* → *Connections* → *Work* → *Change* → *Proxy settings*.
 - To change the settings on Windows Mobile 2003:
Choose *Start* → *Settings* → *Connections* → *Connections* → *Proxy settings*.
2. Enter the following URL in Internet Explorer on your mobile device:
http://<Server>:<Port>/sap/bc/bsp/sap/me_fw_install/install.htm
 <Server>: SAP Web AS name
 <Port>: SAP Web AS standard port



For more information about determining the server and port, see [Determining the Server and Port \[External\]](#).



If an error message occurs, read SAP Note 434918.

The Installation Wizard home page appears.

3. If you want to use automatic device recognition, choose *Continue*. If your mobile device runs on another operating system, choose *Select Others*.



Depending on your operating system, you may need to specify the runtime environment.

4. Enter data as required on the Installation Wizard screens.



WinCE installation: You can select the *SSL* option irrespective of whether you want to install a Java Virtual Machine.

Win32 installation: See [Configuration of Security \[External\]](#) and SAP Note **580497**.

5. On the *Download* screen, choose the links displayed one after another to download the installation files to your mobile device. Under certain circumstances, you only have to download one file.

A *File Download* dialog box appears.

6. Choose *Save this program to disk* and then *OK*.
7. Choose any directory for the installation files and store the installation files there.
8. Run the installation files that you have just saved.

When Installing On PDAs:

The *SAP MI Client Component* is installed on your mobile device.

When Installing On Windows32 Operating Systems:

1. Another Installation Wizard opens.
2. Follow the instructions given on the screen.

Once you have entered all the data in the Installation Wizard, the system installs the *SAP MI Client Component* on your mobile device.

Result

The installation program has created an entry for starting SAP MI on your mobile device.

If you are using a PDA, restart your mobile device. For all other mobile devices, restart the SAP MI. For more information, see [Starting the SAP MI \[External\]](#).