



Installation Guide for Runtime

SAP Mobile Platform 2.3 SP03

Windows

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To successfully install SAP® Mobile Platform for the first time, you must do a considerable amount of planning, make a number of strategic decisions, and gather many specific pieces of information about the technical environment into which you are installing. Upgrading an existing installation also requires you to collect key pieces of information.

If you have an existing installation of SAP Mobile Platform to upgrade, after you have filled in the upgrade worksheet for your scenario, go to the *Upgrading* chapter in this document.

If you are about to perform a new installation of SAP Mobile Platform, before you run the installer for the first time, go through the SAP Mobile Platform *Landscape Design and Integration* document and:

1. Select one of these installation scenarios
 - Single-server installation
 - Simple load-balancing cluster installation
 - Installation with a standard Microsoft Failover Cluster
 - Installation with a Microsoft Failover Cluster with shared hosts

Each of these is described in detail in *Landscape Design and Integration*.

2. Resolve all licensing issues.

Landscape Design and Integration details all the licensing options, and how licenses are managed. It also provides instructions for obtaining a license, if your company has not already purchased one.

3. Complete the worksheet provided for the scenario.

Use the worksheet to record all the important information that configure values in the installer. The information in the worksheets is organized in the same order in which the installer asks you to provide it.

Next

If you are upgrading an existing installation, go to *Chapter 8, Performing a Full Upgrade* on page 123.

To add a server node to an existing SAP Mobile Platform cluster, see *Chapter 7, Adding an SAP Mobile Server Node to an Existing Cluster* on page 115.

For new installations, proceed to the instructions for your chosen scenario:

- *Chapter 3, Installing SAP Mobile Platform on a Single Server* on page 17

CHAPTER 1: Planning the Landscape

- *Chapter 4, Installing SAP Mobile Platform in a Simple Load-Balancing Cluster* on page 25
- *Chapter 5, Installing SAP Mobile Platform with a Standard Microsoft Failover Cluster* on page 43
- *Chapter 6, Installing SAP Mobile Platform with a Microsoft Failover Cluster with Shared Hosts* on page 83

CHAPTER 2 **Obtaining a License**

There are two ways to obtain your SAP Mobile Platform license, depending on how you purchased the product.

When you purchase SySAM 2-enabled SAP products, you must generate, download, and deploy SySAM product licenses.

- If you ordered your product under an SAP® contract and were directed to download from SAP Service Marketplace (SMP), you can use SMP at <http://service.sap.com/licensekeys> (login required) to generate license keys for SAP products that use SySAM 2-based licenses.
- If you purchased your product from Sybase® or an authorized Sybase reseller, go to the secure Sybase Product Download Center (SPDC) at <https://sybase.subscribenet.com> and log in to generate license keys. The license generation process may vary slightly, depending on whether you ordered directly from Sybase or from a Sybase reseller.

For more complete information about SySAM, see:

- *SySAM 2 Users Guide* online at <http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00530.0220/doc/html/title.html>
- *Fast Track to SySAM 2.0* white paper, available at *Fast Track to SySAM 2.0*
- *SySAM FAQ* online at <http://www.sybase.com/detail?id=1038615>
- *SySAM* product page online at <http://www.sybase.com/products/allproductsa-z/sysam>

Determining Host IDs

When you generate licenses at SMP or SPDC, you must specify the host ID of the machine where the licenses will be deployed.

- For unserved licenses, specify the host ID of the machine where the product will run. If you are running a product with per-CPU or per-CHIP licensing that supports SySAM sub-capacity, and you want to run the product in a virtualized environment, see *SySAM Sub-capacity Licensing* in the *SySAM Users Guide* for information about determining the host ID for unserved licenses.
- For served licenses, specify the host ID of the machine where the license server will run.

SMP or SPDC remembers the host information so that you can select the same license server when generating additional licenses.

To determine the host ID of the machine, run the **lmutil** utility from a terminal window or the Windows command prompt. For example:

```
lmutil lmhostid
```

Note: You can download the **lmutil** utility from the Flexera Software Web site at http://www.globes.com/support/fnp_utilities_download.htm.

You can also determine the host ID using native operating system commands. See the Frequently Asked Questions topic "What is my Host ID?":

- SMP: <https://websmp208.sap-ag.de/~sapidb/011000358700001006652011E> (requires login)
- SPDC: <https://sybase.subscribenet.com/control/sybs/faqs#30-4>

Comparing License Deployment Models

Learn about license deployment models.

Unserviced Licenses	Served Licenses
Licenses can be used only on the machine for which the license was generated.	Licenses can be distributed from a network license server to products running on any network machine.
Generate licenses at SMP or SPDC for each machine that will run the product: <ol style="list-style-type: none"> 1. Specify the host ID of the machine where the product will run. 2. Generate a license for that machine. 3. Save the license to the specified machine. 4. Repeat steps 1 – 3 for each machine where the product will run. 	Generate licenses at SMP or SPDC for products running on multiple machines: <ol style="list-style-type: none"> 1. Specify the host ID of the license server. 2. Specify the number of required licenses. 3. Save the licenses to the license server host machine.
No license administration is required. However, when new licenses are required for product updates, you must update and deploy each license for each machine where the product update will run.	The license server requires administration. When new licenses are required for product updates, SMP or SPDC lets you update all licenses for a specific license server in a single step.
No license reporting or asset management capabilities are available.	Allows license monitoring and reporting of license use, capacity planning, and asset management using SAMreport.
Installed locally and always available.	Requires a functioning license server and network. If the license server or network fails, you must fix the problem or install an alternate license server before the product grace period expires.

Unservd Licenses	Served Licenses
If a machine where the product is running fails, you must regenerate all of its licenses and deploy those licenses to the replacement machines.	If a machine where the product is running fails, you can move the product to a new machine, and it will acquire licenses from the running license server. If the license server host machine fails, use the Manage License Hosts functionality at SMP or SPDC to move its licenses to a new network license server host.
License files are distributed across each machine running a product, and therefore they are difficult to manage and control.	License files are centrally located and managed.
Unservd Standalone Seat (SS) licenses do not allow product use via Remote Desktop Connection or other terminal services clients.	Products can be used via Remote Desktop Connection or other Terminal Services clients, irrespective of the type of license in use.

Generating Licenses at SMP

Before you log in to SMP and generate licenses, gather the necessary information and complete these tasks.

Table 1. Information Needed Before License Generation

Required Information or Action	License Model		Description
	Served	Un-served	
License deployment model	X	X	Decide whether to use a served or unserved license deployment model. Typically, this is a company-wide decision that is made only once. Therefore, this is one of the most important things to determine before license generation.
Product machine host ID		X	Determine the host ID of the machine, or machine partition where the product will run.
License server – download and install	X		Download and install the SySAM license server before you generate the product’s licenses, and before you install the product.
License server host ID	X		Determine the host ID of the machine where the license server will run.

Required Information or Action	License Model		Description
	Served	Un-served	
License server host name	X		Determine the host name of the machine where the license server will run.
License server TCP/IP port numbers	X		Determine the two port numbers on which the license server will listen for license requests.

Generating License Keys

If you have purchased SAP products that use SySAM 2-based licenses under SAP contract and are directed to download from SAP Service Marketplace (SMP), you can use SMP to generate license keys.

1. Go to the SAP Marketplace main page at <http://service.sap.com/licensekeys>.
2. Log in using your SMP credentials.
3. Select **SAP Support Portal**.
4. Select **Keys & Requests > License Keys**.
5. Follow the instructions in the "How to generate license keys for SAP Sybase products" presentation available under the "Documentation and Helpful Resources" quick access link.

Generating Licenses at SPDC

Before you log in to SPDC and generate licenses, gather the necessary information and complete these tasks.

Table 2. Information Needed Before License Generation

Required Information or Action	License Model		Description
	Served	Un-served	
License deployment model	X	X	Decide whether to use a served or unserved license deployment model. Typically, this is a company-wide decision that is made only once. Therefore, this is one of the most important things to determine before license generation.

Required Information or Action	License Model		Description
	Served	Un-served	
Product machine host ID		X	Determine the host ID of the machine, or machine partition where the product will run.
License server – download and install	X		Download and install the SySAM license server before you generate the product licenses, and before you install the product.
License server host ID	X		Determine the host ID of the machine where the license server will run.
License server host name	X		Determine the host name of the machine where the license server will run.
License server TCP/IP port numbers	X		Determine the port numbers on which the license server will listen for license requests. Note: If you do not specify the license server port numbers during license generation, the license server uses the first available ports in the range 27000 to 27009. If a firewall exists between the server and the client machines, fix the license server port numbers to allow access to the ports. See <i>Access Through a Firewall or VPN</i> in the <i>SySAM Users Guide</i> .

Logging in to SPDC and Beginning License Generation

Once you log in to SPDC and begin license generation, complete your product’s license generation using the procedure that applies to the license deployment model you chose, either for generating served licenses or for generating unserved licenses.

If your product has been ordered from a SAP reseller, perform the “Web Key step” instructions, where noted.

- Go to the SPDC login page at <https://sybase.subscribenet.com>.
 - Go to the SPDC Web Key Registration page at <https://sybase.subscribenet.com/webkey>.
- Enter the login ID and password, then click **Login**. If you forget your password, click **Password Finder**.

Your password is sent to you in an e-mail message.

- Enter the authorization string from the Web Key Certificate provided by the reseller when your SAP product was purchased, then click **Submit Web Key**.

Note: If you do not know your SPDC account login ID and password, or Web Key Certificate authorization string, contact the person who ordered your product.

- At the Web Key Registration page, enter your account information, then click one of these options:
 - **Submit My Registration Information** – to register your product using your direct account information.
 - **Anonymous Activation** – to activate your product anonymously.
- 3. Select the product family that includes the product for which you want to generate a license; for example, Adaptive Server Enterprise.
- 4. Depending on the product family you choose, you may see an additional Product Information page.
 - a. Product suites – if your product is included in one or more suites, select the suite that includes your product; for example, ASE Small Business Edition.
 - b. Product version and platform – select the product version, name, and operating system that matches your product order.
- 5. If this is the first time you selected a specific product edition and platform, you must accept the SAP License Agreement before you are allowed to generate a license for that product.
- 6. If your product software installation requires a license key (also referred to as the license file), click **License Keys** on the Product Download page.
- 7. On the License Information page:
 - a. Select the option button to the left of the product for which to generate a license; for example, “CPU License (CP), ASE Enterprise Edition 15.7 for Sun Solaris SPARC 64-bit.”
 - b. Scroll down and click **Select to Generate**.
- 8. In the Generate Licenses wizard, choose a license deployment model:
 - **Served license** – go to *Generating Served Licenses* in the *Sybase Software Asset Management (SySAM) 2 Users Guide* to complete the license generation and download process.
 - **Unserved license** – go to *Generating Unserved Licenses* in the *Sybase Software Asset Management (SySAM) 2 Users Guide* to complete the license generation and download process.

Note: Some SAP products or license types do not offer a choice of license deployment models and do not display this page. If this is the case, continue through the Generate Licenses wizard to generate your license.

Click **Next**.

Generating Unserved Licenses

Generate and download an unserved license for your product.

1. Enter the number of machines (up to 10) for which to generate unserved licenses, and click **Next**.
2. Enter:
 - Node Host ID – enter the host ID of the machine where the product will be run. If you do not know the host ID, select **What Is My Host ID?** or see *Determining Host IDs* in the *Sybase Software Asset Management (SySAM) 2 Users Guide* at <http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00530.0220/doc/html/title.html>.
 - Host Name – enter the machine host name.

For some license types, you must enter the number of licenses to generate. If you are unsure of the license quantity, select **How Many Licenses Should I Generate?**.

3. Click **Generate**.
4. When the license has generated, review the information on the View Licenses page, then, if the license information is correct, select one of:
 - If you generated only one license, click **Download License File**.
 - If you generated several licenses, click **Download All Licenses for Host**.

Note: Before you download and save generated licenses, you can select **Print Friendly** to print a paper copy of the license, or **License Overview** to return to the **License Information** page and generate additional licenses.

 - To correct license information before downloading the license, click **License Overview**, select the license to be corrected and click **Check In** to reset the license to its original state. Repeat the license generation process.
5. If you chose to download licenses, when the File Download dialog box opens, click **Save**.
6. Save the generated licenses with a `.lic` file name extension. Although `SYBASE / SYSAM-2_0/licenses` is typically the directory where unserved licenses are located, your product may have a different requirement. See your product installation guide and release bulletin for product-specific information.

Note: If you do not save the license files with a `.lic` extension, SySAM does not recognize the licenses.

Next, install your licensed product using the instructions in the product installation guide and release bulletin.

Generating Served Licenses

Generate and download a served license for your product.

1. Enter the number of licenses to generate and click **Next**.

If you are unsure of the license quantity, select **How Many Licenses Should I Generate?**.

2. Select an existing license server host, or enter the host ID, and an optional host name and port number, of a new license server host.

When completing this step, use these recommendations:

- If you do not know the license server host ID, select **What Is My Host ID?** or see *Determining Host IDs* in the *Sybase Software Asset Management (SySAM) 2 Users Guide* at <http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00530.0220/doc/html/title.html>.
- Although the host name is optional, SAP recommends that you provide the host name to ease future license administration.
- The port number is optional unless your product configuration is going to use three-server redundancy (see the next bullet item). Any unused port number between 0 and 64000 is valid. On UNIX, choose a port number greater than 1024; most port numbers less than 1024 are privileged port numbers. If you do not specify a TCP/IP port number, a default port between 27000 and 27009 is used.
- To generate a license for a three-server redundant configuration, enter the required information: license server host ID, host name, and port number for all three machines. Enter a port number outside of the 27000 to 27009 range. You must enter the fully qualified domain name (FQDN) as the host name if any client machine requires an FQDN to contact a license server machine.

Note: You cannot upgrade SySAM 1.0 licenses and use them in a three-server redundant configuration.

3. Click **Generate**.
4. When the license has generated, review the information on the View Licenses page, then, if the license information is correct and you do not need to generate additional licenses, select one of:
 - If you generated only one license, click **Download License File**.
 - If you generated several licenses, click **Download All Licenses for Host**.

Note: Before you download and save generated licenses, you can select **Print Friendly** to print a paper copy of the license.

- a) To correct license information, click **License Overview**, select the license to be corrected and click **Check In** to reset the license to its original state. Repeat the license generation process, starting with step 1 of this procedure.

- b) To generate additional licenses, click **License Overview** and repeat the generation process for the additional product licenses.
- When the File Download dialog box opens, click **Save**.
 - Save the license files with a `.lic` file name extension to the `SYSAM-2_0/licenses` directory of the license server installation.

Warning! If you do not save the license files with a `.lic` extension, SySAM does not recognize the licenses.

- After you save the license files to the license server, enter in a command prompt (Windows) or a shell window (Linux/UNIX) on the machine where your license server is running:

```
sysam reread
```

Your new licenses are registered with the license server.

Locating Information in a License File

After you download a license file, you may need to get some information from it to complete your installation.

- Use a text editor to open your license file.
- Locate the uncommented line that begins with the string for your SAP Mobile Platform edition:
 - Enterprise Edition – `INCREMENT SUP_ENTSRVR`
 - Enterprise Developer Edition – `INCREMENT SUP_ENTDEV`
 - Personal Developer Edition – `INCREMENT SUP_DEVELOPER`

For example:

- For Enterprise Edition:

```
...
INCREMENT SUP_ENTSRVR SYBASE 2011.11150 permanent uncounted \
  VENDOR_STRING=PE=EE;LT=CP HOSTID=000c29d300bd
PLATFORMS="i86_n \
...
```

- For Enterprise Developer Edition:

```
...
INCREMENT SUP_ENTDEV SYBASE 2011.11150 permanent uncounted \
  VENDOR_STRING=PE=EE;LT=CP HOSTID=000c29d300bd
PLATFORMS="i86_n \
...
```

- For Personal Developer Edition:

```
...
INCREMENT SUP_DEVELOPER SYBASE 2011.11150 permanent uncounted \
  VENDOR_STRING=PE=EE;LT=CP HOSTID=000c29d300bd
```

CHAPTER 2: Obtaining a License

```
PLATFORMS="i86_n \  
...
```

The rest of the examples in this section show the beginning of this line as it appears for Enterprise Edition; the details equally apply to all editions.

3. Determine whether the server license is served or unserved.

If the line you located in step 2 ends with "uncounted", it is an unserved license. For example:

```
...  
INCREMENT SUP_ENTSRVR SYBASE 2011.11150 permanent uncounted \  
  VENDOR_STRING=PE=EE;LT=CP HOSTID=000c29d300bd PLATFORMS="i86_n \  
\   
...
```

If that line ends with a number immediately following a date, it is a served license. For example:

```
...  
INCREMENT SUP_ENTSRVR SYBASE 2011.11150 permanent 10 \  
  VENDOR_STRING=PE=EE;LT=CP HOSTID=000c29d300bd PLATFORMS="i86_n \  
\   
...
```

4. Determine the product edition and license type for the license.

For both served and unserved licenses, note the value of PE (product edition) and LT (license type) in the line following the line you located in step 2. For example:

```
...  
INCREMENT SUP_ENTSRVR SYBASE 2011.11150 permanent uncounted \  
  VENDOR_STRING=PE=EE;LT=CP HOSTID=000c29d300bd PLATFORMS="i86_n \  
\   
...
```

The PE value is the license product edition value; "EE" in the example above.

The LT value is the license type value; "CP" in the example above.

5. If you are installing Enterprise Edition, determine the number of client licenses.

If your license type is Development and Test (DT), you can change this number later.

a) Locate the uncommented line, beginning with INCREMENT SUP_ENTCLIENT.

For example:

```
INCREMENT SUP_ENTCLIENT SYBASE 2011.11150 permanent uncounted \  
  VENDOR_STRING=PE=EE;LT=ST HOSTID=000c29d300bd  
PLATFORMS="i86_n \  
...
```

b) Determine whether the client licenses are served or unserved.

If the line beginning with INCREMENT SUP_ENTCLIENT ends with "uncounted", the client licenses are unserved. For example:

```
INCREMENT SUP_ENTCLIENT SYBASE 2011.11150 permanent uncounted \  
  VENDOR_STRING=PE=EE;LT=ST HOSTID=000c29d300bd  
PLATFORMS="i86_n \  
...
```

```
x64_n" ISSUER="CO=Sybase,
Inc.;V=2.0;AS=A;MP=3120;CP=100;EGO=" \
...
```

If that line ends with a number immediately after a date, the client licenses are served.

For example:

```
INCREMENT SUP_ENTCLIENT SYBASE 2011.11150 permanent 100 \
  VENDOR_STRING=PE=EE;LT=ST HOSTID=000c29d300bd
PLATFORMS="i86_n \
...
```

- c) Determine the number of client licenses.

For unserved client licenses, the number of client licenses is the value of CP two lines below the line beginning with INCREMENT SUP_ENTCLIENT. For example:

```
INCREMENT SUP_ENTCLIENT SYBASE 2011.11150 permanent uncounted \
  VENDOR_STRING=PE=EE;LT=ST HOSTID=000c29d300bd
PLATFORMS="i86_n \
  x64_n" ISSUER="CO=Sybase,
Inc.;V=2.0;AS=A;MP=3120;CP=100;EGO=" \
...
```

For served client licenses, the number of client licenses is the value at the end of the line beginning with INCREMENT SUP_ENTCLIENT. For example:

```
INCREMENT SUP_ENTCLIENT SYBASE 2011.11150 permanent 100 \
  VENDOR_STRING=PE=EE;LT=ST HOSTID=000c29d300bd
PLATFORMS="i86_n \
...
```

Setting a Fixed Port Number for SySAM License Server

To use a served license when there are no ports available, you can edit the license file to specify a fixed port number.

The VENDOR SYBASE daemon is a license management process that runs on SAP Mobile Platform hosts. It normally uses a dynamically assigned port to communicate with the SySAM license server.

This task is required when SAP Mobile Platform is deployed in an environment in which there are no available ports in the 27000 – 27009 range for the licensing server to dynamically assign.

1. Obtain a port number that SAP Mobile Platform can use to communicate with the SySAM license server.
2. Back up the license file.
3. Use a text editor to open the license file, and locate the VENDOR SYBASE line, near the top of the file.
4. At the end of that line, type PORT= followed by the port number you obtained.

For example, if you use port 27010, enter:

```
VENDOR SYBASE PORT=27010
```

You must leave a space between "SYBASE" and "PORT."

5. Save and close the license file.

Switching from Served to Unserved License

You can switch an SAP Mobile Server from a served license to an unserved license without reinstalling.

Repeat this task on each SAP Mobile Server host.

1. Stop SAP Mobile Server.
2. Replace the license file (*.lic extension) at the location below with a revised license file:

```
SMP_HOME\Servers\UnwiredServer\licenses\
```

3. Restart SAP Mobile Server.

Switching from Unserved to Served License

You can switch an SAP Mobile Server from an unserved license to a served license, without reinstalling.

1. Download the SySAM license server software and installation instructions from <http://www.sybase.com/sysam/server>.

Click the **Download the SySAM Standalone License Server** link on that page and follow the instructions provided.

2. Install the SySAM license server.
3. Copy the license file (*.lic) from `SMP_HOME\Servers\UnwiredServer\licenses\` to the `licenses` directory on the license server host.
4. Back up the license file.
5. Edit the license file on the license server host to add the following lines:

```
SERVER <host> ANY  
VENDOR SYBASE  
USE_SERVER
```

Replace <host> with the name of the SySAM license server host.

6. Start or restart the SySAM license server.

If the SySAM license server is running, an alternative to restarting it is to run the `reread` command on that server. See the *SySAM Users Guide*.

7. Create a license file in the `SMP_HOME\Servers\UnwiredServer\licenses\` folder of each SAP Mobile Server node and name it with SySAM server host name and `.lic` extension.
8. Edit the license file you just created and add the following lines:


```
SERVER <host> ANY <port>
VENDOR SYBASE
USE_SERVER
```

Replace `<host>` with the name of the SySAM license server host and `<port>` with the port number for the SySAM license server.
9. Remove the old license file.
10. (Optional) Run `SMP_HOME\Servers\UnwiredServer\bin license.bat` to update the license.
11. Restart the SAP Mobile Server.

Switching to a New License

You can switch an SAP Mobile Server from an existing license to a new license, without reinstalling.

- **Unserviced license** – simply replace the old license file with the new license file in `SMP_HOME\Servers\UnwiredServer\licenses\` on each SAP Mobile Server node.
- **Serviced license** – follow the steps below on each SAP Mobile Server node.

1. Stop SySAM Services:

- a) From a command prompt, change to:

```
SMP_HOME\Servers\UnwiredServer\sysam-2.2\bin
```

- b) Enter the command:

```
sysam stop
```

Note: Alternatively, you can stop SySAM services from the Services tab of Task Manager.

2. Copy the license file into the SySAM `licenses` directory. For example, copy the license to the `SMP_HOME\Servers\UnwiredServer\sysam-2.2\licenses` directory.

3. Restart the license server and reread the license:

- a) From a command prompt, change to:

```
SMP_HOME\Servers\UnwiredServer\sysam-2.2\bin
```

- b) If the license server is not already started, start it, by entering:

```
sysam start
```

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Note: Alternatively, you can start SySAM services from the Services tab of Task Manager.

- c) If the license server is already started, use the reread command to make the license server read the new license files:

```
sysam reread
```

See the *SySAM Users Guide* for additional details.

Installing SAP Mobile Platform on a Single Server

This scenario places all SAP Mobile Platform server components (SAP Mobile Server and data tier) on a single host. This scenario is suitable for a developer environment, with shared SAP Mobile Platform server resources. It may also be suitable for an SAP Mobile Platform prototyping environment, or a low-volume production system that does not require load balancing or failover.

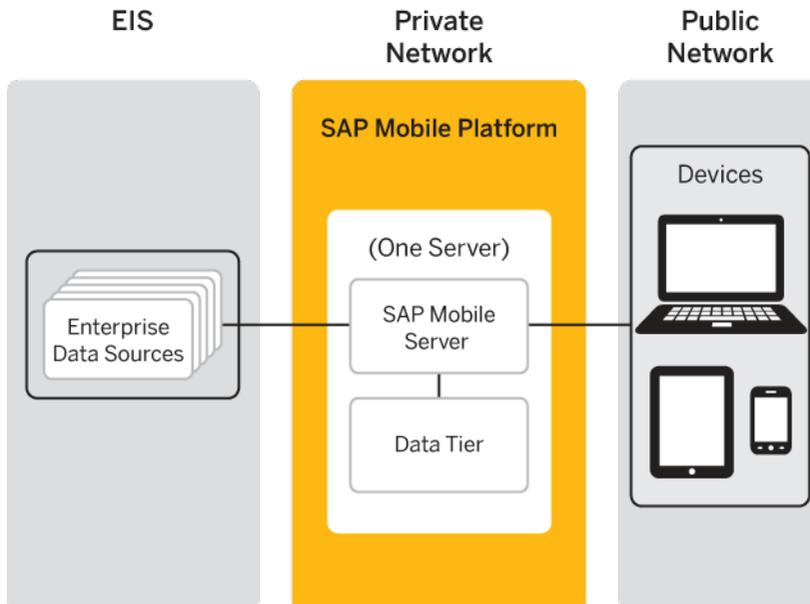
Prerequisites

The architecture, design characteristics, and use cases for this installation scenario are described in *Landscape Design and Integration > Designing the Landscape > Single Server Installation*. The installation instructions in this chapter assume that you have used the *Landscape Design and Integration* document to design the landscape.

Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: [../misc/SMP23_Worksheets.zip](#).

Note: Personal Development Server license terms require all SAP Mobile Platform server components to be installed on the same, single-user host as the SAP Mobile SDK.

This diagram illustrates the single-server scenario:



1. *Preparing for Installation*

Ensure that the host on which you are installing SAP Mobile Platform is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log, and verify that key services are functioning, that you can log into SAP Control Center, and that you can see the properties of the SAP Mobile Server.

Preparing for Installation

Ensure that the host on which you are installing SAP Mobile Platform is ready for you to begin the installation.

1. If you are using a served license, set up the SySAM license server. See:

- *SySAM FAQ* online at <http://www.sybase.com/detail?id=1038615>
- *Fast Track to SySAM 2.0* white paper, available at <http://www.sybase.com/detail?id=1037788>

2. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.

3. Verify that you have Administrator privileges on the installation target host.

4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first SAP Mobile Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.

5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select `JAVA_TOOL_OPTIONS` and click **Delete**.
 - d) Click **OK** to exit all dialogs.
6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

This includes any database servers, SAP Control Center, and if SAP® Data Orchestration Engine Connector is present in an upgrade installation, SAP Data Orchestration Engine.

To verify that services are stopped, open the Services pane from Windows Control Panel.

7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

3. Select your license model and click **Next**.

Evaluation	Allows you to evaluate SAP Mobile Platform for 30 days. A license file is not required.
Unservd (local) license	Standalone license managed locally by the host.
Served (remote) license	Standalone license managed by a license server.

4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select:

- License product edition – Personal Development
- License type – Standalone Seat License

Click **Next**.

6. Enter the location of your license file.

- If you selected **Unservd (local) license**, enter the absolute path to the license file on the installation target host, using only ASCII characters.
- If you selected **Served (remote) license**, enter the host name and TCP port of the license server.

Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as `SMP_HOME` in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

The total length of the path must be 43 characters or less.

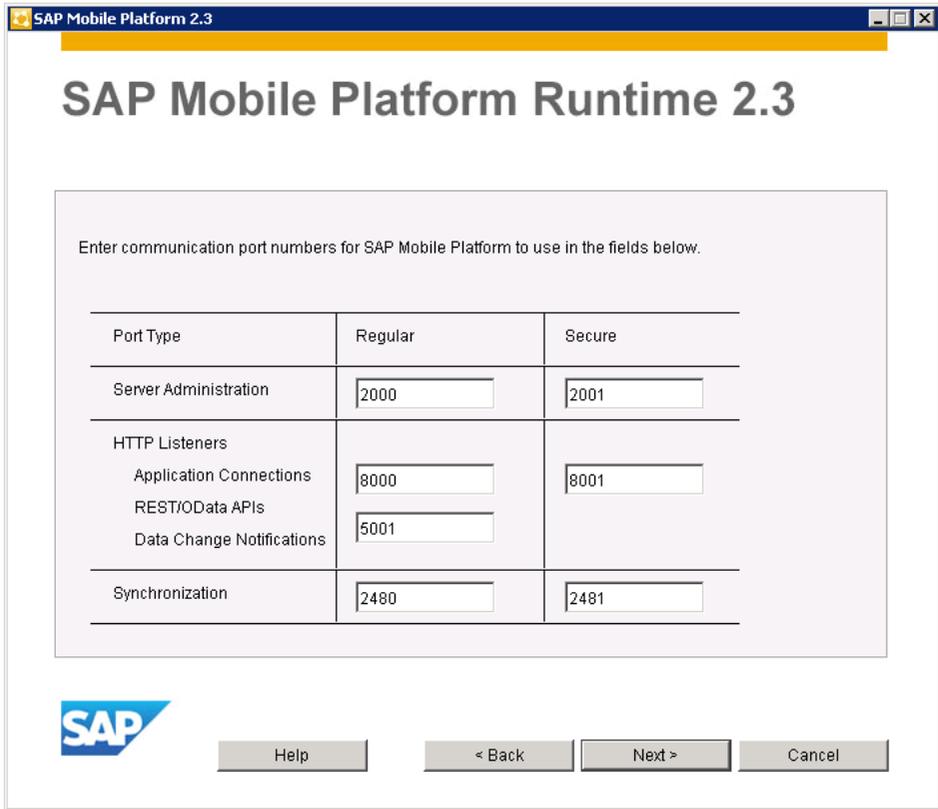
Directory names in the path can contain only:

- ASCII alphanumeric characters

- Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
 - No characters between "MobilePlatform" and the preceding "\" character.
2. Select **Single Server** and click **Next**.
 3. If a page appears, indicating that the installer detected missing third-party software, click:
 - **Next** to install the required software.
 - **Back** to select components to install that do not require the third-party software.
 - **Cancel** to stop the current installation.
 4. (Optional) Select additional installation options.
 - **Configure SAP Mobile Platform communication ports** to change default ports.
 - **Set SAP Mobile Platform services to start automatically** to start services automatically when Windows starts. By default, this option is selected.
Set SAP Mobile Platform services to start automatically if you plan to install products that work with SAP Mobile Platform, such as SAP® Data Orchestration Engine Connector and SAP Mobile Sales for SAP CRM. If SAP Mobile Platform services do not start automatically, dependent products will encounter problems.
 - **Set SAP Mobile Server name and cluster name** to set a name that is unique on the network segment.
 5. (Optional) If you selected **Set SAP Mobile Server name and cluster name**, enter a name for this SAP Mobile Server instance (name must be unique on network segment) and a name for the SAP Mobile Server cluster.

Each server or cluster name:

- Must contain only:
 - ASCII alphanumeric characters
 - Underscore (" _ "), hyphen (" - "), and period (" . ") characters
 - Server names must be 1 – 32 characters in length and must begin with an alphanumeric character.
 - Cluster names must be 1 – 16 characters in length.
6. (Optional) If you selected **Configure SAP Mobile Platform communication ports**, change the regular and secure port numbers as needed.
 - Server administration
 - HTTP listeners
 - Application connections
 - REST/OData APIs
 - Data change notifications
 - Synchronization



7. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

The password must:

- Be at least 8 characters, and no longer than 32 characters.
- Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log into SAP Control Center, and that you can see the properties of the SAP Mobile Server.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is C:\SAP\MobilePlatform)..

1. Check the installation log at *SMP_HOME*\InstallLogs\SMPInstall.log.
A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *X.X*
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
3. Verify that you can log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the SAP Mobile Server is accessible from SAP Control Center and that you can see the properties of that node.

Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform you have just installed.

- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version now.
 2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

Installing SAP Mobile Platform in a Simple Load-Balancing Cluster

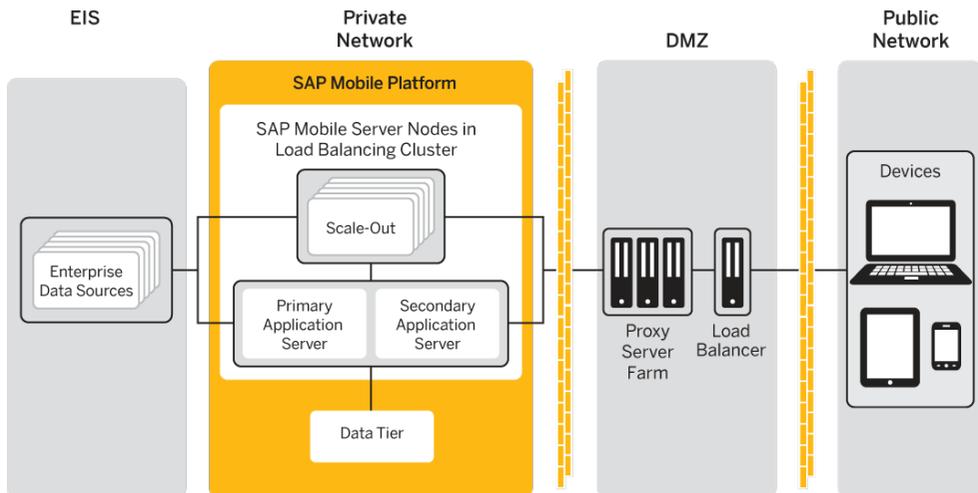
This installation scenario places a data tier on one server and two or more SAP Mobile Server instances on separate servers. Components work together as a cluster, providing load balancing between the SAP Mobile Server instances. This scenario is suitable for a low-volume production environment that does not require a failover capability for the data tier.

Prerequisites

The architecture, design characteristics, and use cases for this installation scenario are described in *Landscape Design and Integration > Designing the Landscape > Simple Load-Balancing Cluster*. The installation instructions in this chapter assume that you have used the *Landscape Design and Integration* document to design the landscape

Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: [../misc/SMP23_Worksheets.zip](#).

This diagram illustrates the system you are installing:



Note: You cannot install cluster nodes concurrently. You must install the nodes in this cluster in this order:

1. Install the data tier.
2. Install the primary SAP Mobile Server as an application server node.
3. Install the secondary SAP Mobile Server as an application server node.

4. (Optional) Install SAP Mobile Server scale-out nodes as needed. You can install multiple scale-out nodes, one at a time, in any order.
-

Task

1. *Installing the Data Tier*

This installation scenario places SAP Mobile Platform common data tier resources on a separate host, from which they can be shared by multiple SAP Mobile Server instances.

2. *Installing the SAP Mobile Server*

Install all of the SAP Mobile Server nodes in your simple load-balancing cluster. This scenario uses two SAP Mobile Servers as application server nodes, and (optionally) as many scale-out nodes as necessary.

3. *Verifying the Full SAP Mobile Platform Cluster Installation*

When you have completed installing and verifying all cluster nodes, verify the functionality of the full cluster to ensure that the installation process has been completely successful.

Installing the Data Tier

This installation scenario places SAP Mobile Platform common data tier resources on a separate host, from which they can be shared by multiple SAP Mobile Server instances.

Prerequisites

Ensure that all servers on which you install SAP Mobile Server and data tier in a cluster are set to the same time and time zone.

Task

1. *Preparing for Installation*

Ensure that the host on which you are installing SAP Mobile Platform is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log and verify that database services are functioning.

See also

- *Installing the SAP Mobile Server* on page 32

Preparing for Installation

Ensure that the host on which you are installing SAP Mobile Platform is ready for you to begin the installation.

1. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
2. Verify that you have Administrator privileges on the installation target host.
3. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select JAVA_TOOL_OPTIONS and click **Delete**.
 - d) Click **OK** to exit all dialogs.
4. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

This includes any database servers, SAP Control Center, and if SAP® Data Orchestration Engine Connector is present in an upgrade installation, SAP Data Orchestration Engine.

To verify that services are stopped, open the Services pane from Windows Control Panel.

5. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
6. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

CHAPTER 4: Installing SAP Mobile Platform in a Simple Load-Balancing Cluster

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. Select your license model and click **Next**.

Evaluation	Allows you to evaluate SAP Mobile Platform for 30 days. A license file is not required.
Unservd (local) license	Standalone license managed locally by the host.
Served (remote) license	Standalone license managed by a license server.

4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type, and click **Next**.
6. Enter the location of your license file.
 - If you selected **Unservd (local) license**, enter the absolute path to the license file on the installation target host, using only ASCII characters.
 - If you selected **Served (remote) license**, enter the host name and TCP port of the license server.

Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as *SMP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

The total length of the path must be 43 characters or less.

Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "MobilePlatform" and the preceding "\" character.

2. Select **Cluster** and click **Next**.
3. Select **Install the data tier for your SAP Mobile Platform cluster** and click **Next**.
4. (Optional) On the additional installation options pane, select **Configure data tier** to change default server ports, passwords, or database file locations.
5. (Optional) If you selected **Configure data tier**:

- a) Enter port numbers and passwords, or accept the defaults for the ports listed:

Note: These passwords can contain only alphanumeric ASCII characters and underscore (" _ "), start with a letter, and be no more than 32 characters in length.

In a new installation, the default password for all databases is `scl`.

- Cache database server
- Cluster database server

Enter a port number, or accept the default for:

- LogData database server

Enter passwords, or accept the defaults for:

- Monitor database
- Domainlog database

- b) (Optional) To specify nondefault locations for database files and transaction logs, select **Specify separate locations for database and/or transaction log files**.
- c) Click **Next**.

Enter port numbers and passwords (when left blank default will be used) for data tier to use in the fields below.

Cache database server	Port number:	5200
	Password:	
Cluster database server	Port number:	5300
	Password:	
LogData database server	Port number:	5400
	Monitor database password:	
	Domainlog database password:	

Specify separate locations for database and/or transaction log files.

Install the data tier into high availability environment.

SAP

< Back Next > Cancel

6. (Optional) If you selected **Configure data tier**, and then selected **Specify separate locations for database and/or transaction log files**, complete these fields:

- **... file path** – (optional) enter the path to a storage location for the database files, for each database listed.
- **... log file path** – (optional) enter the path to a storage location for the transaction logs, for each database listed.

Each path must:

- Point to an existing directory in the shared data folder.
- Be an absolute path (not relative to some other location).
- Be no longer than 228 characters.
- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").

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SAP Mobile Platform 3.0

Enter path to storage locations of high availability data for database files and transaction logs

Cache database server

Database file path: C:\SAP\MobilePlatform3\RT233\Data\CDB Browse

Transaction log file path: C:\SAP\MobilePlatform3\RT233\Data\CDB Browse

Cluster database server

Database file path: C:\SAP\MobilePlatform3\RT233\Data\CDB Browse

Transaction log file path: C:\SAP\MobilePlatform3\RT233\Data\CDB Browse

LogData database server

Monitor database file path: C:\SAP\MobilePlatform3\RT233\Data\CDB Browse

Monitor log file path: C:\SAP\MobilePlatform3\RT233\Data\CDB Browse

Dominalog database file path: C:\SAP\MobilePlatform3\RT233\Data\CDB Browse

Dominalog log file path: C:\SAP\MobilePlatform3\RT233\Data\CDB Browse

SAP

< Back Next > Cancel

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

For information about configuring SAP Mobile Platform, see *System Administration*.

Verifying the Installation

Check for errors in the installation log and verify that database services are functioning.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is C:\SAP\MobilePlatform)..

1. Check the installation log at *SMP_HOME*\InstallLogs\SMPInstall.log.
A search for "error" should not find anything.

2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

Installing the SAP Mobile Server

Install all of the SAP Mobile Server nodes in your simple load-balancing cluster. This scenario uses two SAP Mobile Servers as application server nodes, and (optionally) as many scale-out nodes as necessary.

Prerequisites

- SAP Mobile Server installation depends on data tier installation. Install data tier components first, before installing SAP Mobile Server components.
- Ensure that all servers on which you install SAP Mobile Server and data tier in a cluster are set to the same time and time zone.

Task

1. *Preparing for Installation*

Ensure that the host on which you are installing SAP Mobile Platform is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

See also

- *Installing the Data Tier* on page 26
- *Verifying the Full SAP Mobile Platform Cluster Installation* on page 39

Preparing for Installation

Ensure that the host on which you are installing SAP Mobile Platform is ready for you to begin the installation.

1. Make sure you have installed and verified the data tier node.
2. If you are using a served license, set up the SySAM license server. See:
 - *SySAM FAQ* online at <http://www.sybase.com/detail?id=1038615>
 - *Fast Track to SySAM 2.0* white paper, available at <http://www.sybase.com/detail?id=1037788>
3. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
4. Verify that you have Administrator privileges on the installation target host.
5. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first SAP Mobile Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.

6. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select JAVA_TOOL_OPTIONS and click **Delete**.
 - d) Click **OK** to exit all dialogs.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

This includes any database servers, SAP Control Center, and if SAP® Data Orchestration Engine Connector is present in an upgrade installation, SAP Data Orchestration Engine.

To verify that services are stopped, open the Services pane from Windows Control Panel.

8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
9. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

See Intrusion Detection and Protection Requirements in Landscape Design and Integration.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

3. Select your license model and click **Next**.

Evaluation	Allows you to evaluate SAP Mobile Platform for 30 days. A license file is not required.
Unserviced (local) license	Standalone license managed locally by the host.
Serviced (remote) license	Standalone license managed by a license server.

4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

5. On the license details page, select your license product edition and license type, and click **Next**.

6. Enter the location of your license file.

CHAPTER 4: Installing SAP Mobile Platform in a Simple Load-Balancing Cluster

- If you selected **Unservd (local) license**, enter the absolute path to the license file on the installation target host, using only ASCII characters.
- If you selected **Served (remote) license**, enter the host name and TCP port of the license server.

Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as *SMP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

The total length of the path must be 43 characters or less.

Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "MobilePlatform" and the preceding "\" character.

2. Select **Cluster** and click **Next**.

3. Select the option for this SAP Mobile Server cluster node and click **Next**.

- **Install the first server node and connect it to the data tier**
- **Install an additional server node and connect it to the data tier**

4. If a page appears, indicating that the installer detected missing third-party software, click:

- **Next** to install the required software.
- **Back** to select components to install that do not require the third-party software.
- **Cancel** to stop the current installation.

5. (Optional) Select additional installation options.

- **Configure SAP Mobile Platform communication ports** to change default ports.
- **Set SAP Mobile Platform services to start automatically** to start services automatically when Windows starts. By default, this option is selected.

Set SAP Mobile Platform services to start automatically if you plan to install products that work with SAP Mobile Platform, such as SAP® Data Orchestration Engine

Connector and SAP Mobile Sales for SAP CRM. If SAP Mobile Platform services do not start automatically, dependent products will encounter problems.

- **Set SAP Mobile Server name and cluster name.** You can specify the cluster name, only when you install the first node in an SAP Mobile Server cluster.

Set SAP Mobile Server name on subsequent nodes in an SAP Mobile Server cluster. The name must be unique on the network segment.

- **Install node as scale-out node** to streamline the server node to support high-volume business-to-consumer transactions. (This is available only after you first install SAP Mobile Server in the same cluster. Recommended: Install a second SAP Mobile Server node in the cluster before you install the first scale-out node.)
6. (Optional) If you selected **Set SAP Mobile Server name**, enter a name for this SAP Mobile Server instance. The name must be unique on the network segment.

If you are installing the first node in the SAP Mobile Server cluster, you can also enter a name for the cluster.

Each server or cluster name:

- Must contain only:
 - ASCII alphanumeric characters
 - Underscore ("_"), hyphen ("-"), and period (".") characters
 - Server names must be 1 – 32 characters in length and must begin with an alphanumeric character.
 - Cluster names must be 1 – 16 characters in length.
7. Enter information that SAP Mobile Server needs to connect to the data tier.
- a) Enter the name of the data tier host.
 - b) Enter the following for each configurable database listed:
 - Database Name
 - Port Number
 - Login
 - Password

In a typical new installation, you need not change any prepopulated value, enter `sql` as the default password for each database.

Enter information for the data tier, SQL Anywhere 12.0.1 database server.

Host name:		<input type="text"/>
Cache database	Database name:	<input type="text" value="default"/>
	Port number:	<input type="text" value="5200"/>
	Login:	<input type="text" value="dba"/>
	Password:	<input type="password"/>
Cluster database	Database name:	<input type="text" value="clusterdb"/>
	Port number:	<input type="text" value="5300"/>
	Login:	<input type="text" value="dba"/>
	Password:	<input type="password"/>
LogData database	Database name:	<input type="text" value="monitordb"/>
	Port number:	<input type="text" value="5400"/>
	Login:	<input type="text" value="dba"/>
	Password:	<input type="password"/>
	Database name:	<input type="text" value="domainlogdb"/>
	Port number:	<input type="text" value="5400"/>
	Login:	<input type="text" value="dba"/>
	Password:	<input type="password"/>

SAP

Help < Back Next > Cancel

8. (Optional) If you selected **Configure SAP Mobile Platform communication ports**, change the default port numbers as needed.

Note: Every SAP Mobile Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each SAP Mobile Server in the cluster.

- Server administration
- HTTP listeners
 - Application connections
 - REST/OData APIs
 - Data change notifications
- Synchronization

Note: Synchronization ports do not appear when you are installing a scale-out node.

Port Type	Regular	Secure
Server Administration	2000	2001
HTTP Listeners		
Application Connections	8000	8001
REST/OData APIs		
Data Change Notifications	5001	
Synchronization	2480	2481

9. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

The password must:

- Be at least 8 characters, and no longer than 32 characters.
- Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is C:\SAP\MobilePlatform)..

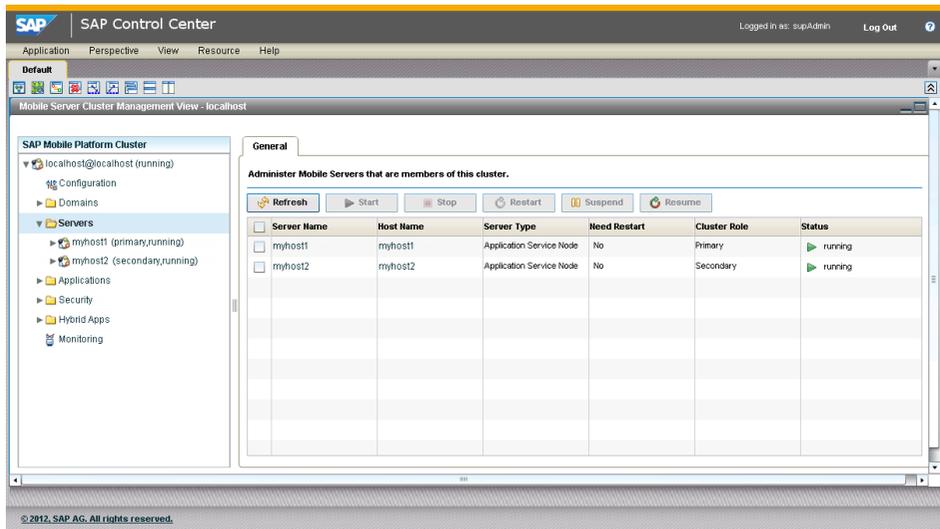
1. Check the installation log at *SMP_HOME*\InstallLogs\SMPInstall.log.
A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *XX* (on Application Server nodes only)
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
3. Log in to SAP Control Center. If you are installing a scale-out node, go to one of the systems where you installed SAP Mobile Server as an application server node.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the node you just installed is accessible from SAP Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Verifying the Full SAP Mobile Platform Cluster Installation

When you have completed installing and verifying all cluster nodes, verify the functionality of the full cluster to ensure that the installation process has been completely successful.

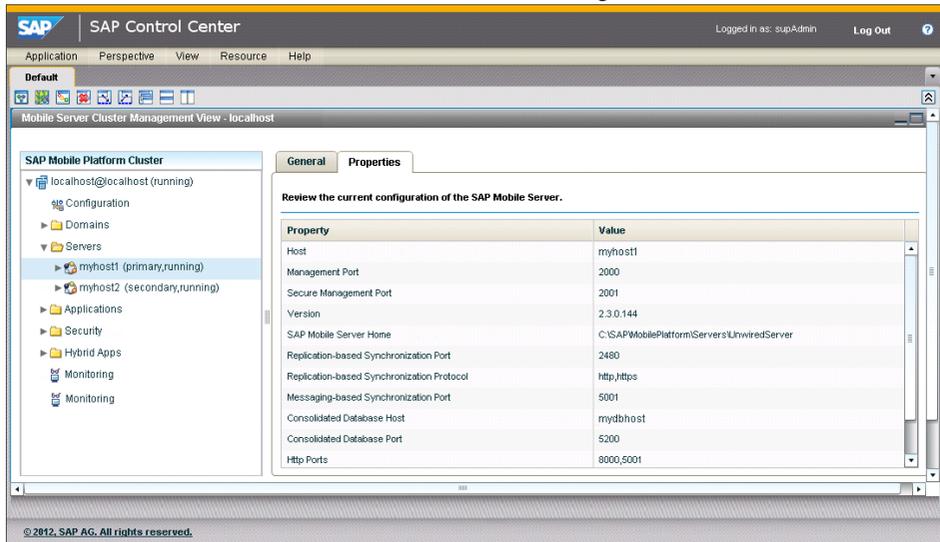
1. Start SAP Control Center. From an SAP Mobile Server node that is not a scale-out node, choose **Start > (All) Programs > SAP > SAP Control Center**.
2. Make sure you can see all the SAP Mobile Server nodes (both application server and scale-out) in the cluster.

CHAPTER 4: Installing SAP Mobile Platform in a Simple Load-Balancing Cluster



3. Select each SAP Mobile Server node (both application server and scale-out nodes) and inspect the settings.

All information should be filled in, with no error messages.



Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform you have just installed.

CHAPTER 4: Installing SAP Mobile Platform in a Simple Load-Balancing Cluster

- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version now.
 2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

See also

- *Installing the SAP Mobile Server* on page 32

Installing SAP Mobile Platform with a Standard Microsoft Failover Cluster

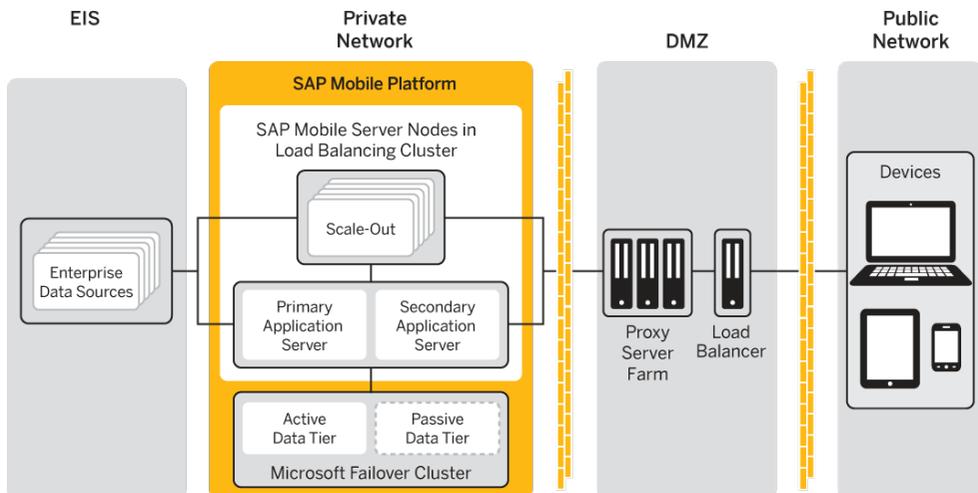
This installation scenario places two data tiers on separate servers within a Microsoft Failover Cluster, and two SAP Mobile Server nodes on separate servers outside the failover cluster, with optional SAP Mobile Server scale out nodes on additional servers. This provides failover capability for the data tier servers and load balancing between the SAP Mobile Server instances. This scenario is suitable for a high-volume production environment that cannot have a single point of failure.

Prerequisites

The architecture, design characteristics, and use cases for this installation scenario are described in *Landscape Design and Integration > Designing the Landscape > Standard Microsoft Failover Cluster*. The installation instructions in this chapter assume that you have used the *Landscape Design and Integration* document to design the landscape.

Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: [../misc/SMP23_Worksheets.zip](#).

This diagram illustrates the system you are installing with this scenario:



Note: You cannot install cluster nodes concurrently. You must perform Microsoft Failover Cluster tasks and install the nodes in this cluster in this order:

1. Perform critical Microsoft Failover Cluster setup tasks.
 2. Install the first data tier.
 3. Prepare Microsoft Failover Cluster for second data tier.
 4. Install the second data tier.
 5. Install the first SAP Mobile Server as an application server node.
 6. Install the second SAP Mobile Server as an application server node.
 7. (Optional) Install SAP Mobile Server scale-out nodes as needed. You can install multiple scale-out nodes, one at a time, in any order.
-

Task

1. *Critical Prerequisite Tasks*

Perform all critical tasks before you attempt to install the first data tier in your Microsoft Failover Cluster environment.

2. *Installing the First Data Tier*

Install the first of two data tiers on a server that is the active node in a Microsoft Failover Cluster.

3. *Preparing Microsoft Failover Cluster for Second Data Tier Installation*

With the first data tier installed, you can complete the configuration of the failover cluster to handle all the tasks involved in switching the two data tier nodes between active and passive states.

4. *Installing the Second Data Tier*

Install the second of two data tiers on the second server in the Microsoft Failover Cluster where the first data tier is installed.

5. *Installing the First SAP Mobile Server Node*

Install the first SAP Mobile Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the primary SAP Mobile Server node for the cluster.

6. *Installing the Second SAP Mobile Server Node*

Install the second SAP Mobile Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the secondary SAP Mobile Server node for the cluster.

7. *(Optional) Installing SAP Mobile Platform Scale-Out Nodes*

(Optional) Repeat needed to install all of the SAP Mobile Platform scale-out nodes required to complete your SAP Mobile Platform installation with a standard Microsoft Failover Cluster.

8. *Verifying the Full SAP Mobile Platform Cluster Installation*

Verify that you can see all SAP Mobile Server nodes in the cluster in SAP Control Center, and that you can inspect the settings for each.

Critical Prerequisite Tasks

Perform all critical tasks before you attempt to install the first data tier in your Microsoft Failover Cluster environment.

1. Set up the number of physical servers that your SAP Mobile Platform installation plan requires.
Ensure that these hosts meet all the requirements specified in *Supported Hardware and Software*.
2. Have your IT support team set up and build a Microsoft Failover cluster with two server nodes on which you will install SAP Mobile Platform data tiers.
Supply your IT support team with the names for the cluster and the two servers.
3. Acquire a license file, customized to reflect the SAP Mobile Platform configuration your company has purchased, from SAP Service Marketplace (SMP) or Sybase Product Download Center (SPDC), as described in *Obtaining a License*.
4. Install and configure a SySAM license server that can manages license information for all the data tiers and SAP Mobile Server nodes in your cluster.

For more complete information about SySAM, see:

- *SySAM 2 Users Guide* online at <http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00530.0220/doc/html/title.html>
- *Fast Track to SySAM 2.0* white paper, available at *Fast Track to SySAM 2.0*
- *SySAM FAQ* online at <http://www.sybase.com/detail?id=1038615>
- *SySAM* product page online at <http://www.sybase.com/products/allproductsa-z/sysam>

Note: You cannot use the unserved license model in a Microsoft Failover Cluster.

See also

- *Installing the First Data Tier* on page 46

Adding a Data Folder to the Cluster Share Disk

Your IT team has created a share disk that will always be available to the active data tier node, as Microsoft Failover Cluster switches the data tier nodes between active and passive states. Create a data folder on that share disk.

Prerequisites

Verify that your IT team created the Microsoft Failover Cluster by including the two servers you specified, and setting up a share disk for the cluster to use.

Task

1. On the active cluster node, open Windows Explorer and navigate to **Share Disk**.
If Share Disk does not appear, verify that you are not on the desktop of the passive node. Look for the share disk on the other node.
2. Create a folder for SAP Mobile Platform shared data, for example, `SMPData`.
Instructions that follow assume the name used for the folder is `SMPData`.

Verifying the Microsoft Failover Cluster Configuration

Before you install the first data tier for SAP Mobile Platform, ensure that the Microsoft Failover Cluster is operating correctly. This simplifies the troubleshooting process for any issues that may arise during installation of SAP Mobile Platform components.

1. From the desktop of the active cluster node, use Windows Explorer to navigate to the Share Disk.
2. Expand the folder you created in the previous task (for example, `SMPData`), and create a `test.txt` file.
3. Fail over to the other node of the cluster to make it active.
4. On the desktop of the new active node, verify that you can now see the `test.txt` file in the data folder of the Share Drive there:
 - a) Navigate to the share disk in Windows Explorer.
 - b) Open the data folder you created earlier and see the `test.txt` file.
 - c) Delete the `test.txt` file.
5. Fail over to the other node of the cluster to make it active.
6. On the desktop of the new active node in the cluster, verify that the `test.txt` file is no longer in the Share Drive there:
 - a) Navigate to the share disk in Windows Explorer.
 - b) Open the data folder you created and confirm the `test.txt` file no longer exists.

Installing the First Data Tier

Install the first of two data tiers on a server that is the active node in a Microsoft Failover Cluster.

Prerequisites

Test the Microsoft Failover Cluster setup and configure the cluster to be ready for SAP Mobile Platform installation.

1. *Preparing for Installation*

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log and verify that database services are functioning.

See also

- *Critical Prerequisite Tasks* on page 45
- *Preparing Microsoft Failover Cluster for Second Data Tier Installation* on page 52

Preparing for Installation

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

Prerequisites

Note: During installation on a Microsoft Cluster, do not change the database password on the first data tier. If changed, an installation error on the second data tier will be encountered. As a workaround, instead of reinstalling the first data tier, and before installing the second, define the following environment variables with the original password (\$ORIGINAL_PASSWORD) set to the value used for the first installed node:

```
set CDB_ORIG_PWD = $ORIGINAL_PASSWORD
set CLDB_ORIG_PWD = $ORIGINAL_PASSWORD
set MDB_ORIG_PWD = $ORIGINAL_PASSWORD
set DDB_ORIG_PWD = $ORIGINAL_PASSWORD
```

Task

1. Verify that you are on the active node.
2. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the `JAVA_TOOL_OPTIONS` environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select `JAVA_TOOL_OPTIONS` and click **Delete**.
 - d) Click **OK** to exit all dialogs.
5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
7. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type, and click **Next**.
6. Enter the host name and TCP port of the license server.
Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as `SMP_HOME` in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

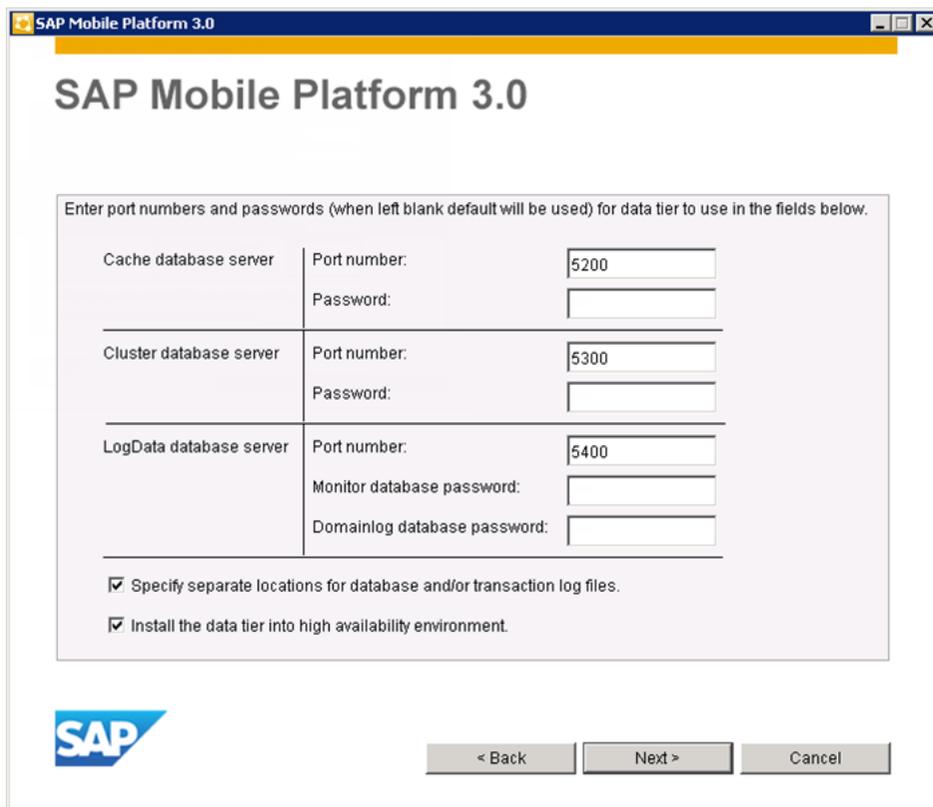
The total length of the path must be 43 characters or less.

Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (`_`), hyphen (`-`), and period (`.`) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "MobilePlatform" and the preceding "`\`" character.

2. Select **Cluster** and click **Next**.
3. Select **Install the data tier for your SAP Mobile Platform cluster** and click **Next**.
4. On the additional installation options panel, select **Configure data tier**.
5. On the port numbers and passwords panel:
 - a) Do not change the default password, which is `sql`. You will change the default passwords when you install the second data tier.
 - b) (Optional) Enter port numbers, or accept the defaults for:
 - Cache database server
 - Cluster database server
 - LogData database server

- c) (Optional) If you want to specify non-default locations for database files and transaction logs, select **Specify separate locations for database and/or transaction log files**.
- d) Select **Install the data tier into high availability environment**.
- e) Click **Next**.

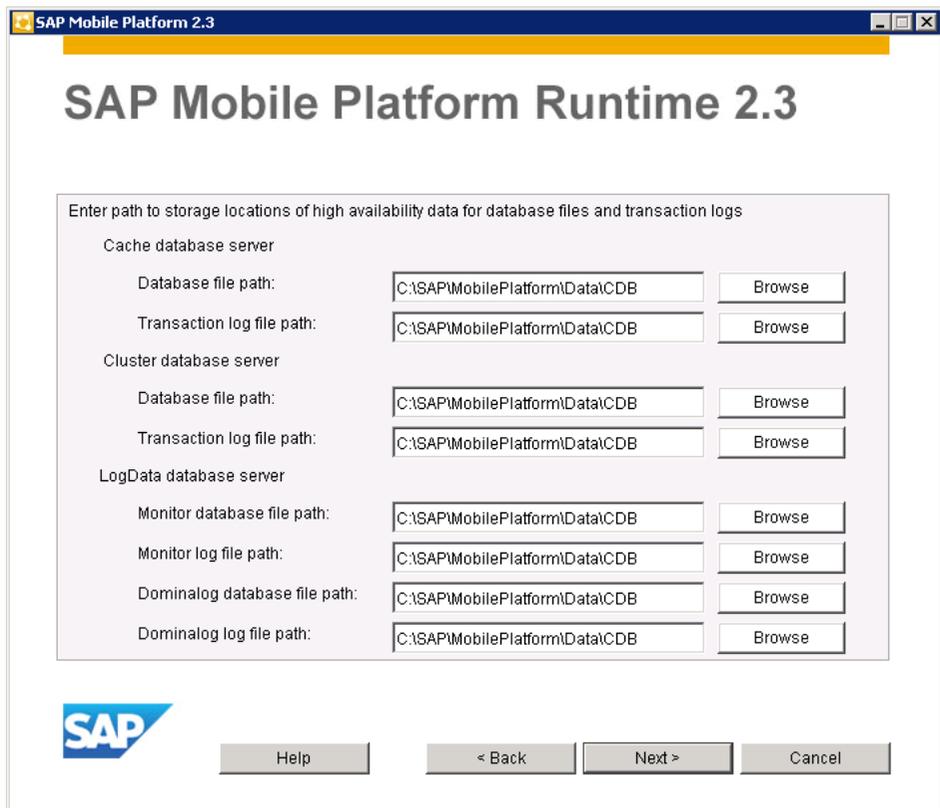


6. If you selected **Specify separate locations for database and/or transaction log files**, enter the full path to each of the following that you want to change:
- **... file path** – (optional) enter the path to a storage location that will house the database files, for each database listed.
 - **... log file path** – (optional) enter the path to a storage location that will house the transaction logs, for each database listed.

Each path must:

- Be either a file share resource group (Windows 2003), a shared folder in the file server service (Windows 2008), or a Client Access Point.
- Not be a UNC path.
- Be an absolute path (not relative to some other location).

- Point to an existing directory in the shared data folder.
- Use the same drive letter mapped on all data tier hosts.
- Be no longer than 228 characters.
- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").



7. If you selected only **Install the data tier into high availability environment**, enter a path for the location of the high availability data.

Enter the path to the location that will hold the data tier database and transaction log files.

The path must:

- Be either a file share resource group (Windows 2003), a shared folder in the file server service (Windows 2008), or a Client Access Point.
- Not be a UNC path.
- Be an absolute path (not relative to some other location).
- Point to an existing directory within the shared data folder you added to the cluster share disk (for example, *SMPData*).
- Use the same drive letter mapped on all data tier hosts.

- Be no longer than 228 characters.
- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

For information about configuring SAP Mobile Platform, see *System Administration*.

Verifying the Installation

Check for errors in the installation log and verify that database services are functioning.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is C:\SAP\MobilePlatform)..

1. Check the installation log at *SMP_HOME\InstallLogs\SMPInstall.log*.
A search for "error" should not find anything.
2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

Preparing Microsoft Failover Cluster for Second Data Tier Installation

With the first data tier installed, you can complete the configuration of the failover cluster to handle all the tasks involved in switching the two data tier nodes between active and passive states.

1. On the active cluster node, verify that all SAP Mobile Platform database services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB
2. In Windows Explorer, navigate to the folder in which you installed the database when you installed the first data tier.

If you did not change the default location, this folder is *SMPData\CDB*, where *SMPData* is the data folder you added to the cluster share disk.

3. Open each **errorlog.txt* file and look for *Now accepting requests* as the last line.

If you see error messages, there is a problem with the installation that you must fix before proceeding.

If you do not check the error logs immediately after installing the data tier, the log contains pairs of lines beginning *Starting checkpoint...* and *Finished checkpoint...*. As long as these are the only lines logged after *Now accepting requests*, the database is operating properly.

4. On the active cluster node, stop all SAP Mobile Platform database services.
5. In Windows Services panel, set all SAP Mobile Platform database services to be started manually:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

Set these services to start manually so that Microsoft Failover Cluster can have full control over starting and stopping them.

6. In the Microsoft Failover Cluster, define a failover unit so that the database services move from the current active node to the new active node when the active node fails over:
 - **Windows 2003** – define a managed cluster resource group and add the database services to it.
 - **Windows 2008** – add the database services to the existing file server service.

For details, refer to the Microsoft Failover Cluster documentation.

7. Verify that all the database services stop when you take the failover unit offline, and start when you take the failover unit online.
 - **Windows 2003** – failover unit is managed cluster resource group.
 - **Windows 2008** – failover unit is file server service.
8. Verify that services switch to the new active node when active and passive nodes are switched.
 - a) Fail over to the other node to make it active.
 - b) Verify that all SAP Mobile Platform database services shut down on the current passive node.
 - c) Go to the desktop on the active node and fail that node over to the first node.
 - d) Go to the desktop on the new active node and check the database log files.

There should be no errors.

9. Fail over to the other node to make it active.

See also

- *Installing the First Data Tier* on page 46

Installing the Second Data Tier

Install the second of two data tiers on the second server in the Microsoft Failover Cluster where the first data tier is installed.

Prerequisites

You have successfully installed the first data tier in the Microsoft Failover Cluster and verified its functionality.

1. *Preparing for Installation*

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options DT2 in MSFC*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log, and verify that database services are functioning and online in Microsoft cluster management software, and that you can manually fail them over.

See also

- *Installing the First SAP Mobile Server Node* on page 60

Preparing for Installation

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

1. Make sure you have installed and verified the first data tier node.

2. Verify that the installation target host is the active node in the Microsoft Failover Cluster into which you are installing.

If it is not the active node, either:

- Switch to the desktop of the active node, or,

- Make the current node active by failing the other node over to it.
3. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
 4. Verify that you have Administrator privileges on the installation target host.
 5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select JAVA_TOOL_OPTIONS and click **Delete**.
 - d) Click **OK** to exit all dialogs.
6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:
 - Insert the SAP Mobile Platform Runtime installation media.
 - Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.
-
- Note:** Use a short path, preferably a folder directly below the root directory, such as C:\temp. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the setup.exe file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type, and click **Next**.
6. Enter the host name and TCP port of the license server.
Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options DT2 in MSFC

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as `SMP_HOME` in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

The total length of the path must be 43 characters or less.

Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (`_`), hyphen (`-`), and period (`.`) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "MobilePlatform" and the preceding "\" character.

2. Select **Cluster** and click **Next**.
3. Select **Install the data tier for your SAP Mobile Platform cluster** and click **Next**.
4. On the additional installation options panel, select **Configure data tier**.
5. On the port numbers and passwords panel:
 - a) (Optional) Enter port numbers and passwords, or accept the defaults for the ports listed:

Note: The port number settings here must match exactly those you set for the first data tier.

The passwords here must contain only alphanumeric ASCII characters and underscore (" _"), start with a letter, and be no more than 32 characters in length.

- Cache database server
- Cluster database server

Enter a port number, or accept the default, for:

- LogData database server

Enter passwords, or accept the defaults, for:

- Monitor database
 - Domainlog database
- b) (Optional) If you want to specify non-default locations for database files and transaction logs, select **Specify separate locations for database and/or transaction log files**.
- c) Select **Install the data tier into high availability environment**.
- d) Click **Next**.

Enter port numbers and passwords (when left blank default will be used) for data tier to use in the fields below.

Cache database server	Port number:	5200
	Password:	
Cluster database server	Port number:	5300
	Password:	
LogData database server	Port number:	5400
	Monitor database password:	
	Domainlog database password:	

Specify separate locations for database and/or transaction log files.

Install the data tier into high availability environment.

SAP

< Back Next > Cancel

6. If you selected **Specify separate locations for database and/or transaction log files**, enter the full path to each of the following that you want to change:

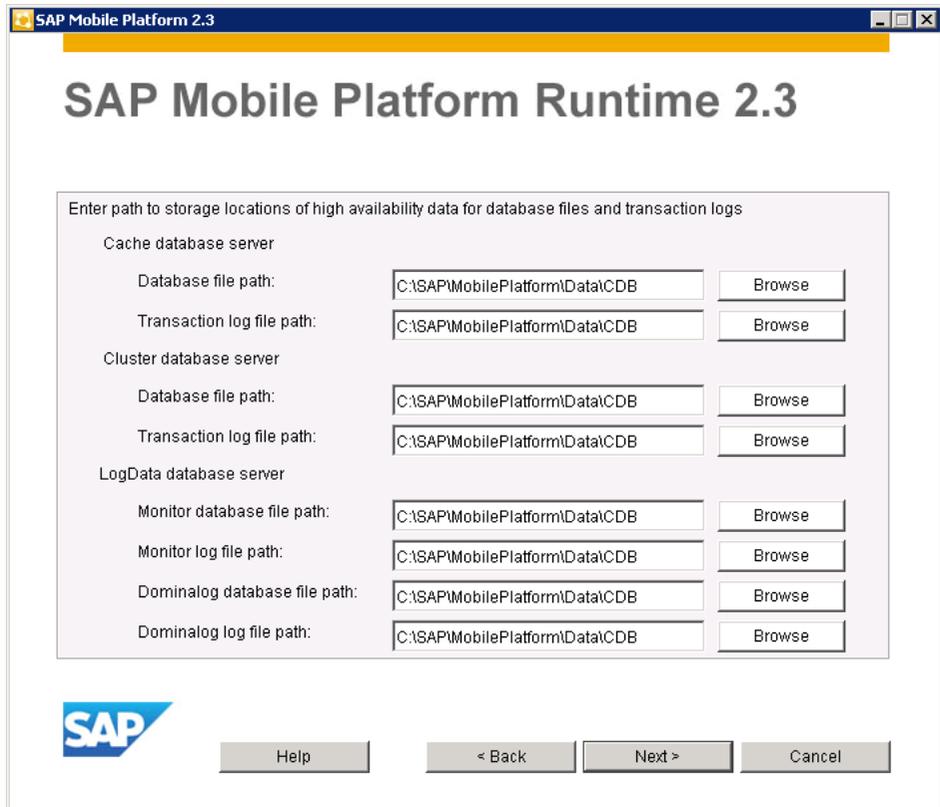
Note: The path settings here must match exactly those you set for the first data tier.

- **... file path** – (optional) enter the path to a storage location that will house the database files, for each database listed.
- **... log file path** – (optional) enter the path to a storage location that will house the transaction logs, for each database listed.

Each path must:

- Be either a file share resource group (Windows 2003), a shared folder in the file server service (Windows 2008), or a Client Access Point.
- Not be a UNC path.
- Be an absolute path (not relative to some other location).
- Point to an existing directory in the shared data folder.
- Use the same drive letter mapped on all data tier hosts.
- Be no longer than 228 characters.

- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").



7. If you selected only **Install the data tier into high availability environment**, enter a path for the location of the high availability data.

Note: The path settings here must match exactly those you set for the first data tier.

Enter the path to the location that will hold the data tier database and transaction log files.

The path must:

- Be either a file share resource group (Windows 2003), a shared folder in the file server service (Windows 2008), or a Client Access Point.
- Not be a UNC path.
- Be an absolute path (not relative to some other location).
- Point to an existing directory within the shared data folder you added to the cluster share disk (for example, *SMPData*).
- Use the same drive letter mapped on all data tier hosts.
- Be no longer than 228 characters.

- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

For information about configuring SAP Mobile Platform, see *System Administration*.

Verifying the Installation

Check for errors in the installation log, and verify that database services are functioning and online in Microsoft cluster management software, and that you can manually fail them over.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is C:\SAP\MobilePlatform)..

1. Check the installation log at *SMP_HOME*\InstallLogs\SMPInstall.log.
A search for "error" should not find anything.
2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB
3. In the Microsoft cluster management software, verify that these same services are online.
4. Verify that you can fail over to the first installed node, and then back to the second.

Installing the First SAP Mobile Server Node

Install the first SAP Mobile Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the primary SAP Mobile Server node for the cluster.

Prerequisites

You have successfully installed both data tiers in the Microsoft Failover Cluster and verified their functionality.

1. *Preparing for Installation*

Ensure that the host on which you are installing this SAP Mobile Server as an application server node is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

See also

- *Installing the Second Data Tier* on page 54
- *Installing the Second SAP Mobile Server Node* on page 67

Preparing for Installation

Ensure that the host on which you are installing this SAP Mobile Server as an application server node is ready for you to begin the installation.

1. Make sure you have installed and verified the data tier nodes.
2. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first SAP Mobile Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.

5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
- b) Select the **Advanced** tab, then click **Environment Variables**.
- c) Select JAVA_TOOL_OPTIONS and click **Delete**.

- d) Click **OK** to exit all dialogs.
6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.
- Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”
7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See *Intrusion Detection and Protection Requirements in Landscape Design and Integration*.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:
- Insert the SAP Mobile Platform Runtime installation media.
 - Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.
-
- Note:** Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).
- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type, and click **Next**.

6. Enter the host name and TCP port of the license server.

Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as `SMP_HOME` in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

The total length of the path must be 43 characters or less.

Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (`_`), hyphen (`-`), and period (`.`) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "MobilePlatform" and the preceding "\" character.

2. Select **Cluster** and click **Next**.

3. Select **Install the first server node and connect it to the data tier** and click **Next**.

4. If a page appears, indicating that the installer detected missing third-party software, click:

- **Next** to install the required software.
- **Back** to select components to install that do not require the third-party software.
- **Cancel** to stop the current installation.

5. (Optional) Select additional installation options.

- **Configure SAP Mobile Platform communication ports** to change default ports.
- **Set SAP Mobile Platform services to start automatically** to start services automatically when Windows starts. By default, this option is selected.

Set SAP Mobile Platform services to start automatically if you plan to install products that work with SAP Mobile Platform, such as SAP® Data Orchestration Engine Connector and SAP Mobile Sales for SAP CRM. If SAP Mobile Platform services do not start automatically, dependent products will encounter problems.

- **Set SAP Mobile Server name and cluster name** . Names must be unique on the network segment.

6. (Optional) If you selected **Set SAP Mobile Server name and cluster name**, enter a name for this SAP Mobile Server instance (name must be unique on network segment) and a name for the SAP Mobile Server cluster.

Note: The SAP Mobile Server cluster name refers to the SAP Mobile Server load balancing cluster; it is different from the Microsoft Failover Cluster, which contains the SAP Mobile Platform data tier nodes.

Each server or cluster name:

- Must contain only:
 - ASCII alphanumeric characters
 - Underscore ("_"), hyphen ("-"), and period (".") characters
 - Server names must be 1 – 32 characters in length and must begin with an alphanumeric character.
 - Cluster names must be 1 – 16 characters in length.
7. Enter information that SAP Mobile Server needs to connect to the data tier:
 - a) For host name, enter:
 - **Windows 2003** – the fully qualified cluster service name that is assigned to the Microsoft Failover Cluster.
 - **Windows 2008** – the fully qualified file server service name.
 - b) For each configurable database listed, enter:
 - Database Name
 - Port Number
 - Login
 - Password

Match exactly the passwords set for each database in the second data tier installation.

Enter information for the data tier, SQL Anywhere 12.0.1 database server.

Host name: <input type="text"/>			
Cache database	Database name:	<input type="text" value="default"/>	Port number: <input type="text" value="5200"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="text"/>
Cluster database	Database name:	<input type="text" value="clusterdb"/>	Port number: <input type="text" value="5300"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="text"/>
LogData database	Database name:	<input type="text" value="monitordb"/>	Port number: <input type="text" value="5400"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="text"/>
	Database name:	<input type="text" value="domainlogdb"/>	Port number: <input type="text" value="5400"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="text"/>

SAP

Help < Back Next > Cancel

8. (Optional) If you selected **Configure SAP Mobile Platform communication ports**, change the default regular and secure port numbers as needed.

Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

Every SAP Mobile Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each SAP Mobile Server in the cluster.

- Server administration
- HTTP listeners
 - Application connections
 - REST/OData APIs
 - Data change notifications
- **Synchronization**

Port Type	Regular	Secure
Server Administration	2000	2001
HTTP Listeners		
Application Connections	8000	8001
REST/OData APIs		
Data Change Notifications	5001	
Synchronization	2480	2481

9. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

The password must:

- Be at least 8 characters, and no longer than 32 characters.
- Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is C:\SAP\MobilePlatform)..

1. Check the installation log at *SMP_HOME*\InstallLogs\SMPInstall.log.
A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *X.X*
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
3. Verify that you can log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the node you just installed is accessible from SAP Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Installing the Second SAP Mobile Server Node

Install the second SAP Mobile Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the secondary SAP Mobile Server node for the cluster.

Prerequisites

Install the first SAP Mobile Server application server node and verify its functionality.

1. *Preparing for Installation*
Ensure that the host on which you are installing this SAP Mobile Server as an application server node is ready for you to begin the installation.
2. *Entering License Information*
Start the SAP Mobile Platform Runtime installer and enter license information.
3. *Selecting Installation Options*
Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

See also

- *Installing the First SAP Mobile Server Node* on page 60
- *(Optional) Installing SAP Mobile Platform Scale-Out Nodes* on page 73

Preparing for Installation

Ensure that the host on which you are installing this SAP Mobile Server as an application server node is ready for you to begin the installation.

1. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
2. Verify that you have Administrator privileges on the installation target host.
3. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first SAP Mobile Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.

4. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
- b) Select the **Advanced** tab, then click **Environment Variables**.
- c) Select JAVA_TOOL_OPTIONS and click **Delete**.
- d) Click **OK** to exit all dialogs.

5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
7. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).
See [Intrusion Detection and Protection Requirements in Landscape Design and Integration](#).

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:
 - Insert the SAP Mobile Platform Runtime installation media.
 - Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type, and click **Next**.
6. Enter the host name and TCP port of the license server.
Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as *SMP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

The total length of the path must be 43 characters or less.

Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "MobilePlatform" and the preceding "\" character.

2. Select **Cluster** and click **Next**.

3. Select **Install an additional server node and connect it to the data tier** and click **Next**.

4. If a page appears, indicating that the installer detected missing third-party software, click:

- **Next** to install the required software.
- **Back** to select components to install that do not require the third-party software.
- **Cancel** to stop the current installation.

5. (Optional) Select additional installation options.

- **Configure SAP Mobile Platform communication ports** to change default ports.
- **Set SAP Mobile Platform services to start automatically** to start services automatically when Windows starts. By default, this option is selected.
Set SAP Mobile Platform services to start automatically if you plan to install products that work with SAP Mobile Platform, such as SAP® Data Orchestration Engine Connector and SAP Mobile Sales for SAP CRM. If SAP Mobile Platform services do not start automatically, dependent products will encounter problems.
- **Set SAP Mobile Server name** to enter a name that is unique on the network segment.
- Do not select **Install node as scale-out node**. For high availability, install two SAP Mobile Server nodes as application servers before you install a scale-out node.

6. (Optional) If you selected **Set SAP Mobile Server name**, enter a name for this SAP Mobile Server instance. The name must be unique on the network segment.)

Each server name must contain only:

- ASCII alphanumeric characters

- Underscore ("_"), hyphen ("-"), and period (".") characters
 - An alphanumeric character in the first position
- Length of server names must be 1 – 32 characters.

7. Enter information that SAP Mobile Server needs to connect to the data tier:

a) For host name, enter:

- **Windows 2003** – the fully qualified cluster service name that is assigned to the Microsoft Failover Cluster.
- **Windows 2008** – the fully qualified file server service name.

b) For each configurable database listed, enter:

- Database Name
- Port Number
- Login
- Password

Match exactly the passwords set for each database in the second data tier installation.

Enter information for the data tier, SQL Anywhere 12.0.1 database server.

Host name: <input type="text"/>			
Cache database	Database name:	<input type="text" value="default"/>	Port number: <input type="text" value="5200"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="password"/>
Cluster database	Database name:	<input type="text" value="clusterdb"/>	Port number: <input type="text" value="5300"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="password"/>
LogData database	Database name:	<input type="text" value="monitordb"/>	Port number: <input type="text" value="5400"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="password"/>
	Database name:	<input type="text" value="domainlogdb"/>	Port number: <input type="text" value="5400"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="password"/>

SAP logo:

Buttons:

8. (Optional) If you selected **Configure SAP Mobile Platform communication ports**, change the default regular and secure port numbers as needed.

Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

Every SAP Mobile Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each SAP Mobile Server in the cluster.

- Server administration
- HTTP listeners
 - Application connections
 - REST/OData APIs
 - Data change notifications
- **Synchronization**

Port Type	Regular	Secure
Server Administration	<input type="text" value="2000"/>	<input type="text" value="2001"/>
HTTP Listeners		
Application Connections	<input type="text" value="8000"/>	<input type="text" value="8001"/>
REST/OData APIs	<input type="text" value="5001"/>	
Data Change Notifications		
Synchronization	<input type="text" value="2480"/>	<input type="text" value="2481"/>

9. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

The password must:

- Be at least 8 characters, and no longer than 32 characters.

- Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is `C:\SAP\MobilePlatform`).

1. Check the installation log at *SMP_HOME*\InstallLogs\SMPInstall.log.
A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *X.X*
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
3. Verify that you can log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the node you just installed is accessible from SAP Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

(Optional) Installing SAP Mobile Platform Scale-Out Nodes

(Optional) Repeat needed to install all of the SAP Mobile Platform scale-out nodes required to complete your SAP Mobile Platform installation with a standard Microsoft Failover Cluster.

Prerequisites

Successfully install the two SAP Mobile Platform nodes as application servers for the data tiers in the Microsoft Failover Cluster and verify their functionality.

1. *Preparing for Installation*

Ensure that the host on which you are installing this SAP Mobile Server scale-out node is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

See also

- *Installing the Second SAP Mobile Server Node* on page 67
- *Verifying the Full SAP Mobile Platform Cluster Installation* on page 80

Preparing for Installation

Ensure that the host on which you are installing this SAP Mobile Server scale-out node is ready for you to begin the installation.

1. Make sure you have installed and verified all the nodes specified in the preceding subtasks for this installation scenario.
2. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first SAP Mobile Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.

5. If the `JAVA_TOOL_OPTIONS` environment variable is set, remove it before you start the installation.

Check for the `JAVA_TOOL_OPTIONS` environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select `JAVA_TOOL_OPTIONS` and click **Delete**.
 - d) Click **OK** to exit all dialogs.
6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See *Intrusion Detection and Protection Requirements in Landscape Design and Integration*.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.

4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type, and click **Next**.
6. Enter the host name and TCP port of the license server.
Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as *SMP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

The total length of the path must be 43 characters or less.

Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "MobilePlatform" and the preceding "\" character.

2. Select **Cluster** and click **Next**.
3. Select **Install an additional server node and connect it to the data tier** and click **Next**.
4. If a page appears, indicating that the installer detected missing third-party software, click:
 - **Next** to install the required software.
 - **Back** to select components to install that do not require the third-party software.
 - **Cancel** to stop the current installation.
5. Select additional installation options.
 - (Optional) **Configure SAP Mobile Platform communication ports** to change default ports.
 - (Optional) **Set SAP Mobile Platform services to start automatically** to start services automatically when Windows starts. This option is selected by default.
Set SAP Mobile Platform services to start automatically if you plan to install products that work with SAP Mobile Platform, such as SAP® Data Orchestration Engine

Connector and SAP Mobile Sales for SAP CRM. If SAP Mobile Platform services do not start automatically, dependent products will encounter problems.

- (Optional) **Set SAP Mobile Server name** (name must be unique on network segment).
 - **Install node as scale-out node** to install this SAP Mobile Server node to be streamlined to support high-volume business-to-consumer transactions.
6. (Optional) If you selected **Set SAP Mobile Server name**, enter a name for this SAP Mobile Server instance. The name must be unique on the network segment.)

Each server name must contain only:

- ASCII alphanumeric characters
- Underscore ("_"), hyphen ("-"), and period (".") characters
- An alphanumeric character in the first position

Length of server names must be 1 – 32 characters.

7. Enter information that SAP Mobile Server needs to connect to the data tier:
- a) For host name, enter:
 - **Windows 2003** – the fully qualified cluster service name that is assigned to the Microsoft Failover Cluster.
 - **Windows 2008** – the fully qualified file server service name.
 - b) For each configurable database listed, enter:
 - Database Name
 - Port Number
 - Login
 - Password

Match exactly the passwords set for each database in the second data tier installation.

Enter information for the data tier, SQL Anywhere 12.0.1 database server.

Host name: <input type="text"/>			
Cache database	Database name:	<input type="text" value="default"/>	Port number: <input type="text" value="5200"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="text"/>
Cluster database	Database name:	<input type="text" value="clusterdb"/>	Port number: <input type="text" value="5300"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="text"/>
LogData database	Database name:	<input type="text" value="monitordb"/>	Port number: <input type="text" value="5400"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="text"/>
	Database name:	<input type="text" value="domainlogdb"/>	Port number: <input type="text" value="5400"/>
	Login:	<input type="text" value="dba"/>	Password: <input type="text"/>

SAP

Help < Back Next > Cancel

8. (Optional) If you selected **Configure SAP Mobile Platform communication ports**, change the default regular and secure port numbers as needed.

Note: Every SAP Mobile Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each SAP Mobile Server in the cluster.

- Server administration
- HTTP listeners
 - Application connections
 - REST/OData APIs
 - Data change notifications

Port Type	Regular	Secure
Server Administration	2000	2001
HTTP Listeners		
Application Connections	8000	8001
REST/OData APIs		
Data Change Notifications	5001	

9. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

The password must:

- Be at least 8 characters, and no longer than 32 characters.
- Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

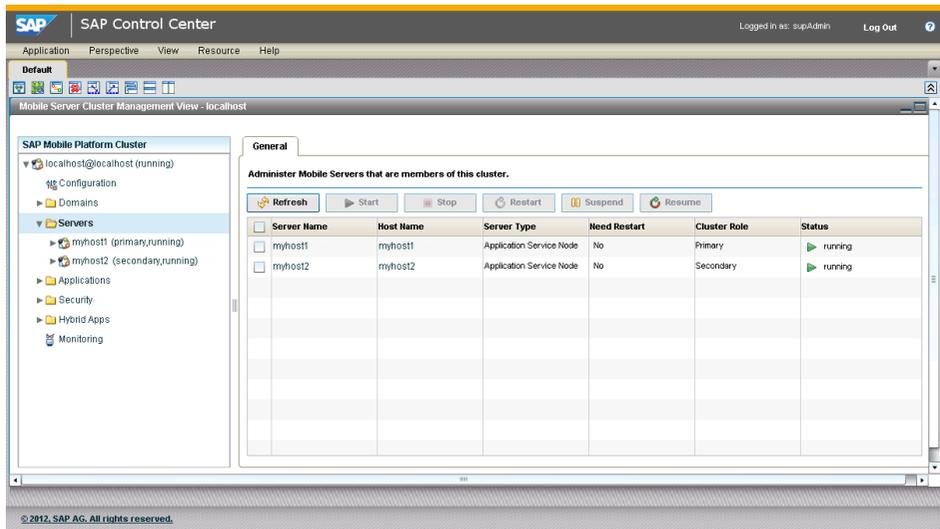
In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is C:\SAP\MobilePlatform)..

1. Check the installation log at *SMP_HOME*\InstallLogs\SMPInstall.log.
A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
3. Go to one of the systems where you installed SAP Mobile Server as an application server node and log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the node you just installed is accessible from SAP Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Verifying the Full SAP Mobile Platform Cluster Installation

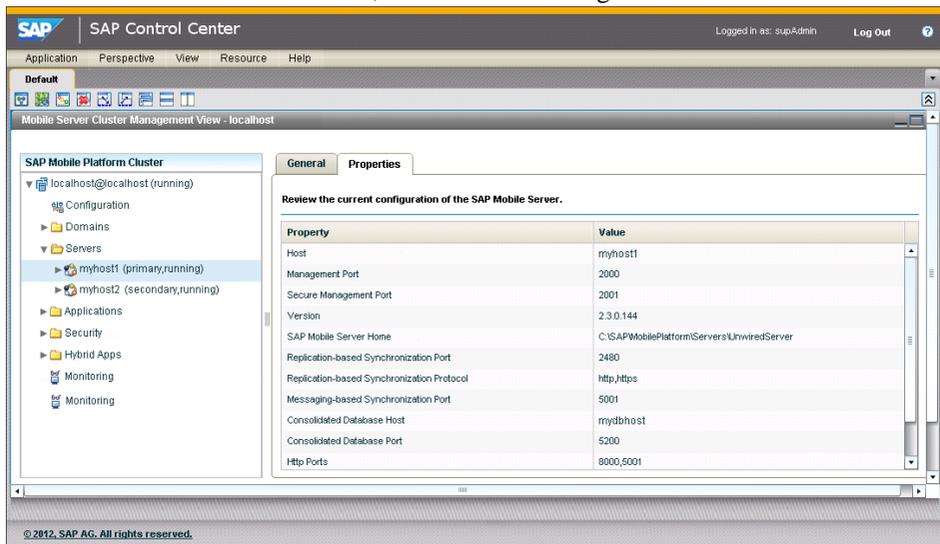
Verify that you can see all SAP Mobile Server nodes in the cluster in SAP Control Center, and that you can inspect the settings for each.

1. Start SAP Control Center. From an SAP Mobile Server node that is not a scale-out node, choose **Start > (All) Programs > SAP > SAP Control Center**.
2. Make sure you can see all the SAP Mobile Server nodes (both application server and scale-out) in the cluster.



3. Select each SAP Mobile Server node (both application server and scale-out nodes) and inspect the settings.

All information should be filled in, with no error messages.



Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform you have just installed.

- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version now.
 2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

See also

- *(Optional) Installing SAP Mobile Platform Scale-Out Nodes* on page 73

Installing SAP Mobile Platform with a Microsoft Failover Cluster with Shared Hosts

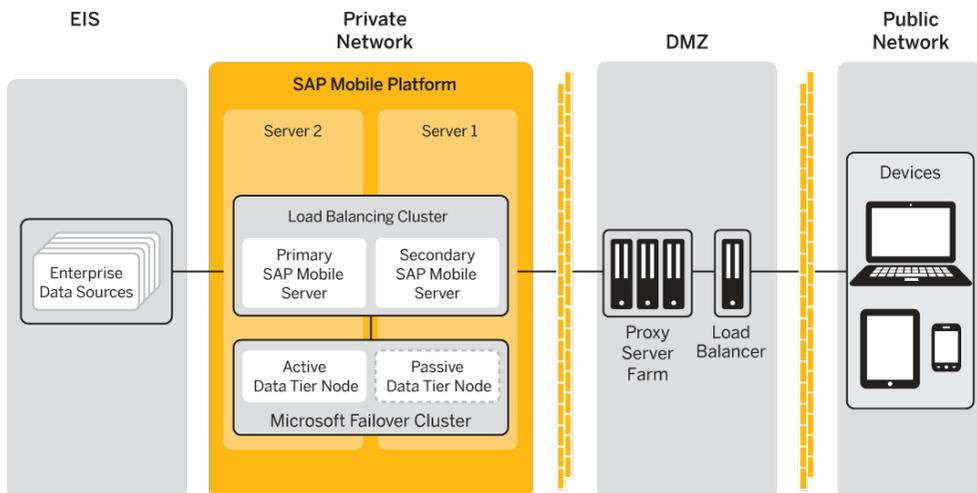
This installation scenario locates two data tiers on separate servers within a Microsoft Failover Cluster, and two SAP Mobile Server Application Server nodes are colocated on the same servers, one with each data tier, but outside the failover cluster. This provides failover capability for the data tier servers and load balancing between the SAP Mobile Server instances on minimal hardware.

Prerequisites

The architecture, design characteristics, and use cases for this installation scenario are described in *Landscape Design and Integration > Designing the Landscape > Microsoft Failover Cluster with Shared Hosts*. The installation instructions in this chapter assume that you have used the *Landscape Design and Integration* document to design the landscape

Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: [../misc/SMP23_Worksheets.zip](#).

This diagram illustrates the system you are installing with this scenario:



Note: You cannot install cluster nodes concurrently. You must perform Microsoft Failover Cluster tasks and install the nodes in this cluster in this order:

1. Perform critical Microsoft Failover Cluster setup tasks.

CHAPTER 6: Installing SAP Mobile Platform with a Microsoft Failover Cluster with Shared Hosts

2. Install the first data tier.
 3. Prepare Microsoft Failover Cluster for second data tier.
 4. Install the second data tier.
 5. Install the first SAP Mobile Server as an application server node.
 6. Install the second SAP Mobile Server as an application server node.
-

Task

1. *Critical Prerequisite Tasks*

Perform all critical tasks before you attempt to install the first data tier in your Microsoft Failover Cluster environment.

2. *Installing the First Data Tier*

Install the first of two data tiers on a server that is the active node in a Microsoft Failover Cluster.

3. *Preparing Microsoft Failover Cluster for Second Data Tier Installation*

With the first data tier installed, in preparation for installing the second data tier, complete the configuration of the failover cluster to handle all the tasks involved in switching the two data tier nodes between active and passive states.

4. *Installing the Second Data Tier*

Install the second of two data tiers on the second server in the Microsoft Failover Cluster where the first data tier is installed.

5. *Installing the First SAP Mobile Server Node*

Install the first SAP Mobile Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the primary SAP Mobile Server node for the cluster.

6. *Installing the Second SAP Mobile Server Node*

Install the second SAP Mobile Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the secondary SAP Mobile Server node for the cluster.

7. *Verifying the Full SAP Mobile Platform Cluster Installation*

Verify that you can see all SAP Mobile Server nodes in the cluster in SAP Control Center, and that you can inspect the settings for each.

Critical Prerequisite Tasks

Perform all critical tasks before you attempt to install the first data tier in your Microsoft Failover Cluster environment.

1. Set up the number of physical servers that your SAP Mobile Platform installation plan requires.

Ensure that these hosts meet all the requirements specified in *Supported Hardware and Software*.

2. Have your IT support team set up and build a Microsoft Failover cluster with two server nodes on which you will install SAP Mobile Platform data tiers.

Supply your IT support team with the names for the cluster and the two servers.

3. Acquire a license file, customized to reflect the SAP Mobile Platform configuration your company has purchased, from SAP Service Marketplace (SMP) or Sybase Product Download Center (SPDC), as described in *Obtaining a License*.
4. Install and configure a SySAM license server that can manage license information for all the data tiers and SAP Mobile Server nodes in your cluster.

For more complete information about SySAM, see:

- *SySAM 2 Users Guide* online at <http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00530.0220/doc/html/title.html>
- *Fast Track to SySAM 2.0* white paper, available at *Fast Track to SySAM 2.0*
- *SySAM FAQ* online at <http://www.sybase.com/detail?id=1038615>
- *SySAM* product page online at <http://www.sybase.com/products/allproductsa-z/sysam>

Note: You cannot use the unserved license model in a Microsoft Failover Cluster.

See also

- *Installing the First Data Tier* on page 86

Adding a Data Folder to the Cluster Share Disk

Your IT team has created a share disk that will always be available to the active data tier node, as Microsoft Failover Cluster switches the data tier nodes between active and passive states. Create a data folder on that share disk.

Prerequisites

Verify that your IT team created the Microsoft Failover Cluster by including the two servers you specified, and setting up a share disk for the cluster to use.

Task

1. On the active cluster node, open Windows Explorer and navigate to **Share Disk**.
If Share Disk does not appear, verify that you are not on the desktop of the passive node. Look for the share disk on the other node.
2. Create a folder for SAP Mobile Platform shared data, for example, SMPData.
Instructions that follow assume the name used for the folder is SMPData.

Verifying the Microsoft Failover Cluster Configuration

Before you install the first data tier for SAP Mobile Platform, ensure that the Microsoft Failover Cluster is operating correctly. This simplifies the troubleshooting process for any issues that may arise during installation of SAP Mobile Platform components.

1. From the desktop of the active cluster node, use Windows Explorer to navigate to the Share Disk.
2. Expand the folder you created in the previous task (for example, `SMPData`), and create a `test.txt` file.
3. Fail over to the other node of the cluster to make it active.
4. On the desktop of the new active node, verify that you can now see the `test.txt` file in the data folder of the Share Drive there:
 - a) Navigate to the share disk in Windows Explorer.
 - b) Open the data folder you created earlier and see the `test.txt` file.
 - c) Delete the `test.txt` file.
5. Fail over to the other node of the cluster to make it active.
6. On the desktop of the new active node in the cluster, verify that the `test.txt` file is no longer in the Share Drive there:
 - a) Navigate to the share disk in Windows Explorer.
 - b) Open the data folder you created and confirm the `test.txt` file no longer exists.

Installing the First Data Tier

Install the first of two data tiers on a server that is the active node in a Microsoft Failover Cluster.

Prerequisites

Test the Microsoft Failover Cluster setup and configure the cluster to be ready for SAP Mobile Platform installation.

1. *Preparing for Installation*

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. Completing the Installation

Review the installation summary and launch the installation process.

5. Verifying the Installation

Check for errors in the installation log and verify that database services are functioning.

See also

- *Critical Prerequisite Tasks* on page 84
- *Preparing Microsoft Failover Cluster for Second Data Tier Installation* on page 92

Preparing for Installation

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

Prerequisites

Note: During installation on a Microsoft Cluster, do not change the database password on the first data tier. If changed, an installation error on the second data tier will be encountered. As a workaround, instead of reinstalling the first data tier, and before installing the second, define the following environment variables with the original password (\$ORIGINAL_PASSWORD) set to the value used for the first installed node:

```
set CDB_ORIG_PWD = $ORIGINAL_PASSWORD
set CLDB_ORIG_PWD = $ORIGINAL_PASSWORD
set MDB_ORIG_PWD = $ORIGINAL_PASSWORD
set DDB_ORIG_PWD = $ORIGINAL_PASSWORD
```

Task

1. Verify that you are on the active node.
2. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
- b) Select the **Advanced** tab, then click **Environment Variables**.
- c) Select JAVA_TOOL_OPTIONS and click **Delete**.

- d) Click **OK** to exit all dialogs.
5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
7. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

*See **Intrusion Detection and Protection Requirements** in **Landscape Design and Integration**.*

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type, and click **Next**.

6. Enter the host name and TCP port of the license server.

Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as *SMP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

The total length of the path must be 43 characters or less.

Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "MobilePlatform" and the preceding "\" character.

2. Select **Cluster** and click **Next**.

3. Select **Install the data tier for your SAP Mobile Platform cluster** and click **Next**.

4. On the additional installation options panel, select **Configure data tier**.

5. On the port numbers and passwords panel:

- a) Do not change the default password, which is `sql`. You will change the default passwords when you install the second data tier.

- b) (Optional) Enter port numbers, or accept the defaults for:

- Cache database server
- Cluster database server
- LogData database server

- c) (Optional) If you want to specify non-default locations for database files and transaction logs, select **Specify separate locations for database and/or transaction log files**.

- d) Select **Install the data tier into high availability environment**.

- e) Click **Next**.

Enter port numbers and passwords (when left blank default will be used) for data tier to use in the fields below.	
Cache database server	Port number: 5200 Password:
Cluster database server	Port number: 5300 Password:
LogData database server	Port number: 5400 Monitor database password: Domainlog database password:

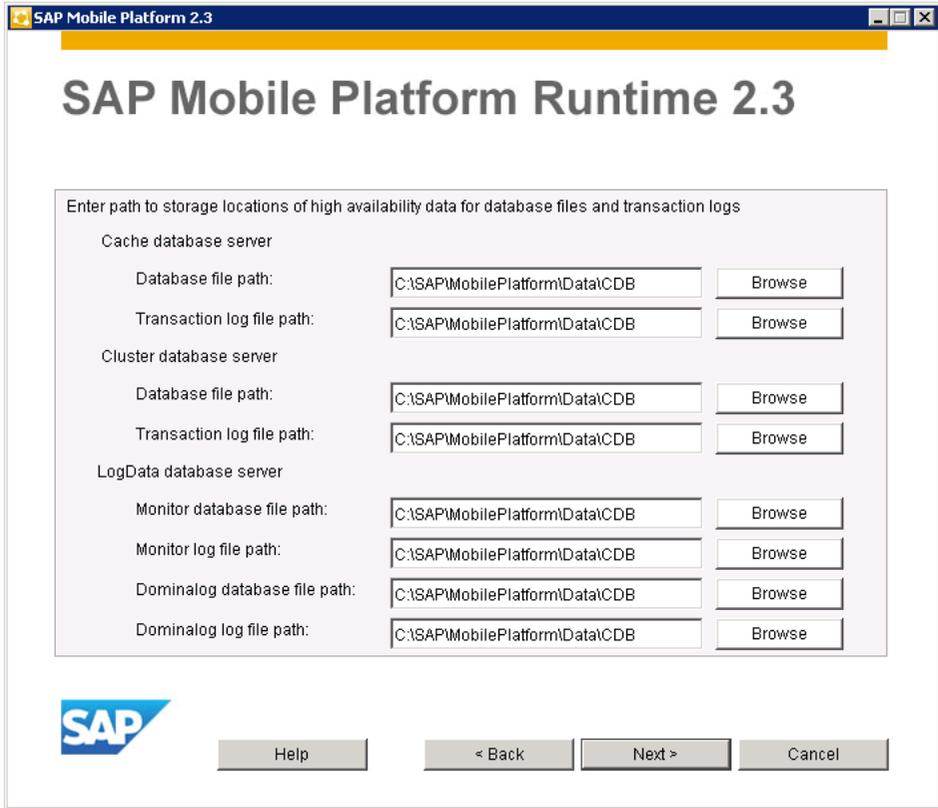
Specify separate locations for database and/or transaction log files.
 Install the data tier into high availability environment.

< Back Next > Cancel

6. If you selected **Specify separate locations for database and/or transaction log files**, enter the full path to each of the following that you want to change:
- **... file path** – (optional) enter the path to a storage location that will house the database files, for each database listed.
 - **... log file path** – (optional) enter the path to a storage location that will house the transaction logs, for each database listed.

Each path must:

- Be either a file share resource group (Windows 2003), a shared folder in the file server service (Windows 2008), or a Client Access Point.
- Not be a UNC path.
- Be an absolute path (not relative to some other location).
- Point to an existing directory in the shared data folder.
- Use the same drive letter mapped on all data tier hosts.
- Be no longer than 228 characters.
- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").



7. If you selected only **Install the data tier into high availability environment**, enter a path for the location of the high availability data.

Enter the path to the location that will hold the data tier database and transaction log files.

The path must:

- Be either a file share resource group (Windows 2003), a shared folder in the file server service (Windows 2008), or a Client Access Point.
- Not be a UNC path.
- Be an absolute path (not relative to some other location).
- Point to an existing directory within the shared data folder you added to the cluster share disk (for example, *SMPData*).
- Use the same drive letter mapped on all data tier hosts.
- Be no longer than 228 characters.
- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

For information about configuring SAP Mobile Platform, see *System Administration*.

Verifying the Installation

Check for errors in the installation log and verify that database services are functioning.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is C:\SAP\MobilePlatform)..

1. Check the installation log at *SMP_HOME*\InstallLogs\SMPInstall.log.
A search for "error" should not find anything.
2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

Preparing Microsoft Failover Cluster for Second Data Tier Installation

With the first data tier installed, in preparation for installing the second data tier, complete the configuration of the failover cluster to handle all the tasks involved in switching the two data tier nodes between active and passive states.

1. On the active cluster node, verify that all SAP Mobile Platform database services are started.
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB
2. In Windows Explorer, navigate to the folder in which you installed the database when you installed the first data tier.
If you did not change the default location, this folder is *SMPData\CDB*, where *SMPData* is the data folder you added to the cluster share disk.
3. Open each **errorlog.txt* file and look for "Now accepting requests" as the last line.

If instead you see error messages, there is a problem with the installation that you must fix before proceeding.

If you do not check the error logs immediately after installing the data tier, you will see pairs of lines beginning "Starting checkpoint..." and "Finished checkpoint...". As long as these are the only lines logged after "Now accepting requests," the database is operating properly.

4. On the active cluster node, stop the SAP Mobile Platform database services.
5. In Windows Services panel, set all SAP Mobile Platform database services to be started manually.
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

These services need to be set to start manually so that Microsoft Failover Cluster can have full control over starting and stopping them.

6. In the Microsoft Failover Cluster, define a failover unit so that the database services move from the current active node to the new active node when the active node fails over:
 - **Windows 2003** – define a managed cluster resource group and add the database services to it.
 - **Windows 2008** – add the database services to the existing file server service.

For details, refer to the Microsoft Failover Cluster documentation.

7. Verify that all the database services stop when you take the failover unit offline, and start when you take the failover unit online.
 - **Windows 2003** – failover unit is managed cluster resource group.
 - **Windows 2008** – failover unit is file server service.
8. Verify that everything moves to the new active node when active and passive nodes are switched.
 - a) Fail over to the other node to make it active.
 - b) Verify that all SAP Mobile Platform database services shut down on the current, passive node.
 - c) Go to the desktop on the other, active node and fail over that node back to the first node.
 - d) Go to the desktop on the new active node and check the database log files.

There should be no errors.

See also

- *Installing the First Data Tier* on page 86

Installing the Second Data Tier

Install the second of two data tiers on the second server in the Microsoft Failover Cluster where the first data tier is installed.

Prerequisites

You have successfully installed the first data tier in the Microsoft Failover Cluster and verified its functionality.

1. *Preparing for Installation*

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options DT2 in MSFC*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log, and verify that database services are functioning and online in Microsoft cluster management software, and that you can manually fail them over.

See also

- *Installing the First SAP Mobile Server Node* on page 100

Preparing for Installation

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

1. Make sure you have installed and verified the first data tier node.

2. Verify that the installation target host is the active node in the Microsoft Failover Cluster into which you are installing.

If it is not the active node, either:

- Switch to the desktop of the active node, or,
- Make the current node active by failing the other node over to it.

3. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
4. Verify that you have Administrator privileges on the installation target host.
5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select JAVA_TOOL_OPTIONS and click **Delete**.
 - d) Click **OK** to exit all dialogs.
6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See *Intrusion Detection and Protection Requirements in Landscape Design and Integration*.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:
 - Insert the SAP Mobile Platform Runtime installation media.
 - Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as C:\temp. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the setup.exe file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the setup.exe file and select **Run as Administrator**.

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- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type, and click **Next**.
6. Enter the host name and TCP port of the license server.
Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options DT2 in MSFC

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as `SMP_HOME` in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

The total length of the path must be 43 characters or less.

Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (`_`), hyphen (`-`), and period (`.`) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "MobilePlatform" and the preceding "`\`" character.

2. Select **Cluster** and click **Next**.
3. Select **Install the data tier for your SAP Mobile Platform cluster** and click **Next**.
4. On the additional installation options panel, select **Configure data tier**.
5. On the port numbers and passwords panel:
 - a) (Optional) Enter port numbers and passwords, or accept the defaults for the ports listed:

Note: The port number settings here must match exactly those you set for the first data tier.

The passwords here must contain only alphanumeric ASCII characters and underscore (" _"), start with a letter, and be no more than 32 characters in length.

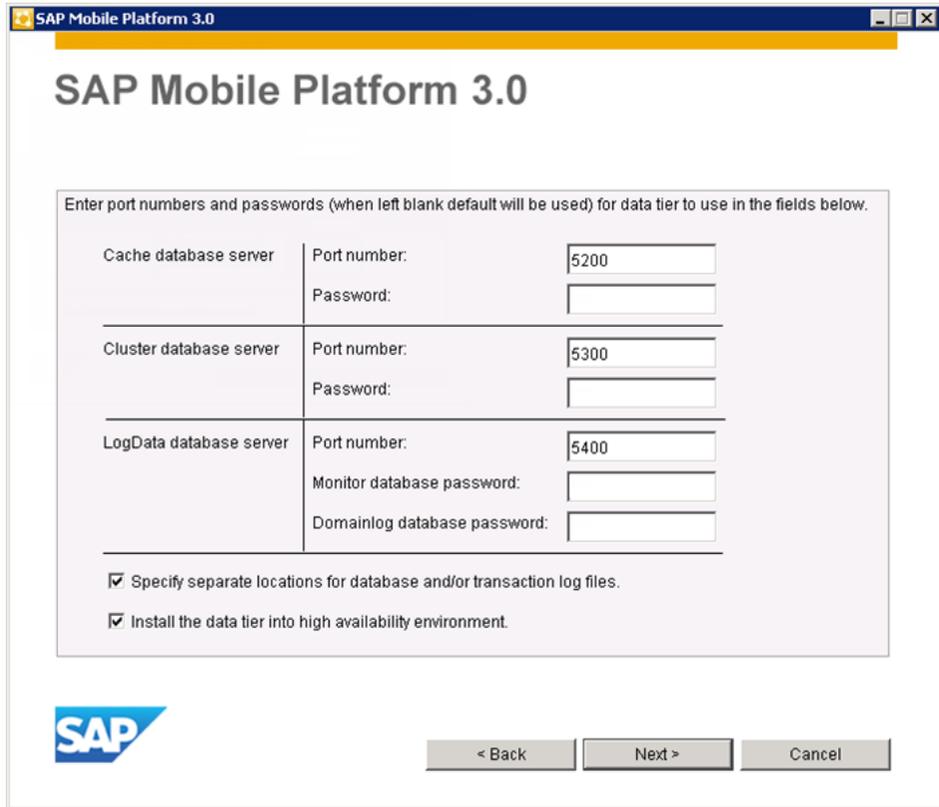
- Cache database server
- Cluster database server

Enter a port number, or accept the default, for:

- LogData database server

Enter passwords, or accept the defaults, for:

- Monitor database
 - Domainlog database
- b) (Optional) If you want to specify non-default locations for database files and transaction logs, select **Specify separate locations for database and/or transaction log files**.
- c) Select **Install the data tier into high availability environment**.
- d) Click **Next**.



6. If you selected **Specify separate locations for database and/or transaction log files**, enter the full path to each of the following that you want to change:

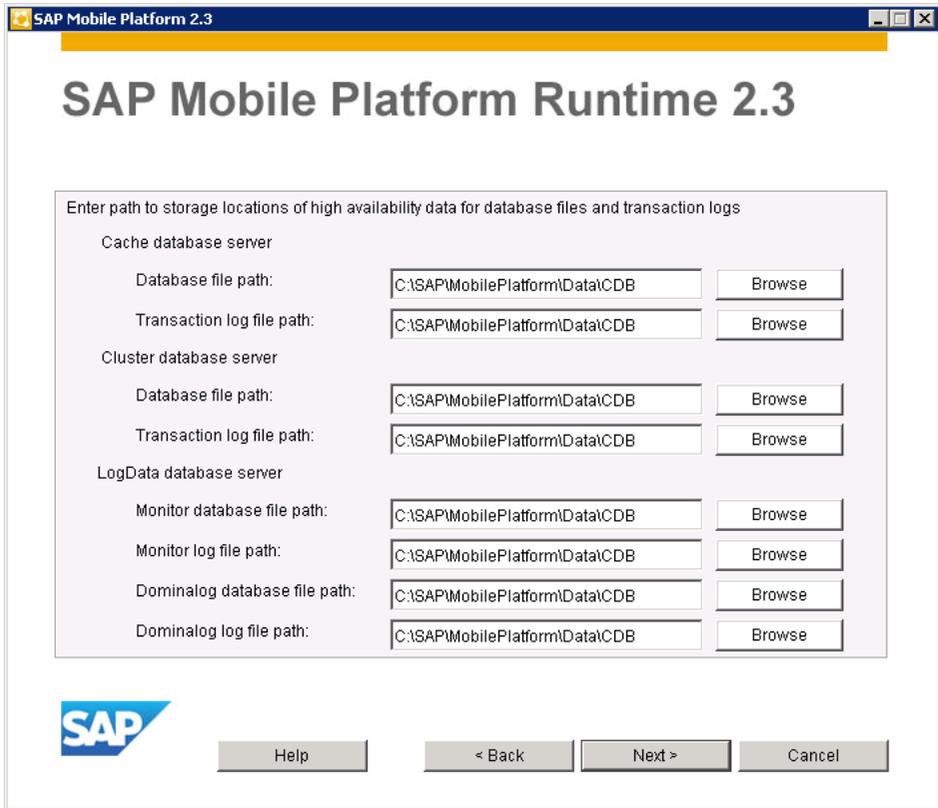
Note: The path settings here must match exactly those you set for the first data tier.

- **... file path** – (optional) enter the path to a storage location that will house the database files, for each database listed.
- **... log file path** – (optional) enter the path to a storage location that will house the transaction logs, for each database listed.

Each path must:

- Be either a file share resource group (Windows 2003), a shared folder in the file server service (Windows 2008), or a Client Access Point.
- Not be a UNC path.
- Be an absolute path (not relative to some other location).
- Point to an existing directory in the shared data folder.
- Use the same drive letter mapped on all data tier hosts.
- Be no longer than 228 characters.

- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").



7. If you selected only **Install the data tier into high availability environment**, enter a path for the location of the high availability data.

Note: The path settings here must match exactly those you set for the first data tier.

Enter the path to the location that will hold the data tier database and transaction log files.

The path must:

- Be either a file share resource group (Windows 2003), a shared folder in the file server service (Windows 2008), or a Client Access Point.
- Not be a UNC path.
- Be an absolute path (not relative to some other location).
- Point to an existing directory within the shared data folder you added to the cluster share disk (for example, *SMPData*).
- Use the same drive letter mapped on all data tier hosts.
- Be no longer than 228 characters.

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- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

For information about configuring SAP Mobile Platform, see *System Administration*.

Verifying the Installation

Check for errors in the installation log, and verify that database services are functioning and online in Microsoft cluster management software, and that you can manually fail them over.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is C:\SAP\MobilePlatform)..

1. Check the installation log at *SMP_HOME*\InstallLogs\SMPInstall.log.
A search for "error" should not find anything.
2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB
3. In the Microsoft cluster management software, verify that these same services are online.
4. Verify that you can fail over to the first installed node, and then back to the second.

Installing the First SAP Mobile Server Node

Install the first SAP Mobile Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the primary SAP Mobile Server node for the cluster.

Prerequisites

You have successfully installed both data tiers in the Microsoft Failover Cluster and verified their functionality.

1. *Preparing for Installation*

Ensure that the host on which you are installing this SAP Mobile Server as an application server node is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

See also

- *Installing the Second Data Tier* on page 94
- *Installing the Second SAP Mobile Server Node* on page 106

Preparing for Installation

Ensure that the host on which you are installing this SAP Mobile Server as an application server node is ready for you to begin the installation.

1. Make sure you have installed and verified the data tier nodes.
2. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first SAP Mobile Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.

5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
- b) Select the **Advanced** tab, then click **Environment Variables**.
- c) Select JAVA_TOOL_OPTIONS and click **Delete**.

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d) Click **OK** to exit all dialogs.

6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

This includes any database servers, SAP Control Center, and if SAP® Data Orchestration Engine Connector is present in an upgrade installation, SAP Data Orchestration Engine.

This excludes the following list of database services. Leave these services running:

- SAP Mobile Platform CacheDB
- SAP Mobile Platform ClusterDB
- SAP Mobile Platform LogDataDB

To verify that services are stopped, open the Services pane from Windows Control Panel.

7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

See *Intrusion Detection and Protection Requirements in Landscape Design and Integration*.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as *SMP_HOME* in the rest of these installation instructions.

1. Click **Next** to use the existing SAP Mobile Platform installation directory.
This was set in the data tier installation and cannot be changed.
2. On the cluster installation step page, select **Install the first server node and connect it to the data tier** and click **Next**.
3. If a page appears, indicating that the installer detected missing third-party software, click:
 - **Next** to install the required software.
 - **Back** to select components to install that do not require the third-party software.
 - **Cancel** to stop the current installation.
4. (Optional) Select additional installation options.
 - **Configure SAP Mobile Platform communication ports** to change default ports.
 - **Set SAP Mobile Platform services to start automatically** to start services automatically when Windows starts. By default, this option is selected.
Set SAP Mobile Platform services to start automatically if you plan to install products that work with SAP Mobile Platform, such as SAP® Data Orchestration Engine Connector and SAP Mobile Sales for SAP CRM. If SAP Mobile Platform services do not start automatically, dependent products will encounter problems.
 - **Set SAP Mobile Server name and cluster name** . Names must be unique on the network segment.
5. (Optional) If you selected **Set SAP Mobile Server name and cluster name**, enter a name for this SAP Mobile Server instance (name must be unique on network segment) and a name for the SAP Mobile Server cluster.

Note: The SAP Mobile Server cluster name refers to the SAP Mobile Server load balancing cluster; it is different from the Microsoft Failover Cluster, which contains the SAP Mobile Platform data tier nodes.

Each server or cluster name:

- Must contain only:
 - ASCII alphanumeric characters
 - Underscore ("_"), hyphen ("-"), and period (".") characters

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- Server names must be 1 – 32 characters in length and must begin with an alphanumeric character.
 - Cluster names must be 1 – 16 characters in length.
6. Enter information that SAP Mobile Server needs to connect to the data tier:
- a) For host name, enter:
- **Windows 2003** – the fully qualified cluster service name that is assigned to the Microsoft Failover Cluster.
 - **Windows 2008** – the fully qualified file server service name.
- b) For each configurable database listed, enter:
- Database Name
 - Port Number
 - Login
 - Password

Match exactly the passwords set for each database in the second data tier installation.

Enter information for the data tier, SQL Anywhere 12.0.1 database server.

Host name: <input type="text"/>			
Cache database	Database name: <input type="text" value="default"/>	Port number: <input type="text" value="5200"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="text"/>	
Cluster database	Database name: <input type="text" value="clusterdb"/>	Port number: <input type="text" value="5300"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="text"/>	
LogData database	Database name: <input type="text" value="monitordb"/>	Port number: <input type="text" value="5400"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="text"/>	
	Database name: <input type="text" value="domainlogdb"/>	Port number: <input type="text" value="5400"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="text"/>	



7. (Optional) If you selected **Configure SAP Mobile Platform communication ports**, change the default regular and secure port numbers as needed.

Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

Every SAP Mobile Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each SAP Mobile Server in the cluster.

- Server administration
- HTTP listeners
 - Application connections
 - REST/OData APIs
 - Data change notifications
- **Synchronization**

Port Type	Regular	Secure
Server Administration	<input type="text" value="2000"/>	<input type="text" value="2001"/>
HTTP Listeners		
Application Connections	<input type="text" value="8000"/>	<input type="text" value="8001"/>
REST/OData APIs	<input type="text" value="5001"/>	
Data Change Notifications	<input type="text" value="5001"/>	
Synchronization	<input type="text" value="2480"/>	<input type="text" value="2481"/>

8. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

The password must:

- Be at least 8 characters, and no longer than 32 characters.

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- Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is `C:\SAP\MobilePlatform`).

1. Check the installation log at `SMP_HOME\InstallLogs\SMPInstall.log`.
A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *X.X*
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
3. Verify that you can log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the node you just installed is accessible from SAP Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Installing the Second SAP Mobile Server Node

Install the second SAP Mobile Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the secondary SAP Mobile Server node for the cluster.

Prerequisites

Install the first SAP Mobile Server application server node and verify its functionality.

1. *Preparing for Installation*

Ensure that the host on which you are installing this SAP Mobile Server as an application server node is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

See also

- *Installing the First SAP Mobile Server Node* on page 100
- *Verifying the Full SAP Mobile Platform Cluster Installation* on page 112

Preparing for Installation

Ensure that the host on which you are installing this SAP Mobile Server as an application server node is ready for you to begin the installation.

1. Make sure you have installed and verified all the nodes specified in the preceding subtasks for this installation scenario.
2. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first SAP Mobile Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.

5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

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- a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select `JAVA_TOOL_OPTIONS` and click **Delete**.
 - d) Click **OK** to exit all dialogs.
6. Shut down all SAP software, SAP processes, and associated third-party processes running on the installation target host.

If the host is the active node in the Microsoft Failover Cluster, you must leave these services running:

- SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB
7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

See *Intrusion Detection and Protection Requirements in Landscape Design and Integration*.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:
- Insert the SAP Mobile Platform Runtime installation media.
 - Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as *SMP_HOME* in the rest of these installation instructions.

1. Click **Next** to use the existing SAP Mobile Platform installation directory.
This was set in the data tier installation and cannot be changed.
2. Select **Install an additional server node and connect it to the data tier** and click **Next**.
3. If a page appears, indicating that the installer detected missing third-party software, click:
 - **Next** to install the required software.
 - **Back** to select components to install that do not require the third-party software.
 - **Cancel** to stop the current installation.
4. (Optional) Select additional installation options.
 - **Configure SAP Mobile Platform communication ports** to change default ports.
 - **Set SAP Mobile Platform services to start automatically** to start services automatically when Windows starts. By default, this option is selected.
Set SAP Mobile Platform services to start automatically if you plan to install products that work with SAP Mobile Platform, such as SAP® Data Orchestration Engine Connector and SAP Mobile Sales for SAP CRM. If SAP Mobile Platform services do not start automatically, dependent products will encounter problems.
 - **Set SAP Mobile Server name** to enter a name that is unique on the network segment.
 - Do not select **Install node as scale-out node**. For high availability, install two SAP Mobile Server nodes as application servers before you install a scale-out node.
5. (Optional) If you selected **Set SAP Mobile Server name**, enter a name for this SAP Mobile Server instance. The name must be unique on the network segment.)

Each server name must contain only:

- ASCII alphanumeric characters
- Underscore ("_"), hyphen ("-"), and period (".") characters
- An alphanumeric character in the first position

Length of server names must be 1 – 32 characters.

6. Enter information that SAP Mobile Server needs to connect to the data tier:
 - a) For host name, enter:

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- **Windows 2003** – the fully qualified cluster service name that is assigned to the Microsoft Failover Cluster.
 - **Windows 2008** – the fully qualified file server service name.
- b) For each configurable database listed, enter:
- Database Name
 - Port Number
 - Login
 - Password

Match exactly the passwords set for each database in the second data tier installation.

Enter information for the data tier, SQL Anywhere 12.0.1 database server.

Host name: <input type="text"/>			
Cache database	Database name: <input type="text" value="default"/>	Port number: <input type="text" value="5200"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="password"/>	
Cluster database	Database name: <input type="text" value="clusterdb"/>	Port number: <input type="text" value="5300"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="password"/>	
LogData database	Database name: <input type="text" value="monitordb"/>	Port number: <input type="text" value="5400"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="password"/>	
	Database name: <input type="text" value="domainlogdb"/>	Port number: <input type="text" value="5400"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="password"/>	



7. (Optional) If you selected **Configure SAP Mobile Platform communication ports**, change the default regular and secure port numbers as needed.

Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

Every SAP Mobile Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each SAP Mobile Server in the cluster.

- Server administration
- HTTP listeners
 - Application connections
 - REST/OData APIs
 - Data change notifications
- **Synchronization**

Port Type	Regular	Secure
Server Administration	<input type="text" value="2000"/>	<input type="text" value="2001"/>
HTTP Listeners		
Application Connections	<input type="text" value="8000"/>	<input type="text" value="8001"/>
REST/OData APIs	<input type="text" value="5001"/>	
Data Change Notifications		
Synchronization	<input type="text" value="2480"/>	<input type="text" value="2481"/>

8. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

The password must:

- Be at least 8 characters, and no longer than 32 characters.
- Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is `C:\SAP\MobilePlatform`).

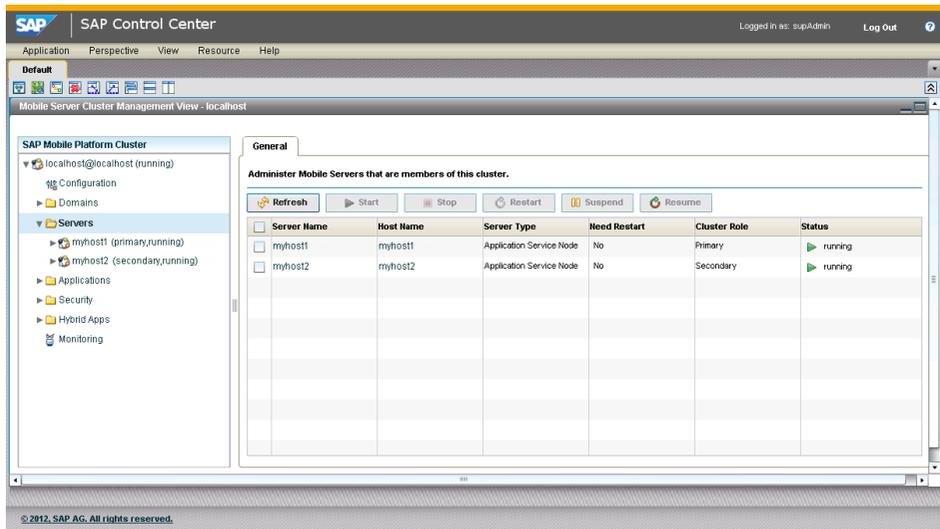
1. Check the installation log at `SMP_HOME\InstallLogs\SMPInstall.log`.
A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *X.X*
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
3. Verify that you can log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the node you just installed is accessible from SAP Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Verifying the Full SAP Mobile Platform Cluster Installation

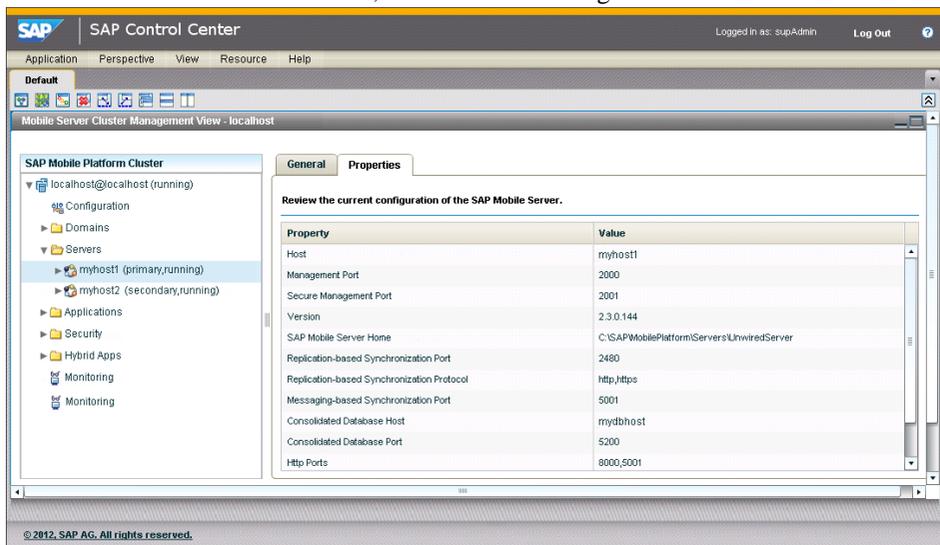
Verify that you can see all SAP Mobile Server nodes in the cluster in SAP Control Center, and that you can inspect the settings for each.

1. Start SAP Control Center. From an SAP Mobile Server node that is not a scale-out node, choose **Start > (All) Programs > SAP > SAP Control Center**.
2. Make sure you can see both SAP Mobile Server nodes in the cluster.

CHAPTER 6: Installing SAP Mobile Platform with a Microsoft Failover Cluster with Shared Hosts



3. Select each SAP Mobile Server node and inspect the settings. All information should be filled in, with no error messages.



Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform you have just installed.

CHAPTER 6: Installing SAP Mobile Platform with a Microsoft Failover Cluster with Shared Hosts

- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version now.
 2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

See also

- *Installing the Second SAP Mobile Server Node* on page 106

Adding an SAP Mobile Server Node to an Existing Cluster

After your SAP Mobile Platform cluster installation is completed, you can add another SAP Mobile Server node at any time.

Prerequisites

- Install SAP Mobile Platform version 2.3 in either a simple load-balancing cluster or a Microsoft Failover Cluster.
- Test that the existing cluster and all components are functioning properly.
- Bring all nodes in the existing cluster online, and ensure that the passive data tier in a Microsoft Failover Cluster is in standby mode.

1. *Preparing for Installation*

Ensure that the host on which you are installing SAP Mobile Platform is ready for you to begin the installation.

2. *Entering License Information*

Start the SAP Mobile Platform Runtime installer and enter license information.

3. *Selecting Installation Options*

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Upgrading the New Node to Your Current SAP Mobile Platform Version*

If you have already upgraded the existing cluster nodes to a support package or patch level later than 2.3, you must upgrade the new node to that same support package or patch level.

6. *Verifying the Installation*

Before proceeding, verify that key services are functioning, you can log in to SAP Control Center, and from SAP Control Center you can see the properties of the node you just installed.

Preparing for Installation

Ensure that the host on which you are installing SAP Mobile Platform is ready for you to begin the installation.

1. Make sure the new node is appropriately licensed.
2. Confirm that the installation target host meets minimum system requirements for all SAP Mobile Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. Ensure that all server nodes in the cluster are at the same version.

Upgrade any that are at earlier versions to the same version as the latest version node in the cluster.

5. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first SAP Mobile Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.

6. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

- a) Right-click **My Computer** and select **Properties**.
- b) Select the **Advanced** tab, then click **Environment Variables**.
- c) Select JAVA_TOOL_OPTIONS and click **Delete**.
- d) Click **OK** to exit all dialogs.

7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

This includes any database servers, SAP Control Center, and if SAP® Data Orchestration Engine Connector is present in an upgrade installation, SAP Data Orchestration Engine.

To verify that services are stopped, open the Services pane from Windows Control Panel.

8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
9. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

See Intrusion Detection and Protection Requirements in Landscape Design and Integration.

Entering License Information

Start the SAP Mobile Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

- 2.** On the installer welcome page, click **Next**.
- 3.** Select your license model and click **Next**.

Evaluation	Allows you to evaluate SAP Mobile Platform for 30 days. A license file is not required.
Unserviced (local) license	Standalone license managed locally by the host.
Serviced (remote) license	Standalone license managed by a license server.

- 4.** On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
- 5.** On the license details page, select your license product edition and license type, and click **Next**.
- 6.** Enter the location of your license file.

- If you selected **Unservd (local) license**, enter the absolute path to the license file on the installation target host, using only ASCII characters.
- If you selected **Served (remote) license**, enter the host name and TCP port of the license server.

Click **Next**.

If you get an error, such as `Failed to check out license`, click **OK**, then click **Back** to confirm the license model (served or unserved), license product edition, and license type.

Selecting Installation Options

Specify the installation directory, installation type, SAP Mobile Platform components, and additional installation options.

The installation path you specify below is referred to as *SMP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

The total length of the path must be 43 characters or less.

Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "MobilePlatform" and the preceding "\" character.

2. Select **Cluster** and click **Next**.

3. Select **Install an additional server node and connect it to the data tier** and click **Next**.

4. If a page appears, indicating that the installer detected missing third-party software, click:

- **Next** to install the required software.
- **Back** to select components to install that do not require the third-party software.
- **Cancel** to stop the current installation.

5. (Optional) Select additional installation options.

- **Configure SAP Mobile Platform communication ports** to change default ports.
- **Set SAP Mobile Platform services to start automatically** to start services automatically when Windows starts. By default, this option is selected.

Set SAP Mobile Platform services to start automatically if you plan to install products that work with SAP Mobile Platform, such as SAP® Data Orchestration Engine

CHAPTER 7: Adding an SAP Mobile Server Node to an Existing Cluster

Connector and SAP Mobile Sales for SAP CRM. If SAP Mobile Platform services do not start automatically, dependent products will encounter problems.

- **Set SAP Mobile Server name** to enter a name that is unique on the network segment.
 - **Install node as scale-out node** to streamline the server node to support high-volume business-to-consumer transactions. (This is available only after you first install SAP Mobile Server in the same cluster. Recommended: Install a second SAP Mobile Server node in the cluster before you install the first scale-out node.)
6. (Optional) If you selected **Set SAP Mobile Server name**, enter a name for this SAP Mobile Server instance. The name must be unique on the network segment.)

Each server name must contain only:

- ASCII alphanumeric characters
- Underscore ("_"), hyphen ("-"), and period (".") characters
- An alphanumeric character in the first position

Length of server names must be 1 – 32 characters.

7. Enter information that SAP Mobile Server needs to connect to the data tier.
- a) Enter the name of the data tier host.

Note: For a host name, enter the cluster service name that is assigned to the Microsoft Failover Cluster for SAP Mobile Platform installation with Microsoft Failover Cluster.

- b) Enter the following for each configurable database listed:
- Database Name
 - Port Number
 - Login
 - Password

In a typical new installation, you need not change any prepopulated value, enter `sql` as the default password for each database.

Enter information for the data tier, SQL Anywhere 12.0.1 database server.

Host name: <input type="text"/>			
Cache database	Database name: <input type="text" value="default"/>	Port number: <input type="text" value="5200"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="password"/>	
Cluster database	Database name: <input type="text" value="clusterdb"/>	Port number: <input type="text" value="5300"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="password"/>	
LogData database	Database name: <input type="text" value="monitordb"/>	Port number: <input type="text" value="5400"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="password"/>	
	Database name: <input type="text" value="domainlogdb"/>	Port number: <input type="text" value="5400"/>	
	Login: <input type="text" value="dba"/>	Password: <input type="password"/>	

SAP logo:

Buttons:

8. (Optional) If you selected **Configure SAP Mobile Platform communication ports**, change the default port numbers as needed.

Note: Every SAP Mobile Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each SAP Mobile Server in the cluster.

- Server administration
- HTTP listeners
 - Application connections
 - REST/OData APIs
 - Data change notifications
- Synchronization

Note: Synchronization ports do not appear when you are installing a scale-out node.

Port Type	Regular	Secure
Server Administration	<input type="text" value="2000"/>	<input type="text" value="2001"/>
HTTP Listeners		
Application Connections	<input type="text" value="8000"/>	<input type="text" value="8001"/>
REST/OData APIs	<input type="text" value="5001"/>	
Data Change Notifications		
Synchronization	<input type="text" value="2480"/>	<input type="text" value="2481"/>

9. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

The password must:

- Be at least 8 characters, and no longer than 32 characters.
- Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Upgrading the New Node to Your Current SAP Mobile Platform Version

If you have already upgraded the existing cluster nodes to a support package or patch level later than 2.3, you must upgrade the new node to that same support package or patch level.

Note: This step is necessary only if you have upgraded your SAP Mobile Platform version 2.3 cluster to a support package or patch level later than 2.3.

Go to the *Release Bulletin* for the latest 2.3 support package or patch level to which you have upgraded the cluster and follow the instructions there for upgrading the SAP Mobile Server node you just installed to the same version as the rest of the cluster.

Verifying the Installation

Before proceeding, verify that key services are functioning, you can log in to SAP Control Center, and from SAP Control Center you can see the properties of the node you just installed.

In the location of the installation log file referenced below, *SMP_HOME* is the installation location you specified (default is C:\SAP\MobilePlatform)..

1. Check the installation log at *SMP_HOME*\InstallLogs\SMPInstall.log.
A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *X.X* (not present in scale out node)
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
3. Log in to SAP Control Center. If you are installing a scale-out node, go to one of the systems where you installed SAP Mobile Server as an application server node.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the node you just installed is accessible from SAP Control Center and that you can see the properties of that node.

CHAPTER 8 Performing a Full Upgrade

The upgrade to SAP Mobile Platform 2.3 is performed in place; this means that the files in the latest version overwrite the files in the earlier version.

Beginning with Sybase Unwired Platform version 2.1.1, the upgrade installer automatically adds SAP® Data Orchestration Engine Connector (DOE-C) if it does not exist in your earlier version installation, and upgrades DOE-C if it is present.

If you are upgrading to a support package or patch, see the *ReadMe* file for that support package or patch for instructions. This chapter discusses only upgrading to SAP Mobile Platform version 2.3 from Unwired Platform version 2.2.x.

Note: When upgrading, there is a potential issue with a Windows process holding a lock on one of the 12 Adaptive Server Anywhere (ASA) libraries (DLLs) even though all the ASA processes have shut down. This causes the upgrade to fail because the upgrade cannot overwrite the file. This is specific to a 32-bit Windows Server 2003 SP2.

Workaround:

1. Shut down all Sybase Unwired Platform processes.
 2. If services were set to automatic, set the start up for the Sybase Unwired Platform services to manual.
 3. Restart the system.
 4. Run the upgrade after the system has restarted.
 5. If step 2 was performed prior to upgrade, set the startup for the services back to automatic.
-

Rebranding Name Changes

When you upgrade from Unwired Platform 2.2.x to SAP Mobile Platform 2.3, the names of some important components change. Become familiar with these changes to avoid confusion.

Table 3. Product Name Change Key

Original Name	Rebranded Name	Comments
Sybase	SAP	In some cases, Sybase continues to appear as a file, directory, or API name

Original Name	Rebranded Name	Comments
Sybase Unwired Platform Unwired Platform	SAP Mobile Platform	In some cases Sybase Unwired Platform continues to appear in a file, directory, or API name.
Unwired Server	SAP Mobile Server	In some cases Unwired Server continues to appear in a lower level directory name.
Sybase Unwired WorkSpace Unwired WorkSpace	SAP Mobile WorkSpace	
Sybase Control Center	SAP Control Center	
Sybase Hosted Relay Service	SAP Hosted Relay Service	
Sybase Hosted Relay Server	SAP Hosted Relay Server	
Sybase Mobile SDK	SAP Mobile SDK	
Sybase Unwired Platform Run- time	SAP Mobile Platform Runtime	

Upgrade Paths

Paths available to upgrade Sybase Unwired Platform servers from earlier versions to SAP Mobile Platform version 2.3.

The installer can directly upgrade your Sybase Unwired Platform 2.2.x installation to SAP Mobile Platform version 2.3. If you have a version of Sybase Unwired Platform earlier than 2.2.x, additional steps are required to upgrade to SAP Mobile Platform version 2.3.

Migrate SAP Mobile SDK customizations at the same time you upgrade SAP Mobile Platform servers. See *Developer Guide: Migrating to SAP Mobile SDK 2.3*.

Current Unwired Platform Version	Server Upgrade Tasks
2.1 2.1.1 2.1.2 2.1.3	Upgrade in place to version 2.2. See the upgrade instructions for your installation scenario in the <i>Sybase Unwired Platform 2.2 Installation Guide for Runtime</i> .

Current Unwired Platform Version	Server Upgrade Tasks
2.1 Online Data Proxy	<ol style="list-style-type: none"> 1. Upgrade in place from version 2.1 Online Data Proxy option to version 2.1 Unwired Platform Runtime option. See <i>Upgrading Online Data Proxy to Unwired Platform Runtime</i> in <i>Sybase Unwired Platform 2.1 Installation Guide for Runtime</i>. 2. Upgrade in place to version 2.2. See the upgrade instructions for your installation scenario in the <i>Sybase Unwired Platform 2.2 Installation Guide for Runtime</i>.
2.2 2.2 SP01 2.2 SP02	<p>Upgrade Sybase Unwired Platform version 2.2 in place to SAP Mobile Platform version 2.3. See the upgrade instructions for your installation scenario:</p> <ul style="list-style-type: none"> • <i>Upgrading a Single-Server Installation</i> on page 130 • <i>Upgrading a Simple Load-Balancing Cluster</i> on page 134 • <i>Upgrading a Standard Microsoft Failover Cluster</i> on page 144 • <i>Upgrading a Microsoft Failover Cluster with Shared Hosts</i> on page 157

Native Client Version Compatibility Matrix

Compatibility between versions of the client object API and SAP Mobile Server (Unwired Server).

Native Client Object API and SAP Mobile Server Version Compatibility

	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2	Unwired Server 2.1 ESD #3	Unwired Server 2.2 SP02	SAP Mobile Server 2.3
Native Client Object API 2.1	Yes	Yes	Yes	Yes	Yes	Yes
Native Client Object API 2.1 ESD #1	No	Yes	Yes	Yes	Yes	Yes

	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2	Unwired Server 2.1 ESD #3	Unwired Server 2.2 SP02	SAP Mobile Server 2.3
Native Client Object API 2.1 ESD #2	No	No	Yes	Yes	Yes	Yes
Native Client Object API 2.1 ESD #3	No	No	No	Yes	Yes	Yes
Native Client Object API 2.2 SP02	No	No	No	No	Yes	Yes
Native Client Object API 2.3	No	No	No	No	No	Yes

Note:

- Yes – the client application built in this SDK version is supported in the server version (minor adjustments may be necessary to ensure the application runs correctly; see the migration details for the appropriate application type, if any).
- No – the client application built in this SDK version is not supported in the server version.
- Server version – refers to the server version to which an original package is migrated, and not a newly deployed package. For the example of "Native Client Object API 2.1" vs. "server 2.3", the application package that runs on "server 2.3" may not always be newly created and deployed from MobileSDK2.3; it may have been originally created from MobileSDK2.1 and deployed to 2.1 server, and then migrated to 2.3 server.

Hybrid Web Container Compatibility Matrix

Compatibility between versions of the Hybrid Web Container and server, and Hybrid Web Container and Hybrid App applications.

Hybrid Web Container and Unwired Server/SAP Mobile Server Compatibility

Client/ Hybrid Web Container	Unwired Server 2.1	Unwired Server 2.1 ESD #2	Unwired Server 2.1 ESD #3	Unwired Server 2.2 SP02	SAP Mobile Server 2.3
Hybrid Web Container 2.1	Yes	Yes	Yes	Yes	Yes
Hybrid Web Container 2.1 ESD #2	No	Yes	Yes	Yes	Yes
Hybrid Web Container 2.1 ESD #3	No	Yes	Yes	Yes	Yes
Hybrid Web Container 2.2 SP02	No	Yes	Yes	Yes	Yes
Hybrid Web Container 2.3	No	Yes	Yes	Yes	Yes

There was no 2.1 ESD #1 Hybrid Web Container; 2.1 ESD #1 shipped with 2.1 Mobile Workflow clients.

Note:

- Yes – the client application built in this SDK version is supported in the server version (minor adjustments may be necessary to ensure the application runs correctly; see the migration details for the appropriate application type, if any).
 - No – the client application built in this SDK version is not supported in the server version.
 - Server version – refers to the server version to which the original package is migrated, not the newly deployed package.
-

Hybrid Web Container and Hybrid App Compatibility

Client/ Hybrid Web Container	Hybrid App 2.1	Hybrid App 2.1 ESD #2	Hybrid App 2.1 ESD #3	Hybrid App 2.2 SP02	Hybrid App 2.3
Hybrid Web Container 2.1	Yes	No	No	No	No
Hybrid Web Container 2.1 ESD #2	Yes	Yes	No	No	No
Hybrid Web Container 2.1 ESD #3	Yes	Yes	Yes	No	No
Hybrid Web Container 2.2 SP02	Yes	Yes	Yes	Yes	No
Hybrid Web Container 2.3	Yes	Yes	Yes	Yes	Yes

There was no 2.1 ESD #1 Hybrid Web Container; 2.1 ESD #1 shipped with 2.1 Mobile Workflow clients.

Note:

- Yes – the client application built in this SDK version is supported in the server version (minor adjustments may be necessary to ensure the application runs correctly; see the migration details for the appropriate application type, if any).
- No – the client application built in this SDK version is not supported in the server version.
- Server version – refers to the server version to which the original package is migrated, not the newly deployed package.

OData Client Compatibility Matrix

Compatibility between versions of OData clients and SAP Mobile Server. Also compatibility between versions of REST SDK clients and SAP Mobile Server.

OData SDK Client and Unwired Server/SAP Mobile Server Version Compatibility

OData SDK Client	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2	Unwired Server 2.1 ESD #3	Unwired Server 2.2 SP02	SAP Mobile Server 2.3
OData SDK Client 2.1	Yes	Yes	Yes	Yes	Yes	Yes
OData SDK Client 2.1 ESD #1	No	Yes	Yes	Yes	Yes	Yes
OData SDK Client 2.1 ESD #2	No	Yes	Yes	Yes	Yes	Yes
OData SDK Client 2.1 ESD #3	No	Yes	Yes	Yes	Yes	Yes
OData SDK Client 2.2 SP02	No	Yes	Yes	Yes	Yes	Yes
OData SDK Client 2.3	No	Yes	Yes	Yes	Yes	Yes

Note:

- Yes – the client application built in this SDK version is supported in the server version (minor adjustments may be necessary to ensure the application runs correctly; see the migration details for the appropriate application type, if any).
- No – the client application built in this SDK version is not supported in the server version.
- Server version – refers to the server version to which the original package is migrated, not the newly deployed package.

REST SDK Client and Unwired Server/SAP Mobile Server Version Compatibility

REST SDK client	Unwired Server 2.1.3	Unwired Server 2.2 SP01	Unwired Server 2.2 SP02	Unwired Server 2.2 SP03	SAP Mobile Server 2.3	SAP Mobile Server 2.3 SP02
REST Client 2.2 SP03	No	Yes	Yes	Yes	Yes	Yes

Note:

- Yes – the client application built in this SDK version is supported in the server version (minor adjustments may be necessary to ensure the application runs correctly; see the migration details for the appropriate application type, if any).
- No – the client application built in this SDK version is not supported in the server version.
- Server version – refers to the server version to which the original package is migrated, not the newly deployed package.

Upgrading a Single-Server Installation

On the system where the single-server installation is installed, shut down all Unwired Platform services and run the installer.

Prerequisites

1. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SMP23_Worksheets.zip*.
2. Back up your existing installation. See *Backup and Recovery of SAP Mobile Platform in System Administration*.

Task**1. Preparing to Upgrade**

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

2. Accepting the End-User License Agreement

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

3. *Selecting Upgrade Options*

Accept the installation directory and enter passwords for databases and the Sybase Unwired Platform administrator.

4. *Verifying the Upgrade*

Check for errors in the upgrade log, and verify that key services are functioning, that you can log into SAP Control Center, and that you can see the properties of the upgraded SAP Mobile Server.

5. *Completing the Upgrade*

Review the installation summary and launch the installation process.

Preparing to Upgrade

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

1. In the Windows Services control panel, check the startup type of all services with names that start with "Sybase." If any of these services are set to Manual, change the setting to Automatic.
2. Prevent backups from interfering.
You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.
3. Prevent virus scans from interfering.
You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
4. Prevent system upgrades from interfering.
You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
5. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).
See [Intrusion Detection and Protection Requirements](#) in [Landscape Design and Integration](#).
6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: "Sybase Control Center" and all services with names that begin with "Sybase Unwired..."
8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
9. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET

CHAPTER 8: Performing a Full Upgrade

Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Accepting the End-User License Agreement

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases and the Sybase Unwired Platform administrator.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. Click **Next** on the installer panel that lists components that will be upgraded.

You cannot make changes in this list.

3. On the database account information panel, enter the password for each database, then click **Next**.

The default value at installation was "sql" for each of these databases.

4. Enter the current user ID for the Sybase Unwired Platform administrator in the first field. Enter the current password for the Sybase Unwired Platform administrator user in the first Password field, then enter it again in the second field to confirm, then click **Next**.

Verifying the Upgrade

Check for errors in the upgrade log, and verify that key services are functioning, that you can log into SAP Control Center, and that you can see the properties of the upgraded SAP Mobile Server.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is C:\Sybase\UnwiredPlatform)..

1. Check the upgrade log at *SUP_HOME*\InstallLogs\SMPIInstall.log, where *SUP_HOME* is the installation directory for Sybase Unwired Platform 2.2, down to include the UnwiredPlatform directory. .

A search for "error" should not find anything.

2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Mobile Server
 - SAP Control Center *X.X*
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
3. Verify that you can log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the node you just upgraded is accessible from SAP Control Center and that you can see the properties of that node.

Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform to which you have just upgraded.

- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version.
 2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

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- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.
If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.
3. Click **Finish** on the last installer panel, indicating successful completion.
4. If you changed the startup type of any services from Manual to Automatic in the *Preparing to Upgrade* task for this upgrade installer run, change the startup type for those services back to Manual before continuing.

Upgrading a Simple Load-Balancing Cluster

Shut down the Sybase Unwired Platform components in the cluster, then upgrade those nodes in a precise sequence.

Prerequisites

1. Verify that all nodes in your Unwired Platform cluster are at the same version.
2. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SMP23_Worksheets.zip*.
3. Back up your existing installation. See *Backup and Recovery of SAP Mobile Platform in System Administration*.

Task

1. *Preparing Cluster Nodes for the Upgrade*
Shut down Unwired Platform services on cluster nodes in an exact sequence.
2. *Upgrading the Data Tier*
Run the Runtime installer on the system where the data tier to be upgraded is located.
3. *Upgrading Unwired Server 2.2 to SAP Mobile Server 2.3*
Upgrade all of the Unwired Server nodes in your cluster.
4. *Verifying the Upgraded Cluster*
Verify that you can see all SAP Mobile Server nodes in the cluster in SAP Control Center, and that you can inspect the settings for each.

Preparing Cluster Nodes for the Upgrade

Shut down Unwired Platform services on cluster nodes in an exact sequence.

1. Shut down the Sybase Unwired Server service on each scale-out node.
2. Shut down the secondary Unwired Server – shut down services in this order:
 - a. Sybase Unwired Server
 - b. Sybase Control Center *X.X*
 - c. Sybase Unwired SampleDB (not present in Enterprise Server Edition)
3. Shut down the primary Unwired Server – shut down services in this order:
 - a. Sybase Unwired Server
 - b. Sybase Control Center *X.X*
 - c. Sybase Unwired SampleDB (not present in Enterprise Server Edition)
4. Shut down the data tier server – shut down these services, in any order:
 - Sybase Unwired CacheDB service (named SAP Mobile Platform CacheDB service in SAP Mobile Platform 2.3)
 - Sybase Unwired ClusterDB service (named SAP Mobile Platform ClusterDB service in SAP Mobile Platform 2.3)
 - Sybase Unwired LogDataDB service (named SAP Mobile Platform LogDataDB service in SAP Mobile Platform 2.3)

Upgrading the Data Tier

Run the Runtime installer on the system where the data tier to be upgraded is located.

1. *Preparing to Upgrade*
Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.
2. *Accepting the End-User License Agreement*
Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.
3. *Selecting Upgrade Options*
Accept the installation directory and enter database passwords.
4. *Completing the Upgrade*
Review the installation summary and launch the installation process.
5. *Verifying the Upgrade*
Check for errors in the upgrade log and verify that database services are functioning.

See also

- *Upgrading Unwired Server 2.2 to SAP Mobile Server 2.3* on page 138

Preparing to Upgrade

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

1. Shut down all SAP Mobile Server nodes in the cluster.
2. In the Windows Services control panel, check the startup type of all services with names that start with "Sybase." If any of these services are set to Manual, change the setting to Automatic.
3. Prevent backups from interfering.
You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.
4. Prevent virus scans from interfering.
You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
5. Prevent system upgrades from interfering.
You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
6. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).
See [Intrusion Detection and Protection Requirements in Landscape Design and Integration](#).
7. Verify that you have Administrator privileges on the upgrade target host.
8. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: "Sybase Control Center" and all services with names that begin with "Sybase Unwired..."
9. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
10. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Accepting the End-User License Agreement

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

1. Start the installer using one of these methods:
 - Insert the SAP Mobile Platform Runtime installation media.

- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
 - On earlier supported versions of Windows, double-click the `setup.exe` file.
-

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter database passwords.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. Click **Next** on the installer panel that lists components that will be upgraded.

You cannot make changes in this list.

3. On the database account information panel, enter the password for each database.

The default value at installation was "sql" for each of these databases.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.

If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.

3. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log and verify that database services are functioning.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is C:\Sybase\UnwiredPlatform)..

1. Check the upgrade log at *SUP_HOME*\InstallLogs\SMPInstall.log, where *SUP_HOME* is the installation directory for Sybase Unwired Platform 2.2, down to include the UnwiredPlatform directory. .

A search for "error" should not find anything.

2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

Upgrading Unwired Server 2.2 to SAP Mobile Server 2.3

Upgrade all of the Unwired Server nodes in your cluster.

Perform this task on each Unwired Server node in the cluster, in this sequence:

- First, upgrade the primary Unwired Server node.
- Next, upgrade the secondary Unwired Server node. If you have more than one secondary server, you may upgrade them in any order.

Note: Do not begin upgrading the secondary servers until the primary server has completely restarted all its services after being upgraded.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

2. *Accepting the End-User License Agreement*

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

3. *Selecting Upgrade Options*

Accept the installation directory, and enter user IDs and passwords for databases and the Sybase Unwired Platform administrator.

4. *Completing the Upgrade*

Review the installation summary and launch the installation process.

5. *Verifying the Upgrade*

Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

See also

- *Upgrading the Data Tier* on page 135
- *Verifying the Upgraded Cluster* on page 142

Preparing to Upgrade

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

1. In the Windows Services control panel, check the startup type of all services with names that start with "Sybase." If any of these services are set to Manual, change the setting to Automatic.
2. Prevent backups from interfering.
You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.
3. Prevent virus scans from interfering.
You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
4. Prevent system upgrades from interfering.
You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
5. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).
See [Intrusion Detection and Protection Requirements](#) in [Landscape Design and Integration](#).
6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: "Sybase Control Center" and all services with names that begin with "Sybase Unwired..."
8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
9. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Accepting the End-User License Agreement

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory, and enter user IDs and passwords for databases and the Sybase Unwired Platform administrator.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. Click **Next** on the installer panel that lists components that will be upgraded.

You cannot make changes in this list.

3. On the database account information panel, enter the password for each database.

The default value at installation was "sql" for each of these databases.

4. Enter the current user ID for the Sybase Unwired Platform administrator in the first field. Enter the current password for the Sybase Unwired Platform administrator user in the first Password field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.
If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.
3. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is C:\Sybase\UnwiredPlatform)..

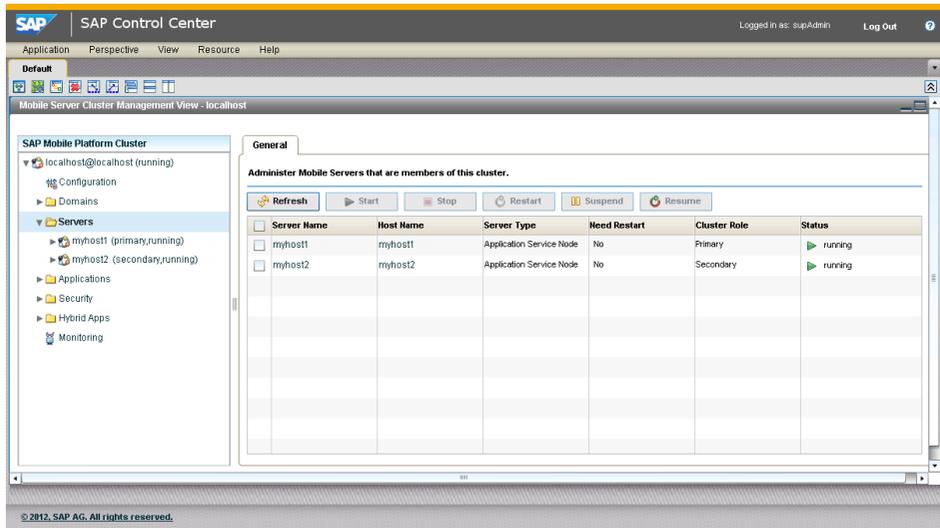
Note: Steps 3, 4, and 5 below can only be performed from an application server node.

1. Check the upgrade log at *SUP_HOME*\InstallLogs\SMPInstall.log, where *SUP_HOME* is the installation directory for Sybase Unwired Platform 2.2, down to include the UnwiredPlatform directory. .
A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *X.X* (not present on scale-out nodes)
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
3. Verify that you can log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the node you just upgraded is accessible from SAP Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

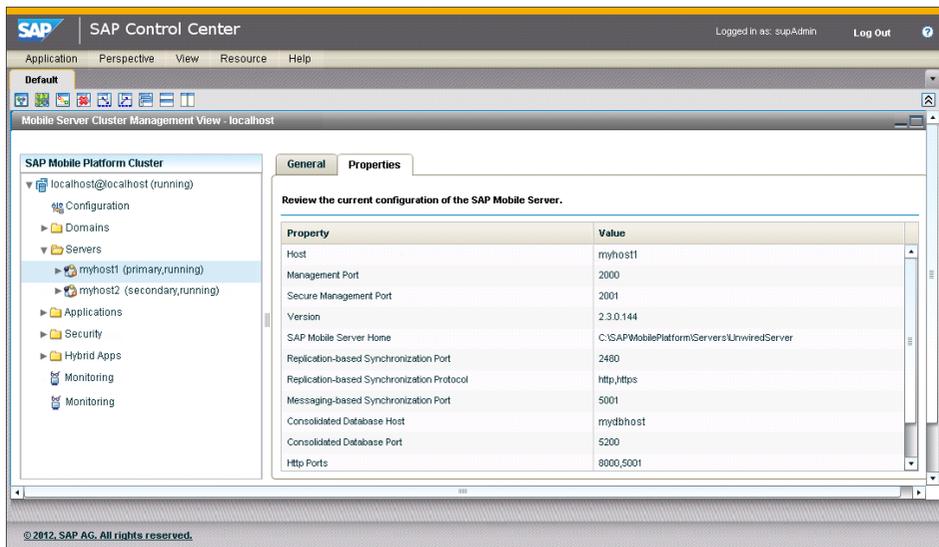
Verifying the Upgraded Cluster

Verify that you can see all SAP Mobile Server nodes in the cluster in SAP Control Center, and that you can inspect the settings for each.

1. From an SAP Mobile Server node, choose **Start > (All) Programs > SAP > SAP Control Center**.
2. Make sure you can see both SAP Mobile Server nodes in the cluster.



3. Select each SAP Mobile Server node and inspect the settings. All information should be filled in, with no error messages.



Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform to which you have just upgraded.

- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version.
 2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

See also

- *Upgrading Unwired Server 2.2 to SAP Mobile Server 2.3* on page 138

Upgrading a Standard Microsoft Failover Cluster

Shut down the Unwired Platform components in the cluster, then upgrade those nodes in a precise sequence.

Prerequisites

1. Verify that all nodes in your Unwired Platform cluster are at the same version.
2. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: `../misc/SMP23_Worksheets.zip`.
3. Back up your existing installation. See *Backup and Recovery of SAP Mobile Platform in System Administration*.

Task

1. *Preparing for the First Data Tier Upgrade*

Shut down Unwired Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.

2. *Upgrading the First Data Tier*

Run the Runtime installer on the system where the first data tier to be upgraded is located.

3. *Preparing for the Second Data Tier Upgrade*

Make the passive node active, go to the desktop of that node, and ensure that cluster resources are offline.

4. *Upgrading the Second Data Tier*

Run the Runtime installer on the system where the second data tier to be upgraded is located.

5. *Preparing for Unwired Server Upgrades*

Bring data tier services back online.

6. *Upgrading Unwired Server 2.2 to SAP Mobile Server 2.3*

Upgrade all of the Unwired Server nodes in your cluster.

7. *Verifying the Upgraded Cluster*

When you have completed upgrading and verifying all the individual cluster nodes, verify the functionality of the full cluster to ensure that the upgrade process has been completely successful.

Preparing for the First Data Tier Upgrade

Shut down Unwired Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.

1. Shut down the Sybase Unwired Server service on each scale-out node.
2. Shut down the secondary Unwired Server – shut down services in this order:
 - a. Sybase Unwired Server
 - b. Sybase Control Center *X.X*
 - c. Sybase Unwired SampleDB (not present in Enterprise Server Edition)
3. Shut down the primary Unwired Server – shut down services in this order:
 - a. Sybase Unwired Server
 - b. Sybase Control Center *X.X*
 - c. Sybase Unwired SampleDB (not present in Enterprise Server Edition)
4. In Failover Cluster Manager or Cluster Administrator on the active node, make sure the following Unwired Platform resources are offline:
 - Afaria Database service (available with Unwired Platform version 1.5.2 or earlier)
 - Sybase Unwired CacheDB service (named SAP Mobile Platform CacheDB service in SAP Mobile Platform 2.3)
 - Sybase Unwired ClusterDB service (named SAP Mobile Platform ClusterDB service in SAP Mobile Platform 2.3)
 - Sybase Unwired LogDataDB service (named SAP Mobile Platform LogDataDB service in SAP Mobile Platform 2.3)

Upgrading the First Data Tier

Run the Runtime installer on the system where the first data tier to be upgraded is located.

1. *Preparing to Upgrade*
Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.
2. *Accepting the End-User License Agreement*
Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.
3. *Selecting Upgrade Options*
Accept the installation directory and enter passwords for databases.
4. *Completing the Upgrade*
Review the installation summary and launch the installation process.
5. *Verifying the Upgrade*
Check for errors in the upgrade log and verify that database services are functioning.

See also

- *Preparing for the Second Data Tier Upgrade* on page 148

Preparing to Upgrade

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

1. Shut down all SAP Mobile Server nodes in the cluster.
2. In the Windows Services control panel, check the startup type of all services with names that start with "Sybase." If any of these services are set to Manual, change the setting to Automatic.
3. Prevent backups from interfering.
You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.
4. Prevent virus scans from interfering.
You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
5. Prevent system upgrades from interfering.
You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
6. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).
See [Intrusion Detection and Protection Requirements](#) in [Landscape Design and Integration](#).
7. Verify that you have Administrator privileges on the upgrade target host.
8. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: "Sybase Control Center" and all services with names that begin with "Sybase Unwired..."
9. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
10. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Accepting the End-User License Agreement

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. Click **Next** on the installer panel that lists components that will be upgraded.

You cannot make changes in this list.

3. On the database account information panel, enter the password for each database.

The default value at installation was "sql" for each of these databases.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.

If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.

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3. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log and verify that database services are functioning.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is `C:\Sybase\UnwiredPlatform`).

1. Check the upgrade log at `SUP_HOME\InstallLogs\SMPInstall.log`, where *SUP_HOME* is the installation directory for Sybase Unwired Platform 2.2, down to include the `UnwiredPlatform` directory. .

A search for "error" should not find anything.

2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

Preparing for the Second Data Tier Upgrade

Make the passive node active, go to the desktop of that node, and ensure that cluster resources are offline.

1. While you are still on the active data tier node that you just upgraded, fail over to the other node make it active.
2. Go to the desktop of the new active node to begin the upgrade process on the second data tier.
3. In Failover Cluster Manager or Cluster Administrator on the active node, make sure the following Sybase Unwired Platform/SAP Mobile Platform resources are offline:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

See also

- *Upgrading the First Data Tier* on page 145

Upgrading the Second Data Tier

Run the Runtime installer on the system where the second data tier to be upgraded is located.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

2. *Accepting the End-User License Agreement*

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

3. *Selecting Upgrade Options*

Accept the installation directory and enter passwords for databases.

4. *Completing the Upgrade*

Review the installation summary and launch the installation process.

5. *Verifying the Upgrade*

Check for errors in the upgrade log and verify that database services are functioning.

See also

- *Preparing for Unwired Server Upgrades* on page 151

Preparing to Upgrade

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

1. Shut down all SAP Mobile Server nodes in the cluster.
2. In the Windows Services control panel, check the startup type of all services with names that start with "Sybase." If any of these services are set to Manual, change the setting to Automatic.
3. Prevent backups from interfering.
You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.
4. Prevent virus scans from interfering.
You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
5. Prevent system upgrades from interfering.
You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
6. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).
See [Intrusion Detection and Protection Requirements](#) in [Landscape Design and Integration](#).
7. Verify that you have Administrator privileges on the upgrade target host.
8. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

CHAPTER 8: Performing a Full Upgrade

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired...”

9. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
10. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Accepting the End-User License Agreement

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. Click **Next** on the installer panel that lists components that will be upgraded.
You cannot make changes in this list.
3. On the database account information panel, enter the password for each database.
The default value at installation was "sql" for each of these databases.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.
If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.
3. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log and verify that database services are functioning.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is C:\Sybase\UnwiredPlatform)..

1. Check the upgrade log at *SUP_HOME*\InstallLogs\SMPIInstall.log, where *SUP_HOME* is the installation directory for Sybase Unwired Platform 2.2, down to include the UnwiredPlatform directory. .
A search for "error" should not find anything.
2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

Preparing for Unwired Server Upgrades

Bring data tier services back online.

In Failover Cluster Manager or Cluster Administrator, bring the resource group containing the database services back online.

See also

- *Upgrading the Second Data Tier* on page 148

Upgrading Unwired Server 2.2 to SAP Mobile Server 2.3

Upgrade all of the Unwired Server nodes in your cluster.

Perform this task on each Unwired Server node in the cluster, in this sequence:

CHAPTER 8: Performing a Full Upgrade

- First, upgrade the primary Unwired Server node.
- Next, upgrade the secondary Unwired Server node. If you have more than one secondary server, you may upgrade them in any order.

Note: Do not begin upgrading the secondary servers until the primary server has completely restarted all its services after being upgraded.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

2. *Accepting the End-User License Agreement*

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

3. *Selecting Upgrade Options*

Accept the installation directory, and enter user IDs and passwords for databases and the Sybase Unwired Platform administrator.

4. *Completing the Upgrade*

Review the installation summary and launch the installation process.

5. *Verifying the Upgrade*

Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

See also

- *Verifying the Upgraded Cluster* on page 155

Preparing to Upgrade

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

1. In the Windows Services control panel, check the startup type of all services with names that start with "Sybase." If any of these services are set to Manual, change the setting to Automatic.
2. Prevent backups from interfering.
You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.
3. Prevent virus scans from interfering.
You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.

4. Prevent system upgrades from interfering.
You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
5. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).
See [Intrusion Detection and Protection Requirements](#) in [Landscape Design and Integration](#).
6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired...”
8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
9. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Accepting the End-User License Agreement

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

1. Start the installer using one of these methods:
 - Insert the SAP Mobile Platform Runtime installation media.
 - Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

 - Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory, and enter user IDs and passwords for databases and the Sybase Unwired Platform administrator.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.
2. Click **Next** on the installer panel that lists components that will be upgraded.

You cannot make changes in this list.
3. On the database account information panel, enter the password for each database.

The default value at installation was "sql" for each of these databases.
4. Enter the current user ID for the Sybase Unwired Platform administrator in the first field. Enter the current password for the Sybase Unwired Platform administrator user in the first Password field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.

If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.
3. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is C:\Sybase\UnwiredPlatform)..

Note: Steps 3, 4, and 5 below can only be performed from an application server node.

1. Check the upgrade log at *SUP_HOME*\InstallLogs\SMPIInstall.log, where *SUP_HOME* is the installation directory for Sybase Unwired Platform 2.2, down to include the UnwiredPlatform directory. .

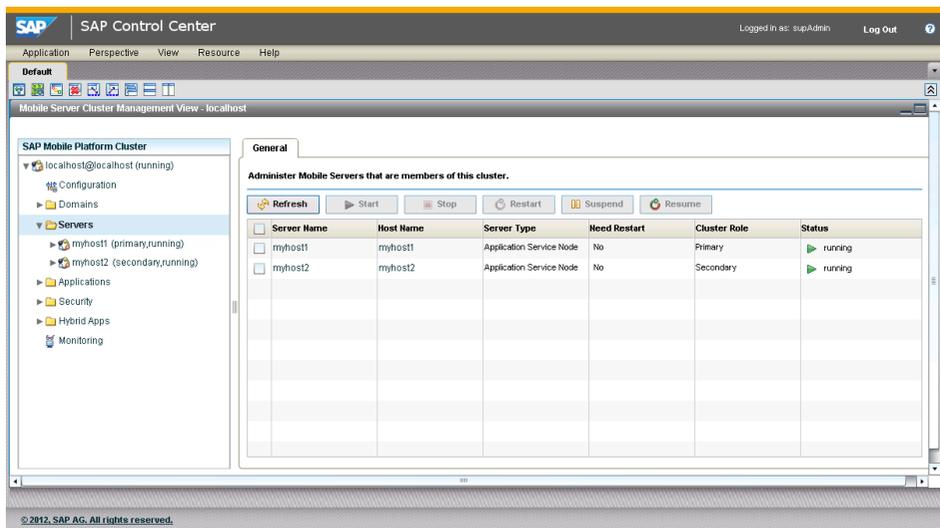
A search for "error" should not find anything.

2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *X.X* (not present on scale-out nodes)
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
3. Verify that you can log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
4. Verify that the node you just upgraded is accessible from SAP Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

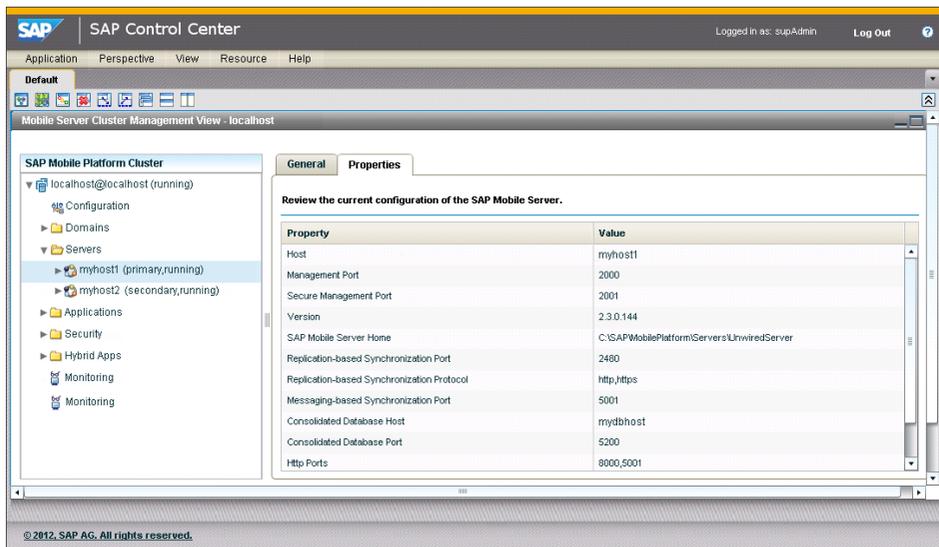
Verifying the Upgraded Cluster

When you have completed upgrading and verifying all the individual cluster nodes, verify the functionality of the full cluster to ensure that the upgrade process has been completely successful.

1. From an SAP Mobile Server node, choose **Start > (All) Programs > SAP > SAP Control Center**.
2. Make sure you can see both SAP Mobile Server nodes in the cluster.



3. Select each SAP Mobile Server node and inspect the settings.
All information should be filled in, with no error messages.



4. Take the resource group with the SAP Mobile Platform database services back online.

Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform to which you have just upgraded.

- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version.
 2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

See also

- *Upgrading Unwired Server 2.2 to SAP Mobile Server 2.3* on page 151

Upgrading a Microsoft Failover Cluster with Shared Hosts

Shut down the Unwired Platform 2.2 components in the cluster, then upgrade those nodes to SAP Mobile Platform 2.3 in a precise sequence.

Prerequisites

1. Verify that all nodes in your Unwired Platform cluster are at the same version.
2. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: `../misc/SMP23_Worksheets.zip`.
3. Back up your existing installation. See *Backup and Recovery of SAP Mobile Platform in System Administration*.

Task

1. *Preparing for the First Host Upgrade*

Shut down Unwired Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.

2. *Upgrading the First Host*

Run the Runtime installer on the system where the first Unwired Server and data tier to be upgraded are located.

3. *Preparing for the Second Host Upgrade*

Make the active node passive, go to the desktop of that node, and ensure that cluster resources are offline.

4. *Upgrading the Second Host*

Run the Runtime installer on the host where the second data tier and Unwired Server to be upgraded to SAP Mobile Platform 2.3 are located.

5. *Verifying the Upgraded Cluster*

Verify the functionality of the full cluster to ensure that the upgrade process has been completely successful.

Preparing for the First Host Upgrade

Shut down Unwired Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.

1. Make sure the active data tier node is on the same host server as the primary Unwired Server node.

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If it is not, use Failover Cluster Manager to move the cluster's File Server service to the other data tier node.

2. Shut down the secondary Unwired Server – shut down services in this order:
 - a. Sybase Unwired Server
 - b. Sybase Control Center *X.X*
3. Shut down the primary Unwired Server – shut down services in this order:
 - a. Sybase Unwired Server
 - b. Sybase Control Center *X.X*
4. Go to the desktop of the active node.
5. In Failover Cluster Manager on the active node, make sure the following Unwired Platform resources are offline:
 - Afaria Database service (available with Unwired Platform version 1.5.2 or earlier)
 - Sybase Unwired CacheDB service (named SAP Mobile Platform CacheDB service in SAP Mobile Platform 2.3)
 - Sybase Unwired ClusterDB service (named SAP Mobile Platform ClusterDB service in versions before SAP Mobile Platform 2.3)
 - Sybase Unwired LogDataDB service (named SAP Mobile Platform LogDataDB service in SAP Mobile Platform 2.3)
6. Proceed with the first host upgrade on the active node.

Upgrading the First Host

Run the Runtime installer on the system where the first Unwired Server and data tier to be upgraded are located.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

2. *Accepting the End-User License Agreement*

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

3. *Selecting Upgrade Options*

Accept the installation directory and enter passwords for databases and the Sybase Unwired Platform administrator.

4. *Completing the Upgrade*

Review the installation summary and launch the installation process.

5. *Verifying the Upgrade*

Before proceeding, verify that the upgrade is successful.

See also

- *Preparing for the Second Host Upgrade* on page 161

Preparing to Upgrade

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

1. In the Windows Services control panel, check the startup type of all services with names that start with "Sybase." If any of these services are set to Manual, change the setting to Automatic.
2. Prevent backups from interfering.
You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.
3. Prevent virus scans from interfering.
You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
4. Prevent system upgrades from interfering.
You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
5. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).
See [Intrusion Detection and Protection Requirements in Landscape Design and Integration](#).
6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: "Sybase Control Center" and all services with names that begin with "Sybase Unwired..."
8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
9. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Accepting the End-User License Agreement

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

1. Start the installer using one of these methods:

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- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases and the Sybase Unwired Platform administrator.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. Click **Next** on the installer panel that lists components that will be upgraded.

You cannot make changes in this list.

3. On the database account information panel, enter the password for each database.

The default value at installation was "sql" for each of these databases.

4. Enter the current user ID for the Sybase Unwired Platform administrator in the first field. Enter the current password for the Sybase Unwired Platform administrator user in the first Password field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.
If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.
3. Click **Finish** on the last installer panel, indicating successful completion.
4. If you changed the startup type of any services from Manual to Automatic in the *Preparing to Upgrade* task for this upgrade installer run, change the startup type for those services back to Manual before continuing.

Verifying the Upgrade

Before proceeding, verify that the upgrade is successful.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is C:\Sybase\UnwiredPlatform)..

1. Check the upgrade log at *SUP_HOME*\InstallLogs\SMPInstall.log, where *SUP_HOME* is the installation directory for Sybase Unwired Platform 2.2, down to include the UnwiredPlatform directory. .
A search for "error" should not find anything.
2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB
 - SAP Mobile Server
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Control Center *X.X*
3. Verify that the SAP Mobile Server node you just upgraded is accessible from SAP Control Center and that you can see the properties of that node.

Preparing for the Second Host Upgrade

Make the active node passive, go to the desktop of that node, and ensure that cluster resources are offline.

1. Stop the SAP Mobile Platform services on the node that you just upgraded.
2. Fail over to the other node to make it active.
3. In Failover Cluster Manager or Cluster Administrator, make sure the following Unwired Platform/SAP Mobile Platform resources are offline:

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- Afaria Database service (available with Unwired Platform version 1.5.2 or earlier)
 - Sybase Unwired CacheDB service (named SAP Mobile Platform CacheDB service in SAP Mobile Platform 2.3)
 - Sybase Unwired ClusterDB service (named SAP Mobile Platform ClusterDB service in SAP Mobile Platform 2.3)
 - Sybase Unwired LogDataDB service (named SAP Mobile Platform LogDataDB service in SAP Mobile Platform 2.3)
 - Sybase Unwired SampleDB service (named SAP Mobile Platform SampleDB in SAP Mobile Platform 2.3; not present in Enterprise Server Edition)
4. Go to the desktop of the new active node to begin the upgrade process on the second host.

See also

- *Upgrading the First Host* on page 158

Upgrading the Second Host

Run the Runtime installer on the host where the second data tier and Unwired Server to be upgraded to SAP Mobile Platform 2.3 are located.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

2. *Accepting the End-User License Agreement*

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

3. *Selecting Upgrade Options*

Accept the installation directory and enter passwords for databases and the Sybase Unwired Platform administrator.

4. *Completing the Upgrade*

Review the installation summary and launch the installation process.

5. *Verifying the Upgrade*

Before proceeding, verify that the upgrade is successful.

See also

- *Verifying the Upgraded Cluster* on page 165

Preparing to Upgrade

Ensure that the host on which you are upgrading Sybase Unwired Platform 2.2 to SAP Mobile Platform 2.3 is ready for you to begin the upgrade.

1. In the Windows Services control panel, check the startup type of all services with names that start with "Sybase." If any of these services are set to Manual, change the setting to Automatic.
2. Prevent backups from interfering.
You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.
3. Prevent virus scans from interfering.
You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
4. Prevent system upgrades from interfering.
You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
5. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).
See [Intrusion Detection and Protection Requirements in Landscape Design and Integration](#).
6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: "Sybase Control Center" and all services with names that begin with "Sybase Unwired..."
8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
9. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Accepting the End-User License Agreement

Start the SAP Mobile Platform Runtime installer and accept the end user-license agreement.

1. Start the installer using one of these methods:
 - Insert the SAP Mobile Platform Runtime installation media.
 - Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases and the Sybase Unwired Platform administrator.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. Click **Next** on the installer panel that lists components that will be upgraded.
You cannot make changes in this list.
3. On the database account information panel, enter the password for each database.
The default value at installation was "sql" for each of these databases.
4. Enter the current user ID for the Sybase Unwired Platform administrator in the first field.
Enter the current password for the Sybase Unwired Platform administrator user in the first Password field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.

If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.

3. Click **Finish** on the last installer panel, indicating successful completion.
4. If you changed the startup type of any services from Manual to Automatic in the *Preparing to Upgrade* task for this upgrade installer run, change the startup type for those services back to Manual before continuing.

Verifying the Upgrade

Before proceeding, verify that the upgrade is successful.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is C:\Sybase\UnwiredPlatform)..

1. Check the upgrade log at *SUP_HOME*\InstallLogs\SMPIInstall.log, where *SUP_HOME* is the installation directory for Sybase Unwired Platform 2.2, down to include the UnwiredPlatform directory. .

A search for "error" should not find anything.

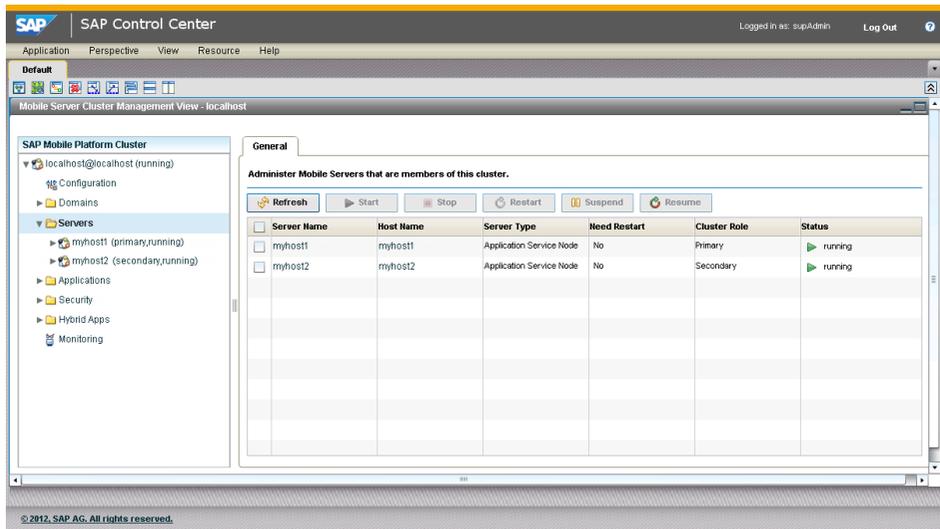
2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB
 - SAP Mobile Server
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Control Center *X.X*
3. Verify that the SAP Mobile Server node you just upgraded is accessible from SAP Control Center and that you can see the properties of that node.

Verifying the Upgraded Cluster

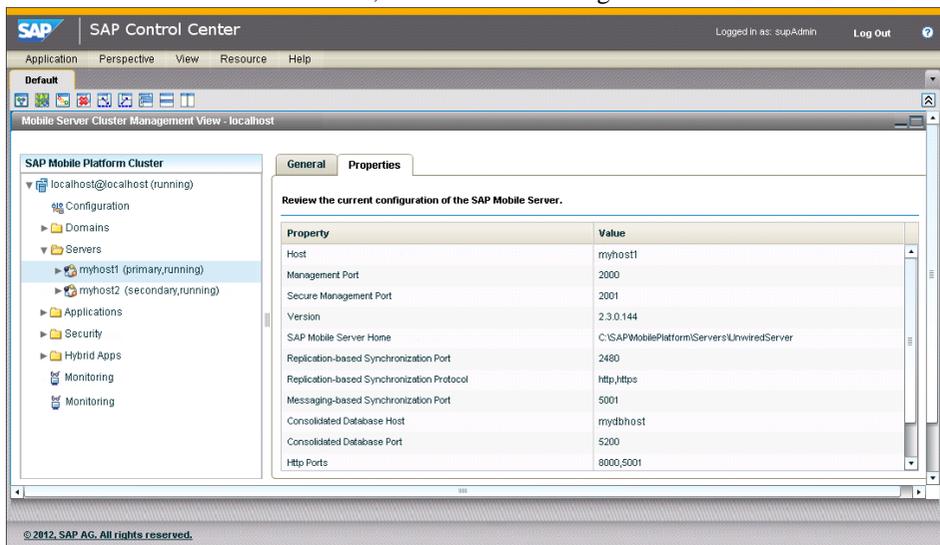
Verify the functionality of the full cluster to ensure that the upgrade process has been completely successful.

1. From an SAP Mobile Server node, choose **Start > (All) Programs > SAP > SAP Control Center**.
2. Make sure you can see both SAP Mobile Server nodes in the cluster.

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3. Select each SAP Mobile Server node and inspect the settings. All information should be filled in, with no error messages.



4. Take the resource group with the SAP Mobile Platform database services back online.

Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform to which you have just upgraded.

- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version.
 2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

See also

- *Upgrading the Second Host* on page 162

Upgrading Relay Servers

To upgrade Relay Servers that were installed with Unwired Platform version 2.2, you must uninstall the Relay Server components on Web server hosts, and replace them with the components supplied on the SAP Mobile Platform Runtime version 2.3 installation media.

When you upgrade an Unwired Platform system from version 2.2 to SAP Mobile Platform version 2.3, upgrading existing Relay Servers (from version 12.0.1.3769 to 12.0.1.3817) is optional.

1. Shut down the Relay Server.
 - a) Shut down the Web server application.
 - b) Shut down the Relay Server State Manager service.
2. Save the existing Relay Server configuration file (`rs.config`) for use with the new Relay Server components.
3. Delete all Relay Server components installed on the Web server host.
 - On an IIS host, delete the `wwwroot\ias_relay_server\` directory, including all files and subdirectories.
 - On an Apache host, delete all Relay Server libraries and executables in the `modules\` directory, and all Relay Server components installed elsewhere on the Apache host.

Performing a Support Package Upgrade

You perform a support package upgrade when you upgrade within the same major version point number. For example, upgrading from version 2.3.2 to version 2.3.3.

Note: If for some reason the support package upgrade cannot be successfully completed, you do not need to restore the previous installation before rerunning the upgrade. After you have resolved the issue that blocked the upgrade, simply rerun the upgrade installer on the same system.

Upgrading a Single-Server Installation

On the system where the single-server installation is installed, shut down all SAP Mobile Platform services and run the support package upgrade installer.

Prerequisites

1. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: `../misc/SMP23_Worksheets.zip`.
2. Back up your existing installation. See *Backup and Recovery of SAP Mobile Platform in System Administration*.

Task

1. *Preparing to Upgrade*
Ensure that the host on which you are upgrading SAP Mobile Platform is ready for you to begin the upgrade.
2. *Starting the Support Package Upgrade*
Download and start the SAP Mobile Platform Runtime service package upgrade installer.
3. *Selecting Upgrade Options*
Accept the installation directory and enter passwords for databases and the SAP Mobile Platform administrator.
4. *Completing the Upgrade*
Review the installation summary and launch the support package installation process.

5. *Verifying the Upgrade*

Check for errors in the upgrade log, and verify that key services are functioning, that you can log into SAP Control Center, and that you can see the properties of the upgraded SAP Mobile Server.

Preparing to Upgrade

Ensure that the host on which you are upgrading SAP Mobile Platform is ready for you to begin the upgrade.

1. Prevent backups from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from backups or temporarily disable them.

2. Prevent system upgrades from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from system upgrades or temporarily disable them.

3. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

4. Verify that you have Administrator privileges on the upgrade target host.

5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

7. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Starting the Support Package Upgrade

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
 - On earlier supported versions of Windows, double-click the `setup.exe` file.
-

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases and the SAP Mobile Platform administrator.

The directory below where the existing installation was detected is referred to as `SMP_HOME` in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. On the database account information panel, enter the password for each database, then click **Next**.

The default value at installation was "sql" for each of these databases.

3. Enter the current password for the SAP Mobile Platform user in the first Password field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the support package installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.

If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.

3. Click **Finish** on the last installer panel, indicating successful completion.

4. If you changed the startup type of any services from Manual to Automatic in the *Preparing to Upgrade* task for this upgrade installer run, change the startup type for those services back to Manual before continuing.

Verifying the Upgrade

Check for errors in the upgrade log, and verify that key services are functioning, that you can log into SAP Control Center, and that you can see the properties of the upgraded SAP Mobile Server.

In the location of the log files referenced below, *SMP_HOME* is the location of the earlier installation that you upgraded (default is `C:\SAP\MobilePlatform`).

1. Check the upgrade log files.

A search for "error" in these files should not find anything:

- Installer log file, *SMP_HOME* \InstallLogs \SMPUpgrade.YYYY.MM.DDTHH.MM.SS.log
- Upgrade error log file, *SMP_HOME* \InstallLogs\upgrade \upgrade.YYYY.MM.DDTHH.MM.SS.log
- Component log files, *SMP_HOME* \InstallLogs\upgrade \upgrade.component_name.err

2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:

- SAP Mobile Server
- SAP Control Center *X.X*
- SAP Mobile Platform CacheDB
- SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)

3. Verify that you can log in to SAP Control Center.

From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.

4. Verify that the node you just upgraded is accessible from SAP Control Center and that you can see the properties of that node.

Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform to which you have just upgraded.

- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version.

2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

Upgrading a Simple Load-Balancing Cluster

Shut down the SAP Mobile Platform components in the cluster, then run the service package upgrade on those nodes in a precise sequence.

Prerequisites

1. Verify that all nodes in your SAP Mobile Platform cluster are at the same version.
2. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: `../misc/SMP23_Worksheets.zip`.
3. Back up your existing installation. See *Backup and Recovery of SAP Mobile Platform in System Administration*.

Task

1. *Preparing Cluster Nodes for the Upgrade*
Shut down SAP Mobile Platform services on cluster nodes in an exact sequence.
2. *Upgrading the Data Tier*
Run the Runtime support package upgrade installer on the system where the data tier to be upgraded is located.
3. *Upgrading SAP Mobile Server*
Upgrade all of the SAP Mobile Server nodes in your cluster.
4. *Verifying the Upgraded Cluster*
Verify that you can see all SAP Mobile Server nodes in the cluster in SAP Control Center, and that you can inspect the settings for each.

Preparing Cluster Nodes for the Upgrade

Shut down SAP Mobile Platform services on cluster nodes in an exact sequence.

1. Shut down the SAP Mobile Server service on each scale-out node.
2. Shut down the secondary SAP Mobile Server – shut down services in this order:
 - a. SAP Mobile Server

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- b. SAP Control Center *X.X*
 - c. SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 3. Shut down the primary SAP Mobile Server – shut down services in this order:
 - a. SAP Mobile Server
 - b. SAP Control Center *X.X*
 - c. SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 4. Shut down the data tier server – shut down these services, in any order:
 - SAP Mobile Platform CacheDB service
 - SAP Mobile Platform ClusterDB service
 - SAP Mobile Platform LogDataDB service

Upgrading the Data Tier

Run the Runtime support package upgrade installer on the system where the data tier to be upgraded is located.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading SAP Mobile Platform is ready for you to begin the upgrade.

2. *Starting the Support Package Upgrade*

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

3. *Selecting Upgrade Options*

Accept the installation directory and enter database passwords.

4. *Completing the Upgrade*

Review the installation summary and launch the support package installation process.

5. *Verifying the Upgrade*

Check for errors in the upgrade log and verify that database services are functioning.

See also

- *Upgrading SAP Mobile Server* on page 177

Preparing to Upgrade

Ensure that the host on which you are upgrading SAP Mobile Platform is ready for you to begin the upgrade.

1. Shut down all SAP Mobile Server nodes in the cluster.
2. Prevent backups from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from backups or temporarily disable them.

3. Prevent system upgrades from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from system upgrades or temporarily disable them.

4. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

5. Verify that you have Administrator privileges on the upgrade target host.

6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

8. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Starting the Support Package Upgrade

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter database passwords.

The directory below where the existing installation was detected is referred to as *SMP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. On the database account information panel, enter the password for each database.

The default value at installation was "sql" for each of these databases.

Completing the Upgrade

Review the installation summary and launch the support package installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.
If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.
3. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log and verify that database services are functioning.

In the location of the log files referenced below, *SMP_HOME* is the location of the earlier installation that you upgraded (default is C:\SAP\MobilePlatform)..

1. Check the upgrade log files.
A search for "error" in these files should not find anything:
 - Installer log file, *SMP_HOME* \InstallLogs
 SMPUpgrade.YYYY.MM.DDTHH.MM.SS.log
 - Upgrade error log file, *SMP_HOME* \InstallLogs\upgrade
 upgrade.YYYY.MM.DDTHH.MM.SS.log
 - Component log files, *SMP_HOME* \InstallLogs\upgrade
 upgrade.component_name.err
2. Verify that these services are started:

- SAP Mobile Platform CacheDB
- SAP Mobile Platform ClusterDB
- SAP Mobile Platform LogDataDB

Upgrading SAP Mobile Server

Upgrade all of the SAP Mobile Server nodes in your cluster.

Perform this task on each SAP Mobile Server node in the cluster, in this sequence:

- First, upgrade the primary SAP Mobile Server node.
- Next, upgrade the secondary SAP Mobile Server node. If you have more than one secondary server, you may upgrade them in any order.

Note: Do not begin upgrading the secondary servers until the primary server has completely restarted all its services after being upgraded.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading SAP Mobile Server is ready for you to begin the support package upgrade.

2. *Starting the Support Package Upgrade*

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

3. *Selecting Upgrade Options*

Accept the installation directory, and enter user IDs and passwords for databases and the SAP Mobile Platform administrator.

4. *Completing the Upgrade*

Review the installation summary and launch the support package installation process.

5. *Verifying the Upgrade*

Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

See also

- *Upgrading the Data Tier* on page 174
- *Verifying the Upgraded Cluster* on page 180

Preparing to Upgrade

Ensure that the host on which you are upgrading SAP Mobile Server is ready for you to begin the support package upgrade.

1. Prevent backups from interfering.

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You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.

2. Prevent system upgrades from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from system upgrades or temporarily disable them.

3. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See *Intrusion Detection and Protection Requirements in Landscape Design and Integration*.

4. Verify that you have Administrator privileges on the upgrade target host.

5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

7. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Starting the Support Package Upgrade

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

Selecting Upgrade Options

Accept the installation directory, and enter user IDs and passwords for databases and the SAP Mobile Platform administrator.

The directory below where the existing installation was detected is referred to as *SMP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. On the database account information panel, enter the password for each database.

The default value at installation was "sql" for each of these databases.

3. Enter the current password for the SAP Mobile Platform user in the first Password field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the support package installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.

If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.

3. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

In the location of the log files referenced below, *SMP_HOME* is the location of the earlier installation that you upgraded (default is C:\SAP\MobilePlatform)..

Note: Steps 3, 4, and 5 below can only be performed from an application server node.

1. Check the upgrade log files.

A search for "error" in these files should not find anything:

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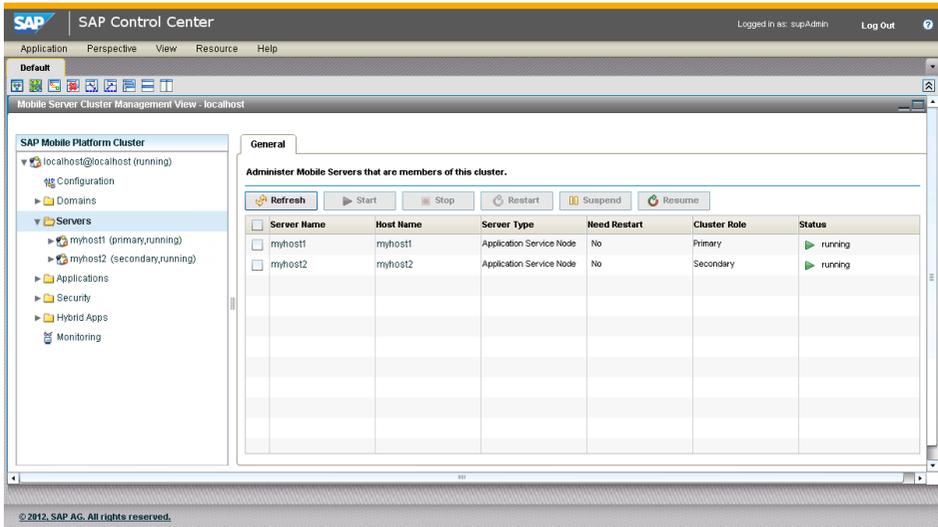
- Installer log file, *SMP_HOME* \InstallLogs \SMPUpgrade.YYYY.MM.DDTHH.MM.SS.log
 - Upgrade error log file, *SMP_HOME* \InstallLogs\upgrade \upgrade.YYYY.MM.DDTHH.MM.SS.log
 - Component log files, *SMP_HOME* \InstallLogs\upgrade \upgrade.component_name.err
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *X.X* (not present on scale-out nodes)
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
 3. Verify that you can log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
 4. Verify that the node you just upgraded is accessible from SAP Control Center and that you can see the properties of that node.
 5. Verify that you can connect to the data tier.

Verifying the Upgraded Cluster

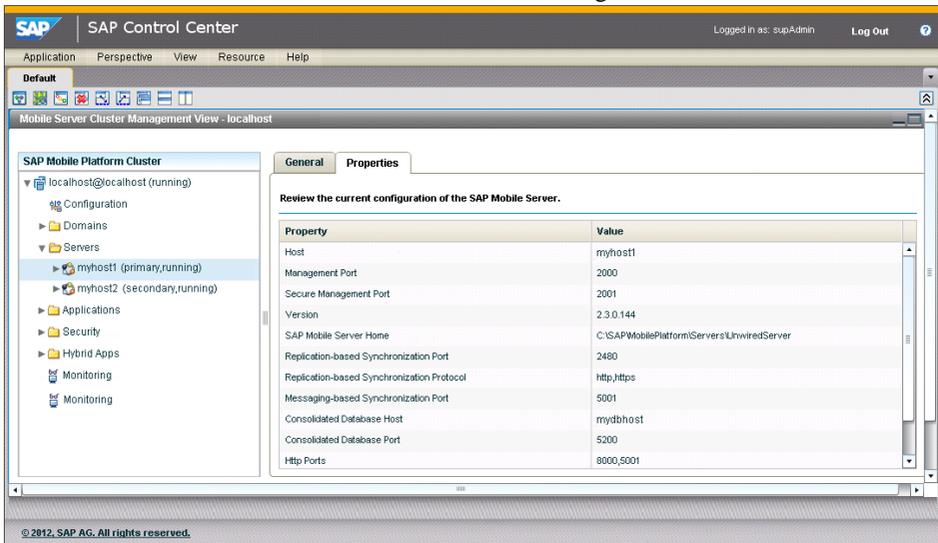
Verify that you can see all SAP Mobile Server nodes in the cluster in SAP Control Center, and that you can inspect the settings for each.

Note: Steps 1, 2, and 3 can only be performed from an application server node.

1. From an SAP Mobile Server node, choose **Start > (All) Programs > SAP > SAP Control Center**.
2. Make sure you can see both SAP Mobile Server nodes in the cluster.



3. Select each SAP Mobile Server node and inspect the settings. All information should be filled in, with no error messages.



Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform to which you have just upgraded.

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- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version.
 2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

See also

- *Upgrading SAP Mobile Server* on page 177

Upgrading a Standard Microsoft Failover Cluster

Shut down the SAP Mobile Platform components in the cluster, then run the service package upgrade on those nodes in a precise sequence.

Prerequisites

1. Verify that all nodes in your SAP Mobile Platform cluster are at the same version.
2. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SMP23_Worksheets.zip*.
3. Back up your existing installation. See *Backup and Recovery of SAP Mobile Platform in System Administration*.

Task

1. *Preparing for the First Data Tier Upgrade*

Shut down SAP Mobile Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.

2. *Upgrading the First Data Tier*

Run the Runtime service package upgrade installer on the system where the first data tier to be upgraded is located.

3. *Preparing for the Second Data Tier Upgrade*

Make the passive node active, go to the desktop of that node, and ensure that cluster resources are offline.

4. *Upgrading the Second Data Tier*

Run the Runtime support package upgrade installer on the system where the second data tier to be upgraded is located.

5. *Preparing for SAP Mobile Server Upgrades*

Bring data tier services back online.

6. *Upgrading SAP Mobile Server*

Upgrade all of the SAP Mobile Server nodes in your cluster.

7. *Verifying the Upgraded Cluster*

When you have completed upgrading and verifying all the individual cluster nodes, verify the functionality of the full cluster to ensure that the support package upgrade process has been completely successful.

Preparing for the First Data Tier Upgrade

Shut down SAP Mobile Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.

1. Shut down the SAP Mobile Server service on each scale-out node.
2. Shut down the secondary SAP Mobile Server – shut down services in this order:
 - a. SAP Mobile Server
 - b. SAP Control Center *X.X*
 - c. SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
3. Shut down the primary SAP Mobile Server – shut down services in this order:
 - a. SAP Mobile Server
 - b. SAP Control Center *X.X*
 - c. SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
4. In Failover Cluster Manager or Cluster Administrator on the active node, make sure the following SAP Mobile Platform resources are offline:
 - Afaria Database service (available with Unwired Platform version 1.5.2 or earlier)
 - SAP Mobile Platform CacheDB service
 - SAP Mobile Platform ClusterDB service
 - SAP Mobile Platform LogDataDB service

Upgrading the First Data Tier

Run the Runtime service package upgrade installer on the system where the first data tier to be upgraded is located.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading SAP Mobile Platform is ready for you to begin the upgrade.

2. *Starting the Support Package Upgrade*

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

3. *Selecting Upgrade Options*

Accept the installation directory and enter passwords for databases.

4. *Completing the Upgrade*

Review the installation summary and launch the support package installation process.

5. *Verifying the Upgrade*

Check for errors in the upgrade log and verify that database services are functioning.

See also

- *Preparing for the Second Data Tier Upgrade* on page 186

Preparing to Upgrade

Ensure that the host on which you are upgrading SAP Mobile Platform is ready for you to begin the upgrade.

1. Shut down all SAP Mobile Server nodes in the cluster.
2. Prevent backups from interfering.
You can either exclude the existing SAP Mobile Platform installation directory from backups or temporarily disable them.
3. Prevent system upgrades from interfering.
You can either exclude the existing SAP Mobile Platform installation directory from system upgrades or temporarily disable them.
4. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).
See [Intrusion Detection and Protection Requirements](#) in [Landscape Design and Integration](#).
5. Verify that you have Administrator privileges on the upgrade target host.
6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”
7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Starting the Support Package Upgrade

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.**Selecting Upgrade Options**

Accept the installation directory and enter passwords for databases.

The directory below where the existing installation was detected is referred to as `SMP_HOME` in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. On the database account information panel, enter the password for each database.

The default value at installation was "sql" for each of these databases.

Completing the Upgrade

Review the installation summary and launch the support package installation process.

- 1.** On the summary information page, click **Upgrade**.
- 2.** Click **Yes** to continue when prompted about backup.

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If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.

3. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log and verify that database services are functioning.

In the location of the log files referenced below, *SMP_HOME* is the location of the earlier installation that you upgraded (default is C:\SAP\MobilePlatform)..

1. Check the upgrade log files.

A search for "error" in these files should not find anything:

- Installer log file, *SMP_HOME* \InstallLogs \SMPUpgrade.YYYY.MM.DDTHH.MM.SS.log
- Upgrade error log file, *SMP_HOME* \InstallLogs\upgrade \upgrade.YYYY.MM.DDTHH.MM.SS.log
- Component log files, *SMP_HOME* \InstallLogs\upgrade \upgrade.component_name.err

2. Verify that these services are started:

- SAP Mobile Platform CacheDB
- SAP Mobile Platform ClusterDB
- SAP Mobile Platform LogDataDB

Preparing for the Second Data Tier Upgrade

Make the passive node active, go to the desktop of that node, and ensure that cluster resources are offline.

1. While you are still on the active data tier node that you just upgraded, fail over to the other node make it active.
2. Go to the desktop of the new active node to begin the upgrade process on the second data tier.
3. In Failover Cluster Manager or Cluster Administrator on the active node, make sure the following SAP Mobile Platform resources are offline:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

See also

- *Upgrading the First Data Tier* on page 183

Upgrading the Second Data Tier

Run the Runtime support package upgrade installer on the system where the second data tier to be upgraded is located.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading SAP Mobile Platform is ready for you to begin the upgrade.

2. *Starting the Support Package Upgrade*

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

3. *Selecting Upgrade Options*

Accept the installation directory and enter passwords for databases.

4. *Completing the Upgrade*

Review the installation summary and launch the support package installation process.

5. *Verifying the Upgrade*

Check for errors in the upgrade log and verify that database services are functioning.

See also

- *Preparing for SAP Mobile Server Upgrades* on page 189

Preparing to Upgrade

Ensure that the host on which you are upgrading SAP Mobile Platform is ready for you to begin the upgrade.

1. Shut down all SAP Mobile Server nodes in the cluster.

2. Prevent backups from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from backups or temporarily disable them.

3. Prevent system upgrades from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from system upgrades or temporarily disable them.

4. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

See *Intrusion Detection and Protection Requirements in Landscape Design and Integration*.

5. Verify that you have Administrator privileges on the upgrade target host.

6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

CHAPTER 9: Performing a Support Package Upgrade

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Starting the Support Package Upgrade

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases.

The directory below where the existing installation was detected is referred to as `SMP_HOME` in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. On the database account information panel, enter the password for each database.
The default value at installation was "sql" for each of these databases.

Completing the Upgrade

Review the installation summary and launch the support package installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.
If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.
3. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log and verify that database services are functioning.

In the location of the log files referenced below, *SMP_HOME* is the location of the earlier installation that you upgraded (default is C:\SAP\MobilePlatform)..

1. Check the upgrade log files.
A search for "error" in these files should not find anything:
 - Installer log file, *SMP_HOME* \InstallLogs \SMPUpgrade.YYYY.MM.DDTHH.MM.SS.log
 - Upgrade error log file, *SMP_HOME* \InstallLogs\upgrade \upgrade.YYYY.MM.DDTHH.MM.SS.log
 - Component log files, *SMP_HOME* \InstallLogs\upgrade \upgrade.component_name.err
2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB

Preparing for SAP Mobile Server Upgrades

Bring data tier services back online.

In Failover Cluster Manager or Cluster Administrator, bring the resource group containing the database services back online.

See also

- *Upgrading the Second Data Tier* on page 187

Upgrading SAP Mobile Server

Upgrade all of the SAP Mobile Server nodes in your cluster.

Perform this task on each SAP Mobile Server node in the cluster, in this sequence:

- First, upgrade the primary SAP Mobile Server node.
- Next, upgrade the secondary SAP Mobile Server node. If you have more than one secondary server, you may upgrade them in any order.

Note: Do not begin upgrading the secondary servers until the primary server has completely restarted all its services after being upgraded.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading SAP Mobile Server is ready for you to begin the support package upgrade.

2. *Starting the Support Package Upgrade*

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

3. *Selecting Upgrade Options*

Accept the installation directory, and enter user IDs and passwords for databases and the SAP Mobile Platform administrator.

4. *Completing the Upgrade*

Review the installation summary and launch the support package installation process.

5. *Verifying the Upgrade*

Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

See also

- *Verifying the Upgraded Cluster* on page 193

Preparing to Upgrade

Ensure that the host on which you are upgrading SAP Mobile Server is ready for you to begin the support package upgrade.

1. Prevent backups from interfering.

You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.

2. Prevent system upgrades from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from system upgrades or temporarily disable them.

3. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See *Intrusion Detection and Protection Requirements in Landscape Design and Integration*.
4. Verify that you have Administrator privileges on the upgrade target host.
5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
7. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Starting the Support Package Upgrade

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

CHAPTER 9: Performing a Support Package Upgrade

2. On the installer welcome page, click **Next**.

Selecting Upgrade Options

Accept the installation directory, and enter user IDs and passwords for databases and the SAP Mobile Platform administrator.

The directory below where the existing installation was detected is referred to as *SMP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. On the database account information panel, enter the password for each database. The default value at installation was "sql" for each of these databases.
3. Enter the current password for the SAP Mobile Platform user in the first Password field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the support package installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.
If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.
3. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to SAP Control Center, and that you can see the properties of the SAP Mobile Server and connect to the data tier.

In the location of the log files referenced below, *SMP_HOME* is the location of the earlier installation that you upgraded (default is C:\SAP\MobilePlatform)..

Note: Steps 3, 4, and 5 below can only be performed from an application server node.

1. Check the upgrade log files.
A search for "error" in these files should not find anything:
 - Installer log file, *SMP_HOME* \InstallLogs
 SMPUpgrade.YYYY.MM.DDTHH.MM.SS.log
 - Upgrade error log file, *SMP_HOME* \InstallLogs\upgrade
 upgrade.YYYY.MM.DDTHH.MM.SS.log

- Component log files, `SMP_HOME \InstallLogs\upgrade\upgrade.component_name.err`
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
 - SAP Control Center *XX* (not present on scale-out nodes)
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Mobile Server
 3. Verify that you can log in to SAP Control Center.
From Windows, select **Start > (All) Programs > SAP > SAP Control Center**.
 4. Verify that the node you just upgraded is accessible from SAP Control Center and that you can see the properties of that node.
 5. Verify that you can connect to the data tier.

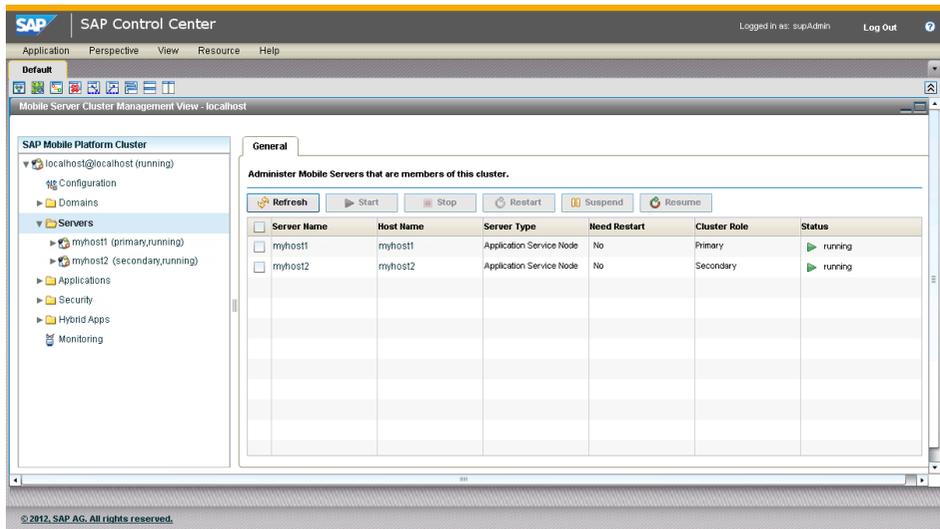
Verifying the Upgraded Cluster

When you have completed upgrading and verifying all the individual cluster nodes, verify the functionality of the full cluster to ensure that the support package upgrade process has been completely successful.

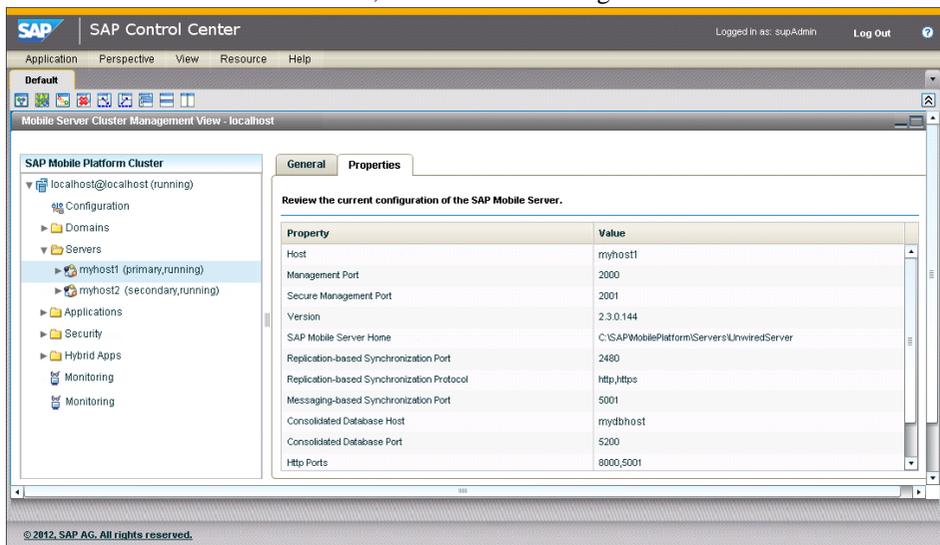
Note: Steps 1, 2, and 3 can only be performed from an application server node.

1. Take the resource group with the SAP Mobile Platform database services back online.
2. From an SAP Mobile Server node, choose **Start > (All) Programs > SAP > SAP Control Center**.
3. Make sure you can see both SAP Mobile Server nodes in the cluster.

CHAPTER 9: Performing a Support Package Upgrade



4. Select each SAP Mobile Server node and inspect the settings. All information should be filled in, with no error messages.



See also

- *Upgrading SAP Mobile Server* on page 190

Upgrading a Microsoft Failover Cluster with Shared Hosts

Shut down the SAP Mobile Platform components in the cluster, then run the service package upgrade on those nodes in a precise sequence.

Prerequisites

1. Verify that all nodes in your SAP Mobile Platform cluster are at the same version.
2. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: `../misc/SMP23_Worksheets.zip`.
3. Back up your existing installation. See *Backup and Recovery of SAP Mobile Platform in System Administration*.

Task

1. *Preparing for the First Host Upgrade*

Shut down SAP Mobile Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.

2. *Upgrading the First Host*

Run the Runtime service package upgrade installer on the system where the first SAP Mobile Server and data tier to be upgraded are located.

3. *Preparing for the Second Host Upgrade*

Make the active node passive, go to the desktop of that node, and ensure that cluster resources are offline.

4. *Upgrading the Second Host*

Run the Runtime service package upgrade installer on the host where the second data tier and SAP Mobile Server to be upgraded are located.

5. *Verifying the Upgraded Cluster*

Verify the functionality of the full cluster to ensure that the service package upgrade process has been completely successful.

Preparing for the First Host Upgrade

Shut down SAP Mobile Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.

1. Make sure the active data tier node is on the same host server as the primary SAP Mobile Server node.

CHAPTER 9: Performing a Support Package Upgrade

If it is not, use Failover Cluster Manager to move the cluster's File Server service to the other data tier node.

2. Shut down the secondary SAP Mobile Server – shut down services in this order:
 - a. SAP Mobile Server
 - b. SAP Control Center *X.X*
3. Shut down the primary SAP Mobile Server – shut down services in this order:
 - a. SAP Mobile Server
 - b. SAP Control Center *X.X*
4. Go to the desktop of the active node.
5. In Failover Cluster Manager on the active node, make sure the following SAP Mobile Platform resources are offline:
 - Afaria Database service (available with Unwired Platform version 1.5.2 or earlier)
 - SAP Mobile Platform CacheDB service
 - SAP Mobile Platform ClusterDB service
 - SAP Mobile Platform LogDataDB service
6. Proceed with the first host upgrade on the active node.

Upgrading the First Host

Run the Runtime service package upgrade installer on the system where the first SAP Mobile Server and data tier to be upgraded are located.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading SAP Mobile Platform is ready for you to begin the upgrade.

2. *Starting the Support Package Upgrade*

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

3. *Selecting Upgrade Options*

Accept the installation directory and enter passwords for databases and the SAP Mobile Platform administrator.

4. *Completing the Upgrade*

Review the installation summary and launch the support package installation process.

5. *Verifying the Upgrade*

Before proceeding, verify that the service package upgrade is successful.

See also

- *Preparing for the Second Host Upgrade* on page 199

Preparing to Upgrade

Ensure that the host on which you are upgrading SAP Mobile Platform is ready for you to begin the upgrade.

1. Prevent backups from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from backups or temporarily disable them.

2. Prevent system upgrades from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from system upgrades or temporarily disable them.

3. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

*See **Intrusion Detection and Protection Requirements** in **Landscape Design and Integration**.*

4. Verify that you have Administrator privileges on the upgrade target host.

5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

7. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Starting the Support Package Upgrade

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as C:\temp. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).

CHAPTER 9: Performing a Support Package Upgrade

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases and the SAP Mobile Platform administrator.

The directory below where the existing installation was detected is referred to as `SMP_HOME` in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. On the database account information panel, enter the password for each database. The default value at installation was "sql" for each of these databases.
3. Enter the current password for the SAP Mobile Platform user in the first Password field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the support package installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup. If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.
3. Click **Finish** on the last installer panel, indicating successful completion.
4. If you changed the startup type of any services from Manual to Automatic in the *Preparing to Upgrade* task for this upgrade installer run, change the startup type for those services back to Manual before continuing.

Verifying the Upgrade

Before proceeding, verify that the service package upgrade is successful.

In the location of the log files referenced below, *SMP_HOME* is the location of the earlier installation that you upgraded (default is C:\SAP\MobilePlatform)..

1. Check the upgrade log files.

A search for "error" in these files should not find anything:

- Installer log file, *SMP_HOME* \InstallLogs
 \SMFUpgrade.YYYY.MM.DDTHH.MM.SS.log
- Upgrade error log file, *SMP_HOME* \InstallLogs\upgrade
 \upgrade.YYYY.MM.DDTHH.MM.SS.log
- Component log files, *SMP_HOME* \InstallLogs\upgrade
 \upgrade.component_name..err

2. Verify that these services are started:

- SAP Mobile Platform CacheDB
- SAP Mobile Platform ClusterDB
- SAP Mobile Platform LogDataDB
- SAP Mobile Server
- SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
- SAP Control Center *X.X*

3. Verify that the SAP Mobile Server node you just upgraded is accessible from SAP Control Center and that you can see the properties of that node.

Preparing for the Second Host Upgrade

Make the active node passive, go to the desktop of that node, and ensure that cluster resources are offline.

1. Stop the SAP Mobile Platform services on the node that you just upgraded.
2. Fail over to the other node to make it active.
3. In Failover Cluster Manager or Cluster Administrator, make sure the following Unwired Platform/SAP Mobile Platform resources are offline:
 - Afaria Database service (available with Unwired Platform version 1.5.2 or earlier)
 - SAP Mobile Platform CacheDB service
 - SAP Mobile Platform ClusterDB service
 - SAP Mobile Platform LogDataDB service
 - SAP Mobile Platform SampleDB service; not present in Enterprise Server Edition)
4. Go to the desktop of the new active node to begin the upgrade process on the second host.

See also

- *Upgrading the First Host* on page 196

Upgrading the Second Host

Run the Runtime service package upgrade installer on the host where the second data tier and SAP Mobile Server to be upgraded are located.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading SAP Mobile Server is ready for you to begin the support package upgrade.

2. *Starting the Support Package Upgrade*

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

3. *Selecting Upgrade Options*

Accept the installation directory and enter passwords for databases and the SAP Mobile Platform administrator.

4. *Completing the Upgrade*

Review the installation summary and launch the support package installation process.

5. *Verifying the Upgrade*

Before proceeding, verify that the service package upgrade is successful.

See also

- *Verifying the Upgraded Cluster* on page 203

Preparing to Upgrade

Ensure that the host on which you are upgrading SAP Mobile Server is ready for you to begin the support package upgrade.

1. Prevent backups from interfering.

You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable them.

2. Prevent system upgrades from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from system upgrades or temporarily disable them.

3. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

4. Verify that you have Administrator privileges on the upgrade target host.

5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The SAP Mobile Platform services are: “SAP Control Center” and all services with names that begin with “SAP Mobile...”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
7. For Windows 8 installations, verify that the Microsoft .NET Framework 3.5 has been enabled before starting the upgrade. If not enabled, you must manually enable the .NET Framework 3.5 from the Windows Features control panel applet before upgrading the SAP Mobile Platform Runtime.

Starting the Support Package Upgrade

Download and start the SAP Mobile Platform Runtime service package upgrade installer.

1. Start the installer using one of these methods:

- Insert the SAP Mobile Platform Runtime installation media.
- Install from a Web download. Extract all the archive files to the same temporary directory on a local disk, not a shared drive.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (`_`), hyphen (`-`), and period (`.`) (two consecutive period characters are not allowed).

- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

Browse to the location of the `setup.exe` file, and:

- On Windows 7, Windows 8, and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases and the SAP Mobile Platform administrator.

The directory below where the existing installation was detected is referred to as `SMP_HOME` in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of SAP Mobile Platform in the directory where the existing installation was detected.

CHAPTER 9: Performing a Support Package Upgrade

You cannot change the installation directory in an upgrade.

2. On the database account information panel, enter the password for each database.
The default value at installation was "sql" for each of these databases.
3. Enter the current password for the SAP Mobile Platform user in the first Password field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the support package installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Yes** to continue when prompted about backup.
If you have not completed a full backup, click **No** to exit the upgrade and perform the backup before proceeding.
3. Click **Finish** on the last installer panel, indicating successful completion.
4. If you changed the startup type of any services from Manual to Automatic in the *Preparing to Upgrade* task for this upgrade installer run, change the startup type for those services back to Manual before continuing.

Verifying the Upgrade

Before proceeding, verify that the service package upgrade is successful.

In the location of the log files referenced below, *SMP_HOME* is the location of the earlier installation that you upgraded (default is C:\SAP\MobilePlatform)..

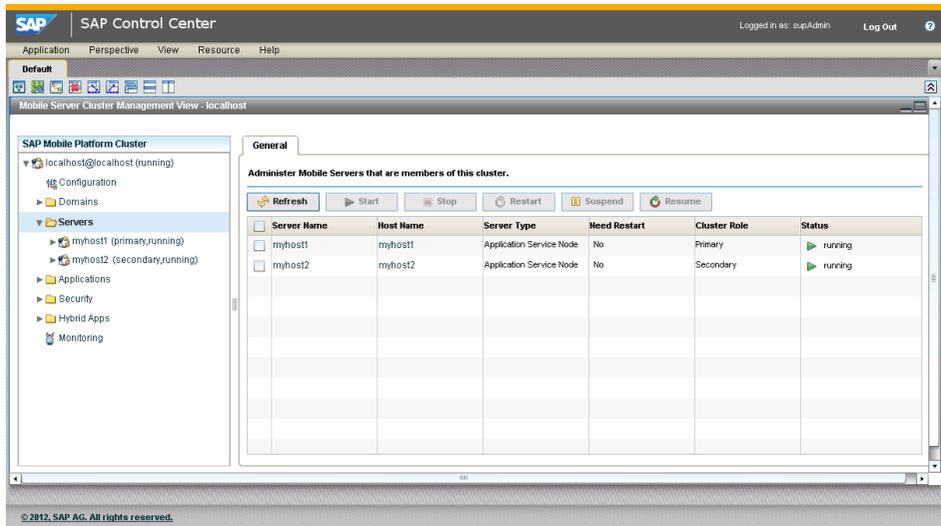
1. Check the upgrade log files.
A search for "error" in these files should not find anything:
 - Installer log file, *SMP_HOME* \InstallLogs
 SMPUpgrade.YYYY.MM.DDTHH.MM.SS.log
 - Upgrade error log file, *SMP_HOME* \InstallLogs\upgrade
 upgrade.YYYY.MM.DDTHH.MM.SS.log
 - Component log files, *SMP_HOME* \InstallLogs\upgrade
 upgrade.component_name..err
2. Verify that these services are started:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB
 - SAP Mobile Server
 - SAP Mobile Platform SampleDB (not present in Enterprise Server Edition)
 - SAP Control Center *X.X*

3. Verify that the SAP Mobile Server node you just upgraded is accessible from SAP Control Center and that you can see the properties of that node.

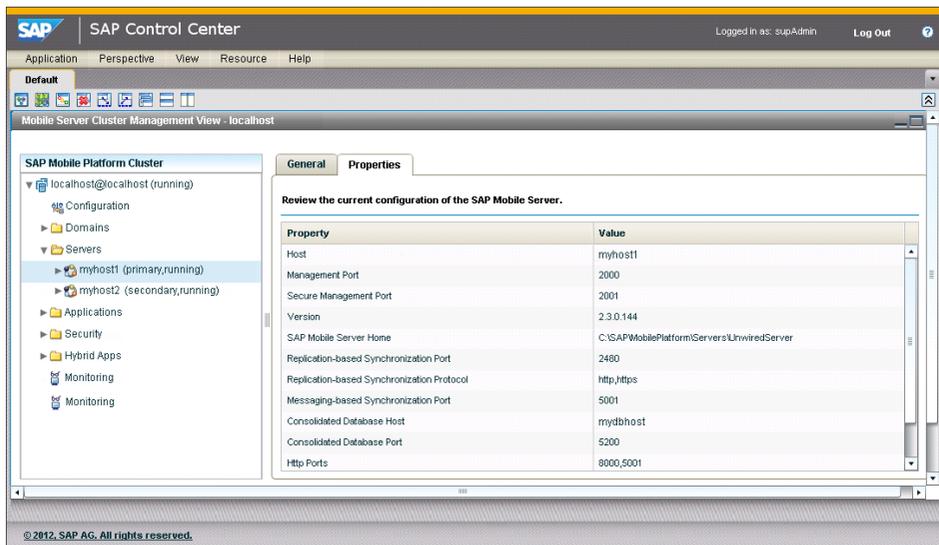
Verifying the Upgraded Cluster

Verify the functionality of the full cluster to ensure that the service package upgrade process has been completely successful.

1. From an SAP Mobile Server node, choose **Start > (All) Programs > SAP > SAP Control Center**.
2. Make sure you can see both SAP Mobile Server nodes in the cluster.



3. Select each SAP Mobile Server node and inspect the settings. All information should be filled in, with no error messages.



4. Take the resource group with the SAP Mobile Platform database services back online.

Next

Go to the SAP Software Download Center at <https://websmp209.sap-ag.de/swdc> (requires an S-user ID with SWDOWNLAD Software download authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of SAP Mobile Platform to which you have just upgraded.

- If a support package is available for this version of SAP Mobile Platform:
 1. Use the *Readme* for the support package to upgrade your SAP Mobile Platform installation to the support package version.
 2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations in Landscape Design and Integration*.

See also

- *Upgrading the Second Host* on page 200

CHAPTER 10 **Uninstalling**

Uninstall SAP Mobile Platform server components before reinstalling them.

Uninstall nodes in SAP Mobile Platform clusters in this order:

- First: SAP Mobile Server scale-out nodes, if present
- Second: secondary SAP Mobile Server (installed as application server) node
- Third: primary SAP Mobile Server (installed as application server) node
- Last: data tier nodes (active first, in Microsoft Failover Cluster)

1. *Planning for Reinstallation*

If you plan to reinstall SAP Mobile Platform in the same location after you have uninstalled it, follow these guidelines.

2. *Preparing to Uninstall*

Ensure that the host on which you are uninstalling SAP Mobile Platform is ready for you to begin the uninstallation.

3. *Uninstalling SAP Mobile Platform Servers*

Use the Windows Control Panel to uninstall SAP Mobile Platform Runtime server components.

Planning for Reinstallation

If you plan to reinstall SAP Mobile Platform in the same location after you have uninstalled it, follow these guidelines.

To avoid problems with reinstallation after you have uninstalled SAP Mobile Platform:

- In clusters, to uninstall and reinstall all server nodes without reinstalling the data tier, uninstall and reinstall each server node in sequence.
If you uninstall all server nodes before reinstalling the first server node, you will have to reinstall the full SAP Mobile Platform cluster, including the data tier.
- When you have finished uninstalling SAP Mobile Platform on a particular server, make sure you complete the last step of the procedure, manually removing any folders and files that remain.

This includes any database files and transaction logs that you have installed in locations that are not under the `SMP_HOME` installation directory.

Preparing to Uninstall

Ensure that the host on which you are uninstalling SAP Mobile Platform is ready for you to begin the uninstallation.

1. If SAP® Data Orchestration Engine Connector is present, use the SAP Control Center console to remove any DOE-C packages.
*See [Deploy](#) in *SAP Control Center for SAP Mobile Platform*.*
2. While SAP Mobile Server is running, uninstall any other SAP products that require SAP Mobile Platform to be installed first.

This includes products such as:

- SAP® Data Orchestration Engine Connector
- SAP Mobile Sales for SAP CRM
- SAP Mobile Workflow for SAP Business Suite

See the product-specific *Installation Guide* for instructions.

3. Shut down all SAP software, SAP processes, and associated third-party processes running on the host.
 - a) For single-server uninstallation:
 1. Shut down SAP Mobile Server.
 2. Ensure that all services with names beginning with "SAP" are stopped.
 3. Ensure that the OpenDS service is stopped, if present.
 - b) For Cluster uninstallation:
 1. For SAP Mobile Server uninstallation:
 - a. Shut down SAP Mobile Server.
 - b. Ensure that all services with names beginning with "SAP" are stopped.
 - c. Ensure that the OpenDS service is stopped, if present.

Exception: When uninstalling SAP Mobile Server from a Microsoft Failover Cluster with shared hosts, leave these database services running:

 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB
 2. For data tier uninstallation:
 - a. Shut down all database services:
 - SAP Mobile Platform CacheDB
 - SAP Mobile Platform ClusterDB
 - SAP Mobile Platform LogDataDB
 - b. Ensure that all services with names beginning with "SAP" are stopped.

Open the Windows Services panel to confirm services are stopped. You may need to manually stop any SAP Mobile Platform services that are still running.

4. Move or copy any user-created files and log files that you want to keep, from the SAP Mobile Platform installation directories to another location.

If you plan to reinstall SAP Mobile Platform, preserve data by backing up the SAP Mobile Platform databases.

See *Operational Maintenance* in *System Administration*.

5. Prevent backups from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from backups or temporarily disable them.

6. Prevent virus scans from interfering.

You can either exclude the existing SAP Mobile Platform installation directory from virus scans or temporarily disable them.

Uninstalling SAP Mobile Platform Servers

Use the Windows Control Panel to uninstall SAP Mobile Platform Runtime server components.

Prerequisites

Confirm all preparation tasks are complete.

Task

1. From the Control Panel, begin removing the program.
This starts the uninstaller.
2. In the welcome window, click **Next**.
3. Select the components to remove, and click **Next**.
4. Review the list of components to remove, then click **Uninstall**.
5. Click **Finish** when you see:
The InstallShield wizard has successfully uninstalled SAP Mobile Platform ...
6. Delete any folders and files remaining in the SAP Mobile Platform installation directory.
If you cannot delete the SAP Control Center installation directory (by default, C:\SAP\SCC-XX), see *Troubleshooting Uninstallation*.
7. Restart the system to ensure deleted files and folders are flushed from the file system.
8. Verify that all files and folders have been removed from the installation directory.

Scripting Silent Installation, Upgrade, or Uninstallation

You can automate installation, upgrading, or uninstallation of SAP Mobile Platform Runtime server components by specifying settings in a text file, then running a script that silently runs the SAP Mobile Platform Runtime installer or uninstaller.

Silent Installation or Upgrade

Use the `SilentInstall_Win.bat` script to automate the installation or upgrade process. The SAP Mobile Platform Runtime installer runs silently, taking input from the `SilentInstall_Win.txt` file.

The silent installation capability allows you to perform any particular type of SAP Mobile Platform Runtime installation or upgrade, without entering information through the installer interface. There is no difference in the scripting process between a silent installation and a silent upgrade.

- Configure installer settings in a `SilentInstall_Win.txt` file.
- Run the installer from the command prompt, using the `SilentInstall_Win.bat` script.
- Each type of installation requires a `SilentInstall_Win.txt` file, with one or more settings that are required to perform the installation. For example, different settings perform a single-node installation, or one of three types of installation required for a clustered system.
- Comment out all unused configurations (for example, Data Tier Configuration) in the silent installation script.
- If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart Windows for the change to take effect.

Note: The SAP Mobile Platform Runtime installer can install only server components. The SAP Mobile SDK requires a different installer.

1. *Planning a Silent Installation or Upgrade*

Review the content of the default `SilentInstall_Win.txt` file and determine what changes you must make for the type of SAP Mobile Platform server installation or upgrade you want to automate.

2. *Modifying Properties in the SilentInstall_Win.txt File*

Edit a separate copy of the default `SilentInstall_Win.txt` configuration file for each type of SAP Mobile Platform Runtime server installation you want to automate.

3. *Running a Silent Installation or Upgrade*

Make sure you have the correct version of the modified `SilentInstall_Win.txt` file in the installer image, then run the `SilentInstall_Win.bat` script from a command prompt.

Planning a Silent Installation or Upgrade

Review the content of the default `SilentInstall_Win.txt` file and determine what changes you must make for the type of SAP Mobile Platform server installation or upgrade you want to automate.

1. Locate the `SilentInstall_Win.bat` script and `SilentInstall_Win.txt` file in the root directory of the SAP Mobile Platform Runtime installation media.
2. If you cannot modify those files on the installation media, create a copy of the installer image in a location from which you can run the installer.
3. Use a text editor to open the `SilentInstall_Win.txt` file, and review the current settings.

Comments preceding each group of settings describe the valid options, and any special requirements for the entry.

4. Determine what changes you want to make in the installation settings.

For example, you may want to match non-default port number assignments used in an existing installation.

Modifying Properties in the SilentInstall_Win.txt File

Edit a separate copy of the default `SilentInstall_Win.txt` configuration file for each type of SAP Mobile Platform Runtime server installation you want to automate.

1. From the root directory of the installer image, use a text editor to open `SilentInstall_Win.txt`.
2. Make the changes you have determined are necessary.
3. Save your changes.

If you are preparing to run several types of silent installation, say for different types of cluster nodes, save the configuration file with a unique name, or in a separate folder.

Note: When you run a silent installation, the configuration file must be named `SilentInstall_Win.txt`, and it must be located in the root directory of the installer image.

Running a Silent Installation or Upgrade

Make sure you have the correct version of the modified `SilentInstall_Win.txt` file in the installer image, then run the `SilentInstall_Win.bat` script from a command prompt.

Prerequisites

1. Shut down the same processes on the target host as you would if you were running the installer manually. See the chapter in this guide that covers the type of installation you are automating.
2. For upgrades, prevent backups and virus scans from interfering with the upgrade. You can either exclude the SAP Mobile Platform installation directory from backups and virus scans, or temporarily disable them.
3. To accommodate SAP Mobile Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See the SAP Mobile Platform *Landscape Design and Integration* guide.
4. Run the installation script as an administrator on Windows 7, Windows 8, and Windows Server 2008 R2.

Task

1. For each type of installation you want to automate, perform a trial run of these instructions using your modified `SilentInstall_Win.txt` configuration files, on a temporary or test server host.

Confirm that each modified configuration file produces the desired installation outcome, before you proceed with silent installation on an actual target host.

2. Confirm that the root directory of the installer image contains the correct version of the `SilentInstall_Win.txt` configuration file that you modified for a particular installation type.
3. From a command prompt on the installation target host, navigate to the root directory of the installer image and launch the silent installation script:

```
SilentInstall_Win.bat
```

4. Check the log files for errors.
 - Errors that cause a silent installation to fail before the installation directories are created are logged in `%SystemDrive%\SMPInstall.log`.
 - Errors encountered after the installation destination is created are logged in `SMP_HOME\InstallLogs\SMPInstall.log`.
5. Repeat these steps on different servers for each type of installation you are automating.

For cluster installations, install servers in the same sequence you would if you were running the installer manually. See the *Installing SAP Mobile Platform...* chapter in this guide for the cluster installation scenario you are automating.

Silent Uninstallation

Use the `SilentUninstall_Win.bat` script to automate the uninstallation process. The SAP Mobile Platform Runtime uninstaller runs silently, taking input from the `SilentUninstall_Win.txt` file.

The silent uninstallation capability allows you to perform selective uninstallation of SAP Mobile Platform Runtime server components, without entering information through the uninstaller interface.

- You control which SAP Mobile Platform Runtime components are uninstalled with settings in a `SilentUninstall_Win.txt` file. The default settings remove all SAP Mobile Platform Runtime server components on the target host.
- Run the uninstaller from the command prompt, using the `SilentUninstall_Win.bat` script.
- Each uninstallation that removes a different combination of SAP Mobile Platform Runtime server components requires a separate `SilentUninstall_Win.txt` file.

When you run a silent installation, the `SilentUninstall_Win.bat` script and `SilentUninstall_Win.txt` configuration file are copied to the `SMP_HOME\Uninstallers\MobilePlatform\` directory.

Note: If you used a silent installation to install Unwired Platform 2.2.x, and then upgraded to SAP Mobile Platform 2.3, the `SilentUninstall_Win.bat` script and `SilentUninstall_Win.txt` configuration file are now in `SMP_HOME\Uninstallers\UnwiredPlatform\`.

If you did not run a silent installation, you must:

- Copy those files to the location above (to `SMP_HOME\Uninstallers\UnwiredPlatform\` if original installation was Unwired Platform 2.2.x) from the SAP Mobile Platform Runtime installation media root directory.

Note: The SAP Mobile Platform Runtime uninstaller can only uninstall server components. The SAP Mobile SDK requires a different uninstaller.

1. *Planning a Silent Uninstallation*

Move and modify the `SilentUninstall_Win.bat` file, then review the content of the default `SilentUninstall_Win.txt` file and determine what changes you must make to selectively remove SAP Mobile Platform Runtime components in the uninstallation.

2. *Modifying Properties in the SilentUninstall_Win.txt File*

Edit a separate copy of the default `SilentUninstall_Win.txt` configuration file for each type of SAP Mobile Platform server uninstallation you want to automate.

3. *Running a Silent Uninstallation*

Make sure you have the correct version of the modified `SilentUninstall_Win.txt` file, in the correct location on the host where you want to run a silent uninstallation, then run the `SilentUninstall_Win.bat` script from a command prompt.

Planning a Silent Uninstallation

Move and modify the `SilentUninstall_Win.bat` file, then review the content of the default `SilentUninstall_Win.txt` file and determine what changes you must make to selectively remove SAP Mobile Platform Runtime components in the uninstallation.

1. Move the `SilentUninstall_Win.bat` to a temporary location outside of the SAP Mobile Platform server installation tree.

For example, `C:\temp`.

Note: The current location of the `SilentUninstall_Win.bat` file should be the `SMP_HOME\Uninstallers\MobilePlatform\` directory (`SMP_HOME\Uninstallers\UnwiredPlatform\` if original installation was Unwired Platform 2.2.x), where either a silent installation placed it or you copied it earlier.

2. Use a text editor to open the `SilentUninstall_Win.bat` file, and change the line beginning with `cd` as follows.

Line before change:

```
cd /d %~dp0
```

Line after change:

```
cd /d SMP_HOME\Uninstallers\MobilePlatform
```

where `SMP_HOME` is the complete path to the SAP Mobile Platform Runtime installation directory.

Note: If original installation was Unwired Platform 2.2.x, the line after making the change is:

```
cd /d SMP_HOME\Uninstallers\UnwiredPlatform
```

3. Use a text editor to open the `SilentUninstall_Win.txt` file, and review the current settings.

Comments preceding each group of settings describe the valid options, and any special requirements for the entry. Any component identified with `.activeForUninstall=true` will be uninstalled.

4. Determine the SAP Mobile Platform server components you want to keep.

The default settings remove all SAP Mobile Platform components.

Modifying Properties in the SilentUninstall_Win.txt File

Edit a separate copy of the default `SilentUninstall_Win.txt` configuration file for each type of SAP Mobile Platform server uninstallation you want to automate.

1. From the `SMP_HOME\Uninstallers\MobilePlatform\` directory (`SMP_HOME\Uninstallers\UnwiredPlatform\` if original installation was Unwired Platform 2.2.x) on the host where you want to run a silent uninstallation, use a text editor to open the `SilentUninstall_Win.txt` file.
2. Make the changes you have determined are necessary.

Set property values to `false` for any SAP Mobile Platform server component you do not want to uninstall:

```
# false here = KEEP feature
...
# Data Tier Feature
-P SupDB.activeForUninstall=true

# Unwired Server Feature
-P MobileServer.activeForUninstall=true
```

3. Save your changes.

If you intend to run several types of silent uninstallations, keeping different combinations of SAP Mobile Platform server components, save the configuration file with a unique name, or in a separate folder.

Note: When you run a silent uninstallation, the configuration file must be named `SilentUninstall_Win.txt`, and it must be located in the `SMP_HOME\Uninstallers\MobilePlatform\` directory (`SMP_HOME\Uninstallers\UnwiredPlatform\` if original installation was Unwired Platform 2.2.x) on the host where you want to run a silent uninstallation.

Running a Silent Uninstallation

Make sure you have the correct version of the modified `SilentUninstall_Win.txt` file, in the correct location on the host where you want to run a silent uninstallation, then run the `SilentUninstall_Win.bat` script from a command prompt.

Prerequisites

1. Shut down the same processes on the target host as if you were running the installer manually. See the chapter in this guide that covers the type of installation you are automating.
2. Prevent backups and virus scans from interfering with the uninstallation. You can either exclude the SAP Mobile Platform installation directory from backups and virus scans, or temporarily disable them.

3. Run the uninstallation script as an administrator on Windows 7, Windows 8, and Windows Server 2008 R2.

Task

1. On the host where you want to run a silent uninstallation, confirm that the `SMP_HOME\Uninstallers\MobilePlatform` directory (`SMP_HOME\Uninstallers\UnwiredPlatform\` if original installation was Unwired Platform 2.2.x) contains the correct version of the `SilentUninstall_Win.txt` configuration file that you modified for a particular uninstallation type.
2. For each type of uninstallation you want to automate, perform a trial run of these instructions using your modified `SilentUninstall_Win.txt` configuration files, on a temporary or test server host.
Confirm that each modified configuration file produces the desired uninstallation outcome, before you proceed with silent uninstallation on an actual target host.
3. From a command prompt on the installation target host, navigate to the directory to which you moved the `SilentUninstall_Win.bat` file and launch the silent uninstallation script:

```
SilentUninstall_Win.bat
```
4. Check for errors in `SMP_HOME\InstallLogs\SMPUninstall.log`.
5. Delete any folders and files remaining in the SAP Mobile Platform installation directory, if the uninstaller could not remove them.
If you cannot delete the SAP Control Center installation directory (`C:\SAP\SCC-X_X` by default), see *Troubleshooting Uninstallation*.
6. Restart the system to delete folders and files remaining in the SAP Mobile Platform installation directory.
7. Repeat these steps on the target servers for each different type of uninstallation you are automating.

CHAPTER 12 **Troubleshooting**

Review information about common problems that arise in the SAP Mobile Platform Runtime installation process, including SySAM licensing issues.

To contact SAP Technical Support, see *Reporting Errors* in *Troubleshooting*.

Troubleshooting Installation

Determine the cause of installation problems and apply the recommended solution.

See the *Troubleshooting* guide for additional information.

Problem	Resolution
Backing up the SAP Mobile Platform Runtime installation fails because the SAP Control Center path is too long.	Before backing up the Runtime installation, you must delete the contents of the <code>EmbeddedWebContainer</code> folder in order to complete a clean backup of the installation. Workaround: Before backing up the SAP Mobile Platform Runtime installation, you must delete the contents of <code>SMP_HOME\services\EmbeddedWebContainer\container\Jetty-7.6.2.v20120308\work</code> . You must delete the contents of this folder from the command prompt, and not from Windows Explorer.
Install image validation failed.	Install image may be corrupt. Workaround: Download a new copy of the installation image. See <code>install_drive\SUPRuntimeMissingFiles.txt</code> (<code>MobileSDKMissingFiles.txt</code> for SAP Mobile SDK) for list of missing files. These files are generated only if any files listed in the <code>installImageFileList.txt</code> file are missing from the install image.
Install image validation failed.	Install image may be corrupt. Workaround: Download a new copy of the installation image. See <code>install_drive\SUPRuntimeCorruptedFiles.txt</code> (<code>MobileSDKCorruptedFiles.txt</code> for SAP Mobile SDK) for list of corrupt files. These files are generated only if any files listed in the <code>zipFileList.txt</code> file are corrupt.

Problem	Resolution
The installImageFileList.txt to run install image validation may be corrupt.	The installImageFileList.txt file is there, but the current size does not match initial size when the install image was created. Workaround: Download a new copy of the installation image.
The zipFileList.txt to run install image validation may be corrupt.	The zipFileList.txt file is there, but the current size does not match initial size when the install image was created. Workaround: Download a new copy of the installation image.
Cannot find file installImageFileList.txt to run install image validation.	The install image may be corrupt. Workaround: Download a new copy of the installation image.
Cannot find file zipFileList.txt to run install image validation.	The install image may be corrupt. Workaround: Download a new copy of the installation image.
Cannot find file .installImageFileList.txt to run install image validation.	The install image may be corrupt. Workaround: Download a new copy of the installation image.
The installImageFileList.txt to run install image validation is empty.	The install image may be corrupt. Workaround: Download a new copy of the installation image.
The zipFileList.txt to run install image validation is empty.	The install image may be corrupt. Workaround: Download a new copy of the installation image.

Problem	Resolution
<p>Potential file locked on 32-bit Windows Server 2003 SP2 system may cause upgrade to fail.</p>	<p>When upgrading, there is a potential problem with a Windows process holding a lock on one of the 12 Adaptive Server Anywhere (ASA) libraries (DLLs) even though all the ASA processes have shut down. This causes the upgrade to fail because the upgrade cannot overwrite the file. This is specific to a 32-bit Windows Server 2003 SP2.</p> <p>Workaround:</p> <ol style="list-style-type: none">1. Shut down all SAP Mobile Platform processes.2. If services were set to automatic, set the start up for the SAP Mobile Platform services to manual.3. Restart the system.4. If step 2 was performed prior to upgrade, run the upgrade after the system has restarted.5. After the upgrade, set the startup for the SAP Mobile Platform services to automatic.

Problem	Resolution
<p>Visual C++2008 wizard starts when installing SAP Mobile Platform</p>	<p>If Visual C++ 2008 runtime is installed in the root directory of the system where you are installing SAP Mobile Platform server components, the Visual C++ wizard automatically starts after you start the SAP Mobile Platform Runtime installer.</p> <p>Workaround: Verify that the following files have a date stamp of 11/7/2007, then move them to another location:</p> <ul style="list-style-type: none"> • VC_RED.MSI • VC_RED.CAB • eula.1028.txt • eula.1031.txt • eula.1033.txt • eula.1036.txt • eula.1040.txt • eula.1041.txt • eula.1042.txt • eula.2052.txt • eula.3082.txt • globdata.ini • install.exe • install.ini • install.res.1028.dll • install.res.1031.dll • install.res.1033.dll • install.res.1036.dll • install.res.1040.dll • install.res.1041.dll • install.res.1042.dll • install.res.2052.dll • install.res.3082.dll • vcredist.bmp

Problem	Resolution
<p>Installation or upgrade cannot continue host name of system resolves to local link address</p>	<p>In a new or upgrade installation, the installer displays this error message:</p> <p>The host name of the system resolves to a local link address. This suggests an incorrect binding order of network adapters. The install/upgrade cannot proceed. Once the binding order is corrected, restart the installer. Click OK to exit the installer.</p> <p>The upgrade version of the message displays the "local link address" in parentheses.</p> <p>Explanation: If no usable IP addresses are available on the system where you are installing SAP Mobile Platform, Windows assigns a "local link" IP address in the range 169.254.0.0/16. The installer detects that the system's IP address is only usable locally, and stops.</p> <p>Workaround: Execute the commands below from the command prompt, restart the server, and restart the installer.</p> <pre>netsh interface ipv6 set prefix ::1/128 50 5 netsh interface ipv6 add prefix ::1/128 50 5 netsh interface ipv6 set prefix ::1/96 40 4 netsh interface ipv6 add prefix ::1/96 40 4 netsh interface ipv6 set prefix ::ffff:0:0/96 30 3 netsh interface ipv6 add prefix ::ffff:0:0/96 30 3 netsh interface ipv6 set prefix ::/0 20 2 netsh interface ipv6 add prefix ::/0 20 2 netsh interface ipv6 add prefix ::ffff:169.254.0.0/112 10 1 netsh interface ipv6 set prefix ::ffff:169.254.0.0/112 10 1</pre>

Problem	Resolution
Silent installation gives Registry error	<p>If SAP Mobile Platform was previously installed on the target system, and either the installation was canceled before completion or the uninstallation was incomplete, the installer detects Windows Registry keys that must be deleted, and prompts you to confirm the deletion. This aborts a silent installation.</p> <p>Workaround: Run the SAP Mobile Platform Runtime installer interactively, confirm the Registry key deletion, and complete the installation. Then immediately use the Windows Control Panel to uninstall SAP Mobile Platform components. The system is then ready for a silent installation.</p>
Uninstaller might not run on Windows Vista	<p>Sometimes, the uninstaller does not launch on Windows Vista. This may be caused by the operating system changing the launch command for the SAP Mobile Platform uninstaller, preventing it from using its own JVM to start itself.</p> <p>Workaround: Run an external 32-bit JDK version 1.6.0_26 to launch the uninstaller with the following, where <i><jdk_installdir></i> is similar to C:\jdk1.6.0_31\bin:</p> <pre><jdk_installdir>\java -Dtemp.dir=%TEMP% -jar SMP_HOME\Uninstallers\ MobilePlatform\uninstall.jar</pre> <p>When you uninstall—or cancel uninstalling—SAP Mobile Platform, the Program Compatibility Assistant reports <i>This program might not have uninstalled correctly</i>. At this point, you can avoid the uninstaller issue by selecting This program uninstalled correctly instead of Uninstall with recommended settings.</p>
SAP Mobile Servers do not shut down during an uninstallation	<p>Shut down all SAP products, SAP processes, and associated third-party products and processes before launching the uninstaller.</p> <p>Shut down the SAP Mobile Servers before shutting down the data tier.</p>
Cannot start an SAP Mobile Platform component	<p>Make sure that all services are started for the installed components. See <i>System Administration > System Reference > SAP Mobile Platform Windows Services</i>.</p>

Problem	Resolution
<p>Cannot start SAP Mobile Server service and <code><host>-server.log</code> file has "PropertiesNotFoundException" error.</p>	<p>If you cannot start the SAP Mobile Server service by any of the means available – Windows Start menu, Desktop icon, or Windows Services control panel – check the server's log file. The log file is located in <code>SMP_HOME \Servers\UnwiredServer\logs</code> and is named <code><host>-server.log</code>. If you find a "PropertiesNotFoundException" error in this log file, it means that the name you gave this server during installation duplicates the name of another server node in the cluster.</p> <p>Workaround: Uninstall SAP Mobile Server on this node and re-install, providing a server name that is unique within the cluster.</p>
<p>Cannot start SAP Control Center</p>	<p>Make sure you have installed an appropriate version of Adobe Flash Player.</p> <p>See <i>Supported Hardware and Software</i>.</p>

Problem	Resolution
<p>Network domain name is invalid on virtual machine (VM) installation or when switching to different networks after installation</p>	<p>Configure SAP Mobile Server to use the valid network domain name.</p> <ol style="list-style-type: none"> 1. Shut down SAP Mobile Server and SAP Control Center services. 2. Obtain the correct host and domain name. 3. Open a command window and enter: ipconfig /all 4. Run: updateProps.bat -nv "sup.host=<hostname>" -cn <cluster-name> -sn <servername> 5. Manually edit <code>SCC_HOME\SCC-3_2\services\RM\service-config.xml</code>, modifying the address property to reflect the new fully qualified host name. <pre style="background-color: #f0f0f0; padding: 5px;"> <properties> <set-property property="address" value="supvm.mycompany.com" /> <set-property property="port" value="9999" /> <set-property property="timeout" value="43200" /> </properties> </pre> <p>Replace <i>supvm</i> with your host name and <i>mycompany.com</i> with your domain name.</p> 6. If the DNS server cannot resolve the fully qualified name and this server is accessed only locally, edit the <code>c:\Windows\system32\drivers\etc\hosts</code> file to add 127.0.0.1 to the current fully qualified name. You can add as many 127.0.0.1 entries as needed for each host and domain in which your machine works. 7. Restart SAP Control Center and SAP Mobile Server. 8. Log in to SAP Control Center. 9. Open Perspective Resources view. 10. Update the host property of the registered resource for SAP Mobile Server for which the network domain name changed. 11. Choose Authenticate, then launch Management Console using Manage option on the resource. 12. For SAP Mobile Workspace components only, launch Eclipse and modify the domain name in the connection profile for SAP Mobile Server.

Problem	Resolution
Cannot install Enterprise Developer Edition on virtual machine (VM) with unserved license.	<p>If you need to use a Developer Edition via Remote Desktop Connection (RDC), Terminal Services, or similar remote access technology, you cannot use unserved licenses.</p> <p>Workaround: Generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses.</p> <p>You may be able to install on a VM with an unserved license if you use console 0 to access the VM to perform the installation.</p>
Unable to open Service error appears during installation and, after installation, messaging service does not appear in Windows Service list.	<p>The local .NET framework may be corrupted. To check, go to C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\ and run <code>installutil</code>. A configuration error message indicates whether the local .NET framework is corrupted; help information indicates normal function.</p> <p>If the local .NET framework is corrupted, uninstall and reinstall .NET 2.0.</p>

Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name

In a new installation of SAP Mobile Server, if you let the installer use the computer name for the server name and, on the first SAP Mobile Server, as the cluster name, the computer name must meet the same requirements as server and cluster names that you specify.

In a new installation of SAP Mobile Server, if you do not specify a server name, by default the installer uses the computer name for the server name. If it is a single-server installation, or the first SAP Mobile Server node in a cluster, the installer also uses the computer name by default for the cluster name. In these cases, the computer name must meet the same requirements as server and cluster names that you enter.

Each server or cluster name:

- Must contain only:
 - ASCII alphanumeric characters
 - Underscore ("_"), hyphen ("-"), and period (".") characters
- Server names must be 1 – 32 characters in length and must begin with an alphanumeric character.
- Cluster names must be 1 – 16 characters in length.

If the computer name does not meet these requirements, you have two options for installing SAP Mobile Server on that system:

Workaround 1: Keep the computer name as is:

- In the *Selecting Installation Options* section of the installation task, select the option to **Set SAP Mobile Server name (Set SAP Mobile Server name and cluster name** in a single-server installation, or for the first SAP Mobile Server node in a cluster).
- In the next step, specify a server name that meets the requirements listed in that step

Workaround 1: Before running the installer, change the computer name so that it meets the requirements listed in the next step for a user-entered server name. For a single-server installation or for the first SAP Mobile Server node in a cluster, make sure it also meets the requirements for a user-entered cluster name:

- Change the computer name.
- Start the installer.
- When you reach the *Selecting Installation Options* section of the installation task, do not select the option to **Set SAP Mobile Server name (Set SAP Mobile Server name and cluster name** in a single-server installation, or for the first SAP Mobile Server node in a cluster).

Exception in Shared Host for SAP Mobile Platform and EAServer Installations

Problem: When upgrading, an unhandled exception ('System.MissingMethodException') occurred in JMSBridge.exe [8320] is received.

This occurs only if an EAServer installation and an SAP Mobile Platform installation coexist on the same machine. The exception is caused by the presence of different versions of the `com.sybase.iiop.net.dll` file.

Ensure that your environment path includes only the SAP Mobile Platform `com.sybase.iiop.net.dll` assembly. For example, if you have EAServer installed on the same machine as SAP Mobile Platform:

1. Use a **strings** command (using UNIX tools for Windows) to check if `SetTrustAllCertificates` exists on the assembly file that `jmsbridge.exe` loaded.
2. From a command prompt, enter:

```
>strings -a com.sybase.iiop.net.dll | grep SetTrustAllCertificates
```

The command reports back with `SetTrustAllCertificates` if it exists within the assembly.

3. Remove the EAServer installed `com.sybase.iiop.net.dll` from the global assembly cache (GAC).

VMWare Fusion Stops Responding when Running Installer on Some MacBook Models

Problem: The accelerated 3D graphics option in VMWare Fusion 5.0.2 conflicts with the Retina display in 2012 MacBook Pro and Air models. The conflict causes VMWare Fusion to stop responding when running the SAP Mobile Platform Runtime installer.

Workaround: Turn off the accelerated 3D graphics option in the Fusion display settings for the VM image.

Learn more: <http://blogs.vmware.com/teamfusion/2012/11/macbook-air-and-macbook-pro-update-2-0-and-vmware-fusion-5.html>

Workflow Deployment Fails with SoapException

After migration, a workflow deployment may fail with a SoapException error.

Workaround: Update the module version number that appears on the Flow Design page, General tab.

SAP Mobile Server or RSOE Startup Problems

Problems, such as SAP Mobile Server or RSOE failing to start, are encountered without any obvious error messages.

Explanation 1: This may occur if the SAP Mobile Server host machine is running intrusion detection software, such as the McAfee Host Intrusion Prevention service. This may cause a connection from the consolidated database (CDB) to the SAP Mobile Server node to be flagged as an attack, and the CDB host to be added to the list of blocked hosts, preventing communication between SAP Mobile Server and the CDB. The SAP Mobile Server log reports connectivity problems with the CDB, and start-up failure problems similar to:

```
YYYY-MM-DD HH:MM:SS.SSS ERROR MMS Thread-55
[com.sybase.djc.log.SystemExceptionLog]
com.sybase.djc.DataStoreException was thrown by method
com.sybase.djc.server.PartitionLock.updateLock(boolean)
\ncom.sybase.djc.DataStoreException: Connection Failed:
java.sql.SQLException: JZ006: Caught IOException:
java.net.SocketException: Software caused connection abort:
connect ...
```

Workaround 1: You may want to set up some exclusion rules to allow the required communication between the CDB and SAP Mobile Server nodes. Use the following information to formulate exclusion rules; rules may vary depending on the intrusion detection software used.

- SAP Mobile Platform to CDB – uses a connection through jConnect™ driver. There are two kinds of protocols between SAP Mobile Platform and CDB:

- The MobiLink™ and CDB connection uses Command Sequence.
- The jConnect connection uses TDS.
- RSOE to Relay Server – uses either an HTTP and HTTPS connection.
- SAP Mobile Server to SAP Mobile Server – for administration communication uses:
 - Administration communication (MMS to MMS) uses IIOPS protocol by default.
 - Administration communication (MMS to Mobile Office service) uses IIOPS protocol by default.

Explanation 2: If .NET is present when SAP Mobile Platform is installed, and the .NET installation is corrupt, the SAP Mobile Platform installer does not detect the problem, leaves the corrupt .NET in place and SAP Mobile Server does not start.

Workaround 2: Uninstall both SAP Mobile Platform and .NET, then reinstall SAP Mobile Platform, letting the SAP Mobile Platform installer install .NET.

Cannot Access sampledb

After installation, you cannot access the sample database (`sampledb`).

Explanation 1: The SAP Mobile Platform installer creates the Windows service (SAP Mobile Platform SampleDB) that runs the `sampledb` server only when you install SAP Mobile Server with a Personal or Enterprise Development license. If you installed SAP Mobile Server with an Enterprise Server (production) license, you must run a script to create this service.

Solution 1: Use the `sampledb.bat` command line utility to create the Windows service for the sample database. See *Create or Remove the Windows Service for sampledb Server (sampledb) Utility* in *System Administration*.

Explanation 2: You installed SAP Mobile Platform with an Enterprise or Personal Development license.

Solution 2: Make sure the SAP Mobile Platform SampleDB service is started in the Windows Services panel.

Troubleshooting SySAM

If you do not address SySAM errors in a timely fashion, SAP Mobile Platform may cease to function.

There may be more recent information published in the *SySAM Asset Management Users Guide* online at *SySAM FAQ*, and in the *Fast Track to SySAM 2.0* white paper, available at *Fast Track to SySAM 2.0*. If your SAP® product cannot find a required license, it operates in grace mode, if a grace period is available.

Typically, there is a 30-day grace period during which to resolve any SySAM-related issues. When a license is awarded in grace mode, the SAP product error log entry includes the grace period expiry date and time. To view the expiration date for your license, in the SAP Control Center folder for your server, click on the first item in the left side navigation area and then

click the **Licensing** button in the right window. This opens a window with the licensing information.

The SAP product log includes information about licenses awarded under grace mode. The warnings in the SAP product error log are repeated daily while the license is under grace mode.

SySAM-Related Errors

All SySAM-related errors print in your SAP product error log.

The error log for SAP Mobile Platform is `SMP_HOME\Servers\UnwiredServer\logs\<server_name>-server.log`.

To locate SySAM related entries, search for "LicenseManager" in this file. For example:

```
2010-02-01 18:07:32.138 WARN MMS Thread-3
[com.sybase.sup.server.lm.LicenseManager] - msgId: 1,
message: Failed to open the localised message file '%SYBASE%
\locales\unicode\sylapi\en_us\sylapi.lcu' (i18nuni_FileOpen
returned -479)
```

If you are using a served license model, the license server's debug log, located in `SMP_HOME\Servers\UnwiredServer\sysam-2.0\log`, provides information about any license checkout issues.

SySAM Problems and Solutions

If the product does not install or does not function after installation, try the following solutions before contacting Technical Support.

Error	Possible Causes	Solution
Installation warning: cannot find a valid license.	You may not have the required licenses installed, or the licenses may be incorrect for the product or feature you are trying to install.	See <i>Installing for the First Time</i> in the <i>SySAM Users Guide</i> .
Updating an existing installation.	Make sure your license authorizes you to install the update. See <i>Installing Product Updates, EBFs, and Support Renewal</i> in the <i>SySAM Users Guide</i> . If your license does not allow you to perform the update, the product may not be usable.	If you are installing an update that is authorized by the license, see the solution for <i>Product cannot check out a license and starts in grace period</i> , below, before you proceed with the update.

Error	Possible Causes	Solution
License server executables and scripts not installed.	When you installed your product, the license server was not installed. Some product installations offer the option to install a license server; however when available, this option, by default, is not selected for installation. You may need to explicitly install a license server. See your product installation guide and release bulletin to determine if the product installer offers this option.	Use one of the following solutions: <ul style="list-style-type: none"> • If your product offers the option to install a license server, use the instructions in the product installation guide to install the license server. • If your product does not include the option to install a license server, go to http://www.sybase.com/products/all-products-a-z/sysam/server and click Download the SySAM Standalone License Server.
License server does not start.	See <i>Possible Causes of a License Server Failure</i> in the <i>SySAM Users Guide</i> .	Go to SAP Service Marketplace (SMP) or Sybase Product Download Center (SPDC), generate a valid served license for your product, and copy it into the <code>licenses</code> directory on the machine where the license server is installed. See <i>Generating Licenses at SMP</i> or <i>Generating Licenses at SPDC</i> .
License server does not recognize the license files.	<ul style="list-style-type: none"> • The license was generated for a different machine or generated using an incorrect host ID. • The license has been altered. You cannot change any information in a generated license. • If the host ID for your platform is based on the network adapter identification, the most common problem occurs when you have used an ID associated with the address of a virtual network adaptor. 	<ul style="list-style-type: none"> • Verify that the host ID recorded in the license file matches the host ID of the actual machine for which the license was issued. If the host IDs do not match, go to SMP or SPDC, check in the license, then regenerate the license with the correct host ID. • If your license is being created by typing from a paper copy, verify whether errors occurred when the license information was entered. You can also download a new copy of the activated license from SMP or SPDC. • If the host ID for your platform is based on a network adapter, verify that the ID you are using is associated with a valid NIC and that the ID is not associated with loopback or virtual adapters. If the ID you are using is associated with a removable network adapter, verify that the adapter is actually attached to the computer.

Error	Possible Causes	Solution
Linux virtual machine does not appear to be part of the Microsoft Hyper-V host.	/usr/sbin/dmidecode in Linux virtual machine cannot read from /dev/mem.	Log in to Linux virtual machine as root, then execute chmod 4555 /usr/sbin/dmidecode .
Product does not start, license checkout error.	<ul style="list-style-type: none"> • You have not generated and deployed the valid licenses for the product requesting licenses. • The required license does not exist and the product does not award a grace period. • The product is configured to use the wrong edition or license type. • You have the wrong host ID for an unserved license. • When multiple product editions include optional features, the features are offered as separately licensed items for each edition. Licensed optional features work only with the licensed base product of the same edition. For example, if you order Adaptive Server Enterprise, you cannot use a Small Business Edition optional feature license with an Enterprise Edition base product. • You are using an unserved Standalone Seat (SS) type license on a terminal server. • The license is for a different operating system. • The license is a Floating License (FL) but is currently in use elsewhere. 	<p>At a command prompt or in a terminal window, execute the following commands, where <i>feature_name</i> is the name of the feature for which SySAM failed to check out a license:</p> <pre>sysam diag feature_name</pre> <p>If the SySAM script is unavailable, enter:</p> <pre>lmutil lmdiag -c license_directory_location feature_name</pre> <p>Go to SMP or SPDC and generate required licenses for your product. To use a separately licensable optional feature, you must have a license for both the base product and the option. If the product has more than one edition, the edition of the base product and option must be the same.</p> <p>If you generated an invalid license, check in the license at SMP or SPDC, and regenerate the license with the correct information.</p>

Error	Possible Causes	Solution
Product cannot check out a license and starts in grace mode.	<p>To help you determine the possible causes when your product cannot check out a license, execute the following command from the <code>SYSAM-2_0/bin</code> directory, at a Windows command prompt or in a UNIX system terminal window, where <i>feature_name</i> is the name of the feature license that cannot be checked out.</p> <pre>sysam diag feature_name</pre> <p>If the command output says that no licenses are available for checkout, this may be due to one of the reasons below, which are separated into served and unserved license deployment model causes and solutions.</p>	See <i>Served License Deployment Models</i> or <i>Unserved License Deployment Models</i> , both in the <i>SySAM Users Guide</i> .
Product continues to run in grace meriod after fixing a license problem	The license status has not yet been updated. When the product periodically performs license checks, the license status is not immediately updated.	Wait up to 6 hours for server products, and up to 1.5 hours for tool products.
Product cannot find licenses for optional features	You either have not installed the license for the optional feature, or the license exists, but cannot be checked out.	See <i>Solution for Problem: Product Cannot Find Licenses for Optional Features</i> in the <i>SySAM Users Guide</i> .

Error	Possible Causes	Solution
<p>Product obtains the wrong license</p>	<p>These locations are searched, in the order specified, until a suitable license is found. When a license directory is specified, license files in that directory are loaded in the directory sort order. When a product looks for a license, it looks in:</p> <ul style="list-style-type: none"> • The locations that represent the values set for the SYBASE_LICENSE_FILE and LM_LICENSE_FILE variables. SAP does not advocate using environmental variables and recommends that all licenses be located centrally in the expected licenses directory. • All files with a .lic extension in the licenses directory. This location is product specific, though typically the directory is \$SYBASE/SY-SAM-2_0/licenses. <p>The first license that matches the feature name, version, edition, and license type filter is used; however, this license may not be the intended license your product requested.</p>	<ul style="list-style-type: none"> • Configure your product to choose a license for a specific edition and license type. • If you are using served licenses, use the options file to ensure that the correct license is used.

Error	Possible Causes	Solution
<p>lmgrd is not running: Cannot connect to license server system. The license server manager (lmgrd) has not been started yet, the wrong port@host or license file is being used, or the port or host name in the license file has been changed.</p>	<p>One or more of the required executables is not present in the expected location.</p>	<p>If SySAM is running on any OS that requires IPv6 (Windows 2008 Server, for example) make these changes:</p> <ol style="list-style-type: none"> 1. Navigate to C:\SAP\SY-SAM-2_0\bin\binIPv6. 2. Copy these files: <ul style="list-style-type: none"> • installs.exe • lmgrd.exe • SYBASE.exe 3. Paste the copied files into C:\Sybase\SYSAM-2_0\bind. 4. If prompted to replace existing files, back them up first, then complete the replacement. 5. If you get an error on replacing the files, make sure the SySAM service is not running. 6. After files have been successfully copied, restart the SySAM service.
<p>License checkout problems with unserved license.</p>	<p>See <i>Unserved License Deployment Models</i> in the <i>SySAM Users Guide</i>.</p>	
<p>License checkout problems with served license.</p>	<p>See <i>Served License Deployment Models</i> in the <i>SySAM Users Guide</i>.</p>	

Problems and Solutions for SAP Mobile Platform

Troubleshoot SySAM issues that are specific to SAP Mobile Platform.

Table 4. Troubleshooting SySAM

Problem	Resolution
<p>With a served license, SAP Mobile Platform Runtime installer generates a license checkout failure error and cannot complete the installation.</p>	<p>This is most likely due to unavailability of a port for the license server's VENDOR SYBASE daemon to use in communicating with SAP Mobile Platform.</p> <p>Check the entries in the <code>sybase.log</code> file in the <code>SYSAM-2_0\log</code> directory where the SySAM license server is installed. Locate the line containing "FLEXnet Licensing." Your log file may look similar to this:</p> <pre>11:20:27 (lmgrd) FLEXnet Licensing (v11.6.1.0 ... 11:20:27 (lmgrd) Copyright (c) 1988-2008 Acresso ... 11:20:27 (lmgrd) US Patents 5,390,297 and 5,671,412. 11:20:27 (lmgrd) World Wide Web: http://... 11:20:27 (lmgrd) lmdown/lmreread only allowed on ... 11:20:27 (lmgrd) License file(s): ../licenses/... 11:20:27 (lmgrd) lmgrd tcp-port 27000 11:20:27 (lmgrd) Starting vendor daemons ... 11:20:27 (lmgrd) Started SYBASE (internet ...</pre> <p>About 6 lines below the "FLEXnet Licensing" line is a line containing "lmgrd tcp-port," and just below that should be a line containing "Started SYBASE."</p> <ul style="list-style-type: none"> • If you do not see the "Started SYBASE" line, it indicates that the license server started without successfully opening a port for the VENDOR SYBASE daemon. Contact your network security administrator and arrange for a port number to be available, then restart the license server. Check the <code>sybase.log</code> file again to be sure that the port was successfully opened. • If you see the "Started SYBASE" line, with no error messages, it indicates that the license server successfully opened a port for the VENDOR SYBASE daemon. Edit this port number from the "lmgrd tcp-port" line into your SAP Mobile Platform license file.
<p>SAP Mobile Platform does not start, and generates a license checkout failure error.</p>	<p>If SAP Mobile Platform cannot check out the required license, it determines whether the license can be issued in grace mode. If a grace period cannot be given, the license is not granted. If the base license for SAP Mobile Platform (SUP_ENTSRVR, for Enterprise Edition, SUP_ENTDEV for Enterprise Developer Edition, or SUP_DEVELOPER for Personal Developer Edition) was in grace mode and the issue is not fixed by the end of the grace period, SAP Mobile Platform fails to start.</p> <p>See <i>SAP Mobile Platform cannot check out a license and starts with license in grace mode</i> in this table. The troubleshooting tips for resolving licenses issued in grace mode apply to this issue as well.</p>

Problem	Resolution
<p>SAP Mobile Platform cannot check out a license and starts with license in grace mode.</p>	<p>Execute the sysam diag feature_name command from the SySAM <code>bin</code> directory, where <i>feature_name</i> is the SySAM feature name for SAP Mobile Platform or the optional feature that is in grace mode. The feature name is printed in the SAP Mobile Platform error log and in the optional e-mail notifications.</p> <p>If the diag command shows that there are no licenses available to be checked out, it may be due to one of these reasons:</p> <ul style="list-style-type: none"> • If you are using a served model: <ul style="list-style-type: none"> • Verify that the license server is running and reachable from the machine you are using. Use <code>sysam status</code> to verify that you can access the license server. If you cannot access the license server, make sure it is running. • If the license server is running, use <code>sysam status -f feature_name</code> to determine whether the license server is serving a license for the given feature. If not, obtain the correct licenses from SPDC or SMP. • All licenses on the license server may be in use. If <code>sysam status -f feature_name</code> indicates that no licenses are available, obtain additional licenses or shut down existing instances of SAP Mobile Platform. • If you are using an unserved model: <ul style="list-style-type: none"> • The license for the given feature may not be in the local <code>licenses</code> directory. Obtain the correct licenses from SPDC or SMP and copy them to the local <code>licenses</code> directory. • The license may have been activated for a different machine or with an incorrect host ID. Check the license back in to SPDC or SMP and reactivate it with the correct host ID. • The available licenses are for a different operating system or architecture. Obtain license for the correct platform from SPDC or SMP. • If you are running in a terminal server environment, you cannot use unserved licenses. Set up served licenses. • The available license may not authorize use of this version of SAP Mobile Platform. For information about date based versioning, see <i>Installing Product Updates, EBFs, and Support Renewal</i> in the <i>SySAM Users Guide</i>.

Problem	Resolution
SAP Mobile Platform cannot check out a license and starts with license in grace mode (continued).	<p>If the diag command shows that the license for the given feature is available, SAP Mobile Platform may not be able to check it out because:</p> <ul style="list-style-type: none"> • The product edition or license type does not match the requirement. If the product edition and license type configuration parameters are set, SAP Mobile Platform uses only the license that matches these settings. • Also see “SAP Mobile Platform cannot find license for optional feature, even though the license exists” in this table.
SAP Mobile Platform shows licenses as being in grace mode even after the issue has been fixed	SAP Mobile Platform periodically performs license checks, and the license status is updated only after the next heartbeat cycle is completed. This may take a few hours.
SAP Mobile Platform cannot find license for an optional feature, even though the license exists.	<p>Execute "<code>sysam diag feature_name</code>" to ensure that license for the optional feature exists and can be checked out from the machine on which SAP Mobile Platform is running. If the feature exists, but cannot be checked out from SAP Mobile Platform, it may be because:</p> <ul style="list-style-type: none"> • The optional feature is for a different edition. • The active or standby flags do not match for the base server license for SAP Mobile Platform and the optional feature.
SAP Mobile Platform does not start with the expected edition or license type.	<p>If the edition and license type configuration parameters are not set, SAP Mobile Platform uses the first available base license (<code>SUP_ENTSRVR</code>, for Enterprise Edition, <code>SUP_ENTDEV</code> for Enterprise Developer Edition, or <code>SUP_DEVELOPER</code> for Personal Developer Edition). If you have multiple base licenses with different editions and license types, the first-available license depends on many factors, such as license file directory sort order, available licenses on the license server, and so on.</p> <p>The product edition and license type that are granted by SySAM cannot be guaranteed. SAP recommends that you set the edition and license type configuration parameters. During installation, you set these parameters on the license details page, following acceptance of the end-user license agreement.</p> <p>When these parameters are set, SAP Mobile Platform starts with that configuration. If a matching license is unavailable, SAP Mobile Platform starts in grace mode (if available) to allow you to resolve the licensing issue.</p>

Calling SAP Technical Support

Information to have available if you call SAP Technical Support for SySAM-related issues.

- The SAP Mobile Platform error log.
 - `SMP_HOME\Servers\UnwiredServer\logs\<server_name>-server.log`

- The bootstrap log file that is created on license expiration, if it exists.
 - `SMP_HOME\Servers\UnwiredServer\logs\bootstrap<randomNo>.log`
- If SAP Mobile Platform does not start, check the server's properties file:
 - `SMP_HOME\Servers\UnwiredServer\Repository\Instance\com\sybase\sup\server\SUPServer\sup.properties`
- The license files (.lic extension) saved in the `SMP_HOME\Servers\UnwiredServer\licenses` directory on the machine running SAP Mobile Platform.
- Output from `lmutil lmpath -status` command. The `lmutil` program is located in the `SYBASE/SYSAM-2_0/licenses` directory on the system where the SySAM license server is installed.
- If you are using a served license model:
 - The license files (.lic extension) saved in the `SYBASE/SYSAM-2_0/licenses` directory of the license server.
 - The license server log file in the `SYBASE/SYSAM-2_0/log` directory.

Troubleshooting Uninstallation

Determine the cause of uninstallation problems and apply the recommended solution.

See the *Troubleshooting* guide for the most recent troubleshooting information.

Problem	Resolution
SAP Control Center installation directory, <code>SCC-3_2</code> , cannot be removed.	The Windows uninstaller fails to remove the SAP Control Center installation directory (by default, <code>C:\SAP\SCC-3_2</code>). Manual attempt to delete the directory fails saying that the files could not be deleted. To remove the directory: <ol style="list-style-type: none"> 1. Find: <pre>SCC_HOME\services\EmbeddedWebContainer\container\Jetty-6.1.22\work\Jetty_0_0_0_0_8282_help.war__help__.smpe97</pre> 2. Change the name of <code>Jetty_0_0_0_0_8282_help.war__help__.smpe97</code> to a single character, such as <code>j</code>. 3. Retry deleting the SAP Control Center installation directory.

Troubleshooting Reinstallation

Determine the cause of reinstallation problems and apply the recommended solution.

See the *Troubleshooting* guide for the most recent troubleshooting information.

Problem	Resolution
"Failed to get package list" error in SAP Control Center after reinstalling an SAP Mobile Server node	This error condition occurs when you uninstall all the SAP Mobile Server nodes in a cluster and then reinstall the first server node. Workaround: Reinstall the full SAP Mobile Platform cluster, including the data tier.
"Invalid user ID or password" error during data tier reinstallation	This error condition occurs when you uninstall the data tier without manually removing all folders and files that remain. Specifically, this error indicates that a <code>db/log</code> directory exists and is not empty. Workaround: Cancel the data tier installation, locate and delete any <code>db/log</code> directories you find on the host system, then restart the data tier installation. <hr/> Note: If your installation specifies custom locations for database files and transaction logs, the <code>db/log</code> folder may not be located under the <code>SMP_HOME</code> installation directory.

APPENDIX A **System Deployment Reference**

Reference information that supports SAP Mobile Platform system deployment tasks.

Port Number Reference

Components of SAP Mobile Platform rely on communication ports for inter-process coordination, data transfer, and administrative access.

SAP Mobile Server Ports

SAP Mobile Server ports, default assignments, and protocols.

Type	Default	Protocol
Administration, SAP Mobile Server	2000	IIOPI
	2001 (secure)	IIOPI
HTTP listeners (used for application connections, REST/OData APIs, and data change notifications)	5001	HTTP
	8000	HTTP
	8001 (secure)	HTTPS
Messaging service administration	5100	HTTP
Replication	2480	HTTP
	2481 (secure)	HTTPS

Data Tier Ports

Data tier server ports, default assignments, and protocols.

Type	Default	Protocol
Cache database (CDB) server, client access	5200	Command sequence on connection to SAP Mobile Server replication engine Tabular Data Stream™ (TDS) on JDBC connection TCP and UDP, when using Windows Filtering Platform (WFP)
Cluster database server, client access	5300	TDS
Monitor DB, client access	5400	TDS
domainlog DB, client access	5400	TDS

SAP Control Center Ports

Ports used by SAP Control Center services, default assignments, and protocols.

Type	Default	Protocol
RMI service	9999	TCP/IP
Messaging service	2100	TCP/IP
SCC repository database server	3638	TDS
Web container	8282 8283	HTTP HTTPS

SAP Control Center Port Assignments

Port assignments for SAP Control Center services are defined in XML configuration files.

SAP Control Center service configuration files are named `service-config.xml`, and located in subdirectories under the `SCC_HOME\SCC-X_X\services\` directory.

SCC Service	Configuration File Location
Messaging service	...\services\Messaging\

SCC Service	Configuration File Location
RMI service	... \services\RMI\
SCC repository database server	... \services\ScsSADataserver\
Web container	... \services\EmbeddedWebContainer\

To change the port assigned to an SAP Control Center service, edit the `service-config.xml` file for that service.

Relay Server Ports

By default, Relay Server uses standard, IANA-assigned ports for HTTP (80) and HTTPS (443).

Reserved Ports

Ports reserved for internal use by SAP Mobile Platform components.

Type	Number	Protocol
Reserved	4343	TDS
Reserved	5011	HTTP
Reserved	6001	HTTP for SAP Introscope Agent
Reserved	8002	HTTPS

Do not use these reserved ports.

Other Ports

Significant ports that are not directly associated with an SAP Mobile Platform server component.

SySAM License Server

If you deploy SAP Mobile Platform with the served license model, all SAP Mobile Platform hosts must have network access to the license server port, on the SySAM license server host.

Type	Default	Protocol
SySAM license server	27000	

Sample Database Server

Both Personal Development Server and Enterprise Development Server Editions include a sample database, which is installed on the SAP Mobile Server host, for tutorials and simple testing.

Type	Default	Protocol
Sample database	5500	TDS

The Enterprise Server Edition includes a sample database, but it is not enabled. To enable the sample database installed with Enterprise Server Edition, see *Create or Remove the Windows Service for sampledb Server (sampledb) Utility* in *System Administration*.

Installation Directories

To ensure a successful installation, review the SAP Mobile Platform server component installation directories.

- The following tables show the high-level directories created in a single-node installation (all SAP Mobile Platform server components installed on a single host).
- In a multi-node or cluster installation, some of these directories are present only on a particular type of host.

By default, SAP Mobile Platform server components are installed in the `C:\SAP\MobilePlatform` directory. In this guide, `SMP_HOME` represents the SAP Mobile Platform installation directory, down to the `MobilePlatform` folder.

Table 5. SAP Mobile Platform Installation Subdirectories

Directory	Description
<code>_jvm</code>	JVM used by the uninstaller.
<code>supXXebflogs</code>	Log files created each time <code>installebf.bat</code> is run. Appears only in EBF installations upgraded from an earlier version of SAP Mobile Platform.
<code>InstallLogs</code>	Log files created each time the SAP Mobile Platform Runtime installer is used. Use these logs to troubleshoot installer issues.
<code>IntroscopeAgent</code>	Introscope Agent for 64-bit Installations.
<code>JDKx.x.x_x</code>	JDK required by SAP Mobile Platform components.
<code>sapjco</code>	SAP Java Connector files.
<code>scc_cert</code>	Certificate files for SAP Control Center.
<code>Servers</code>	SAP Mobile Platform server components.

Directory	Description
Servers\AgentryServer	Agentry server.
Servers\MessagingServer	SAP messaging server.
Servers\SQLAnywherexx	Database server for cache, cluster, and logging databases. Default database file location is the data\ subdirectory.
Servers\UnwiredServer	SAP Mobile Server components.
Servers\UnwiredServer\doe-c_clu	SAP® Data Orchestration Engine Connector (DOE-C) Command Line Utility components. CLU.bat in bin directory starts the DOE-C console.
Servers\UnwiredServer\doecSvlet	SAP® Data Orchestration Engine Connector (DOE-C) runtime components.
Servers\UnwiredServer\licenses	SySAM license files. When an unserved license is updated, copy the new files here.
smpXXupgrade	Appears only in installations upgraded from an earlier version of SAP Mobile Platform.
ThirdParty	License terms of third-party components included in SAP Mobile Platform.
Uninstallers	Uninstallers for SAP Mobile Platform Runtime components.
Uninstallers\MobilePlatform	SAP Mobile Platform Runtime uninstaller.
Util	Utilities used by the SAP Mobile Platform Runtime installer.

By default, SAP Control Center components are installed in the C:\SAP\SCC-XX directory.

Note: If you have other SAP products installed on the same host as SAP Mobile Server, you may have more than one version of SAP Control Center.

Table 6. SAP Control Center Installation Subdirectories

Directory	Description
backup	Backup files.

Directory	Description
bin	Scripts to start or stop SAP Control Center management framework components.
common	Files shared by SAP Control Center components.
conf	Configuration files, including security providers for administration logins.
ldap	LDAP-related files.
log	Log files used by SAP Control Center and its console plug-ins to capture only management framework events. No SAP Mobile Platform data is captured here, except administration logins.
plugins	Managed resource plug-ins.
rtlib	Runtime library files.
sccRepoPwdChange	SAP Control Center repository password update files.
server	Class and library files used by the management framework server.
services	Class and library files for SAP Control Center services.
shared	Shared class and library files.
templates	SAP Control Center service or plug-in template files.

Service Reference

Services are installed on each SAP Mobile Platform server host to support managing and coordinating component processes.

SAP Mobile Server Services

Services installed on an SAP Mobile Server host.

Note: Some services may not be installed on an SAP Mobile Server host, depending on the SAP Mobile Platform product option, the deployment scenario and system design, and the licensed product edition.

Service	Description
SAP Mobile Server	Top-level SAP Mobile Server process. Coordinates other processes that handle interactions with EIS services, supports messaging and synchronization service to mobile clients, and provides SAP Mobile Platform system management facilities.
SAP Control Center <i>X.X</i>	Includes processes for managing, monitoring, and controlling distributed SAP Mobile Platform server resources, and a Web app server for remote SCC console access.
SAP Mobile Platform SampleDB (optional)	Database server for sample database, enabled during installation only with Evaluation license, and with Personal Development Server and Enterprise Development Server licensed product editions. To enable with Enterprise Server Edition after installation, see <i>Create or Remove the Windows Service for sampledb Server (sampledb) Utility</i> in <i>System Administration</i> .

Data Tier Services

Services installed on a data tier host.

Note: Some services may not be installed on a data tier host, depending on the SAP Mobile Platform product option, the deployment scenario and system design, and the licensed product edition.

Service	Description
SAP Mobile Platform CacheDB	Database server that manages the cache database, used primarily to support mobile clients that depend on occasional synchronization of local data stores.
SAP Mobile Platform ClusterDB	Database server that manages the cluster database, which supports SAP Mobile Server runtime management and operational processes.
SAP Mobile Platform LogDataDB	Database server that manages the SAP Mobile Server logging databases (system logging and domain logging).

When the data tier is installed in a single-node system:

- The SAP Mobile Platform ClusterDB and SAP Mobile Platform LogDataDB services are not installed.
- The SAP Mobile Platform CacheDB service manages the cache database, cluster database, and logging databases.

Starting Required Services

Before beginning development, you must start required SAP Mobile Platform services.

Prerequisites

Ensure the required services are installed on the same host.

Task

By starting required services, you start the servers and dependent services. For a complete list of SAP Mobile Platform services, see *System Administration > System Reference > SAP Mobile Platform Windows Services*.

1. Click the **Start SAP Mobile Platform Services** desktop shortcut to start SAP Mobile Server and the dependent services.
2. Use the Services Control Panel to verify that the Windows service named SAP Control Center X.X is started. If it has not, start it by selecting the service and clicking **Start**.

Starting and Stopping SAP Mobile Server

You can start and stop SAP Mobile Server in different ways, depending on the use context.

Review this table to understand which method you should use.

Method	Use When	Services Started or Stopped
SAP Control Center SAP Mobile Server list	Stopping or starting remote SAP Mobile Server nodes	SAP Mobile Server service only
Desktop shortcut	Stopping or starting SAP Mobile Server locally	All runtime services installed on that host
Windows Services panel	Stopping or starting SAP Mobile Server locally	Any combination of individual services that require stopping

Note: You cannot start a Scale-out node from SAP Control Center. If you stop a Scale-out node, you must start it manually.

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