Server Installation

ZENworks® Mobile Management 2.5.x

July 2012

Novell®

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1800 South Novell Place
Provo, UT 84606
U.S.A.
www.novell.com

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ZENworks Mobile Management Overview

ZENworks Mobile Management is a mobile device management solution that provides organizations with centralized management and control of the wireless device platforms in their enterprise network.

The *ZENworks Mobile Management* solution includes an application downloaded to devices, a server application, and an Update Manager application for applying server software updates.

A single instance of the server application supports a multi-tenant architecture, allowing an enterprise to manage one or multiple organizations.

The Role of the ZENworks Mobile Management Server

The *ZENworks Mobile Management* server is capable of managing devices in two capacities.

- **ActiveSync Present** - When an ActiveSync server is part of the environment, the *ZENworks Mobile Management System* serves as a gateway that proxies ActiveSync traffic. Settings for the policies that govern devices in your environment are configured from *ZENworks Mobile Management*. For ActiveSync policies, the *ZENworks Mobile Management* policy setting takes precedence over the settings configured on the ActiveSync server. In addition, the *ZENworks Mobile Management* server relays all email and PIM data to and from the ActiveSync server. ActiveSync servers using protocol version 12.0 or greater should be configured to enable *Autodiscover* so that actual server address information can be discovered as users enroll.
- **ActiveSync not Present** - For systems that do not use the ActiveSync protocol, *the ZENworks Mobile Management system serves as a stand-in ActiveSync server* that synchronizes policies and issues security command messages. In this scenario, email and PIM are not proxied through the *ZENworks Mobile Management* server.

The purpose of taking either of these roles is to control security policies available through ActiveSync and to allow the *ZENworks Mobile Management* server to issue remote security command messages.

ZENworks Mobile Management as a Gateway Server

Access. ActiveSync servers can be configured so that users are blocked from accessing the server without going through *ZENworks Mobile Management*. This forces even users with devices not running a *ZENworks Mobile Management* device application to enroll against the *ZENworks Mobile Management* server. This effectively allows you to manage all devices through *ZENworks Mobile Management*.

In addition, the *ZENworks Mobile Management* server can be configured to allow only devices that meet security and usage standards to access the corporate ActiveSync server. The server allows ActiveSync traffic through if a device is currently using the policies defined for it. When policies are updated in the *ZENworks Mobile Management* Web, devices are required to synchronize the updated security policies in order to continue accessing the corporate server.

Security. The *ZENworks Mobile Management* server intercepts security policy updates sent from the ActiveSync server to prevent them from being sent to the device. Instead, the policies defined in the *ZENworks Mobile Management* server are enforced on the device.

Remote wipe commands can be issued from either the *ZENworks Mobile Management* server or the ActiveSync server. Remote wipes are a crucial security feature, so if intent to wipe is expressed on the ActiveSync server, the *ZENworks Mobile Management* server relays the wipe message to the device.

Authentication. For devices that have an ActiveSync server defined, the *ZENworks Mobile Management* server uses the ActiveSync server to authenticate the user's credentials.

Email and PIM. For devices that have an ActiveSync server defined, the *ZENworks Mobile Management* Server relays ActiveSync Email and PIM traffic to and from the ActiveSync server.

ZENworks Mobile Management Device App Enrollment. Users associated with a defined ActiveSync server install the *ZENworks Mobile Management* device app and enroll their devices with the *ZENworks Mobile Management* server by using their ActiveSync account user credentials.

ZENworks Mobile Management as a Stand-in ActiveSync Server

Security. *ZENworks Mobile Management* can provide ActiveSync security enforcement even when ActiveSync is not used for Email or PIM synchronization. When functioning in this role, *ZENworks Mobile Management* provides a minimum implementation of ActiveSync to send security policies and remote wipe messages and to record device statistics when they are sent to the server.

The *ZENworks Mobile Management* server serves as a stand-in ActiveSync server only when a user is not associated with a defined ActiveSync server.

Authentication. Devices are authenticated directly against the *ZENworks Mobile Management* server by using the password associated with the user account set up on the *ZENworks Mobile Management* server.

ZENworks Mobile Management Device App Enrollment. Users not interfacing with an ActiveSync server install the *ZENworks Mobile Management* device app and enroll their devices with the *ZENworks Mobile Management* server by using the credentials associated with the user account set up on the *ZENworks Mobile Management* server.

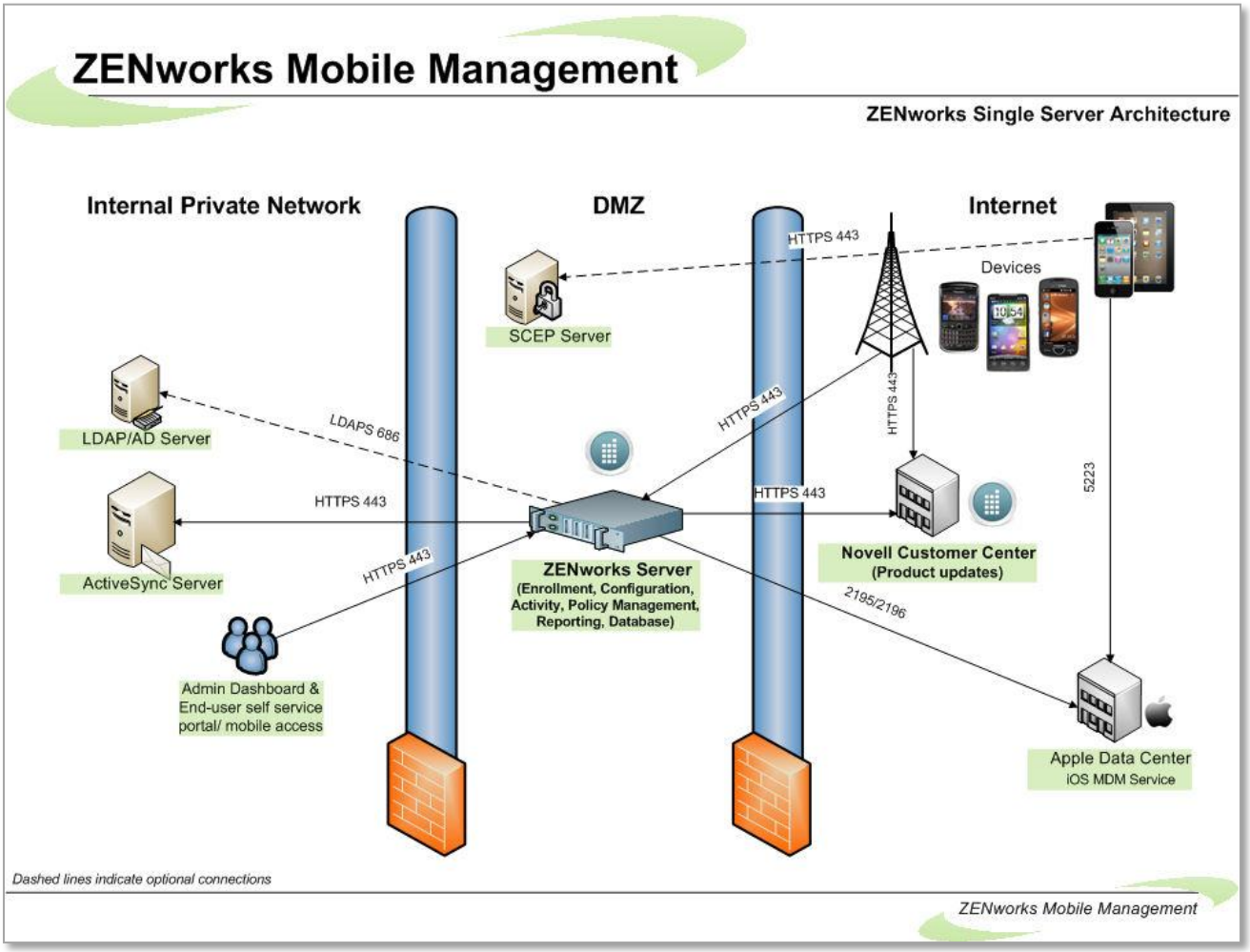
System Architecture

The *ZENworks Mobile Management System* consists of two components that can be installed on a single or multiple servers.

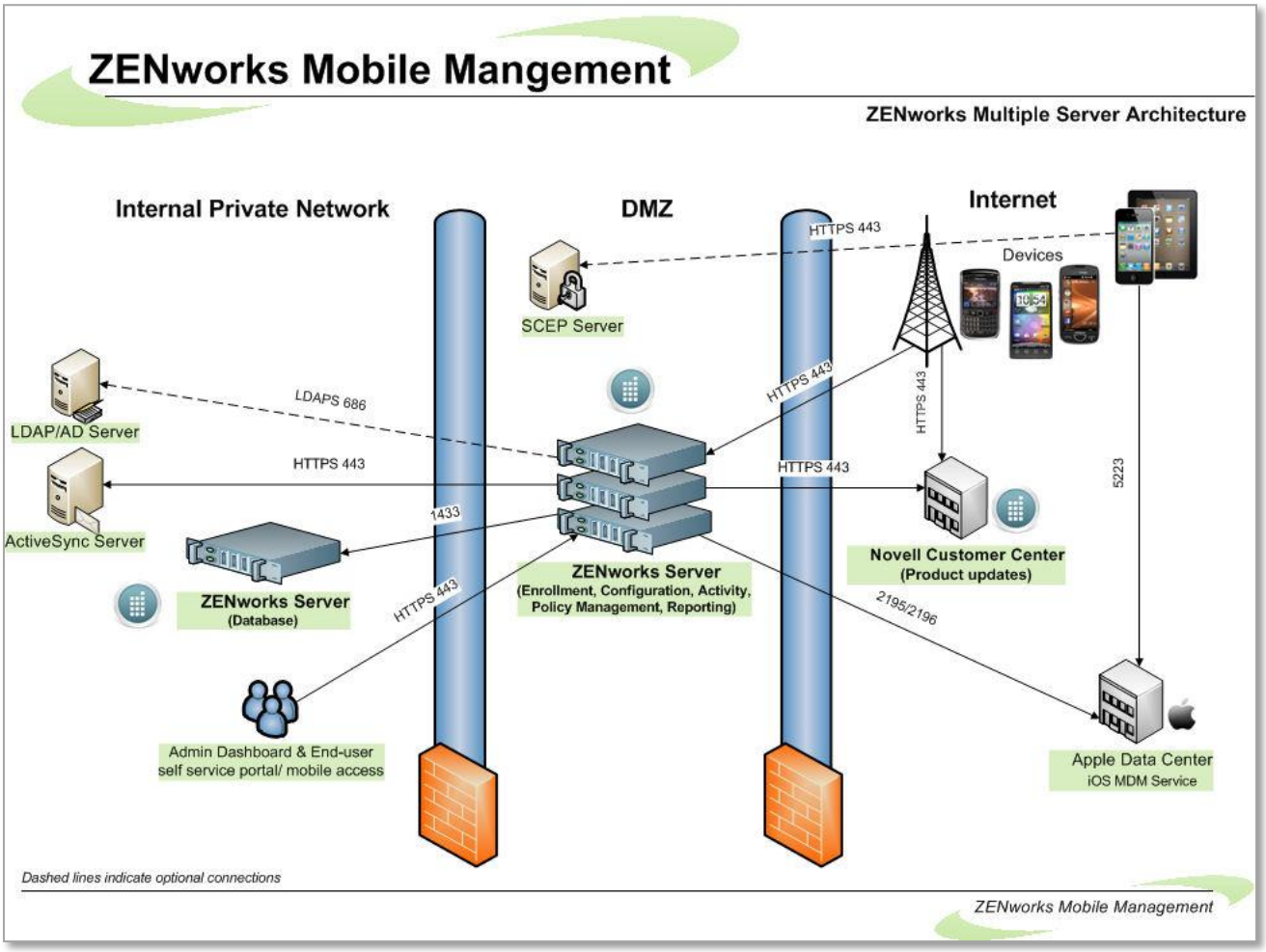
- SQL Database Component
- Web/Http Server Component

In addition to the setups illustrated, a reverse proxy setup is also supported as long as the proxy is sufficiently scalable. For the long term, redundant proxies might be advisable to help ensure high availability. Achieving redundancy through SQL and Web clusters is a good way to ensure high availability.

Single Server Configuration Diagram



Multiple Server Configuration Diagram



System Requirements

The *ZENworks Mobile Management System* consists of an *SQL Database Component* and a *Web/Http Server Component*.

General Requirements

- Successful installation of the *ZENworks Mobile Management* system requires an SMTP Server.
- The *ZENworks Mobile Management* server requires Secure Sockets Layer (SSL) encryption to meet best practices for security.

  Note: The *ZENworks Mobile Management* server must have a CA signed certificate. Self-signed certificates are not supported.
- Install *ZENworks Mobile Management* on a system with a freshly installed operating system.

SQL Database Component Requirements

These are minimum system requirements. Actual requirements might vary depending on the nature of your environment.

Windows Server 2008 R2 SP1

Set up on Windows 2008 x64: http://www.novell.com/documentation/zenworksmobile2/pdfdoc/zen_mobile_install_kb1.pdf

Windows Server 2008 with SP2

Set up on Windows 2008 x64: http://www.novell.com/documentation/zenworksmobile2/pdfdoc/zen_mobile_install_kb1.pdf

Windows Server 2003 R2 x64 or Windows Server 2003

Set up instructions for Windows 2003 R2 x64:
http://www.novell.com/documentation/zenworksmobile2/pdfdoc/zen_mobile_install_kb2.pdf

Use English versions. Apply all *Windows Server* updates.

The *ZENworks Mobile Management Server* is also supported on any of the above operating systems running as a virtual machine.

32-bit Intel Xeon processor or better

2 GB RAM (minimum)

3 GB free hard drive space

Microsoft SQL Server, 2008 R2 SP1 (*Standard Edition*)
Microsoft SQL Server, 2008 R2 (*Standard Edition*)
Microsoft SQL Server, 2008 SP3 (*Standard Edition*)
Microsoft SQL Server, 2008 SP1 (*Standard Edition*)
Microsoft SQL 2008 Web Edition or

Microsoft SQL Express, 2008 *(Supported for product evaluations; not recommended for production)*

Use English versions.

- Make sure that you select SQL server authentication when installing SQL.
- If you will be installing the Web/Http Component on the same server as the SQL Database Component, we recommend that you restrict the amount of system resources that Microsoft SQL Server uses. You can accomplish this by adjusting the *min server memory* and *max server memory* options in SQL Server 2008.
- If SQL Express 2008 is used, enter /SQLEXPRESS after the server address.

Web/Http Component Requirements

These are minimum system requirements. Actual requirements might vary depending on the nature of your environment.

Windows Server 2008 R2 SP1
Set up on Windows 2008 x64: http://www.novell.com/documentation/zenworksmobile2/pdfdoc/zen_mobile_install_kb1.pdf

Windows Server 2008 with SP2
Set up on Windows 2008 x64: http://www.novell.com/documentation/zenworksmobile2/pdfdoc/zen_mobile_install_kb1.pdf

Windows Server 2003 R2 x64 or Windows Server 2003
Set up instructions for Windows 2003 R2 x64:
http://www.novell.com/documentation/zenworksmobile2/pdfdoc/zen_mobile_install_kb2.pdf

Use English versions. Apply all *Windows Server* updates.

The *ZENworks Mobile Management Server* is also supported on any of the above operating systems running as a virtual machine.

32-bit Intel Xeon processor or better

Microsoft SQL Server Native Client 10.0

Microsoft .NET Framework 3.5 SP1

- Automatically installed with Windows Server 2008
- Manual installation required for Windows Server 2003

2 GB RAM (minimum)

256 MB free hard drive space
Additional space may be required for log files.

Microsoft IIS

Supported Microsoft IIS versions: English versions 7.5, 7.0, or 6.0

PHP, Version 5.3.10 is distributed with the *ZENworks Mobile Management* Web/Http Component.

Note: This can cause issues with any existing installation of PHP. Therefore, it is recommended that you do NOT install the Web/Http Component on a server with other PHP Websites.

Port 80/443 (http/https) inbound and outbound must be open for device ← → server communications.
Port 1433 for communication with SQL Server.

***ZENworks Mobile Management* dashboard requirements:**

- Internet Explorer or Firefox
- Adobe Flash Player 10.1.0
- Minimum screen resolution: 1024 x 768

An **SSL certificate** is required for the Web component

The following certificates have been tested and confirmed to work with all supported *ZENworks Mobile Management* devices:

- **Verisign/RSA Secure Server CA: "Secure Site" certificate**: http://www.verisign.com/ssl/
- **Thawte Server CA: "SSL Web Server Certificate"**: https://www.thawte.com/products/index.html

ZENworks Mobile Management Installation

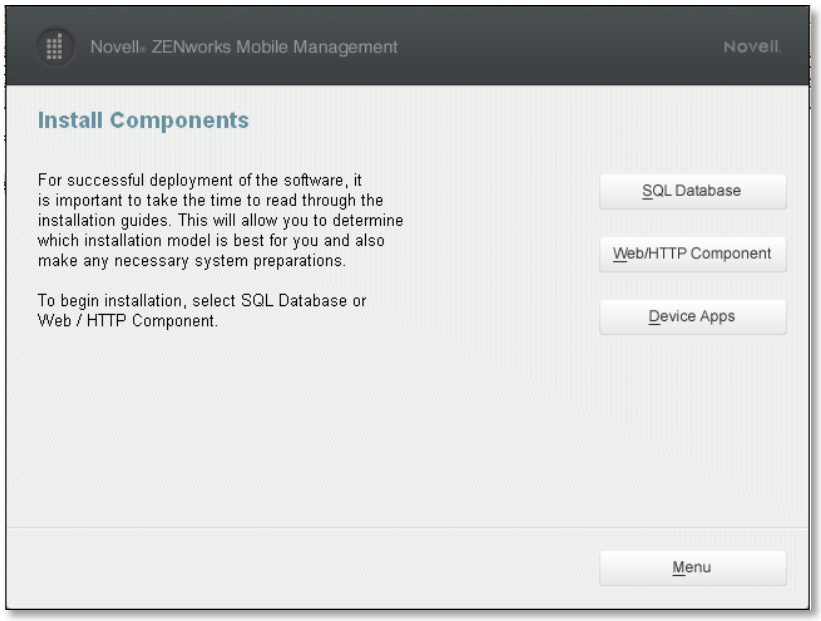
The *ZENworks Mobile Management* server software is made up of the SQL Database Component and the Web/Http Server Component. Install the SQL component first.

If you are planning on configuring a highly available *ZENworks Mobile Management* setup with Network Load Balancing or SQL Failover Clusters, please read the *ZENworks Mobile Management* High Availability Guide before you proceed with installation.

Upgrades: All software updates should be applied using the *ZENworks Mobile Management Update Manager*. The Update Manager applies all software patches and may even call up the installer when it is required for an upgrade. See the ZENworks Mobile Management Update Management Guide for details.

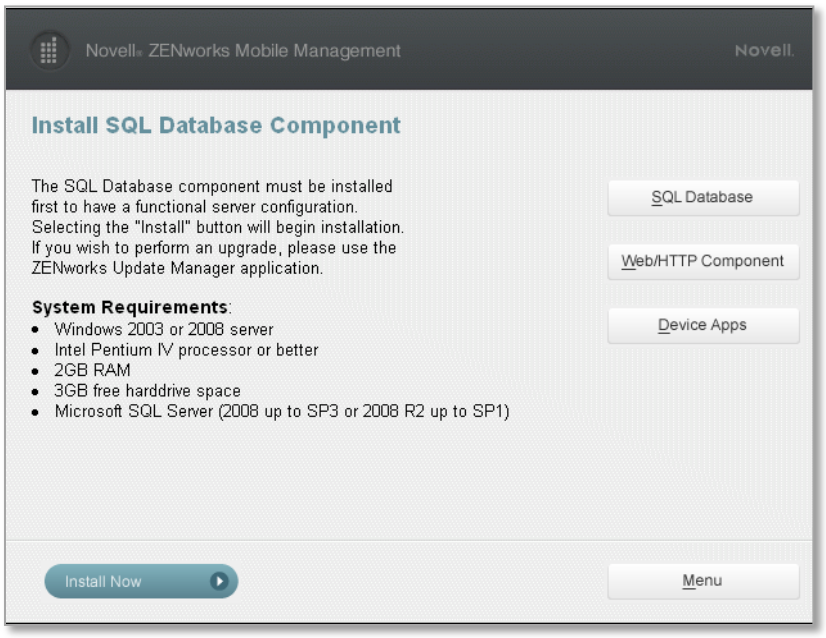
Download the ZENworks Mobile Management Server Software

1. Open a Web browser and enter http://download.novell.com
2. In the **Product** or **Technology** list, select *ZENworks Mobile Management*, then click **Search**.
3. Click **ZENworks Mobile Management 2.5**.
4. Download the **ZMM Server and Admin Software.zip** file.
5. Extract the files and run **Launch.exe**.
6. Select **Install Components** and review the installation instructions on the installer launch screen.
7. Begin the installation by selecting **SQL Database**.

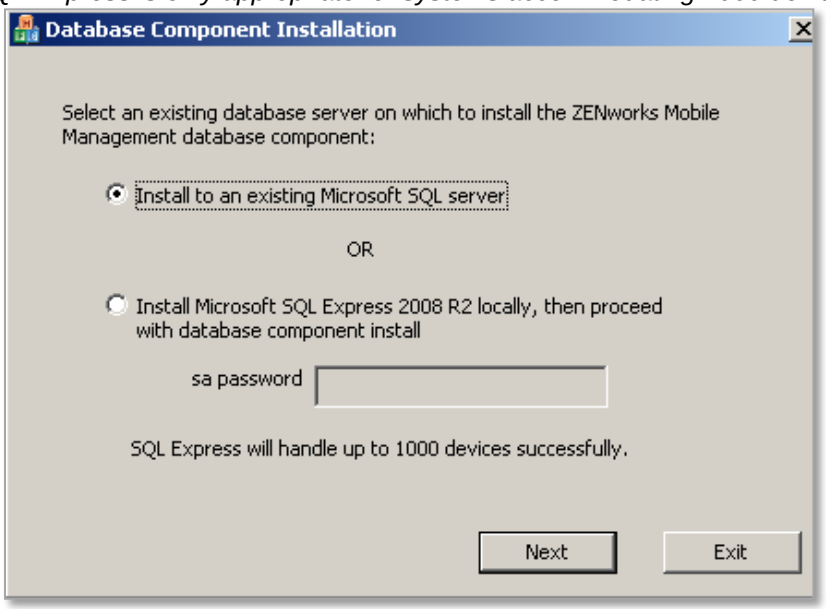


Step 1: SQL Database Component Installation

Before you begin, review the requirements for the SQL Database Component.



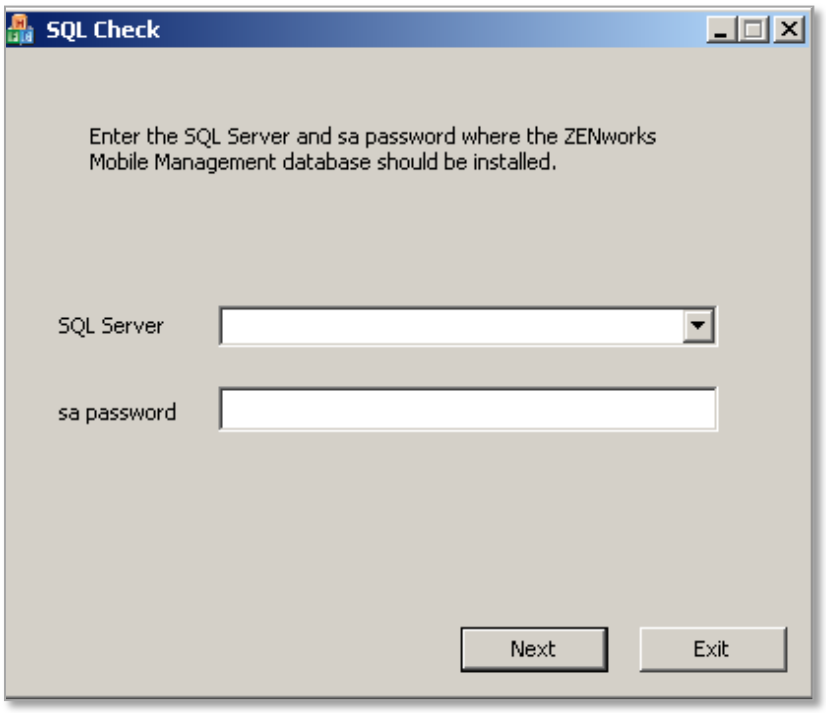
1. Select the **SQL Database** button and click **Install Now**.
2. Begin the installation process. Do one of the following:
   - Install the *ZENworks Mobile Management* database component on an existing Microsoft SQL server
   - Install Microsoft SQL Express 2008 R2 first and then proceed with the database component install. Create an **sa password** for the SQL Express installation.
     A strong password is required. It must be at least six characters and contain three of these four criteria: uppercase letters, lowercase letters, numbers, and non-alphanumeric characters. An error displays if the password does not meet the criteria.
     (SQL Express is only appropriate for systems accommodating 1000 devices or less.)



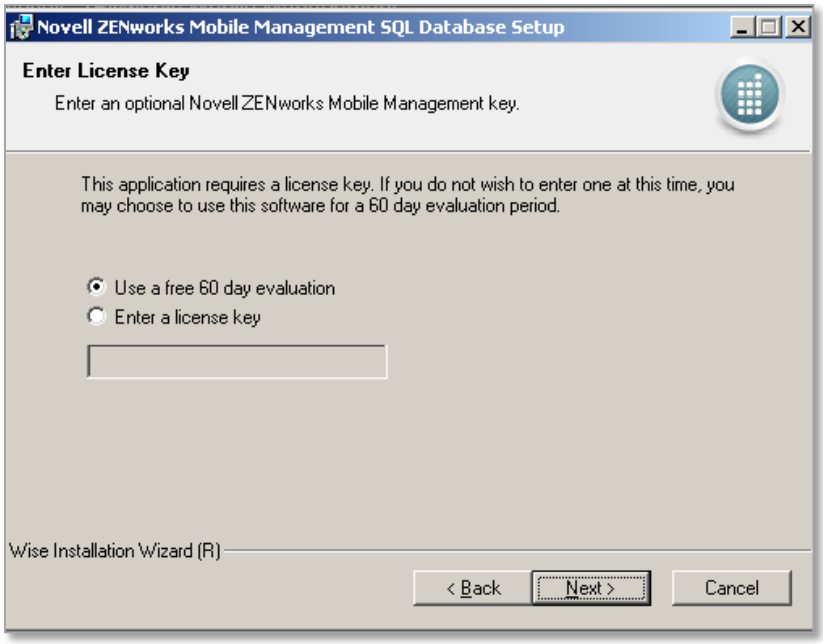
3. If you choose to install Microsoft SQL Express, a progress bar is displayed as the software installs. This can take 10 to 15 minutes. Click **Next**.

4. At the *SQL Check* screen, enter the following:
   - From the drop-down list, select the **SQL Server** to which you will install the database.
     Note: If you are using SQL Express 2008, enter /SQLEXPRESS after the server address.
   - Enter the **sa password** defined at the installation of Microsoft SQL Server.

   A prompt appears, confirming that you want to create the new database. Select **Yes**, then click **Next**.

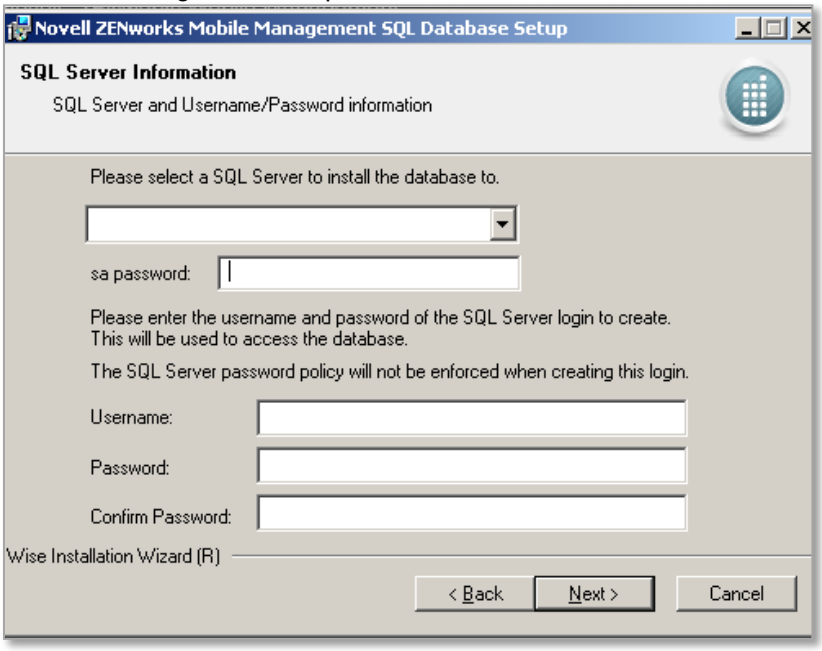


5. Read the **License Agreement** carefully and select "*I accept the License Agreement*." Click **Next** to display the **Readme Information**. Review this information carefully, then click **Next**.
6. At the *License Key* screen, choose whether to use the free **60 day evaluation** or enter a **license key**. Click **Next**.



7. View the *Destination Folder* dialog. Browse to select a **Destination Folder** for the *ZENworks Mobile Management* software and then click **Next**.

8. At the *SQL Server Information* screen, the **SQL Server** and **sa password** fields are pre-populated with what you entered in the initial prompt.
   Create a **username** and **password** for the SQL Server login. Confirm the password. Note the credentials, because the Web/Http installer will prompt for this username/password. This will be used by the *ZENworks Mobile Management* components to access the database. Click **Next** to continue.

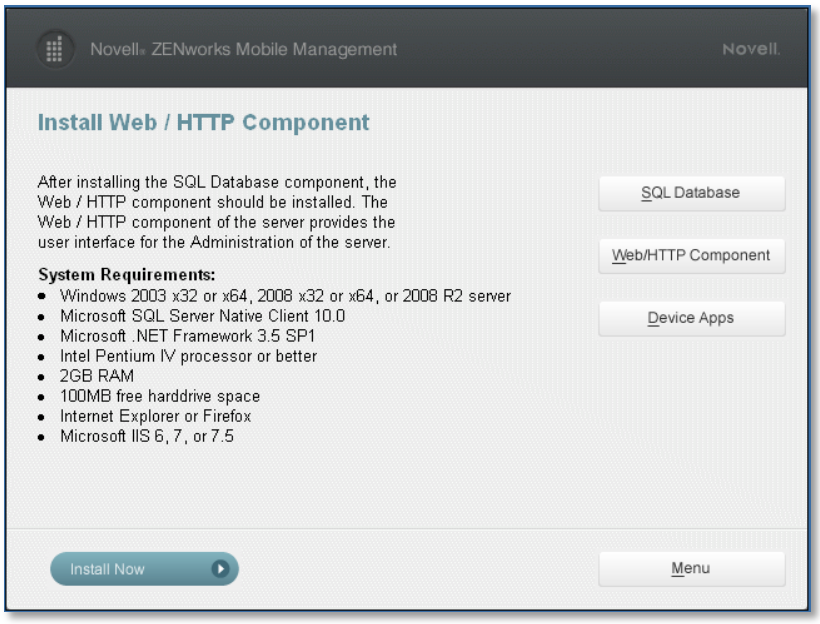


   Click **Next** to finish the SQL Database Component installation. When the installation is complete, you will see a message indicating that the database has been successfully installed. Click **Finish**.

   Proceed with Step 2, Installing the Web/Http Component.

Step 2: Web/Http Server Component Installation

Before you begin, review the requirements for the Web/Http Component.

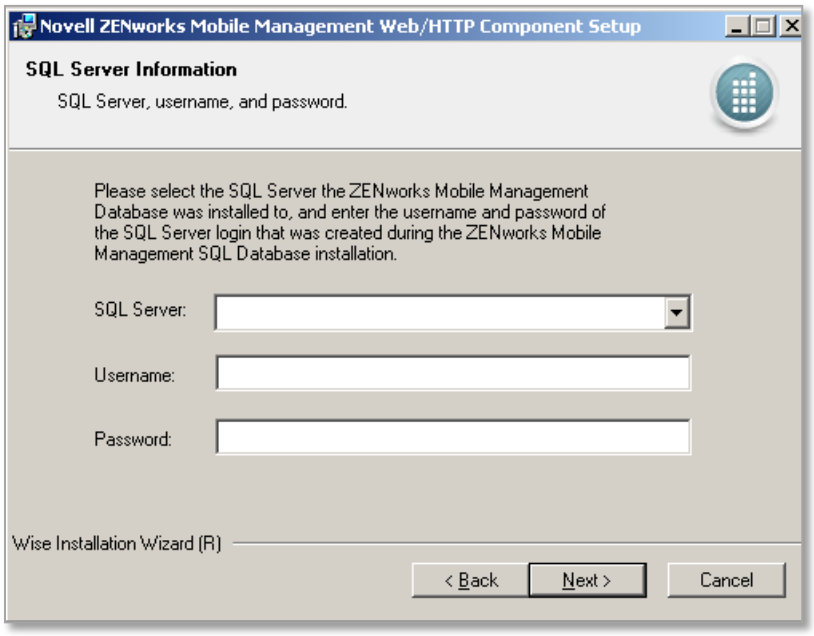


1. Select the **Web/Http Component** button and click **Install Now**. Click **Next**.

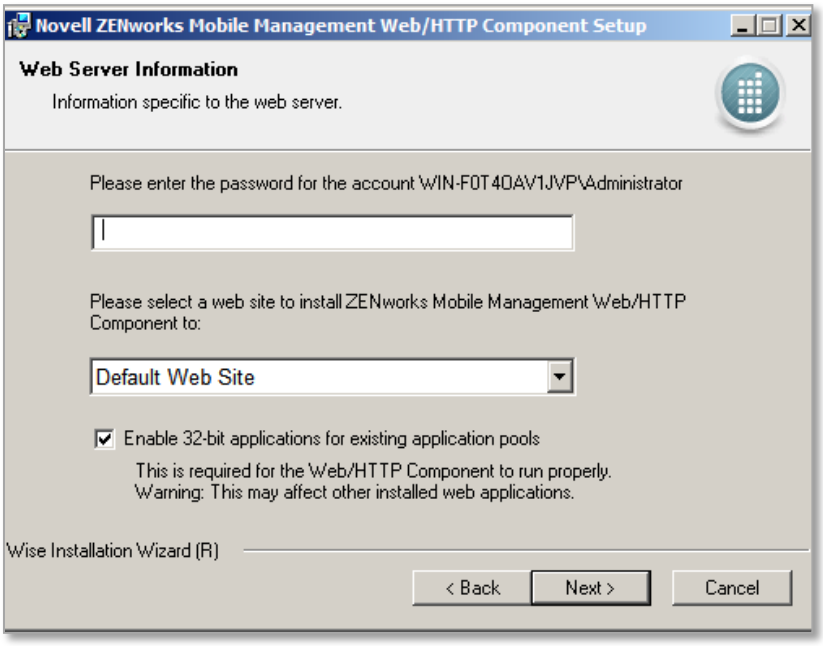
2. Read the **License Agreement** carefully and select "*I accept the License Agreement*." Click **Next** to display the **Readme Information**. Review this information carefully..

3. Click **Next** to view the **Destination Folder** dialog. Browse to select a **Destination Folder** for the *ZENworks Mobile Management* software and then click **Next**.

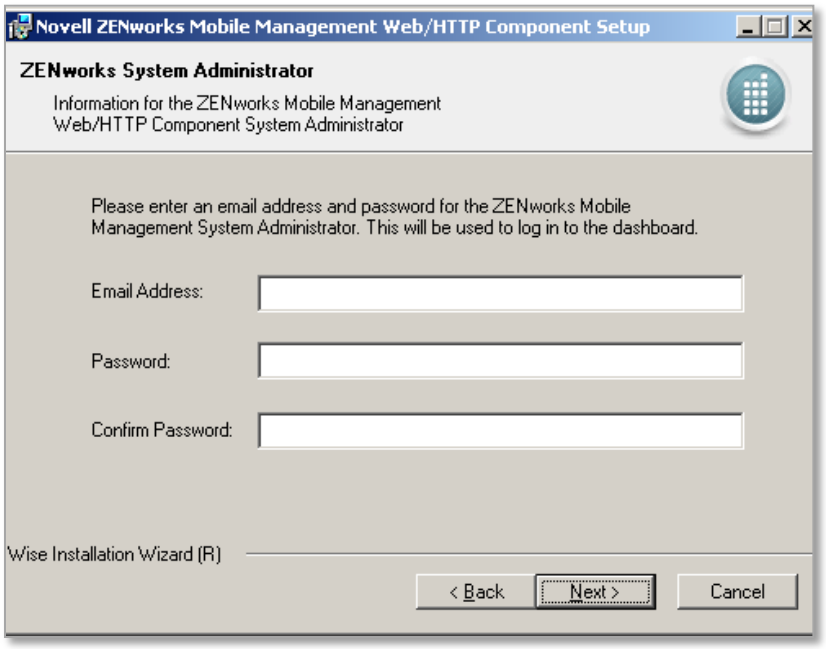
4. At the *SQL Server Information* screen, enter the following:
   - From the drop-down list, select the **SQL Server** running the Server SQL Database. (The database installed in Step 1).
   - Enter the **Username** and **Password** of the SQL Server login created during the SQL Database installation. Click **Next** to continue.



5. At the *Web Server Information* screen, enter the correct password for the Windows administrator account that is shown.
   - Select the Web site to which you are installing. By default, the Enterprise Server Web/Http Component will be installed to the *Default Web Site*. Install to a Web site that is not currently in use or create a new Web site with Microsoft IIS before installation (so that it appears in the drop-down list). Click **Next** to continue.
   - If you are installing on a 64-bit machine, select the box to enable 32-bit applications. Verify that this will not affect other Web applications installed on the server. This option does not appear on 32-bit machines.



6. At the *ZENworks System Administrator* screen, enter the following:
    - Enter the email address of the ZENworks Mobile Management System Administrator. The administrator will receive email regarding system monitoring errors, warnings, and notices of software updates and new releases. This email address serves as the username for the administrator's login credentials.
    - Create a password for the ZENworks Mobile Management System Administrator login. Confirm the password. Click **Next** to continue.
    - Click **Next** to finish the Web/Http Component installation. When the installation is complete, you see a message indicating the Web/Http Component has been successfully installed. Select **Finish**.



The *ZENworks Mobile Management* installation is now complete. You must restart your system before proceeding.

Step 3: Applying Software Updates

Use the *ZENworks Mobile Management Update Manager* application to check for and apply available software updates.

The *Update Manager* is a Windows application that allows the administrator to apply *ZENworks Mobile Management* server software updates. You can also use the application to check for new updates and read change logs.

> **Note:** If you have configured your system with multiple Web servers for a Network Load Balanced setup, apply updates to all servers where the *ZENworks Mobile Management* Web/HTTP component resides.

For complete instructions on using the Update Manager, see the *ZENworks Mobile Management* Update Management Guide.

To check for available updates

1. Access the *ZENworks Mobile Management Update Manager* via the desktop shortcut on the *ZENworks Mobile Management* server.
2. Click **Check for Updates** to determine whether updates are available. Your initial use of the *Update Manager* requires that you enter the Customer Center login credentials provided by your Novell Sales Representative.
3. Click the **Download Available Updates** button to check the server for and download available updates. A progress meter displays as the updates download.
4. If you want to view descriptions of the updates, click the **View Change Log** button.
5. Select the latest update available (the default) to install.

Post-Installation Tasks

When the *ZENworks Mobile Management* components have been installed on your server(s), access the administrative dashboard and begin configuring the *ZENworks Mobile Management* environment.

1. Review the Configuration Guide: Organization, Policy Suites, Connection Schedules.
2. Create an organization using the *Organization Setup Wizard*. This wizard steps you through defining default servers, the default policy suite, and the default device connection schedule.
    - From the *ZENworks Mobile Management* dashboard, choose

      System > **System Administration** > **Organizations** > **Add Organization**
3. Obtain an Apple Push Notification Service (APNs) Certificate if the organization supports iOS devices.
    - For instructions, refer to Obtaining an Apple Push Notification Service Certificate.
    - Upload the certificate to the server from the *ZENworks Mobile Management* dashboard. Select **System** > **Organization** > click the **Upload** button beside the **APNs Certificate** field.
4. Customize the default Policy Suite or create additional Policy Suites.
    - From the *ZENworks Mobile Management* dashboard choose: **Organization** > **Policy Suites**
5. Customize the default Device Connection Schedule and/or create additional Connection Schedules.
    - From the *ZENworks Mobile Management* dashboard, choose

      Organization > **Device Connection Schedules**
6. Configure the Compliance Manager.
    - For instructions, refer to Configuration Guide: Compliance Manager
    - From the *ZENworks Mobile Management* dashboard, choose

      Organization > **Compliance Manager**
7. Define additional administrative logins (optional).
    - For instructions, refer to the System Administration Guide.
    - From the *ZENworks Mobile Management* dashboard, choose

      System > **Organization Administrators** > **Add Administrator**
8. Configure ActiveSync so that users who are not enrolled through *ZENworks Mobile Management* are blocked from accessing the ActiveSync server.
    - For instructions, refer to the Pre-Installation Guide.
9. Deploy Smart Devices and Users
    - For instructions, refer to Configuration Guide: Adding Users, Enrolling Devices and the device app user guides.
10. Database Maintenance

- **Database Cleanup.** Verify that the database cleanup tasks have been enabled. When the *ZENworks Mobile Management* server software is installed, tasks are enabled, by default, with parameters for a system accommodating 1000 devices. Administrators of larger systems should adjust the task parameters according to the recommendations in the Database Maintenance Guide. To verify that the jobs are running, access the *Database Task Scheduler* from the dashboard and view the task grid. The grid displays which cleanup jobs are enabled, the last time each job was executed, and when each job will run again.

  If a database task has failed to run, you can check the *DatabaseTaskSchedulerLogs* database table for errors. See the System Administration Guide: Server Logging.

- **Back up.** Periodically backing up the database is an essential practice for system maintenance. A daily backup of the database, preferably streamed off site, is recommended at minimum.

  In addition, back up the MDM.ini file on the Web/Http server. This file is found under the *ZENworks* directory. Default directory: C:\Program Files\Novell\ZENworks\mobile.

  Regular backups insure that data can be recovered if the database becomes compromised. With both a database back up and a back up of the MDM.ini file, a system can be fully restored if necessary.