



**Landscape Design and Integration**

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**SAP Mobile Platform 3.0 SP02**

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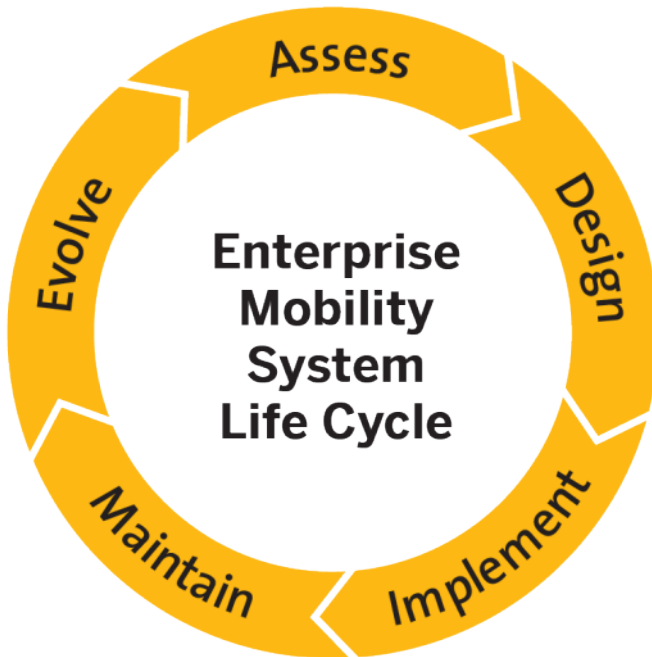
# Contents

# SAP Mobile Platform System Life Cycle

Use the SAP® Mobile Platform life cycle to define required IT processes for implementing and altering your enterprise mobility management system. Understand each phase so you can successfully deploy and evolve platform components into your ecosystem.

SAP recommends that you review the contents of this document before using *Installation: SAP Mobile Platform Server for Windows* or *Installation: SAP Mobile Platform Server for Linux* to install SAP Mobile Platform.

For SAP Mobile Platform, the life cycle is represented by these stages:



This document covers the Assess, Design, and Implement stages of the enterprise mobility life cycle for SAP Mobile Platform Server.



## Stage 1: Assess

Conduct a preliminary analysis of your existing IT ecosystem. Define the mobility goals and required functions and operation of the intended mobile applications and runtime system.

Ecosystem assessments should include:

- Physical plant resources (power, rack space, cable drops, and so on)
- Network design and configuration
- Access control and authentication (information security) mechanisms
- Availability of suitable host systems
- Availability of back-end resources

From the assessment, gather requirements that will help you make design-phase decisions.

### Host Platform Requirements

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Provision host systems to meet SAP Mobile Platform Server requirements.

All SAP Mobile Platform Server hosts must meet the requirements for:

- Minimum host resources (CPU, RAM, and local storage space), specified in <http://service.sap.com/pam>
- Operating system (including edition, version, and service pack), specified in 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.

### Network Communications Requirements

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Network and host provisioning must accommodate SAP Mobile Platform internal communications.

When SAP Mobile Platform runtime components, such as the database and back-end servers, are installed on more than one host, they depend on network connections for some interprocess communication. Configure the local network to allow all communications between SAP Mobile Platform runtime components.

When all SAP Mobile Platform runtime components are installed on a single host, they depend on regular IP communication on the primary network interface of the host.

## **SAP Mobile Platform Port Accommodation**

Infrastructure provisioning must accommodate all ports required by SAP Mobile Platform runtime components.

To accommodate SAP Mobile Platform ports, you may need to:

- Configure personal firewalls or host-based intrusion protection (HIPS) to allow access to component ports. See *Managing Firewalls and Intrusion Prevention in Administration*.
- Configure SAP Mobile Platform Server to change port number assignments during installation.
- Reserve ephemeral ports on SAP Mobile Platform hosts to prevent other processes from using them.  
See the Microsoft operating system documentation for information about reserving ephemeral ports.

Ports and default port numbers are listed in the *Port Number Reference in Administrator*.

## **Back-End Requirements**

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You may need to provision back-end resources to enable SAP Mobile Platform to use data services provided by those resources.

### **Back-End Driver Requirements**

SAP Mobile Platform includes drivers for SAP databases, such as Adaptive Server Enterprise® (ASE) and SQL Anywhere®, and for Web services. For non-SAP data sources, such as DB2, Oracle, or Microsoft SQL Server, you must install the appropriate drivers.

Depending on the type of back-end connection, you may need to copy some driver and library files to SAP Mobile Platform Server installation directories.

In an SAP Mobile Platform Server cluster, each host must have the appropriate drivers installed.

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.

### **SAP External Libraries Requirements**

(Optional) Enable communication with an SAP back end by downloading external files from SAP and installing them into SAP® Mobile Platform.

- **SAP Cryptographic Libraries** – required by SAP Mobile Platform to enable Secure Network Communications (SNC) between SAP Mobile Platform Server and the SAP back end.



- **SAPCAR utility** – required to extract files from the SAP cryptographic library.

## **Authentication and Authorization Security Requirements**

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If you do not effectively define security requirements before installing SAP Mobile Platform, you cannot evaluate the resulting system for success or failure prior to implementation. SAP Mobile Platform security features are affected by your current infrastructure.

- **Roles and distribution of assignments** – to prevent mapping collisions, identify the roles that need to exist, and how to map them.
- **Security provider strategy** – identify the existing built-in security providers, and the ones you can create using the CSI API. The security providers you configure in SAP Mobile Platform pass authentication and authorization information to the providers in your environment. Identifying the providers simplifies the implementation of a security configuration by the platform administrator after installation. If you are using single sign-on (SSO) with a security provider, you may also need to prepare libraries and other back-end components.

## **Intrusion Detection and Protection Requirements**

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To accommodate SAP Mobile Platform internal communications, you may need to reconfigure hardware or software intrusion detection and prevention systems.

- Configure personal firewall applications, or host-based intrusion prevention software (HIPS) to allow all communications between SAP Mobile Platform components.
- To prevent required internal component communication ports from being blocked, configure an intrusion prevention system (IPS), or intrusion detection and prevention system (IDPS) appliances to allow connections to the ports SAP Mobile Platform uses.
- When you install any new IDPS on an SAP Mobile Platform server host, or on a local network that services an SAP Mobile Platform Server host, configure that new system to accommodate all SAP Mobile Platform internal communications.

## Stage 1: Assess

## Stage 2: Design

Create the landscapes, process diagrams (beyond the scope of this document), perform license selection, and prepare supporting documentation (including installation worksheets). The design stage uses the requirements identified during the assessment stage.

Each requirement produces a set of one or more design elements, which are intended to describe the software in sufficient detail to allow any IT member to perform its installation.

### Choosing a Reverse Proxy

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Determine whether you need third-party reverse proxy servers in your landscape design.

Different environments have different requirements for managing in-bound application requests to SAP Mobile Platform Server. Review the criteria to help you determine which component needs to be installed and configured in your landscape.

1. What application types do you need to support?

Application Type	Reverse Proxy
Native	Apache
Hybrid	Apache
Agentry	Nginx

2. Is this a production or a preproduction environment?

Typically, only production environments need a reverse proxy. Most preproduction environments or small-scale development environments do not require a reverse proxy, unless you need to replicate production systems and values as closely as possible in a development testing environment.

Once you have reviewed all evaluation criteria, you can determine whether you need to use a reverse proxy. To install and configure a reverse proxy into your SAP Mobile Platform environment. See *Adding Reverse Proxies* in *Administrator*.

## Choosing a SOCKS Proxy or Load Balancer for APNS Connections

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Determine whether you need a socket secure (SOCKS) proxy in a network proxy server or a load balancer in the DMZ. One of these features may be required to enable a path to get through network obstacles to the Apple Push Notification Service (APNS).

Different environments have different requirements for managing outbound application requests from SAP Mobile Platform Server to APNS. Review the criteria to determine the best approach to facilitate APNS access in your environment.

1. Do you have a network proxy server with SOCKS capability in the route between the SMP server and Internet access to APNS?

If not, you cannot implement a SOCKS proxy for APNS connections.

2. Do you have a DMZ load balancer that can handle SSL connections, passing the client certificate through to the APNS server upon challenge?

If not, you cannot use the load balancer for APNS connections.

3. If the answers to the above questions indicate that you can use either a SOCKS proxy or DMZ load balancer, consider these criteria:

Item	SOCKS Proxy	DMZ Load Balancer
Ease of setup	Modify the <code>props.ini</code> file.	Modify the <code>hosts</code> file and firewall rules.
Security	Has no restrictions on Internet connections.	Allows Internet connections only to APNS servers.

To set up either a SOCKS proxy in a network proxy server, or a load balancer in the DMZ in your SAP Mobile Platform environment, see *Adding a SOCKS Proxy or Load Balancer for APNS Connections* in *Administration*.

## Choosing an Installation Scenario

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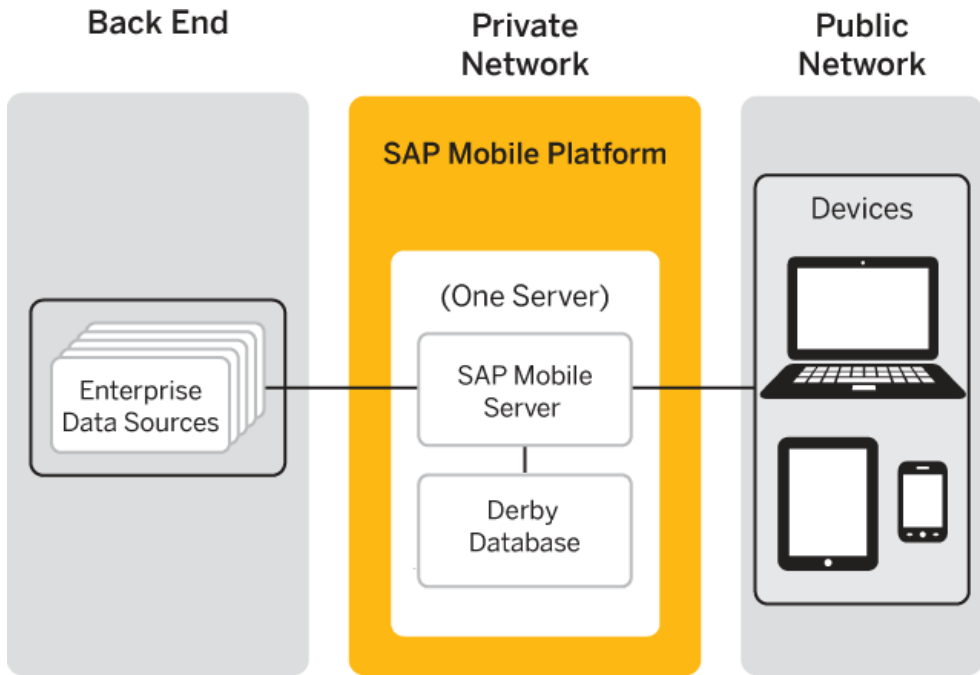
Each installation scenario outlines a specific way to install and configure an SAP Mobile Platform system.

### Single-Server Development Installation

Single-server development installations set up a complete SAP Mobile Platform system on a single server. This configuration is suitable for a small team of developers. With SAP Mobile

Platform SDK installed on the same system, a single-server installation provides a self-contained individual developer workstation.

**Figure 1: Single-Server Development Installation**



Summary of single-server development installation architecture:

- SAP Mobile Platform Server installed on a single server.
- Derby database installed on the same server.

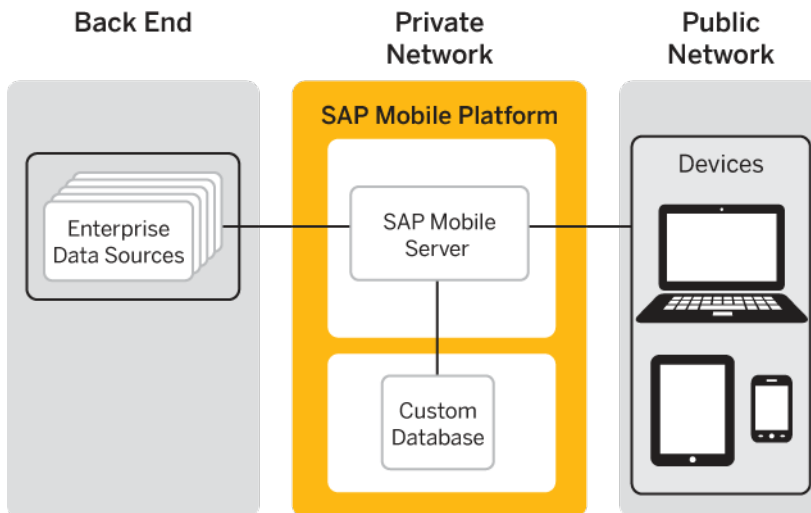
**See also**

- *Single-Server Production Installation* on page 10

## **Single-Server Production Installation**

Single-server production installations set up SAP Mobile Platform Server on one server, and a custom database on a separate server. This configuration is suitable for a low-volume production system that does not require continuous availability.

**Figure 2: Single-Server Production Installation**



Summary of single-server production installation architecture:

- SAP Mobile Platform Server installed on a single server.
- Custom database – ASE, DB2, or Oracle – installed on a separate server.

### **See also**

- *Single-Server Development Installation* on page 8

## Stage 3: Implement

The implementation stage uses the documentation produced by the design stage. IT personnel use any documentation, for example, completed worksheets design documents, or diagrams, as the concrete guidelines for executing and phasing the installation.

### Completing Installation Worksheets

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To streamline installation tasks, fill in the installation worksheet before you start to install..

You might want to start using the worksheet during the design and planning stage, then pass it to the person who is performing the actual installation according to the design documentation you deliver.

Obtain the installation worksheet by clicking: *SMP3\_Worksheets.zip*.

### Performing the Installation

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Go to the SAP Mobile Platform Server installation document for your target operating system and locate the instructions for your chosen installation scenario. Use the information in the installation worksheet you filled out for your installation scenario to fill in the installer panels.

#### Prerequisites

Complete an installation worksheet for the SAP Mobile Platform installation scenario you have chosen.

#### Task

Follow the instructions in the installation document for your platform:

- *Installation: SAP Mobile Platform Server for Windows*
- *Installation: SAP Mobile Platform Server for Linux*

## Stage 3: Implement



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