

Installation: SAP Mobile Platform Server for Linux SAP Mobile Platform 3.0

Linux

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Planning the Landscape

Successfully installing SAP[®] Mobile Platform for the first time requires a considerable amount of planning, a number of strategic decisions, and many specific pieces of information about the technical environment into which you are installing.

Before you run the installer for the first time, go through the SAP Mobile Platform *Landscape Design and Integration* document and:

- 1. Review the information for a single-server installation in *Choosing an Installation Scenario* in *Landscape Design and Integration*.
- 2. Complete the installation worksheet.

Record the environment information you will need during installation. The worksheet is organized in the same order in which the installer asks you to provide information.Obtain the installation worksheet by clicking: *SMP3_Worksheets.zip*.

3. For a production installation using a custom database, make sure the database resources —number of connections, available space, permissions, and threads, plus any other parameters that you would tune to support a major application—can support SAP Mobile Platform.

For example, make a minimum of 25 database connections available for SAP Mobile Platform Server.

Next

Installing SAP Mobile Platform on a Single Server on page 3.

Planning the Landscape

Installing SAP Mobile Platform on a Single Server

This scenario places all SAP Mobile Platform server components 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 *Choosing an Installation Scenario* in *Landscape Design and Integration*. The installation instructions in this chapter assume that you have used the *Landscape Design and Integration* document to design the landscape.

Obtain the installation worksheet by clicking: SMP3_Worksheets.zip.

This diagram illustrates the single-server scenario:



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. Acquiring the Installer

The SAP Mobile Platform Server installer image is available as physical media and as a Web download.

3. Using a Custom Database

To use a custom database in a production installation, you must install and set up that database before running the SAP Mobile Platform installer.

4. Running the Installer

Edit the SilentInstall_Linux.txt file to set installation options, then run the installation script.

5. Verifying the Installation

Check for errors in the installation logs, then verify that you can start the SAP Mobile Platform Server and log in to Management Cockpit.

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.

See the SAP Product Availability Matrix (PAM) *http://service.sap.com/pam*. Click the **Mobile** link at the top of the page. Scroll to find the appropriate product and version in the product list.

- 2. Verify that you have Administrator privileges on the installation target host.
- **3.** Shut down all Sybase[®] and SAP software and processes, and associated third-party processes, running on the installation target host.
- **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.

Acquiring the Installer

The SAP Mobile Platform Server installer image is available as physical media and as a Web download.

Use one of these methods:

- Insert the physical installation media.
- Download from the software distribution center on SAP Service Marketplace:

- a. Go to http://service.sap.com/swdc.
- b. Under "A-Z Index" click Installations and Upgrades.
- c. Click M.
- d. Click SAP MOBILE PLATFORM.
- e. Click the link for the current version.
- f. Download the package for the SAP Mobile Platform Server installer.
- g. Extract the entire contents of the installer . zip file to a temporary directory on a local disk on the target host.

Use a short path, preferably a folder directly below the root directory, such as usr/ home/temp. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.). Two consecutive period characters are not allowed.

Using a Custom Database

To use a custom database in a production installation, you must install and set up that database before running the SAP Mobile Platform installer.

The SAP Mobile Platform database stores metadata—data about the data that passes through the SAP Mobile Platform system. This includes information about native and hybrid applications, execution requests between client and server, back-end notification requests, and usage statistics. You can view this data in the Management Cockpit, where you manage and monitor applications. You do not need to encrypt this data.

Use a custom database for a production installation: ASE, DB2, or Oracle. Install the database before you install SAP Mobile Platform Server, using the instructions for your selected database in the sections that follow.

For a development installation, the default Derby database included with SAP Mobile Platform requires no separate installation or setup. To use the default Derby database in a development installation, skip this section and continue with *Running the Installer* on page 16.

See also

• Running the Installer on page 16

Setting Up a Custom ASE Database

To use Adaptive Server[®] Enterprise (ASE), modify some properties files, and run scripts to configure it to work with SAP Mobile Platform.

Note: In the steps below, *<installer_root>* is the root directory in the installer image.

1. Verify that SAP Mobile Platform supports the version of ASE you are planning to use.

- a) Go to the SAP Product Availability Matrix (PAM) *http://service.sap.com/pam.* Click the **Mobile** link at the top of the page. Scroll to find the appropriate product and version in the product list.
- b) Under the Essentials heading in the upper right corner, click the "Open in New Window" link to open the *Support Matrices...* PowerPoint file.
- c) Click through to the SAP Note for persistence databases supported by SAP Mobile Platform 3.0.
- **2.** Install ASE anywhere on the same network where you will be installing SAP Mobile Platform. Consult with your company's database administrator, or have the database administrator perform the installation for you.

If you are not sure what values to specify when you install or configure your database, use the settings below to get started.

Setting	Value
Page size	16 KB

Record the values for these parameters:

- Host name the host system on which the database software is installed.
- Login the admin login for the database software.
- Port number the port number the database software uses.
- 3. If you installed ASE on a different server from the one where you will install SAP Mobile Platform Server, copy the db_tools directory (and all subdirectories) from the SAP Mobile Platform Server installer image to a temporary location on the database server.

In the steps below, <installer_root> will refer to the directory into which you copied db tools.

- 4. Edit the 001_SMP3_drop_and_create_user.DDL script:
 - a) Use a text editor to open the <installer_root>/db_tools/db/ase/smp3/ sql/001 SMP3 drop and create user.DDL file.
 - b) Locate the following two lines and replace c:\Sybase\data\ with the path to where you want your SAP Mobile Platform database to be created.

```
physname = "c:\Sybase\data\smp3.dat",
...
physname = "c:\Sybase\data\smp3.log",
```

Note: The path for your SAP Mobile Platform data is independent of the path that you set for your SAP Mobile Platform installation directory. If you place your database files within the SAP Mobile Platform installation directory tree, the SAP Mobile Platform uninstaller will not remove them.

c) (Optional) Change database name, user name, and password.

This example shows a contiguous block of the noncomment lines in the 001 SMP3 drop and create user.DDL file for ASE:

Replace:

- **smp3** with the new database name.
- gomobile with the new database user name.
- secret with the new database user password.

Be sure to:

- Refer to your database documentation for limitations on length and allowable characters for these parameters.
- Replace all instances of each default text string in the 001 SMP3 drop and create user.DDL script with the same value.
- Make note of the changes you make. You will need to enter the changed values during SAP Mobile Platform Server installation.

Replace highlighted items below as needed to implement the changes you wish to make.

```
. . .
disk init
name = "smp3data",
physname = "c:\Sybase\data\smp3.dat"
size = "256M",
directio = true
qo
disk init
name = "smp3log",
physname = "c:\Sybase\data\smp3.log",
size = "256M",
directio = true
qo
sp addlogin "gomobile", "secret"
go
sp configure "lock scheme", 0, datarows
qo
drop database smp3
qo
create database smp3
   on smp3data="256M"
    log on smp3log="256M"
qo
exec sp dboption 'smp3', 'select into/bulkcopy/pllsort', true
αo
sp configure 'enable functionality group', 1
go
use smp3
go
checkpoint
αo
sp adduser gomobile
go
grant all to gomobile
qo
. . .
```

- **5.** Save and close the file.
- 6. Run the 001_SMP3_drop_and_create_user.DDL script.
 - **a.** Open a terminal window.
 - **b.** In the SAP Mobile Platform installer image, navigate to:

```
<installer root>/db tools/db/ase/smp3/sql
```

c. Enter:

```
isql -S<servername> -U<username> -P<password> -
i001_SMP3_drop_and_create_user.DDL
```

where:

- *<servername>* is the server where ASE is installed.
- *<username>* is an admin user, such as sa.
- cpassword>is the password for <username>.
- 7. Make a minimum of 25 database connections available for SAP Mobile Platform Server.
- **8.** (Optional) Configure your ASE database to support Mobiliser.

See *Configuring ASE to Support Mobiliser* on page 8.

Next

Running the Installer on page 16

Configuring ASE to Support Mobiliser

To support Mobiliser applications with Adaptive Server Enterprise (ASE) on your SAP Mobile Platform Server, make ASE-specific changes to the dbmaintain script and execute it.

Prerequisites

Install SAP Mobile Platform Server to work with ASE.

Task

- 1. Edit the dbmaintain script.
 - a) Make a backup copy of <installer_root>/db_tools/db/ase/smp3/ sql/dbmaintain.properties.ase.
 - b) Use a text editor to open <installer_root>/db_tools/db/ase/smp3/ sql/dbmaintain.properties.ase.
 - c) Edit these lines:

```
database.url=jdbc:sybase:Tds:{HOST}:{PORT}/{DBNAME}
```

```
database.userName={USER}
database.schemaNames={USER}
database.password={PASSWORD}
```

Make thes replacements, including the braces ("{" and "}"):

- {HOST} with the host name for your database
- { PORT } with the port number for your database
- (DBNAME } with smp3, or the new database name, if you changed it from the "smp3" default.
- {USER} with gomobile, or the new user name if you changed it from the "gomobile" default (two replacements)
- {PASSWORD} with secret
- d) Save and close the file.
- 2. Run the dbmaintain script against your database.
 - a) In a terminal window, go to <installer_root>/db_tools/db/ase/smp3/ sql.
 - b) Enter:

```
java -jar
com.sap.mobile.platform.server.db.ase.dbmaintain-
<version>-scriptarchive-ase.jar -c
dbmaintain.properties.ase
```

Where <version> is the actual version text in the file name on your system.

Note: Use Java 7 to invoke this command: either the Java instance that is installed with SAP Mobile Platform Server, or any other available instance.

c) Respond to the Are you sure you want to continue? prompt.

When the dbmaintain script has successfully connected to your database, if the dbMaintainer.fromScratch.enabled parameter is true, the script warns you that any existing objects in the database will be dropped if you continue.

- If this is a fresh installation on a new system, you may safely answer yes to this prompt, and the script continues.
- To preserve existing objects in your database:
 - **1.** Answer no to the prompt.
 - 2. Edit this line in the dbmaintain script, replacing true with false: dbMaintainer.fromScratch.enabled=true
 - 3. Re-run the dbmaintain script.
- d) Review the "Dry Run Results" and continue if there are no issues.

The script takes several minutes to complete, then ends with:

The database has been updated successfully.

Setting Up a Custom DB2 Database

If you plan to use DB2, modify some properties files, and run scripts to configure it to work with SAP Mobile Platform.

Note: In the steps below, *<installer_root>* is the root directory in the installer image.

- 1. Verify that SAP Mobile Platform supports the version of DB2 you are planning to use.
 - a) Go to the SAP Product Availability Matrix (PAM) *http://service.sap.com/pam*. Click the **Mobile** link at the top of the page. Scroll to find the appropriate product and version in the product list.
 - b) Under the Essentials heading in the upper right corner, click the "Open in New Window" link to open the *Support Matrices...* PowerPoint file.
 - c) Click through to the SAP Note for persistence databases supported by SAP Mobile Platform 3.0.
- **2.** Install DB2 anywhere on the same network where you will be installing SAP Mobile Platform. Consult with your company's database administrator, or have the database administrator perform the installation for you.

Record the values for these parameters:

- Host name the host system on which the database software is installed.
- Login the admin login for the database software.
- Port number the port number the database software uses.
- 3. If you installed DB2 on a different server from the one where you will install SAP Mobile Platform Server, copy the db_tools directory (and all subdirectories) from the SAP Mobile Platform Server installer image to a temporary location on the database server. In the steps below, <installer_root> will refer to the directory into which you copied db_tools.
- 4. (Optional) Change database name and user name.
 - a) Use a text editor to open the <installer_root>/db_tools/db/db2/smp3/ sql/001 SMP3 drop and create user.DDL file.
 - b) Change default values for database name and user name.

This example shows a contiguous block of the noncomment lines in the 001_SMP3_drop_and_create_user.DDL file for ASE is shown below. Replace:

- **smp3** with the new database name.
- gomobile with the new database user name.

Be sure to:

. . .

- Refer to your database documentation for limitations on length and allowable characters for these parameters.
- Replace all instances of each default text string in the 001 SMP3 drop and create user.DDL script with the same value.
- Make note of the changes you make. You will need to enter the changed values during SAP Mobile Platform Server installation.

Replace highlighted items below as needed to implement the changes you wish to make.

CREATE DATABASE **smp3** AUTOMATIC STORAGE YES USINGCODESET UTF-8

```
TERRITORY US
COLLATE USING SYSTEM PAGESIZE 32 K;
CONNECT TO smp3;
CREATE SCHEMA gomobile AUTHORIZATION gomobile;
CREATE ROLE SY365_OBJOWNER;
GRANT CREATEIN ON SCHEMA smp3 TO SY365_OBJOWNER;
GRANT SY365_OBJOWNER TO USER gomobile;
...
```

Note: You create the DB2 user name and set the password at the operating system level and, by convention, DB2 uses the same name for the schema. The default 001_SMP3_drop_and_create_user.DDL file assumes that "gomobile" is the user name created for DB2.

- c) Save and close the file.
- 5. Run the 001_SMP3_drop_and_create_user.DDL script.
 - **a.** Open a terminal window.
 - **b.** In the SAP Mobile Platform installer image, navigate to: <installer root>/db tools/db/db2/smp3/sql
 - **c.** Enter: db2 -tvsf 001 SMP3 drop and create user.DDL
- 6. Make a minimum of 25 database connections available for SAP Mobile Platform Server.
- (Optional) Configure your DB2 database to support Mobiliser. See *Configuring DB2 to Support Mobiliser* on page 11.

Next

Running the Installer on page 16

Configuring DB2 to Support Mobiliser

To support Mobiliser applications with DB2 on your SAP Mobile Platform Server, make DB2-specific changes to the dbmaintain script and execute it.

Prerequisites

Install SAP Mobile Platform Server to work with DB2.

Task

- 1. Edit the dbmaintain script.
 - a) Make a backup copy of <installer_root>/db_tools/db/db2/smp3/ sql/dbmaintain.properties.db2.
 - b) Use a text editor to open <installer_root>/db_tools/db/db2/smp3/ sql/dbmaintain.properties.db2.
 - c) Edit these lines: database.url=jdbc:db2://{HOST}:{PORT}/{DBNAME}

```
database.userName={USER}
database.schemaNames={USER}
database.password={PASSWORD}
```

Make thes replacements, including the braces ("{" and "}"):

- {HOST} with the host name for your database
- { PORT } with the port number for your database
- {DBNAME} with smp3, or the new database name, if you changed it from the "smp3" default.
- {USER} with gomobile, or the new user name if you changed it from the "gomobile" default (two replacements)
- {PASSWORD} with secret
- d) Save and close the file.
- 2. Run the dbmaintain script against your database.
 - a) In a terminal window, go to <installer_root>/db_tools/db/db2/smp3/ sql.
 - b) Enter:

```
java -jar
com.sap.mobile.platform.server.db.db2.dbmaintain-
<version>-scriptarchive-db2.jar -c
dbmaintain.properties.db2
```

Where <version> is the actual version text in the file name on your system.

Note: Use Java 7 to invoke this command: either the Java instance that is installed with SAP Mobile Platform Server, or any other available instance.

c) Respond to the Are you sure you want to continue? prompt.

When the dbmaintain script has successfully connected to your database, if the dbMaintainer.fromScratch.enabled parameter is true, the script warns you that any existing objects in the database will be dropped if you continue.

- If this is a fresh installation on a new system, you may safely answer yes to this prompt, and the script continues.
- To preserve existing objects in your database:
 - **1.** Answer no to the prompt.
 - 2. Edit this line in the dbmaintain script, replacing true with false: dbMaintainer.fromScratch.enabled=true
 - 3. Re-run the dbmaintain script. again.
- d) Review the "Dry Run Results" and continue if there are no issues.

The script takes several minutes to complete, then ends with:

The database has been updated successfully.

Setting Up a Custom Oracle Database

If you plan to use Oracle, create and run the smp3.sql script and download the Oracle JDBC driver.

Note: In the steps below, *<installer_root>* is the root directory in the installer image.

- 1. Verify that SAP Mobile Platform supports the version of Oracle you are planning to use.
 - a) Go to the SAP Product Availability Matrix (PAM) *http://service.sap.com/pam.* Click the **Mobile** link at the top of the page. Scroll to find the appropriate product and version in the product list.
 - b) Under the Essentials heading in the upper right corner, click the "Open in New Window" link to open the *Support Matrices...* PowerPoint file.
 - c) Click through to the SAP Note for persistence databases supported by SAP Mobile Platform 3.0.
- **2.** Install Oracle anywhere on the same network where you will be installing SAP Mobile Platform. Consult with your company's database administrator, or have the database administrator perform the installation for you.

Record the values for these parameters:

- Host name the host system on which the database software is installed.
- Login the admin login for the database software.
- Port number the port number the database software uses.
- **3.** If you installed Oracle on a different server from the one where you will install SAP Mobile Platform Server, copy the db_tools directory (and all subdirectories) from the SAP Mobile Platform Server installer image to a temporary location on the database server.

In the steps below, <installer_root> will refer to the directory into which you copied db_tools.

- 4. Create and run the smp3.sql script.
 - **a.** Open a terminal window.
 - **b.** In the SAP Mobile Platform installer image, navigate to:

<installer_root>/db_tools/db/oracle/smp3/sql

- c. Use a text editor to create a smp3.sql file in this location.
- **d.** Use a text editor to open 001_SMP3_drop_and_create_user.DDL from this location and copy its entire contents into the smp3.sql file.
- e. As the last line in the smp3.sql file, enter: EXIT:

f. (Optional) Change user name and password.

This example shows a contiguous block of the noncomment lines in the 001_SMP3_drop_and_create_user.DDL file for ASE is shown below. Replace:

- gomobile with the new database user name.
- secret with the new database user password.

Be sure to:

- Refer to your database documentation for limitations on length and allowable characters for these parameters.
- Replace all instances of each default text string in the 001_SMP3_drop_and_create_user.DDL script with the same value.
- Make note of the changes you make. You will need to enter the changed values during SAP Mobile Platform Server installation.

Replace highlighted items below as needed to implement the changes you wish to make.

```
...
DROP USER gomobile CASCADE;
CREATE USER gomobile
IDENTIFIED BY secret
DEFAULT TABLESPACE USERS
TEMPORARY TABLESPACE TEMP
PROFILE DEFAULT
ACCOUNT UNLOCK;
GRANT SY365_OBJOWNER TO gomobile;
GRANT CREATE SESSION TO gomobile;
GRANT CONNECT TO gomobile;
ALTER USER gomobile DEFAULT ROLE ALL;
ALTER USER gomobile QUOTA UNLIMITED ON USERS;
```

Note: Oracle does not define a database name as such, and by convention uses the same name for the user and the schema. The SAP Mobile Platform Server installer needs either the Oracle service name or SID to connect to your Oracle database.

- g. Save and close smp3.sql.
- h. Enter:

```
sqlplus <username>/<password>@<servername> @smp3.sql > smp3.log
```

Where:

- *<servername>* is the server where Oracle is installed.
- *<username>* is an admin user, such as sa.
- 5. (Optional) Configure your Oracle database to support Mobiliser.

See Configuring Oracle to Support Mobiliser on page 15.

- **6.** Download the JDBC driver from oracle.com for the version of Oracle you are using. The installer will ask you for the path to this driver.
- 7. Make a minimum of 25 database connections available for SAP Mobile Platform Server.

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Running the Installer on page 16

Configuring Oracle to Support Mobiliser

To support Mobiliser applications with Oracle on your SAP Mobile Platform Server, make Oracle-specific changes to the dbmaintain script and execute it.

Prerequisites

Install SAP Mobile Platform Server to work with Oracle.

Task

- 1. Edit the dbmaintain script.
 - a) Make a backup copy of <installer_root>/db_tools/db/oracle/smp3/ sql/dbmaintain.properties.oracle-xxx.
 - b) Use a text editor to open <installer_root>/db_tools/db/oracle/ smp3/sql/dbmaintain.properties.oracle-xxx.
 - c) Enter the location of the JDBC driver that was downloaded for use with SAP Mobile Platform Server.

```
Locate this line and enter the JDBC driver location after the equal sign: database.driverLocation=
```

d) Replace terms in braces with appropriate values for your system.

Make thes replacements, including the braces ("{" and "}"):

- {HOST} with the host name for your database
- { PORT } with the port number for your database
- {SERVICE} or {SID} with smp3, or the new database name, if you changed it from the "smp3" default.
- {USER} with gomobile, or the new user name if you changed it from the "gomobile" default (two replacements)
- {PASSWORD} with secret
- e) Save and close the file.
- 2. Run the dbmaintain script against your database.
 - a) In a terminal window, go to <installer_root>/db_tools/db/oracle/ smp3/sql.
 - b) Enter:

```
java -jar
com.sap.mobile.platform.server.db.oracle.dbmaintain-
<version>-scriptarchive-oracle.jar -c
dbmaintain.properties.oracle
```

Where <version> is the actual version text in the file name on your system.

Note: Use Java 7 to invoke this command: either the Java instance that is installed with SAP Mobile Platform Server, or any other available instance.

c) Respond to the Are you sure you want to continue? prompt.

When the dbmaintain script has successfully connected to your database, if the dbMaintainer.fromScratch.enabled parameter is true, the script warns you that any existing objects in the database will be dropped if you continue.

- If this is a fresh installation on a new system, you may safely answer yes to this prompt, and the script continues.
- To preserve existing objects in your database:
 - **1.** Answer no to the prompt.
 - 2. Edit this line in the dbmaintain script, replacing true with false: dbMaintainer.fromScratch.enabled=true
 - 3. Re-run the dbmaintain script.
- d) Review the "Dry Run Results" and if there are no issues.

The script takes several minutes to complete, then ends with:

The database has been updated successfully.

Running the Installer

Edit the SilentInstall_Linux.txt file to set installation options, then run the installation script.

- **1.** Open a terminal window.
- 2. Go to the root directory of your installer image.
- 3. Use a text editor to open the SilentInstall_Linux.txt file.
- **4.** Make changes as needed to customize installation options. There are three changes you must make:
 - Change AgreeToSAPLicense from false to true in the line below, to indicate your acceptance of the end user license agreement:

-V AgreeToSAPLicense="false"

- Uncomment AdminPassword in the line below, and assign a non-null value: #-V AdminPassword=""
- Uncomment keyStorePassword in the line below, and assign a non-null value: #-V KeystorePassword=""

Note: For both the admin password and the keystore password, only alphabetic and numeric characters, space, period, colon, dash, and hyphen are allowed. The following characters are not allowed: ! ? , ; " ' ` + * ^ / \ | = ~ < > @ # \$ % & () [] { }

If you have installed a custom database and you want to install SAP Mobile Platform to work with it, you must set the parameters as indicated in the table below. Other parameters you can change are documented in comments in the SilentInstall_Linux.txt file.

Parameter	Explanation
-V developerIn- stall= "false"	The default setting is true, which specifies a developer installation, with no options, using the Derby database.
	Change to false to enable a production installation, which allows you to set all other parameters, including a custom database.
	Note: Whenever you change the developerInstall set- ting, you must change the productionInstall to be the opposite.
-V productionIn- stall=" true "	The default setting is false, which specifies a developer installa- tion, with no options, using the Derby database.
	Change to true to enable a production installation, which allows you to set all other parameters, including a custom database.
	Note: Whenever you change the productionInstall setting, you must change the developerInstall to be the opposite.
-V derbyDB= "false"	The default setting is true, which specifies the default Derby da- tabase.
	Change to false to enable selection of another database.
-V existDB=" true "	The default setting is false, which disables selection of a database other than Derby.
	Change to true to enable selection of another database.
-V exist- DBType=" <data-< b=""> base_choice>"</data-<>	 Delete the "#" at the start of the line to enable the parameter. Set the value to select the database you have installed to use with SAP Mobile Platform: ase db2 oracle-sid or oracle-svc
-V dbHost- Name=" <data-< b=""> base_host_name>"</data-<>	Delete the "#" at the start of the line to enable the parameter. Set the value to the name of the host on which you have installed the database to use with SAP Mobile Platform:

Installing SAP Mobile Platform on a Single Server

Parameter	Explanation
-V dbPortNum- ber=" <data-< b=""> base_port>"</data-<>	Delete the "#" at the start of the line to enable the parameter. Set the value to the port number your database uses.
-V dbLogin="gomo- bile"	Delete the "#" at the start of the line to enable the parameter.
	Set the value to gomobile , or the new user name if you changed it from the default. This value was set for the administrator's ID for the SAP Mobile Platform database by the scripts that you ran.
-V dbPassword=" se- cret"	Delete the "#" at the start of the line to enable the parameter.
	Set the value to secret , or the new user password if you changed it from the default. This value was set for the administrator's pass- word for the SAP Mobile Platform database by the scripts that you ran.
-V dbDBName= "smp3"	Delete the "#" at the start of the line to enable the parameter.
	Set the value to smp3 , or the new database name, if you changed it from the default. This value was set for the SAP Mobile Platform database name by the scripts that you ran.
	Note: If you are using Oracle, dbDBName is either the service name or the SID, depending on how you access Oracle.
-V ignorePingEr- ror=" false "	Delete the "#" at the start of the line to enable the parameter.
	Warning! Leave the value as false (recommended) to stop the installer if it cannot successfully ping your database, using the values that you have specified. If this option is true and the database ping fails, the installation completes, but the server will not start.
-V oracleJdbcDriv- er=" <jdbc_path></jdbc_path> "	(Oracle only) Delete the "#" at the start of the line to enable the parameter.
	Set the value to the path to your Oracle JDBC driver, ojdbc6.jar or ojdbc6_g.jar.

Note: If you wish to change the installation directory, uncomment the line below and replace "{User home directory}" with a valid path to the desired installation directory: #-P installLocation="{User home directory}/SAP/MobilePlatform3"

If you uncomment this line without changing "{User home directory}" the installation will fail.

5. Save and close the SilentInstall Linux.txt file.

6. Launch the installer:

sh SilentInstall_Linux.sh

Note: The installer displays an Initializing wizard... message while it verifies the integrity of the installation image.

The installer then displays progress messages as it completes each step of the installation. Watch for this message when the installer completes:

Installation Successful

See also

• Using a Custom Database on page 5

Verifying the Installation

Check for errors in the installation logs, then verify that you can start the SAP Mobile Platform Server and log in to Management Cockpit.

 Check the installation log at SMP_HOME/InstallLogs/ SMPInstall<timestamp>.log.

SMP_HOME is the installation location you specified (the default is *\$HOME/SAP/* MobilePlatform3/).

A quick way to do this is:

grep -i error SMP*log

2. Verify that you can start SAP Mobile Platform Server.

In a terminal window, enter:

> cd SMP_HOME/Server
> ./daemon.sh start

Server start-up is complete when you see:

The SMP server has initialized and is ready.

- 3. Verify that you can log in to Management Cockpit.
 - In a browser on any computer on the network, enter: https://host_name:https_admin_port/Admin/
 - Optionally, in a browser on the system where SAP Mobile Platform Server is installed, enter:

```
https://localhost:https_admin_port/Admin/
```

Installing SAP Mobile Platform on a Single Server

Next

Use the *Upgrade: SAP Mobile Platform Server for Linux* for the support package to upgrade your SAP Mobile Platform installation.

Uninstalling

Uninstall SAP Mobile Platform server components before reinstalling them.

Preparing to Uninstall

Ensure that the host from which you are uninstalling SAP Mobile Platform Server is ready for the uninstallation.

Note: If you have been using an external production database, uninstalling SAP Mobile Platform Server leaves that database intact.

If you have been using the Derby database in a development installation, uninstalling SAP Mobile Platform Server deletes it.

- 1. While SAP Mobile Platform Server is running, first uninstall any other SAP products that require SAP Mobile Platform, including:
 - SAP Mobile Sales for SAP CRM
 - SAP Mobile Workflow for SAP Business Suite

See the product-specific Installation Guide.

2. Shut down all SAP software and processes, and associated third-party processes that are running on the host.

Determine the status of daemon.sh:

- a. Open a terminal window.
- **b.** Go to SMP HOME/Server/.
- c. Execute ./daemon.sh status.

If the server is not stopped, execute ./daemon.sh stop.

3. Move or copy any user-created files and log files that you want to keep, from the SAP Mobile Platform Server installation directories to another location.

If you have been using the Derby database in a development installation and you plan to reinstall SAP Mobile Platform Server, preserve data by backing up the SAP Mobile Platform Server databases.

With SAP Mobile Platform Server stopped, use operating system commands to copy the entire directory structure from *SMP_HOME/Server/db/derby/smp3/* to a backup location. For alternative ways of backing up the Derby database, see *http://db.apache.org/derby/docs/10.0/manuals/admin/hubprnt43.html*.

- **4.** Prevent backups from interfering, by either excluding the existing SAP Mobile Platform Server installation directory from backup processes or by temporarily disabling them.
- **5.** Prevent virus scans from interfering, by either excluding the existing SAP Mobile Platform Server installation directory from virus scans or by temporarily disabling them.

Running the Uninstaller

Run a shell script to uninstall SAP Mobile Platform server components.

- 1. Open a terminal window.
- 2. Go to SMP HOME.
- 3. Launch the uninstaller:

```
sh SilentUninstall Linux.sh
```

- 4. When you see the message that SAP Mobile Platform was successfully uninstalled, enter exit to close the terminal window.
- **5.** Delete any folders and files remaining in the SAP Mobile Platform Server installation directory.
- **6.** If you are using a custom database, archive your data, then execute the appropriate command below to delete the SAP Mobile Platform database tables.
 - ASE at the **isql** prompt (if you changed the default database name, replace smp3 with the new name):

```
drop database smp3;
```

• DB2 – at DB2 prompt (if you changed the default database user name, replace gomobile with the new name):

```
drop schema gomobile;
```

• Oracle – at SQL*Plus prompt (if you changed the default database user name, replace gomobile with the new name):

```
drop user gomobile cascade;
```

Troubleshooting

Review information about common problems that arise in the SAP Mobile Platform Runtime installation process.

For information about contacting SAP Technical Support, see *Issues Requiring Product Support* on page 29.

Issues Requiring Root Cause Analysis

Problems that have multiple solutions may require you to investigate an identified incident, problem, concern, or nonconformity. Try to understand the fundamental or underlying causes of the situation and correct them right, thereby preventing reoccurrence of the same issue.

Cannot Access Management Cockpit

After successfully installing SAP Mobile Platform Server, you cannot access Management Cockpit in a browser window.

Detect

After installing SAP Mobile Platform Server, when you try to access Management Cockpit, your Web browser displays an error message.

Problem Overview

The error message varies, depending on the browser you are using and the underlying cause.

- **Environment** this can occur with SAP Mobile Platform Server installed on any supported server operating system, when attempting to access Management Cockpit remotely or from the same system where the server is installed.
- Notable symptoms the admin ID and password prompt never appears.
- **Triage characteristics** use severity and complexity characteristics to determine the IT resources you may need to assign to remediate this problem.

Attribute	Classification
Severity	High. Major system administration functions are unavailable.
Complexity	Simple to assess and to resolve.

Next: Assess the issue to determine your root cause.

See also

- Assess on page 24
- Correct Server Not Started on page 27
- Correct Management Cockpit URL on page 27
- Correct Browser Version on page 28
- Correct Browser Proxy Settings on page 28

<u>Assess</u>

You may not be able to access Management Cockpit if the server is not started, the URL is incorrect, or the browser is not supported.

Root Cause Diagnostic Assessment

Check the most likely causes first. You may have to resolve more than one root cause.

Root Cause	Assessment	Correction
(Likely) SAP Mo- bile Platform Server is not star- ted.	 Log in to the desktop of the computer where SAP Mobile Platform Server is installed. Check the server start-up state: a. Open a terminal window. b. Go to \$HOME/SAP/. c. Execute ./daemon.sh status. If daemon.sh is not running, the server is not started. 	If server is not started, see <i>Correct Server Not Started</i> on page 27. If server is started, assess the next root cause.

Table 1. Diagnostic Assessment and Correction Summary

Root Cause	Assessment	Correction
(Possible) Man- agement Cockpit URL is incorrect.	 Log in to the desktop of the computer where SAP Mobile Platform Server is installed. Copy this URL into a text editor: https://localhost.port/Ad- 	If the URLs are different, see <i>Correct Management Cock-</i> <i>pit URL</i> on page 27. If not, assess the next root
	min/ 3. Get the computer name.	cause.
	In a terminal window, enter:	
	Copy the full computer name to the clipboard.4. In the text editor, paste the computer name from the clipboard replacing local bost	
	in that URL5. Immediately after the computer name you instantial fully after the computer name you	
	for example, if the computer name is my-	
	server and the rest of the networkaddress for the computer is myco.com, after re-	
	editor, you would have https://my- server.myco.com:port/Admin,	
	the correct URL to access Management Cockpit from any computer on your network.	
	6. Get the port number used for Management Cockpit.	
	 a. Open the SilentInstall_Li- nux.txt file. b. Least the line for the common? d 	
	b. Locate the line for the serverAd- minHttpsPortNumber parameter and record the value set there.	
	c. Open the SMPInstall <time- stamp>.log file and search for a message indicating that the installer used a different port number for server-</time- 	
	AdminhttpsPortNumber. If you see that the installer used a differ- ent port number, record that and ignore	

Root Cause	Assessment	Correction	
	 the port number set in the SilentIn- stall_Linux.txt file. 7. In the text editor, paste the port number you recorded from the clipboard, replacing port in that URL. For example, if the port number you recorded is 8083, pasting that into the URL changes it to https://myserver.my- co.com:8083/Admin, the correct URL to access Management Cockpit from any computer on your network. 8. Compare the URL you have created in the text editor with the URL you were using to access Management Cockpit. 		
(Possible) Brows- er version is not supported.	See <i>http://service.sap.com/pam</i> for the correct browser versions. If your browser version is not listed, it is not sup- ported.	If the browser version you are using is not supported, see <i>Correct Browser Version</i> on page 28. If the browser version is sup- ported, assess the next root cause.	
(Possible) Brows- er proxy settings prevent access	Even if your browser does not display an error message indicating that proxy settings are block- ing access to the Management Cockpit URL, check with your company's IT support to deter- mine whether browser proxy settings need to be changed.	If your company's IT sup- port determines that your browser proxy settings are preventing access, see <i>Cor-</i> <i>rect Browser Proxy Settings</i> on page 28.	
(Unknown) None of the root causes have been valida- ted.	Check other knowledge and support assets on SAP Service Marketplace. If no other causes are documented by Product Support, collect the data and outcomes of this assessment.	Assistance required. Create a help ticket with Product Support on SAP Service Marketplace.	

See also

- *Detect* on page 23
- Correct Server Not Started on page 27
- Correct Management Cockpit URL on page 27
- Correct Browser Version on page 28
- Correct Browser Proxy Settings on page 28

Correct Server Not Started

If your assessment confirms this root cause, start the server.

Correct

- 1. Log in to the desktop of the computer where SAP Mobile Platform Server is installed.
- **2.** Start the server:
 - **a.** Open a terminal window.
 - **b.** Go to *SMP_HOME*/Server/.
 - c. Execute ./daemon.sh start. Server start-up is complete when you see: The SMP server has initialized and is ready.

Validate

- 1. Try again to access Management Cockpit.
- **2.** If the login screen for Management Cockpit still does not appear, assess the next root cause.

See also

- Detect on page 23
- Assess on page 24
- Correct Management Cockpit URL on page 27
- Correct Browser Version on page 28
- Correct Browser Proxy Settings on page 28

Correct Management Cockpit URL

If your assessment confirms the root cause, correct the URL used to access Management Cockpit.

Correct

- 1. Select and copy the URL you created in the text editor.
- 2. Paste the URL into your browser's address bar and press Enter.

Validate

If the login screen for Management Cockpit still does not appear, assess the next root cause.

See also

- Detect on page 23
- Assess on page 24
- Correct Server Not Started on page 27

- Correct Browser Version on page 28
- Correct Browser Proxy Settings on page 28

Correct Browser Version

If your assessment confirms this root cause, install a supported browser.

Correct

- 1. Select a supported browser version from those listed in http://service.sap.com/pam.
- **2.** Download that browser version from the vendor's Web site and install it on the computer from which you want to access Management Cockpit.

Validate

- 1. Try again to access Management Cockpit.
- **2.** If the login screen for Management Cockpit still does not appear, assess the next root cause.

See also

- Detect on page 23
- Assess on page 24
- Correct Server Not Started on page 27
- Correct Management Cockpit URL on page 27
- Correct Browser Proxy Settings on page 28

Correct Browser Proxy Settings

If your assessment confirms this root cause, correct browser proxy settings.

Correct

- 1. Consult with your company's IT support to determine the correct browser proxy settings.
- 2. Change browser proxy settings to match settings provided by your company's IT support..

Validate

- 1. Try again to access Management Cockpit.
- **2.** If the login screen for Management Cockpit still does not appear, assess the next root cause.

See also

- Detect on page 23
- Assess on page 24
- Correct Server Not Started on page 27

- Correct Management Cockpit URL on page 27
- Correct Browser Version on page 28

Issues Requiring Product Support

Your SAP support ID gives you access to enterprise-level incident support as part of your support plan on SAP Service Marketplace.

Product Support can help you resolve new undocumented incidents with software installation, start-up, and overall use, as well as providing diagnostic and troubleshooting assistance for known problems with a new or undocumented cause.

Product Support Engagement Requirements

If you use SAP Service Marketplace to engage with Product Support, you must meet certain requirements.

Service Marketplace Case Creation Requirements Be prepared to provide:

- A valid installation number for SAP Mobile Platform
- A valid service contract with SAP
- A valid system ID (S-User ID)
- An enabled NetViewer connection.

SAP Mobile Platform Incident Requirements

- Configure your logs to an appropriate level for your issue. Product Support requires details from one or more of the system logs.
- Capture these basic incident details to help Product Support analyze the problem, and determine any next steps:
 - Environment summary: product version, back end, client type (device and OS), proxy connections. These details help isolate component that is causing the failure. If you have an architecture diagram, share it with SAP.
 - Problem description: what were the actions preceded the incident. Capture all details that allow Product Support to reproduce the issue.
- Locate the server version in the SMP_HOME\Server\version.properties file.

Creating an Incident on SAP Service Marketplace

If you cannot resolve problems with the troubleshooting documentation for SAP Mobile Platform, go to SAP Service Marketplace for additional help.

Use SAP Service Marketplace to create an incident message for Product Support. Keywords from this message return related articles from the Knowledge Base. Before you submit a message, review these articles to see if they resolve your problem.

- 1. Go to *http://service.sap.com/message*.
- 2. Create a message using the wizard.

Note: You must know the component ID for SAP Mobile Platform to return the correct scope of Knowledge Base Articles and to correctly route the message to Product Support. On-premise installations of SAP Mobile Platform use a different ID than cloud instances. See Knowledge Base Article *1915061- How to Choose a Component for SAP Mobile Platform 3.x in Service Marketplace*.

3. Once the message is processed, you receive an e-mail notification of the solution.

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.

HTTP/HTTPS Port Number Reference

Туре	Default	Pro- tocol	Where Configured
client communications, unsecured	8080	HTTP	<pre>File: SMP_HOME\Server\con- fig_master \org.eclipse.gemi- ni.web.tomcat\default- server.xml Setting: <connector port="8080"</connector </pre>
client communications with one way SSL au- thentication	8081 (secure)	HTTP S	<pre>File: SMP_HOME\Server\con- fig_master \org.eclipse.gemi- ni.web.tomcat\default- server.xml Setting: <connector proto-<br="">col="com.sap.mobile.plat- form.coy- ote.httpl1.SapHttpl1Proto- col" port="8081"</connector></pre>

HTTP and HTTPS ports, default assignments, and protocols.

Туре	Default	Pro- tocol	Where Configured
client communications with mutual SSL authen- tication	8082 (secure)	HTTP S	<pre>File: SMP_HOME\Server\con- fig_master \org.eclipse.gemi- ni.web.tomcat\default- server.xml</pre>
			Setting: <connector proto-<br="">col="com.sap.mobile.plat- form.coy- ote.http11.SapHttp11Proto- col" port="8082"</connector>
administration port, Man- agement Cockpit and Kapsel command line in- terface (CLI) communi- cations with one way SSL authentication	8083 (secure)	HTTP S	<pre>File: SMP_HOME\Server\con- fig_master \org.eclipse.gemi- ni.web.tomcat\default- server.xml Setting: <connector proto-<br="">col="com.sap.mobile.plat- form.coy- ote.http11.SapHttp11Proto- col" port="8083"</connector></pre>

Note: Keystore certificates are used for SSL authentication of SAP Mobile Platform Server communication ports.

TCP Port Number Reference

TCP ports, default assignments, and protocols.

Туре	Default	Pro- tocol	Where Configured
JMX	1717	ТСР	<pre>File: SMP_HOME\Server\config_master \com.sap.ljs.commandline.parame- ters\ljs.properties</pre>
			Setting: jmxremote.port=1717
			<pre>File: SMP_HOME\Server\config_master\ com.sap.mobile.platform.serv- er.foundation.security.jmx \com.sap.mobile.platform.serv- er.foundation.security.jmx.proper- ties</pre>
			Settings:
			 jmxPort=1717 serviceUrl=service:jmx:rmi:// 127.0.0.1:1717/jndi/rmi:// 127.0.0.1:1717/jmxrmi
Derby database (only when Der- by is used as the	1527 (localhost only)	ТСР	File: SMP_HOME\Server\derby.proper- ties
SAP Mobile Platform Server database)	omy)		Note: Line is commented out (defaults internally to 1527). Uncomment the line when changing the port number.
OSGi console	2401	ТСР	File: SMP_HOME\Server\props.ini
	(localhost only)		Setting:-console localhost:2401
Mobiliser TCP	8088	ТСР	<pre>File: SMP_HOME\Server\config_master\ com.sybase365.mobiliser.frame- work.gateway.tcp/com.sybase365.mo- biliser.framework.gateway.tcp.prop- erties Setting: port=8088</pre>

Installation Directories

File organization of your SAP Mobile Platform Server installation.

The table below shows the top-level directories created under *SMP_HOME* when you install SAP Mobile Platform Server. *SMP_HOME* is the installation location you specified (the default is *\$HOME*/SAP/MobilePlatform3/).

Directory	Description
_smpjvm	JVM used by the uninstaller
InstallLogs	Log files created each time the SAP Mobile Platform Server installer is used. Use these logs to troubleshoot installer issues.
sapjvm7	SAP Java virtual machine files used by SAP Mobile Platform Server
Server	SAP Mobile Platform Server components
ThirdParty	License terms of third-party components included in SAP Mobile Platform
Uninstaller	Uninstallers for SAP Mobile Platform Server compo- nents
Uninstaller/Server	SAP Mobile Platform Server uninstaller
Util	Utilities used by the SAP Mobile Platform Server in- staller

Table 2. SAP Mobile Platform Installation Subdirectories

Daemon Reference

Daemons are installed on the SAP Mobile Platform Server host to manage and coordinate component processes.

Service	Description
daemon.sh	Top-level SAP Mobile Platform Server process. Coor- dinates other processes that handle interactions with back-end services, supports messaging and synchroni- zation service to mobile clients, and provides SAP Mobile Platform system management facilities.

Starting and Stopping SAP Mobile Platform Server on Linux

Start and stop SAP Mobile Platform Server on Linux through a terminal window.

Note: If you are using a custom database with SAP Mobile Platform, starting and stopping SAP Mobile Platform Server has no effect on the database. Only the Derby database is automatically stopped and started in sync with SAP Mobile Platform Server.

Starting SAP Mobile Platform Server

You must manually start SAP Mobile Platform Server each time you restart the host system.

- 1. Open a terminal window.
- 2. Go to SMP_HOME/Server/.
- 3. Execute ./daemon.sh start.

Server start-up is complete when you see:

The SMP server has initialized and is ready.

Stopping SAP Mobile Platform Server

- 1. Open a terminal window.
- 2. Go to *SMP_HOME*/Server/.
- 3. Execute ./daemon.sh stop.

Starting and Stopping the Management Cockpit on Linux

Start and stop Management Cockpit through a browser window.

Note: SAP Mobile Platform Server must be started before you can start the Management Cockpit.

Starting Management Cockpit

- In a browser on any computer on the network, enter: https://host name:https admin port/Admin/
- Optionally, in a browser on the system where SAP Mobile Platform Server is installed, enter:

https://localhost:https_admin_port/Admin/

Stopping Management Cockpit

To stop Management Cockpit, click the **Logout** icon in the upper-right corner.

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