SYBASE®

Sybase Unwired Platform 1.5.2

Windows

Contents

CHAPTER 1   **Installation Task Flows**

These task flows define a path for planning, installing, and configuring Sybase® Unwired Platform.

Follow the task flow that best describes your installation scenario:

- Installing a Developer Edition. See *Developer Edition Task Flows* on page 1.
- Installing the Deployment (Production) Edition. See *Deployment (Production) Edition Task Flows* on page 4.
- Upgrading from an earlier version. See *Upgrade Installation Task Flow* on page 5.

Developer Edition Task Flows

Follow the task flow for your license type and desired development environment configuration.

Installing a Personal Developer Edition

Install Sybase Unwired Platform on a single server or developer workstation:

- This installation cannot be upgraded to a cluster installation.
- 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. You must generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. If installing on a VM with an unserved license, you must use console 0 to access the VM to perform the installation.

This task flow installs these components on a single server or workstation:

- Data tier
- Unwired Server
- Unwired WorkSpace
- (Optional) Device Application Designer
- (Optional) Windows Mobile .NET Components

1. Plan your installation. The Personal Developer license allows you to install all Sybase Unwired Platform components on the same machine.
   - To create an installation image on the network.
   - You will install additional developer workstations to share the same Unwired Server.
   - You will install Device Application Designer in addition to Unwired WorkSpace.

- You will install Windows Mobile .NET Components.
- You will use an existing JDK installation.
- You will use an existing Eclipse installation.

2. If you are not using the time-delimited evaluation license, download a license file. See *Obtaining a License* on page 19.
3. Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
4. Perform postinstallation tasks for your installation. See *Chapter 6, Postinstallation Tasks* on page 117.

Installing an Enterprise Developer Edition on a Single Server

Install the Developer Edition on either a single server or a developer workstation, without cluster support:

- This installation cannot be upgraded to a cluster installation. To perform cluster development work, install using the next task flow, *Installing an Enterprise Developer Edition in a Cluster*.
- 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. You must generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. If installing on a VM with an unserved license, you must use console 0 to access the VM to perform the installation.

Use this task flow to install these components on a single server or developer workstation:

- Data tier
- Unwired Server
- Unwired WorkSpace
- (Optional) Device Application Designer
- (Optional) Windows Mobile .NET Components
- (Optional) Above developer components on additional developer workstations

1. Plan your installation. Determine whether:
   - To create an installation image on the network.
   - You will install additional developer workstations to share the same Unwired Server.
   - You will install Device Application Designer in addition to Unwired WorkSpace.
   - You will install Windows Mobile .NET Components.
   - You will use an existing JDK installation.
   - You will use an existing Eclipse installation.
2. Determine your licensing model: unserved (local) license or served (SySAM License Server). See *License Validation* on page 17.
3. Download a license file. See *Obtaining a License* on page 19.

4. Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
5. Print the *Installation Worksheet* on page 151 and record important installation details to have them available during subsequent installations.
6. Install Unwired Platform on the server or developer workstation. See *Installing Developer Edition on a Single Server* on page 27.
7. (Optional) Install Unwired WorkSpace and Device Application Designer on additional developer workstations that will share this Unwired Server installation. See *Performing a Custom Installation of Developer Edition* on page 51.
8. Perform postinstallation tasks for your installation. See *Chapter 6, Postinstallation Tasks* on page 117.

Installing an Enterprise Developer Edition in a Cluster

Install Developer Edition in a cluster configuration. 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. You must generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. If installing on a VM with an unserved license, you must use console 0 to access the VM to perform the installation.

Use this task flow to install these components in a cluster configuration:

• Data tier on its own server
• Unwired Server and Unwired WorkSpace on the first server node in the cluster
• (Optional) Device Application Designer and Windows Mobile .NET Components on the first server node in the cluster
• Unwired Server on additional cluster server nodes
• (Optional) Unwired WorkSpace, Device Application Designer, and Windows Mobile .NET Components on additional developer workstations

1. Plan your installation. Determine whether:
    • To create an installation image on the network.
    • You will install additional developer workstations to share the same Unwired Server.
    • You will install Device Application Designer in addition to Unwired WorkSpace.
    • You will use an existing JDK installation.
    • You will install Windows Mobile .NET Components.
    • You will use an existing Eclipse installation.
    • You have designated machines that can host the data tier and the server nodes.
2. Determine your licensing model: unserved (local) license or served (SySAM License Server). See *License Validation* on page 17.
3. Download a license file. See *Obtaining a License* on page 19.
4. Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.

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5. Print the *Installation Worksheet* on page 151 so you can note important installation details and have them available during subsequent installations.

6. Install the data tier on its own server. See *Installing the Consolidated Database on its Own Host for a Developer Installation* on page 32.

   Note: You must install the data tier even if you are planning to use an existing installation of SQL Anywhere to host your Unwired Platform data. The data tier installation includes the Unwired Server messaging database.

7. Install the first node for the cluster. See *Installing the First Node for a Developer Cluster Installation* on page 37.

8. Install the second and subsequent nodes for the cluster. See *Installing Additional Nodes in an Existing Cluster for a Developer Installation* on page 44.

9. (Optional) Install Unwired WorkSpace and Device Application Designer on additional developer workstations that will share this Unwired Server installation. See *Performing a Custom Installation of Developer Edition* on page 51.

10. Perform postinstallation tasks for your installation. See *Chapter 6, Postinstallation Tasks* on page 117.

Deployment (Production) Edition Task Flow

Install Sybase Unwired Platform on either a single server or on multiple nodes in a cluster.

Note: The deployment edition of Unwired Platform can only be installed on 64-bit Windows systems. This is necessary to provide optimal performance for a production system. When you run the deployment installer on a 32-bit system, only Afaria® is available for installation.

Use this task flow to install these components in a production environment:

- Data tier on its own server
- Unwired Server on the nodes of the cluster

1. Review the deployment options available. See *System Administration Guide > Systems Design*.

   To set up a high availability environment using Microsoft Cluster Server, see *System Administration for Sybase Unwired Platform > Systems Design > Clustered Environments > Implementing an N+2-node Cluster for Optimal Redundancy*. Microsoft Cluster Server support is limited to the data tier and you must set it up before installing Unwired Platform.

2. Plan your installation. Determine whether:
   - To create an installation image on the network.
   - You will use an existing JDK installation.
   - You have designated machines that can host the data tier and the server nodes.

3. Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.

4. Determine your licensing model: unserved (local) license or served (SySAM License Server). See *License Validation* on page 17.

5. Download a license file. See *Obtaining a License* on page 19.

6. If you are installing with a served license in an environment where there may not be a port free for the license server to open dynamically on startup, edit your license file to specify a port number. See *Setting a Fixed Port Number for SySAM License Server* on page 25.

7. Print the *Installation Worksheet* on page 151 so you can note important installation details and have them available during subsequent installations.

8. Install Unwired Platform.
   To install in a cluster:
   - Install the data tier on its own server. See *Installing the Data Tier on its Own Host for a Deployment Installation* on page 61.

     > **Note:** You must install the data tier even if you are planning to use an existing installation of SQL Anywhere to host your Unwired Platform data. The data tier installation provides the Unwired Server messaging database.

   - Install the first node for the cluster. See *Installing the First Node for a Deployment Cluster Installation* on page 68.
   - Install the second and subsequent nodes for the cluster. See *Installing Additional Nodes in an Existing Cluster for a Deployment Installation* on page 75.
   - Install Afaria®. See *Installing Afaria on a 32-bit System for a Deployment Cluster* on page 82.

   To install on a single server, which you cannot upgrade to a cluster:
   - Perform a custom installation on that server and select everything that is available on the component selection page. *Performing a Custom Installation of Deployment Edition* on page 84.
   - Install Afaria. See *Installing Afaria on a 32-bit System for a Deployment Cluster* on page 82.

9. To add a component other than Afaria to your installation, re-run the installer. The installer detects the existing installation and automatically takes you to the page where you can select components to add. See *Performing a Custom Installation of Deployment Edition* on page 84.

10. Perform postinstallation tasks for your installation. See *Chapter 6, Postinstallation Tasks* on page 117.

Upgrade Installation Task Flow

Follow this task flow if you are upgrading from an earlier version of Unwired Platform.

Upgrading From Sybase Unwired Platform Version 1.2

This task flow upgrades your existing Unwired Platform version 1.2 installation to version 1.5.2. There is no upgrade path supported from Unwired Platform versions earlier than 1.2.

1. Plan your upgrade installation. Determine whether:
   - To create an installation image on the network.
   - You are upgrading a developer or deployment installation.
   - What the configuration of your previous installation was.
   - You will be installing version 1.5.2 on the same or different machines, if you are upgrading the deployment edition.
2. Download a license file. See *Obtaining a License* on page 19.
3. Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
4. Review the information in *Migration Guidelines and Limitations* on page 95 and *API Differences in this Version of Unwired Platform* on page 108.
5. Complete the tasks in *Chapter 5, Upgrading and Migrating* on page 93.

CHAPTER 2   **Planning Your Sybase Unwired Platform Installation**

Before you install or upgrade, plan your environment.

* If you are upgrading from an existing Unwired Platform version, migrate this data before installation. See *Chapter 5, Upgrading and Migrating* on page 93:

    * Eclipse projects and applications
    * Production environment
    * Afaria

* Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running, including any database servers, OpenDS server, and Sybase Control Center.

    Note: If you have an existing Unwired Platform installation, shut down all Unwired Servers before shutting down the data tier.

* Unless you are installing the deployment edition of Unwired Platform version 1.5.2 to coexist with version 1.2, uninstall the existing version of Unwired Platform.
* Identify the components and options to install.
* Make sure your system meets all requirements for your installation scenario and planned use. Install the necessary prerequisites.
* Have your license information available.

Supported Third-Party Software and Hardware

Sybase Unwired Platform supports several versions of Windows, Windows Mobile Family, .NET, and databases for deployment to laptops, tablets, and mobile devices.

Supported Devices
Windows

* Windows XP, Professional Edition, with Service Pack 2 (32-bit)
* Windows Vista, Business, Enterprise, and Ultimate Editions (32- and 64-bit)

Windows Mobile Family

* Windows Mobile 5.0 for Pocket PC or Smartphone
* Windows Mobile 6.0 Standard or Professional
* Windows Mobile 6.1 Standard or Professional

Apple

- iPhone 3.0 - 3.1.3
- iPod touch 3.0 - 3.1.3

RIM BlackBerry

- OS 4.2.1 on Blackberry 8800
- OS 4.2.2 on Blackberry Curve 8300
- OS 4.6.0 on Blackberry Pearl Flip 8220 and Blackberry Bold 9000
- OS 4.6.1 on Blackberry Curve 8900
- OS 4.7.0 on Blackberry Storm 9530

Symbian (supporting Mobile Workflow Application only)

- Nokia Series 60 3rd Edition
- Nokia Series 60 5th Edition

Supported Native Application Development Environments
BlackBerry

- Java Plug-in for Eclipse version 1.1
- BlackBerry – Java Development Environment (JDE) 4.2.1 - 4.7

iPhone

- MacOS 10.5 (Leopard), Xcode 3.1.2 (MacBook or iMac)
- MacOS 10.6 (Snow Leopard), Xcode 3.2.2 (MacBook or iMac)
- iPhone SDK up to 3.1.3

Windows Mobile

- Visual Studio 2008, Microsoft .NET Compact Framework 2.0 and 3.5

Windows

- Visual Studio 2008, Microsoft .NET Framework 2.0 and 3.5
- Java Standard Edition (SE) 6.0

Supported Enterprise Information Systems (EIS) and Databases
SAP® Connectors

- SAP Java Connector (SAP JCo) 2.1.8
- Gateway 1.1 to SAP NetWeaver® Mobile 7.10

Web Services

- WS-I Basic Profile 1.1
- RESTful services, XML over HTTP(S)

Java Database Connectivity (JDBC)

- SQL Anywhere® 11.x
- Adaptive Server® Enterprise 12.5.x, 15.x
- Microsoft SQL Server 2005, 2008
- Oracle 10g, 11g
- IBM DB2 UDB 9.1

System Requirements for Unwired Platform

Make sure your system meets all the requirements for the Sybase Unwired Platform components you intend to install. See the Release Bulletin for the most current information about required system patches.

Unwired Server Requirements

Make sure your system meets all requirements for Unwired Server.

Note: Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264).*

Table 1. Supported operating systems

Note: For developer installations, the Windows operating systems listed below may be either the 32-bit or 64-bit version. For deployment installations, the Windows operating system must be the 64-bit version.

Operating system	Hardware	RAM
Microsoft Windows XP, Professional Edition, with Service Pack 2 (32-bit)	Intel Core 2 Duo processor running at 2GHz or greater, or equivalent AMD processor.	4GB
Microsoft Windows Vista, Business and Enterprise Editions (32- or 64-bit)	Intel Core 2 Duo processor running at 2GHz or greater, or equivalent AMD processor.	4GB
Microsoft Windows 2003 Server, Standard or Enterprise Edition, with Service Pack 2 (32- or 64-bit)	Intel Core 2 Duo processor running at 2GHz or greater, or equivalent AMD processor.	4GB
Microsoft Windows 2008 R1, Server Standard or Enterprise Edition, with Service Pack 2 (32- or 64-bit)	Intel Core 2 Duo processor running at 2GHz or greater, or equivalent AMD processor.	4GB

Table 2. Disk space requirements

Component	Required disk space
Unwired Server (including Sybase Control Center)	682MB

Table 3. Sybase products that cannot coexist with Unwired Platform

Product	Restriction
Adaptive Server Enterprise	Installation of Adaptive Server Enterprise and Unwired Platform on the same server is not supported.

Table 4. Supported browsers for accessing Sybase Control Center

Note: On 64-bit Windows systems, you must run the 32-bit version of these browsers.

Browser	Supported versions
Microsoft Internet Explorer	7 or 8
Firefox	3.x

Relay Server Requirements

Make sure your system meets all these requirements before you install Relay Server.

Sybase recommends using Relay Server version 11.0.1.

Table 5. Supported operating systems

Operating system	Hardware	RAM
Microsoft Windows XP, with Service Pack 2 (32-bit), with Internet Information Services (IIS) v6.0	1 or more CPUs, 2GHz or greater	2GB
Windows Server 2003 Standard or Enterprise Edition, Service Pack 2 (32- or 64-bit)with IIS v6.0	1 or more CPUs, 2GHz or greater	2GB
Red Hat Enterprise 5 with Apache 2.2.8 (32-bit)	1 or more CPUs, 2GHz or greater	2GB
SuSE Enterprise Linux 10 with Apache 2.2.8 (32-bit)	1 or more CPUs, 2GHz or greater	2GB

Table 6. Disk space requirements

Component	Required disk space
Relay Server	10MB

Afaria Requirements

Make sure your system meets all requirements before you install. See the release bulletin for the most current information about required system patches.

Sybase recommends using Afaria version 6.5.

Table 7. System requirements

Operating system	Hardware	RAM
Microsoft Windows Server 2003 Standard, Enterprise, or Web Edition (32-bit)	1 or more CPUs, 2GHz or greater	2GB

Table 8. Disk space requirements

Component	Required disk space
Afaria Server and database	243MB
Afaria Administrator	40MB

Sybase Unwired WorkSpace Requirements

Make sure your system meets all requirements before you install. See the release bulletin for the most current information about required service packs.

Table 9. Sybase Unwired WorkSpace installation requirements

Operating system	Service pack level
Microsoft Windows XP	SP2 or SP3
Microsoft Windows Vista Business and Enterprise Editions	
Microsoft Windows 2003 Server	SP2
Microsoft Windows 2008 Server	SP2 or SP3

Table 10. Disk space requirements

Component	Disk space requirements
Sybase Unwired WorkSpace (without Eclipse and JDK)	541MB
Sybase Unwired WorkSpace and Eclipse 3.5.0	714MB
Sybase Unwired WorkSpace, Eclipse 3.5.0, and JDK 1.6.0.	858MB

Installation Prerequisites

Install the required prerequisites or perform the required configuration before launching the Sybase Unwired Platform installer.

These components have installation prerequisites:

- Sybase Unwired Server (includes Sybase Control Center)
- Afaria

The Sybase Unwired Platform installer includes many of the prerequisites and can install them during the installation process.

Sybase Unwired Platform Installation Prerequisites

Configure your environment before launching the Sybase Unwired Platform installer.

Deleting the JAVA_TOOL_OPTIONS environment variable
If the JAVA_TOOL_OPTIONS environment variable is set, delete it before installing or uninstalling Sybase Unwired Platform.

1. Right-click **My Computer** and select **Properties**.
2. Select the **Advanced** tab, then click **Environment Variables**.
3. Select **JAVA_TOOL_OPTIONS**, then **Delete**.
4. Click **OK** to exit the Environment Variables dialog, and **OK** again to exit the Properties dialog.

You can also delete (set to NULL) the environment variable through the command window.

```
set JAVA_TOOL_OPTIONS=
```

Note: As an alternative to deleting the environment variable, you can unset it from a command prompt window before running the installer from the command prompt window.

Logging in with Administrator Privileges
Wherever you install Sybase Unwired Platform components, you must log in to that system with an account that has administrator privileges.

Turning off User Account Control (UAC)

Windows Vista and Windows Server 2008 incorporate a new security model, UAC, which limits user access to application software until an administrator grants increased privileges. UAC interferes with the Sybase Unwired Platform installer. Before launching the installer, turn off UAC to avoid installation errors.

Creating Permanent Credentials for Installation

If security policies in your organization allow it, create a user account with an ID and password that will never change. Use this account to install Unwired Platform.

If security policies in your organization do not allow an account to have a password that is never changed, be prepared to update the password for the Sybase Messaging Service each time the password changes for the account used to install Unwired Platform. See *Troubleshooting Guide > Troubleshoot Servers > Messaging Server > Messaging Service Failure*.

Sybase Control Center Installation Prerequisites

Install the required prerequisites for Sybase Control Center before launching the Sybase Unwired Platform installer.

Table 11. Sybase Control Center prerequisites

Product	Version	Installed by the Sybase Unwired Platform installer?
Adobe Flash Player	9.0.124+ or FP10.x (recommended) When you launch Sybase Control Center, if no Flash Player is installed you see a message with a link to "Get Flash." If an outdated version of Flash Player is installed you see a blank browser screen. Upgrade to a newer version.	No, but an installer for version 10 is included on the installation media in the `3rdParty` folder. You can install Sybase Unwired Platform before you install Adobe Flash Player, but you will not be able to access Sybase Control Center until the Flash Player is installed.
Internet Explorer	6.0 or later	No

Unwired Server Installation Prerequisites

Install the prerequisites for Unwired Server before launching the Sybase Unwired Platform installer. If you do not install them prior to launching the installer, the installer checks for their existence and installs them if it can.

Table 12. Unwired Server prerequisites

Product	Version	Installed by the Sybase Unwired Platform installer?
Microsoft Windows installer	3.1	Yes
Visual C++ Runtime	2005	Yes
Visual C++ Runtime	2008 SP1	Yes
.NET Framework	2.0 SP2	Yes

Afaria Installation Prerequisites

Install the required prerequisites for Afaria before launching the Sybase Unwired Platform installer. The Sybase Unwired Platform installer installs most of these prerequisites during the installation process.

To be able to install Afaria, you must install Internet Information Server before running the Unwired Platform installer. The Sybase Unwired Platform installer informs you of any other missing Afaria prerequisites and installs them during the installation process. You can find the installers for these programs on the installation media in the `\modules\afaria \Redistributables` directory.

Note: Sybase Unwired Platform includes Afaria version 6.5. For existing Afaria customers, Sybase recommends using version 6.0 or later. If you are using a previous version of Afaria, see *Installing Afaria* in *Afaria Documentation* on page 101 for information on upgrading.

Table 13. Afaria Server prerequisites

Product	Version	Installed by the Sybase Unwired Platform installer?
Microsoft Windows installer	3.1	Yes
.NET Framework	3.5 SP1	Yes
XML	6.0	Yes

Product	Version	Installed by the Sybase Unwired Platform installer?
Microsoft Visual C++ Runtime	2008 SP1	Yes

Table 14. Afaria Admin Console prerequisites

Product	Version	Installed by the Sybase Unwired Platform installer?
Microsoft Windows installer	3.1	Yes
Crystal Reports Runtime for Visual Studio	2008	Yes
Internet Information Services	5.0 or 5.5 on Windows XP; version 6.0 for Windows Server 2003	No (available on Microsoft Windows installation CD) See the next topic, *Configuring Internet Information Services to use ASP .NET* on page 15.

Configuring Internet Information Services to use ASP .NET

To use the Afaria Web console without Sybase Control Center, configure Internet Information Services (IIS) to use ASP .NET.

1. Select **Start > Run**, then enter cmd to open a command window.
2. Change to the drive that contains the Windows installation directory.
3. Enter:
   ```
   cd %WINDIR%\Microsoft.NET\Framework\v2.0.50727
   aspnet_regiis -i
   aspnet_regiis -ga ASPNET
   ```
4. Check that the appropriate service for Afaria Server is created and started, and that AfariaWebUI appears under IIS.
5. Start the browser:

   ```
   http://localhost/AfariaWebUI/default.aspx
   ```

You see the Afaria home page.

Sybase Unwired Platform Licenses

Sybase Unwired Platform offers Developer and Deployment Editions.

To determine the edition for an existing Unwired Platform installation, see *Locating Information in a License File* on page 23.

Table 15. Sybase Unwired Platform Editions

Edition	Description
Personal Developer Edition	Includes Unwired Server, Afaria, and Eclipse development tools.
	Requires that all Sybase Unwired Platform components are installed on the same machine and configured with this restriction in mind. Allows a maximum of five synchronization clients for Unwired Server and Afaria Server.
	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. You must generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. If installing on a VM with an unserved license, you must use console 0 to access the VM to perform the installation.
Enterprise Developer Edition	Includes Unwired Server, Afaria, and Eclipse development tools.
	Enables installation and configuration of different components on different machines, as well as supporting clusters and high availability. Allows a maximum of 20 synchronization clients for Unwired Server and Afaria Server.
	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. You must generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. If installing on a VM with an unserved license, you must use console 0 to access the VM to perform the installation.
	Unwired Server can be accessed by separate developer workstations where the development environment of Personal Developer Edition is installed without Unwired Server.
Enterprise Edition	Is for deployment of production applications, not for development work.
	Includes only Unwired Server and Afaria components.
	Enables installation and configuration of these components on separate machines in a cluster and is intended for use in a production environment.

Cluster License Coordination

In a cluster, each server deployed to the environment must be licensed. Multiple servers cannot share a single license. However, all server nodes in the cluster can share device connection licenses.

In a clustered environment, you must use a license server so it can coordinate licensing requirements among all installed components:

- Server validation – each time a server starts, it connects and registers with the license server check if there is a valid license for it. If there is a free license available, the server checks out the license and continues with the start-up process. If the value cannot be retrieved or the license server confirms that a server is not licensed, Unwired Server stops.
- Device connection validation – because available device licenses are shared among all servers in the cluster, all connections to all servers must be accounted for. The cluster name is used to enumerate each device connection made across clustered servers. Every server then checks out all device licenses when the servers start.

Afaria Licenses

Afaria is not licensed by SySAM. Instead, Afaria uses an internal mechanism to track and enforce licenses and features.

The Afaria server included with Unwired Platform uses the Afaria license string for session manager support. The license string is a fixed serial number that determines what options are included. If you require more options than what are currently included with Unwired Platform, upgrade Afaria by ordering additional Afaria options.

For example, if you are using over-the-air (OTA) deployments to support Unwired Platform, you may want to purchase the Outbound option. Otherwise, the Maximum Simultaneous Notifications data element defaults to 20, and you cannot increase the notifications you can use in your environment.

License details appear on the Afaria Administrator License page. The Licensing page contains information about your Afaria system, including a list of licensed components and Afaria client types, the number of licensed sessions, expiration dates (if any), and a brief description of the license type. The information on this page is read-only; you cannot modify any values.

You can also track software compliance as needed. The License compliance view allows you to examine software license compliance and usage data collected via Inventory Manager scans. See *Afaria Reference | Platform > Data views > Tracking Software Compliance and Usage Data*.

License Validation

Attributes in the license file control the base number of devices that can be registered, the number of servers (typically for clustered production environments) you install, and expiry

dates for both devices and servers. The mechanism that counts device licenses varies, depending on your model.

There are two licensing models you can use with Unwired Platform:

- Unserved (local) license – uses a local license file for each Unwired Platform installation.
- Served (SySAM License Server) – uses a SySAM License Server to support multiple Unwired Platform installations.

For both models, Unwired Server always tracks available licenses and expiry dates, and writes license errors to the Unwired Server log. Administrators can always check these limits and take appropriate action when that limit is reached.

Unserved model

In an unserved license model, licenses are validated at several intervals:

- At Unwired Server start-up – When Unwired Server starts up, it always checks the license file for the number of servers licensed. If the value cannot be retrieved, or if the server is not licensed, Unwired Server stops.
- At device connection – when the device user tries to connect to Unwired Server, Unwired Server checks the device ID against the data tier. If the device falls within the device license limit, the device connection continues and operations proceed normally for both replication and messaging applications. If the device falls outside the limit, Unwired Server throws a license check exception to the client. For details about deleting unused device IDs to free licenses, see *System Administration Guide > Systems Maintenance and Monitoring > Platform Licenses > Device User License Limits*.
- Upon license expiry – if the date in the license file matches the current date, the license expires; Unwired Server generates a license expired error. The error text varies, depending on whether the server or the client connection licenses have expired. If a server license is expired, Unwired Servers also stop.

Served Model

In a served license model, licenses are validated at these intervals:

- At Unwired Server startup – When Unwired Server starts up, it always checks the license file for the number of servers licensed. If the value cannot be retrieved, or if the server is not licensed, Unwired Server stops.
- With each synchronization – the procedure varies slightly depending on the synchronization model used on the client:
  - For replication-based synchronization – after the device user first attempts to connect to Unwired Server and is authenticated, Unwired Server uses the device ID to check the license into the data tier. If the device falls within the device license limit, synchronization proceeds. If the device falls outside the limit, Unwired Server throws a license check exception to the client.

    Administrators must monitor licenses carefully; there may be many devices connected to the server, but fewer licenses being used. For details about deleting unused device

IDs to free licenses, see *System Administration Guide > Systems Maintenance and Monitoring > Platform Licenses > Device User License Limits*.

- For messaging-based synchronization – when the device user tries to connect, Unwired Server checks the device ID against the data tier. If the device is registered, and the total number of devices registered falls within the device license limit, the message is processed normally. If the device is not registered, or the total number of devices registered falls outside the limit, Unwired Server throws a license check exception to the client.

- Upon license expiry – if the license expires, Unwired Server generates a license expired error. The error varies, depending on whether the server or the client connection licenses have expired. When a server license expires, Unwired Servers also stop.

Obtaining a License

Before installing your product, determine your license type.

These steps summarize the actions you must take to install a Sybase Software Asset Management (SySAM) license. Refer to the *Sybase Software Asset Management Users Guide* for details.

If you are installing the Evaluation version, a license is not required. For all other developer and deployment editions, obtain a license through SySAM.

1. Choose a SySAM license model.

License model	Description
Unserved license model	Licenses are obtained directly from a license file. If you are using an unserved license, save the license file to the machine on which you install the product. Sybase recommends that you use a location outside of the Sybase installation directories.
Served license model	A license server manages the allocation of licenses among multiple machines.

2. For the served license model, decide whether to use an existing or new license server.

   You may install the Windows version of the license server that is packaged with this product, or you may use an existing license server. The license server and your product installation do not need to share the same machine, operating system, or architecture.

3. If you chose the served license model, do one of:

   - Install the new license server on a machine that does not have an existing license server.
   - Install on a machine that is running a SySAM 1.0 license server and follow migration instructions in the *Sybase Software Asset Management User's Guide* to migrate to the newer SySAM version.
   - Use an existing SySAM 2 license server. Apply the new license to the existing SySAM 2 license server and restart the license server.

4. Before installing your product, generate license files from the Sybase Product Download Center (SPDC) at *https://sybase.subscribenet.com* using the SPDC access information you receive from Sybase or your Sybase reseller.

Obtaining the SySAM Host ID

Learn how to obtain your SySAM host ID.

1. Change to `%SYBASE%\SYSAM-2_0\bin`, Where *%SYBASE%* is the Sybase installation directory.

2. To obtain a host ID for a served license enter:

```
lmutil lmhostid
```

Note: On some platforms, the host ID is derived from the network adapter address. If your machine has multiple network adapters, `lmutil lmhostid` returns one host ID for each network adapter. The output may look similar to:

```
The FLEXlm host ID of this machine
     is ""0013023c8251 0015c507ea90""
     Only use ONE from the list of hostids.
```

Choose one of these host IDs. Sybase recommends that you use the value associated with the primary wired Ethernet adapter. Do not use values associated with internal loopback adapters. If you cannot determine which host ID to use from the `lmutil lmhostid` output, use an appropriate native operating system command to get additional details. See the SPDC FAQ topic titled, "What's my Host ID."

3. To obtain a host ID for an unserved licenses, use the network adapter address for the host ID. To find the network adapter address enter:

```
ipconfig /all
```

4. Make note of the host ID so you can use it later at SPDC.

   - Your host ID is platform-specific, but may be similar to:
     - `00B0A9DF9A32 or 00-B0-A9-DF-9A-32` on Windows platforms.

Accessing SPDC

Once you have purchased a Sybase product, download the product and generate the licenses from the online Web portal, the Sybase Product Download Center (SPDC.)

After you order a Sybase product, you receive an e-mail message that contains a URL to the SPDC site, as well as a user name and password.

Click the URL in the e-mail, and when prompted, enter the designated user name and password. Your login is typically your e-mail address. If you have forgotten your password, use the password finder on the SPDC login page.

Note: If you have purchased your Sybase software from a Sybase reseller, you receive a Web key rather than an e-mail message.

Next
Sybase Product Download Center: *http://www.sybase.com/detail?id=1025266*.

Generating a Served License
Before you install your Sybase product, set up the license server and required licenses.

Prerequisites
Before generating the licenses, determine the host ID. See *Obtaining the SySAM Host ID* on page 20.

- If you have problems, see Troubleshooting SySAM in the installation guide for your platform.

Task

1. From the Product List page on the SPDC, select the product family that contains the product for the license you want to generate.
2. From the list of Sybase products, select the appropriate product edition and version. Make sure you select the product for the operating system you are using.
3. When the license agreement screen appears, select the appropriate country or region, read the agreement, then click **I Agree**.

   Note: The license agreement appears only the first time you attempt to download a product. Once you agree to the license, you do not see the license agreement for any subsequent downloads of that product.

4. On the Product Download page, click **License Keys**.
5. Select the license to generate.

   Verify that you are generating the correct license by comparing the product name, edition, and license type with your company's purchase order.

   Note: If your product requires both a server and a client license, Sybase recommends that you generate the server license first.

6. Click **Select to Generate**.
7. Select **Served License**, then click **Next**.
8. Enter the quantity of licenses to generate, then click **Next**. You can generate licenses for a maximum of 10 machines.
9. Enter the license server host ID and, optionally, the host name and port number.
   a) A port number is not required unless you are using a three-node redundant cluster. A valid number is any unused port number between 0 and 64000. On UNIX, choose a port greater than 1024, since those less than 1024 are privileged port numbers. If you do not specify a TCP/IP port number, one of the default ports in the range of 27000 and 27009 is used.

b) To generate a license for a three-node redundant cluster, specify the host ID, host name, and port number for each node of the cluster. In this configuration the port number is required and should be outside of the 27000 to 27009 range.

c) Specify redundant server information to configure your servers for three-server redundancy.

10. Click **Generate**.

11. If you have just generated a server license, your product also requires a client license. Repeat steps 5 – 10 above for the client license.

12. Once you have generated all the licenses your product requires, you can:

- Download the license file by clicking **Download All Licenses for Host**.
- Print a paper copy of the license by clicking **Print Friendly**.
- Return to the license information page to generate additional licenses.

13. After generating the licenses, save them with a .lic extension to the licenses directory in your license server installation.

Generating an Unserved License

Learn how to generate an unserved license.

Prerequisites

Before generating licenses, determine the host ID. See *Obtaining the SySAM Host ID* on page 20.

- If you have problems, see Troubleshooting SySAM in the installation guide for your platform.

Task

1. From the Product List page on the SPDC, select the product family that contains the product for the license you want to generate.

2. From the list of Sybase products, select the appropriate product edition and version. Make sure you select the product for the operating system you are using.

3. When the license agreement screen appears, select the appropriate country or region, read the agreement, then click **I Agree**.

Note: The license agreement appears only the first time you attempt to download a product. Once you agree to the license, you do not see the license agreement for any subsequent downloads of that product.

4. On the Product Download page, click **License Keys**.

5. Select the license to generate.

Verify that you are generating the correct license by comparing the product name, edition, and license type with your company's purchase order.

> **Note:** If your product requires both a server and a client license, Sybase recommends that you generate the server license first.

6. Click **Select to Generate**.

7. Select **Unserved License** and click **Next**.

8. Select the number of machines to license and click **Next**. You can generate licenses for a maximum of 10 machines.

9. Enter the host ID, and optionally, the host name for each machine for which you want to generate a license.

   For some license types, you must enter the number of CPUs or licenses for the machine where this license is used.

10. Click **Generate**.

11. If you have just generated a server license, your product also requires a client license. Repeat steps 5 – 10 above for the client license.

12. Once you have generated all the licenses your product requires, you can:

    - Download the license file by clicking **Download All Licenses for Host**.
    - Print a paper copy of the license by clicking **Print Friendly**.
    - Return to the license information page to generate additional licenses.

13. After generating the licenses, save them with a `.lic` extension to the `licenses` directory in your license server installation.

Locating Information in a License File

After you download a license file, you must extract some information from it to complete your installation. When you run the Unwired Platform installer, enter this information on the license details page.

1. Use a text editor to open your license file.

2. Locate the uncommented line that begins with the string for your Unwired Platform edition:

   - Deployment Edition – `INCREMENT SUP_ENTSRVR`
   - Enterprise Developer Edition – `INCREMENT SUP_ENTDEV`
   - Personal Developer Edition – `INCREMENT SUP_DEVELOPER`

   For example:

   - Enterprise Deployment Edition would be similar to this.

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

   - Enterprise Developer Edition would be similar to this.

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

- Personal Developer Edition would be similar to this.

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

The rest of the examples in this section show the beginning of this line as it would appear for Deployment Edition. The details illustrated apply equally 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 Deployment 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=1.5;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=1.5;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 in an environment where there are no ports available, edit your license file to specify a fixed port number for the VENDOR SYBASE daemon to use in communicating with the SySAM license server.

You can specify a port number for the VENDOR SYBASE daemon to use by editing your license file. This task is required in order to install Sybase Unwired Platform in an environment where there are no ports available for the licensing server to select dynamically on startup. A strict security environment might be set up this way.

1. Obtain a port number from your network security administrator that can be used by Unwired Platform to communicate with SySAM license server.

2. Use a text editor to open your license file.

3. Locate the `VENDOR SYBASE` line near the top of the license file.

   For example:

   ```
   #Sybase Software Asset Management License File. DT License for
   Sybase Unwired
   #Platform Enterprise Developer for Windows - 32/64bit
   SERVER mmdfwmapp299.mm.local 005056807a88 27001
   VENDOR SYBASE
   USE_SERVER
   ```

4. At the end of that line, type `PORT=` followed by the port number you obtained.

   For example, if you are using port 27010:

   ```
   #Sybase Software Asset Management License File. DT License for
   Sybase Unwired
   #Platform Enterprise Developer for Windows - 32/64bit
   SERVER mmdfwmapp299.mm.local 005056807a88 27001
   VENDOR SYBASE PORT=27010
   USE_SERVER
   ```

   Be sure to leave a space between "SYBASE" and "PORT."

5. Save and close the license file.

CHAPTER 3   **Installing Developer Editions**

Use the Sybase Unwired Platform installation media to install a Developer Edition.

Make sure you have completed all the prerequisites before installing.

Installing Developer Edition on a Single Server

Install Unwired Server, the data tier, Afaria, and developer components on a single server or developer workstation. Optionally, install developer components on additional developer workstations.

Prerequisites

Going through the appropriate task flow in *Developer Edition Task Flows* on page 1, you should have performed these tasks:

- Download a license file. See *Obtaining a License* on page 19.
- Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
- Verify that you are logged in with administrative rights.
- Install Adobe Flash Player 9.0.124+ or FP10.x (recommended).
- If you are planning to use an existing Eclipse 3.5 installation, follow the steps in *Additional Steps to Use an Existing Eclipse Installation* on page 144.
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.
- 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. You must generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. If installing on a VM with an unserved license, you must use console 0 to access the VM to perform the installation.

Note: You cannot upgrade a single-server installation of Unwired Platform to a cluster setup. If you want to have cluster support available in your development environment, install in a cluster initially. See *Performing a Cluster Installation of Developer Edition* on page 31.

Note: If you run the Developer Edition installer again on a machine where you have already installed Unwired Platform version 1.5.2, the installer detects the existing installation and

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takes you to the component selection page as soon as you have accepted the end user licensing agreement. Resume with step 12 in *Performing a Custom Installation of Developer Edition* on page 51.

Task

1. Start the Sybase Unwired Platform installer using one of these methods:

   - Insert the Sybase Unwired Platform installation media.
   - Install from a Web download. Extract the four archives to the same temporary directory on a local disk, not a shared drive.
   - Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

   a) If installing from installation media, select **Start > Run**.
   b) Browse to the location of the setup.exe file on the installation media or in the temporary directory, and click **OK**.

2. On the installer welcome page, click **Next**.
3. On the license type page, select your license type and click **Next**.

Options	Description
Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (local) license	A standalone license managed locally by your workstation. Be sure you know the location of the license file.
Served (remote) license	A standalone license managed by a license server. Be sure you know your license manager host name and TCP port.

4. On the end-user license agreement page, accept the terms of the license agreement.
   a) Select the appropriate geographic location and read the license agreement.
   b) Click **I Do Agree to the Terms of the Sybase License, for the Install Location Specified**, then click **Next**.
5. On the license details page, select the information for your product license.

   See *Locating Information in a License File* on page 23.

Field	Valid values
License product edition	• **ED**: Enterprise Developer Edition • **PD**: Personal Developer Edition

Field	Valid values
License type	If you selected **ED** for license product edition, license type must be **DT**: Development and Test License.
	If you selected **PD** for license product edition, then license type must be **SS**: Standalone Seat License.

Note: If you enter a combination of values on this page that does not match your license file, the error is not detected until the installer attempts to check out your license on the next page.

6. Enter your license information.

   If you selected "Unserved (local) license" as the license type, on the unserved license file page enter the full path to the license file. Click **Browse** to browse to the file location.

   If you selected "Served (remote) license" as the license type, on the SySAM license manager server page enter the **Host Name of License Server** and, optionally, change the **TCP Port of License Server** entry.

   If you see a `Failed to check out license` error, and you think you may have entered license settings that do not match your license, click **OK**, then click **Back** to reenter the license settings.

7. On the installation directory page, accept the default installation directory or choose a different one.
   - If the directory does not exist, click **OK** to create it.
   - For best results, use English or Western European characters (cp1252/ISO-8859-1) for the installation directory path and directory names.
   - You can use the underscore or hyphen character, but do not use symbols or spaces in the installation directory name.

   Note: The directory path where Sybase Control Center is installed varies. If the SYBASE environment variable is defined and valid, Sybase Control Center installs in the directory path specified by the variable. Otherwise, Sybase Control Center installs in a sibling directory to the installation directory specified here. For example, if the installation directory is `C:\Sybase\UnwiredPlatform`, Sybase Control Center installs into `C:\Sybase\SCC-3_0`.

8. On the installation type page, select **Mobile Developer** .

9. (Optional) Select additional installation options. Choose:

   - **Configure Unwired Platform communication ports** to change default port numbers.
   - **Set Unwired Platform services to start automatically** to start Unwired Platform services automatically when Windows starts. If you do not select this option, you must manually start services from the **Start** menu after every Windows restart.

- **Install Device Application Designer** to install this developer component. This option is only available if Unwired WorkSpace is selected to install. If Unwired WorkSpace is already installed, this option is only available from the component selection page.
- **Install Windows Mobile .NET Components** to install this developer component. This option is only available if Unwired WorkSpace is selected to install. If Unwired WorkSpace is already installed, this option is only available from the component selection page.
- **Use Unwired Platform with an existing JDK or Eclipse Installation**. Indicate the fully qualified path to the existing JDK installation directory. Sybase Unwired Platform requires JDK 1.6.0_16 and Eclipse 3.5.0.

  Note: On 64-bit systems, specify the fully qualified path to an existing 32-bit JDK installation.

10. A page that says, "One or more required components (prerequisites) are not installed on the system," indicates that the installer has detected missing third-party software.

    Click:
    - **Next** to have the installer install the required software.
    - **Back** to select components to install that do not require the third party software.
    - **Cancel** to cancel the current installation.

11. (Optional) If you selected "Configure Unwired Platform communication ports" on the additional installation options page, you can change port numbers as required, on the port numbers for Unwired Server page.

Option	Description
General	
Server Administration	Standard Internet Inter-ORB Protocol (IIOP) port used by Eclipse and Sybase Control Center to connect to Unwired Server for deployment and administration tasks. The default is 2000.
	To change the port number after installation, use Sybase Control Center (administration console).
Data Change Notification	HTTP port used for data change notification (DCN). The default is 8000.
Synchronization	

Option	Description
Messaging	The port used for messaging clients to communicate with Unwired Server's messaging server, to synchronizes data between the enterprise information system and messaging-based mobile devices. The default is 5001.
Replication	Port number on which Unwired Server synchronizes data between the enterprise information system and replication-based mobile devices. The default is 2480.

12. On the summary information page, verify the installation features and click **Install**.

13. (Optional) Click **View Release Bulletin**.

14. Click **Finish**.

Next

- To add a component, such as Device Application Designer, or Windows Mobile .NET Components, or Afaria, to your installation, re-run the installer. The installer detects the existing installation and automatically takes you to the page where you can select components to add. See *Performing a Custom Installation of Developer Edition* on page 51.
- Perform postinstallation tasks for your installation. See *Chapter 6, Postinstallation Tasks* on page 117.

Performing a Cluster Installation of Developer Edition

Install the Developer Edition in a cluster configuration consisting of a data tier and multiple server nodes.

- *Installing the Data Tier on its Own Host for a Developer Installation* on page 32
- *Installing the First Node for a Developer Cluster Installation* on page 37
- *Installing Additional Nodes in an Existing Cluster for a Developer Installation* on page 44

Installing the Data Tier on its Own Host for a Developer Installation

Install the data tier for Developer Edition on a different host machine from the rest of Sybase Unwired Platform. Do this before installing Unwired Platform components on other cluster nodes.

Prerequisites

Going through the appropriate task flow in *Developer Edition Task Flows* on page 1, you should have performed these tasks:

- Download a license file. See *Obtaining a License* on page 19.
- (Optional) Create an installation image on your network. See *Creating an Installation Image on the Network* on page 143.
- Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
- Verify that you are logged in with administrative rights.
- Install Adobe Flash Player 9.0.124+ or FP10.x (recommended).
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.
- Print the *Installation Worksheet* on page 151 to note pertinent installation details. Having this information available will expedite the completion of installations on subsequent cluster nodes.
- 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. You must generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. If installing on a VM with an unserved license, you must use console 0 to access the VM to perform the installation.

Note: If you run the Developer Edition installer again on a machine where you have already installed Unwired Platform version 1.5.2, the installer detects the existing installation and takes you to the component selection page as soon as you have accepted the end user licensing agreement. Resume with step 12 in *Performing a Custom Installation of Developer Edition* on page 51.

Task

1. Start the Sybase Unwired Platform installer using one of these methods:

   - Insert the Sybase Unwired Platform installation media.

- Install from a Web download. Extract the four archives to the same temporary directory on a local disk, not a shared drive.
- Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

a) If installing from installation media, select **Start > Run**.

b) Browse to the location of the setup.exe file on the installation media or in the temporary directory, and click **OK**.

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

3. On the license type page, select your license type and click **Next**.

Options	Description
Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (local) license	A standalone license managed locally by your workstation. Be sure you know the location of the license file.
Served (remote) license	A standalone license managed by a license server. Be sure you know your license manager host name and TCP port.

4. On the end-user license agreement page, accept the terms of the license agreement.

a) Select the appropriate geographic location and read the license agreement.

b) Click **I Do Agree to the Terms of the Sybase License, for the Install Location Specified**, then click **Next**.

5. On the license details page, select the information for your product license.

See *Locating Information in a License File* on page 23.

Field	Valid values
License product edition	• **ED**: Enterprise Developer Edition • **PD**: Personal Developer Edition
License type	If you selected **ED** for license product edition, license type must be **DT**: Development and Test License. If you selected **PD** for license product edition, then license type must be **SS**: Standalone Seat License.

Note: If you enter a combination of values on this page that does not match your license file, the error is not detected until the installer attempts to check out your license on the next page.

6. Enter your license information.

If you selected "Unserved (local) license" as the license type, on the unserved license file page enter the full path to the license file. Click **Browse** to browse to the file location.

If you selected "Served (remote) license" as the license type, on the SySAM license manager server page enter the **Host Name of License Server** and, optionally, change the **TCP Port of License Server** entry.

If you see a `Failed to check out license` error, and you think you may have entered license settings that do not match your license, click **OK**, then click **Back** to reenter the license settings.

7. On the installation directory page, accept the default installation directory or choose a different one.
   - If the directory does not exist, click **OK** to create it.
   - For best results, use English or Western European characters (cp1252/ISO-8859-1) for the installation directory path and directory names.
   - You can use the underscore or hyphen character, but do not use symbols or spaces in the installation directory name.

   Note: The directory path where Sybase Control Center is installed varies. If the SYBASE environment variable is defined and valid, Sybase Control Center installs in the directory path specified by the variable. Otherwise, Sybase Control Center installs in a sibling directory to the installation directory specified here. For example, if the installation directory is `C:\Sybase\UnwiredPlatform`, Sybase Control Center installs into `C:\Sybase\SCC-3_0`.

8. On the installation type page, select **Cluster** and click **Next**.
9. On the cluster setup selection page, select **Install the data tier for your Unwired Platform cluster** and click **Next**.
10. (Optional) Select additional installation options. The available options on the additional installation options page depend on the selections you made on the component selection page; you may not see all of the options listed below. Choose:

    - **Configure data tier** to change default port numbers for the data tier or to install data tier into a high availability environment. This option appears only when you install the data tier without Unwired Server.
    - **Use Unwired Platform with an existing JDK Installation** to indicate the fully qualified path to an existing JDK installation directory. Sybase Unwired Platform requires JDK 1.6.0_16.

    Note: On 64-bit systems, specify the fully qualified path to an existing 32-bit JDK installation.

11. On the cluster configuration information page, enter the information necessary to access the data tier in a cluster.

Option	Description
Cluster Configuration Password	Enter the password used by the cluster administrator to configure the cluster.

Option	Description
Confirm Cluster Configuration Password	Reenter the cluster configuration password.
UNC path to shared data folder **Note:** This field appears only when you are installing Unwired Server without the data tier	Universal naming convention path to the shared data folder. This folder must already exist, with the data tier installed and be shared to your network with write privileges. If the data tier is installed in the default installation directory on its host, the local path would be `C:\Sybase\UnwiredPlatform\Data`. You would share this directory to your network. If you share this directory with the name `Data`, and the computer where you are installing is named `myserver`, the UNC path would be `\\myserver\Data`.

12. If you selected "Configure Data Tier" on the additional installation options page, on the port numbers for data tier page, enter port numbers and, optionally, specify a high availability environment:

Option	Description
Database Server	Port number for the data tier that manages transactions between the enterprise information system and mobile devices. The default is 5200.
Messaging Server	HTTP port for the messaging configuration Web service, used by Sybase Control Center to perform deployment and administration tasks related to the Unwired Server messaging server and devices, and workflow application. The default is 6262.
Afaria Database	The Afaria Server database port number. The default is 4343.

Option	Description
Install Data Tier into high availability environment	Select this option to install the data tier in a Microsoft cluster.
	The next two fields appear only when you select this option.
	For more information on using a Microsoft cluster with Unwired Platform, see *System Administration for Sybase Unwired Platform > Systems Design > Clustered Environments > Implementing an N+2-node Cluster for Optimal Redundancy*.
Enter a path to Microsoft cluster setup	Enter the location of the high availability Microsoft cluster, beginning with a drive letter.
	Note: This cannot be a UNC path. If the high availability data location is on a different server, map a path to that server as a network drive and use the mapped drive letter in the path you enter here.
Enter a name for database server	Enter the name to be used for the data tier server in the Microsoft cluster.
	Note: The data tier server is renamed to *<name_you_enter_here>*. The Afaria database server is renamed to AFDB_*<name_you_enter_here>*.

13. On the summary information page, verify the installation features and click **Install**.

14. (Optional) Click **View Release Bulletin**.

15. Click **Finish**.

Next

- Install the first node for the cluster. See *Installing the First Node for a Developer Cluster Installation* on page 37.

Installing the First Node of a Cluster for a Developer Installation

Install Sybase Unwired WorkSpace, JDK 1.6.0_16, Sybase Control Center, and Unwired Server on the first node in a cluster. Do this after installing the data tier on its own host.

Prerequisites

Going through the appropriate task flow in *Developer Edition Task Flows* on page 1, you should have performed these tasks:

- Download a license file. See *Obtaining a License* on page 19.
- (Optional) Create an installation image on your network. See *Creating an Installation Image on the Network* on page 143.
- Install the data tier on its own server. See *Installing the Data Tier on its Own Host for a Developer Installation* on page 32.
- Verify that the databases on the data tier server are up and running.
- Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
- Verify that you are logged in with administrative rights.
- Install Adobe Flash Player 9.0.124+ or FP10.x (recommended).
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.
- Print the *Installation Worksheet* on page 151 to note pertinent installation details. Having this information available will expedite the completion of installations on subsequent cluster nodes.
- 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. You must generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. If installing on a VM with an unserved license, you must use console 0 to access the VM to perform the installation.

Note: The host name where you install the first server node of the cluster becomes the cluster by default.

Note: To install Afaria components, perform a custom installation. See *Performing a Custom Installation of Developer Edition* on page 51.

Note: If you run the Developer Edition installer again on a machine where you have already installed Unwired Platform version 1.5.2, the installer detects the existing installation and takes you to the component selection page as soon as you have accepted the end user licensing

agreement. Resume with step 12 in *Performing a Custom Installation of Developer Edition* on page 51.

Task

1. Start the Sybase Unwired Platform installer using one of these methods:
   - Insert the Sybase Unwired Platform installation media.
   - Install from a Web download. Extract the four archives to the same temporary directory on a local disk, not a shared drive.
   - Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

   a) If installing from installation media, select **Start > Run**.
   b) Browse to the location of the setup.exe file on the installation media or in the temporary directory, and click **OK**.
2. On the installer welcome page, click **Next**.
3. On the license type page, select your license type and click **Next**.

Options	Description
Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (local) license	A standalone license managed locally by your workstation. Be sure you know the location of the license file.
Served (remote) license	A standalone license managed by a license server. Be sure you know your license manager host name and TCP port.

4. On the end-user license agreement page, accept the terms of the license agreement.
   a) Select the appropriate geographic location and read the license agreement.
   b) Click **I Do Agree to the Terms of the Sybase License, for the Install Location Specified**, then click **Next**.
5. On the license details page, select the information for your product license.

   See *Locating Information in a License File* on page 23.

Field	Valid values
License product edition	- **ED**: Enterprise Developer Edition - **PD**: Personal Developer Edition

Field	Valid values
License type	If you selected **ED** for license product edition, license type must be **DT**: Development and Test License.
	If you selected **PD** for license product edition, then license type must be **SS**: Standalone Seat License.

Note: If you enter a combination of values on this page that does not match your license file, the error is not detected until the installer attempts to check out your license on the next page.

6. Enter your license information.

   If you selected "Unserved (local) license" as the license type, on the unserved license file page enter the full path to the license file. Click **Browse** to browse to the file location.

   If you selected "Served (remote) license" as the license type, on the SySAM license manager server page enter the **Host Name of License Server** and, optionally, change the **TCP Port of License Server** entry.

   If you see a `Failed to check out license` error, and you think you may have entered license settings that do not match your license, click **OK**, then click **Back** to reenter the license settings.

7. On the installation directory page, accept the default installation directory or choose a different one.
   - If the directory does not exist, click **OK** to create it.
   - For best results, use English or Western European characters (cp1252/ISO-8859-1) for the installation directory path and directory names.
   - You can use the underscore or hyphen character, but do not use symbols or spaces in the installation directory name.

Note: The directory path where Sybase Control Center is installed varies. If the SYBASE environment variable is defined and valid, Sybase Control Center installs in the directory path specified by the variable. Otherwise, Sybase Control Center installs in a sibling directory to the installation directory specified here. For example, if the installation directory is `C:\Sybase\UnwiredPlatform`, Sybase Control Center installs into `C:\Sybase\SCC-3_0`.

8. On the installation type page, select **Cluster** and click **Next**.

9. On the cluster setup selection page, select **Install the first server node and connect it to the data tier** and click **Next**.

10. A page that says, "One or more required components (prerequisites) are not installed on the system," indicates that the installer has detected missing third-party software.

    Click:

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

11. (Optional) Select additional installation options. The available options on the additional installation options page depend on the selections you made on the component selection page; you may not see all of the options listed below. Choose:

- **Configure Unwired Platform communication ports** to change default port numbers.
- **Set Unwired Platform services to start automatically** to start Unwired Platform services automatically when Windows starts. If Unwired Platform services are not set to start automatically, you must manually start these services from the Windows **Start** menu.

  Note: Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® DOE Connector and Sybase Mobile Sales for SAP® CRM. If Unwired Platform services do not start automatically, these product installations will encounter problems.

- **Use Unwired Platform with an existing JDK Installation** to indicate the fully qualified path to an existing JDK installation directory. Sybase Unwired Platform requires JDK 1.6.0_16.

  Note: On 64-bit systems, specify the fully qualified path to an existing 32-bit JDK installation.

Note: If you need to install Unwired WorkSpace on this node, rerun the installer after you complete this installation. The installer will go directly to the component selection page where Unwired WorkSpace is available to select, along with Device Application Designer and Windows Mobile .NET Components.

12. On the cluster configuration information page, enter the information necessary to access the data tier in a cluster.

Option	Description
Cluster Configuration Password	Enter the password used by the cluster administrator to configure the cluster.
Confirm Cluster Configuration Password	Reenter the cluster configuration password.

Option	Description
UNC path to shared data folder **Note:** This field appears only when you are installing Unwired Server without the data tier	Universal naming convention path to the shared data folder. This folder must already exist, with the data tier installed and be shared to your network with write privileges. If the data tier is installed in the default installation directory on its host, the local path would be `C:\Sybase\UnwiredPlatform\Data`. You would share this directory to your network. If you share this directory with the name `Data`, and the computer where you are installing is named `myserver`, the UNC path would be `\\myserver\Data`.

13. On the Windows account page, enter the information for the Windows account under which Sybase Unwired Platform will run.

Note: The user should be a domain user. If you are installing in a cluster, enter the exact same information on this page as you install on each node. A local account can also be used in installing in a cluster, as long as that account has read/write access to the shared data folder on the data tier machine.

Option	Description
Windows Account Name	Use the form, *<Windows_domain>\<login_id>* or *<login_id>*, for example, `sybase\jdoe`, or `jdoe`. Domain name is optional. The account must exist on the local machine and have administrator privileges.
Windows Account Password	Enter the password for the account.
Confirm Windows Account Password	Reenter the password for the account.

14. On the information for the data tier page, enter the information for your data tier installation.

Option	Description
SQL Anywhere 11.0.1 database	

Option	Description
Host Name	The name of the machine on which the database server is running. Enter this name with capitalization exactly as it is defined in the Windows network environment.
Port Number	Port number that the database server uses on the host machine.
Login	The account login for database administrator for the data tier. **Warning!** Do not change the "dba" default unless you have changed the database administrator account.
Password	The account password for the database administrator for the data tier. **Warning!** Enter the "sql" default password, unless you have changed the password for the database administrator account.
Consolidated database	
Database Name	The SQL Anywhere database name for the consolidated database. **Warning!** Do not change the default name from "default" unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.
Cluster database	
Database Name	The SQL Anywhere database name for the cluster database. **Warning!** Do not change the default name from "clusterdb" unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.
Monitoring database	

Option	Description
Database Name	The SQL Anywhere database name for the monitoring database.
	Warning! Do not change the default name from "monitordb" unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.

15. (Optional) If you selected "Configure Unwired Platform communication ports" on the additional installation options page, you can change port numbers as required, on the port numbers for Unwired Server page.

Option	Description
General	
Server Administration	Standard Internet Inter-ORB Protocol (IIOP) port used by Eclipse and Sybase Control Center to connect to Unwired Server for deployment and administration tasks. The default is 2000.
	To change the port number after installation, use Sybase Control Center (administration console).
Data Change Notification	HTTP port used for data change notification (DCN). The default is 8000.
Synchronization	
Messaging	The port used for messaging clients to communicate with Unwired Server's messaging server, to synchronizes data between the enterprise information system and messaging-based mobile devices. The default is 5001.
Replication	Port number on which Unwired Server synchronizes data between the enterprise information system and replication-based mobile devices. The default is 2480.

16. On the summary information page, verify the installation features and click **Install**.

17. (Optional) Click **View Release Bulletin**.

18. Click **Finish**.

Next

- To add a component, such as Device Application Designer, or Windows Mobile .NET Components, or Afaria, to your installation, re-run the installer. The installer detects the existing installation and automatically takes you to the page where you can select components to add. See *Performing a Custom Installation of Developer Edition* on page 51.
- Install an additional node in the cluster. See *Installing Additional Nodes in an Existing Cluster for a Developer Installation* on page 44.

Installing Additional Nodes in an Existing Cluster for a Developer Installation

Install Unwired Server on second and subsequent nodes of an existing Unwired Platform cluster. Do this after installing the data tier on its own host and Unwired Server on the first server node.

Prerequisites

Going through the appropriate task flow in *Developer Edition Task Flows* on page 1.

- Download a license file. See *Obtaining a License* on page 19.
- (Optional) Create an installation image on your network. See *Creating an Installation Image on the Network* on page 143.
- Install the data tier on its own server. See *Installing the Data Tier on its Own Host for a Developer Installation* on page 32.
- Install Unwired Server on the first node in the cluster. See *Installing the First Node for a Developer Cluster Installation* on page 37.
- Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
- Verify that you are logged in with administrative rights.
- Install Adobe Flash Player 9.0.124+ or FP10.x (recommended).
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.
- Print the *Installation Worksheet* on page 151 to note pertinent installation details. Having this information available will expedite the completion of installations on subsequent cluster nodes.
- 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. You must generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. If installing on a VM

with an unserved license, you must use console 0 to access the VM to perform the installation.

Note: To install Afaria components, perform a custom installation. See *Performing a Custom Installation of Developer Edition* on page 51.

Note: If you run the Developer Edition installer again on a machine where you have already installed Unwired Platform version 1.5.2, the installer detects the existing installation and takes you to the component selection page as soon as you have accepted the end user licensing agreement. Resume with step 12 in *Performing a Custom Installation of Developer Edition* on page 51.

Task

1. Start the Sybase Unwired Platform installer using one of these methods:

    • Insert the Sybase Unwired Platform installation media.
    • Install from a Web download. Extract the four archives to the same temporary directory on a local disk, not a shared drive.
    • Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

    a) If installing from installation media, select **Start > Run**.
    b) Browse to the location of the setup.exe file on the installation media or in the temporary directory, and click **OK**.

2. On the installer welcome page, click **Next**.
3. On the license type page, select your license type and click **Next**.

Options	Description
Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (local) license	A standalone license managed locally by your workstation. Be sure you know the location of the license file.
Served (remote) license	A standalone license managed by a license server. Be sure you know your license manager host name and TCP port.

4. On the end-user license agreement page, accept the terms of the license agreement.
    a) Select the appropriate geographic location and read the license agreement.
    b) Click **I Do Agree to the Terms of the Sybase License, for the Install Location Specified**, then click **Next**.
5. On the license details page, select the information for your product license.

    See *Locating Information in a License File* on page 23.

Field	Valid values
License product edition	• **ED**: Enterprise Developer Edition • **PD**: Personal Developer Edition
License type	If you selected **ED** for license product edition, license type must be **DT**: Development and Test License. If you selected **PD** for license product edition, then license type must be **SS**: Standalone Seat License.

Note: If you enter a combination of values on this page that does not match your license file, the error is not detected until the installer attempts to check out your license on the next page.

6. Enter your license information.

   If you selected "Unserved (local) license" as the license type, on the unserved license file page enter the full path to the license file. Click **Browse** to browse to the file location.

   If you selected "Served (remote) license" as the license type, on the SySAM license manager server page enter the **Host Name of License Server** and, optionally, change the **TCP Port of License Server** entry.

   If you see a `Failed to check out license` error, and you think you may have entered license settings that do not match your license, click **OK**, then click **Back** to reenter the license settings.

7. On the installation directory page, accept the default installation directory or choose a different one.
   • If the directory does not exist, click **OK** to create it.
   • For best results, use English or Western European characters (cp1252/ISO-8859-1) for the installation directory path and directory names.
   • You can use the underscore or hyphen character, but do not use symbols or spaces in the installation directory name.

Note: The directory path where Sybase Control Center is installed varies. If the SYBASE environment variable is defined and valid, Sybase Control Center installs in the directory path specified by the variable. Otherwise, Sybase Control Center installs in a sibling directory to the installation directory specified here. For example, if the installation directory is `C:\Sybase\UnwiredPlatform`, Sybase Control Center installs into `C:\Sybase\SCC-3_0`.

8. On the installation type page, select **Cluster** and click **Next**.
9. On the cluster setup selection page, select **Install an additional server node and connect it to the data tier** and click **Next**.
10. A page that says, "One or more required components (prerequisites) are not installed on the system," indicates that the installer has detected missing third-party software.

Click:

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

11. (Optional) Select additional installation options. The available options on the additional installation options page depend on the selections you made on the component selection page; you may not see all of the options listed below. Choose:

- **Configure Unwired Platform communication ports** to change default port numbers.
- **Set Unwired Platform services to start automatically** to start Unwired Platform services automatically when Windows starts. If Unwired Platform services are not set to start automatically, you must manually start these services from the Windows **Start** menu.

  Note: Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® DOE Connector and Sybase Mobile Sales for SAP® CRM. If Unwired Platform services do not start automatically, these product installations will encounter problems.

- **Use Unwired Platform with an existing JDK Installation** to indicate the fully qualified path to an existing JDK installation directory. Sybase Unwired Platform requires JDK 1.6.0_16.

  Note: On 64-bit systems, specify the fully qualified path to an existing 32-bit JDK installation.

Note: If you need to install Unwired WorkSpace on this node, rerun the installer after you complete this installation. The installer will go directly to the component selection page where Unwired WorkSpace is available to select, along with Device Application Designer and Windows Mobile .NET Components.

12. On the cluster configuration information page, enter the information necessary to access the data tier in a cluster.

Option	Description
Cluster Configuration Password	Enter the password used by the cluster administrator to configure the cluster.
Confirm Cluster Configuration Password	Reenter the cluster configuration password.

Option	Description
UNC path to shared data folder **Note:** This field appears only when you are installing Unwired Server without the data tier	Universal naming convention path to the shared data folder. This folder must already exist, with the data tier installed and be shared to your network with write privileges. If the data tier is installed in the default installation directory on its host, the local path would be `C:\Sybase\UnwiredPlatform\Data`. You would share this directory to your network. If you share this directory with the name `Data`, and the computer where you are installing is named `myserver`, the UNC path would be `\\myserver\Data`.

13. On the Windows account page, enter the information for the Windows account under which Sybase Unwired Platform will run.

Note: The user should be a domain user. If you are installing in a cluster, enter the exact same information on this page as you install on each node. A local account can also be used in installing in a cluster, as long as that account has read/write access to the shared data folder on the data tier machine.

Option	Description
Windows Account Name	Use the form, *<Windows_domain>\<login_id>* or *<login_id>*, for example, `sybase\jdoe`, or `jdoe`. Domain name is optional. The account must exist on the local machine and have administrator privileges.
Windows Account Password	Enter the password for the account.
Confirm Windows Account Password	Reenter the password for the account.

14. On the information for the data tier page, enter the same information you indicated when installing the first node.

Option	Description
SQL Anywhere 11.0.1 database	

Option	Description
Host Name	The name of the machine on which the database server is running. Enter this name with capitalization exactly as it is defined in the Windows network environment.
Port Number	Port number that the database server uses on the host machine.
Login	The account login for database administrator for the data tier.
	Warning! Do not change the "dba" default unless you have changed the database administrator account.
Password	The account password for the database administrator for the data tier.
	Warning! Enter the "sql" default password, unless you have changed the password for the database administrator account.
Consolidated database	
Database Name	The SQL Anywhere database name for the consolidated database.
	Warning! Do not change the default name, unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.
Cluster database	
Database Name	The SQL Anywhere database name for the cluster database.
	Warning! Do not change the default name, unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.

15. (Optional) If you selected "Configure Unwired Platform communication ports" on the additional installation options page, you can change port numbers as required, on the port numbers for Unwired Server page.

Option	Description
General	
Server Administration	Standard Internet Inter-ORB Protocol (IIOP) port used by Eclipse and Sybase Control Center to connect to Unwired Server for deployment and administration tasks. The default is 2000.
	To change the port number after installation, use Sybase Control Center (administration console).
Data Change Notification	HTTP port used for data change notification (DCN). The default is 8000.
Synchronization	
Messaging	The port used for messaging clients to communicate with Unwired Server's messaging server, to synchronizes data between the enterprise information system and messaging-based mobile devices. The default is 5001.
Replication	Port number on which Unwired Server synchronizes data between the enterprise information system and replication-based mobile devices. The default is 2480.

16. On the summary information page, verify the installation features and click **Install**.

17. (Optional) Click **View Release Bulletin**.

18. Click **Finish**.

Next

- To add a component, such as Device Application Designer, or Windows Mobile .NET Components, or Afaria, to your installation, re-run the installer. The installer detects the existing installation and automatically takes you to the page where you can select components to add. See *Performing a Custom Installation of Developer Edition* on page 51.
- Repeat the procedure to install another additional node in the cluster.
- Perform postinstallation tasks for all nodes in your cluster. See *Chapter 6, Postinstallation Tasks* on page 117.

Performing a Custom Installation of Developer Edition

Perform a custom installation to install a custom configuration of Unwired Platform on a single server, or to add components to an existing installation of Unwired Platform. The existing installation can be a single server setup or any node in a cluster setup.

Prerequisites

Going through the appropriate task flow in *Developer Edition Task Flows* on page 1, you should have performed these tasks:

- Download a license file. See *Obtaining a License* on page 19.
- Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
- Verify that you are logged in with administrative rights.
- Install Adobe Flash Player 9.0.124+ or FP10.x (recommended).
- If you are planning to use an existing Eclipse 3.5 installation, follow the steps in *Additional Steps to Use an Existing Eclipse Installation* on page 144.
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.
- 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. You must generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. If installing on a VM with an unserved license, you must use console 0 to access the VM to perform the installation.

Note: If the installer detects an existing installation of Unwired Platform, it takes you directly to the component selection screen after you complete the end user license agreement. There you can select additional components to install. To uninstall any components that are already installed, must completely uninstall Unwired Platform.

Task

1. Start the Sybase Unwired Platform installer using one of these methods:

   - Insert the Sybase Unwired Platform installation media.
   - Install from a Web download. Extract the four archives to the same temporary directory on a local disk, not a shared drive.

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

a) If installing from installation media, select **Start > Run**.

b) Browse to the location of the `setup.exe` file on the installation media or in the temporary directory, and click **OK**.

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

3. On the license type page, select your license type and click **Next**.

Options	Description
Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (local) license	A standalone license managed locally by your workstation. Be sure you know the location of the license file.
Served (remote) license	A standalone license managed by a license server. Be sure you know your license manager host name and TCP port.

4. On the end-user license agreement page, accept the terms of the license agreement.

a) Select the appropriate geographic location and read the license agreement.

b) Click **I Do Agree to the Terms of the Sybase License, for the Install Location Specified**, then click **Next**.

5. On the license details page, select the information for your product license.

See *Locating Information in a License File* on page 23.

Field	Valid values
License product edition	• **ED**: Enterprise Developer Edition • **PD**: Personal Developer Edition
License type	If you selected **ED** for license product edition, license type must be **DT**: Development and Test License. If you selected **PD** for license product edition, then license type must be **SS**: Standalone Seat License.

Note: If you enter a combination of values on this page that does not match your license file, the error is not detected until the installer attempts to check out your license on the next page.

6. Enter your license information.

If you selected "Unserved (local) license" as the license type, on the unserved license file page enter the full path to the license file. Click **Browse** to browse to the file location.

If you selected "Served (remote) license" as the license type, on the SySAM license manager server page enter the **Host Name of License Server** and, optionally, change the **TCP Port of License Server** entry.

If you see a `Failed to check out license` error, and you think you may have entered license settings that do not match your license, click **OK**, then click **Back** to reenter the license settings.

7. On the installation directory page, accept the default installation directory or choose a different one.
   - If the directory does not exist, click **OK** to create it.
   - For best results, use English or Western European characters (cp1252/ISO-8859-1) for the installation directory path and directory names.
   - You can use the underscore or hyphen character, but do not use symbols or spaces in the installation directory name.

   Note: The directory path where Sybase Control Center is installed varies. If the SYBASE environment variable is defined and valid, Sybase Control Center installs in the directory path specified by the variable. Otherwise, Sybase Control Center installs in a sibling directory to the installation directory specified here. For example, if the installation directory is `C:\Sybase\UnwiredPlatform`, Sybase Control Center installs into `C:\Sybase\SCC-3_0`.

8. On the installation type page, select **Custom** and click **Next**.
9. On the component selection page, select the specific Sybase Unwired Platform components to install, then click **Next**.
10. A page that says, "One or more required components (prerequisites) are not installed on the system," indicates that the installer has detected missing third-party software.

    Click:
    - **Next** to have the installer install the required software.
    - **Back** to select components to install that do not require the third party software.
    - **Cancel** to cancel the current installation.
11. (Optional) Select additional installation options. The available options on the additional installation options page depend on the selections you made on the component selection page; you may not see all of the options listed below. Choose:

    - **Configure Unwired Platform communication ports** to change default port numbers.
    - **Set Unwired Platform services to start automatically** to start Unwired Platform services automatically when Windows starts. If Unwired Platform services are not set to start automatically, you must manually start these services from the Windows **Start** menu.

    Note: Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® DOE Connector and

Sybase Mobile Sales for SAP® CRM. If Unwired Platform services do not start automatically, these product installations will encounter problems.

- **Configure data tier** to change default port numbers for the data tier or to install data tier into a high availability environment. This option appears only when you install the data tier without Unwired Server.
- **Install Device Application Designer** to install this developer component. This option is only available if Unwired WorkSpace is selected to install. If Unwired WorkSpace is already installed, this option is only available from the component selection page.
- **Install Windows Mobile .NET Components** to install this developer component. This option is only available if Unwired WorkSpace is selected to install. If Unwired WorkSpace is already installed, this option is only available from the component selection page.
- **Use an existing JDK or Eclipse Installation for use with Sybase Unwired Platform** to indicate the fully qualified path to an existing JDK or Eclipse installation directory. Sybase Unwired Platform requires JDK 1.6.0_16 and Eclipse 3.5.0. (Eclipse option available only if Unwired WorkSpace is selected.)

Note: On 64-bit systems, specify the fully qualified path to an existing 32-bit JDK installation.

12. If you selected either Unwired Server or Data Tier, but not both, on the component selection page, on the cluster configuration information page enter the information necessary to access the data tier in a cluster.

Option	Description
Cluster Configuration Password	Enter the password used by the cluster administrator to configure the cluster.
Confirm Cluster Configuration Password	Reenter the cluster configuration password.
UNC path to shared data folder **Note:** This field appears only when you are installing Unwired Server without the data tier	Universal naming convention path to the shared data folder. This folder must already exist, with the data tier installed and be shared to your network with write privileges. If the data tier is installed in the default installation directory on its host, the local path would be `C:\Sybase\UnwiredPlatform\Data`. You would share this directory to your network. If you share this directory with the name `Data`, and the computer where you are installing is named `myserver`, the UNC path would be `\\myserver\Data`.

13. On the Windows account page, enter the information for the Windows account under which Sybase Unwired Platform will run.

Note: The user should be a domain user. If you are installing in a cluster, enter the exact same information on this page as you install on each node. A local account can also be used in installing in a cluster, as long as that account has read/write access to the shared data folder on the data tier machine.

Option	Description
Windows Account Name	Use the form, *<Windows_domain>\<login_id>* or *<login_id>*, for example, sybase\jdoe, or jdoe. Domain name is optional. The account must exist on the local machine and have administrator privileges.
Windows Account Password	Enter the password for the account.
Confirm Windows Account Password	Reenter the password for the account.

14. If you selected Data Tier without Unwired Server on the component selection page, and you selected Configure Data Tier on the additional install options page, on the port numbers for data tier page enter port numbers and, optionally, specify a high availability environment:

Option	Description
Database Server	Port number for the data tier that manages transactions between the enterprise information system and mobile devices. The default is 5200.
Messaging Server	HTTP port for the messaging configuration Web service, used by Sybase Control Center to perform deployment and administration tasks related to the Unwired Server messaging server and devices, and workflow application. The default is 6262.
Afaria Database	The Afaria Server database port number. The default is 4343.

Option	Description
Install Data Tier into high availability environment	Select this option to install the data tier in a Microsoft cluster.
	The next two fields appear only when you select this option.
	For more information on using a Microsoft cluster with Unwired Platform, see *System Administration for Sybase Unwired Platform > Systems Design > Clustered Environments > Implementing an N+2-node Cluster for Optimal Redundancy*.
Enter a path to Microsoft cluster setup	Enter the location of the high availability Microsoft cluster, beginning with a drive letter.
	Note: This cannot be a UNC path. If the high availability data location is on a different server, map a path to that server as a network drive and use the mapped drive letter in the path you enter here.
Enter a name for database server	Enter the name to be used for the data tier server in the Microsoft cluster.
	Note: The data tier server is renamed to *<name_you_enter_here>*. The Afaria database server is renamed to AFDB_*<name_you_enter_here>*.

15. If you selected Unwired Server without Data tier on the component selection page, on the information for the data tier page, enter the information for your data tier installation.

Option	Description
SQL Anywhere 11.0.1 database	
Host Name	The name of the machine on which the database server is running. Enter this name with capitalization exactly as it is defined in the Windows network environment.
Port Number	Port number that the database server uses on the host machine.

Option	Description
Login	The account login for database administrator for the data tier.
	Warning! Do not change the "dba" default unless you have changed the database administrator account.
Password	The account password for the database administrator for the data tier.
	Warning! Enter the "sql" default password, unless you have changed the password for the database administrator account.
Consolidated database	
Database Name	The SQL Anywhere database name for the consolidated database.
	Warning! Do not change the default name from "default" unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.
Cluster database	
Database Name	The SQL Anywhere database name for the cluster database.
	Warning! Do not change the default name from "clusterdb" unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.
Monitoring database	
Database Name	The SQL Anywhere database name for the monitoring database.
	Warning! Do not change the default name from "monitordb" unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.

16. (Optional) If you selected "Configure Unwired Platform communication ports" on the additional installation options page, you can change port numbers as required, on the port numbers for Unwired Server page.

Option	Description
General	
Server Administration	Standard Internet Inter-ORB Protocol (IIOP) port used by Eclipse and Sybase Control Center to connect to Unwired Server for deployment and administration tasks. The default is 2000. To change the port number after installation, use Sybase Control Center (administration console).
Data Change Notification	HTTP port used for data change notification (DCN). The default is 8000.
Synchronization	
Messaging	The port used for messaging clients to communicate with Unwired Server's messaging server, to synchronizes data between the enterprise information system and messaging-based mobile devices. The default is 5001.
Replication	Port number on which Unwired Server synchronizes data between the enterprise information system and replication-based mobile devices. The default is 2480.

17. If you selected both Data Tier and Afaria Server on the Component Selection page, on the port numbers for device management page, enter the Afaria server port number (default is 4041).

18. If you selected Afaria Server on the component selection page, but did not select Data Tier on that page, enter server and port information on the port numbers for device management page.

Option	Description
Afaria Server	The Afaria server HTTP port number. The default is 4041.
Host Name	The host name of the machine on which the data tier is installed, where the Afaria database service is running.

Option	Description
Port Number	Port number the Afaria database service on the data tier host machine. The default is 4343.
Server Name	The name of the existing data tier server that the Afaria server is to use. The default is AFDB_<*datatier_hostname*>.
Login	The account name used to log in to the database. The default is dba.
Password	The password for the database login. The default is SQL.

19. On the summary information page, verify the installation features and click **Install**.

20. (Optional) Click **View Release Bulletin**.

21. Click **Finish**.

Next

- Perform postinstallation tasks for your installation. See *Chapter 6, Postinstallation Tasks* on page 117.

CHAPTER 4   **Installing the Deployment (Production) Edition**

Use the Sybase Unwired Platform installation media to install the Deployment Edition.

You can install using one of these procedures:

*   *Performing a Cluster Installation of Deployment Edition* on page 61: use this procedure to install a cluster configuration consisting of a data tier and multiple server nodes.
*   *Performing a Custom Installation of Deployment Edition* on page 84: use this procedure to install the Deployment Edition with a subset of all features.

Performing a Cluster Installation of Deployment Edition

Install the Deployment Edition in a cluster configuration consisting of a data tier and multiple server nodes.

Note: The deployment edition of Unwired Platform can only be installed on 64-bit Windows systems. This is necessary to provide optimal performance for a production system. When you run the deployment installer on a 32-bit system, only Afaria is available for installation.

*   *Installing the Data Tier on its Own Host for a Deployment Installation* on page 61
*   *Installing the First Node for a Deployment Cluster Installation* on page 68
*   *Installing Additional Nodes in an Existing Cluster for a Deployment Installation* on page 75
*   *Installing Afaria on a 32-bit System for a Deployment Cluster* on page 82

Installing the Data Tier on its Own Host for a Deployment Installation

Install the data tier for Deployment Edition on a different 64-bit host machine from the rest of Sybase Unwired Platform. Do this before installing Unwired Platform components on other cluster nodes.

Prerequisites

Going through the task flow in *Deployment (Production) Edition Task Flows* on page 4, you should have performed these tasks:

*   Download a license file. See *Obtaining a License* on page 19.
*   If you are installing with a served license in an environment where there may not be a port free for the license server to open dynamically on startup, edit your license file to specify a port number. See *Setting a Fixed Port Number for SySAM License Server* on page 25.

- (Optional) Create an installation image on your network. See *Creating an Installation Image on the Network* on page 143.
- Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
- Verify that you are logged in with administrative rights.
- Install Adobe Flash Player 9.0.124+ or FP10.x (recommended).
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Unless you are installing the Deployment Edition of Unwired Platform to coexist with version 1.2, uninstall any existing versions of Unwired Platform. See *Chapter 8, Uninstalling Sybase Unwired Platform* on page 127.
- If you are installing the deployment edition of Sybase Unwired Platform version 1.5.2 to coexist on a system with the deployment edition of version 1.2, see the limitations listed in *Installing the Deployment Edition to Coexist with Version 1.2* on page 95.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.
- Print the *Installation Worksheet* on page 151 to note pertinent installation details. Having this information available will expedite the completion of installations on subsequent cluster nodes.

Note: The deployment edition of Unwired Platform can only be installed on 64-bit Windows systems. This is necessary to provide optimal performance for a production system. When you run the deployment installer on a 32-bit system, only Afaria is available for installation.

Note: If you run the Deployment Edition installer again on a machine where you have already installed Unwired Platform version 1.5.2, the installer detects the existing installation and takes you to the component selection page as soon as you have accepted the end user licensing agreement. Resume with step 12 in *Performing a Custom Installation of Deployment Edition* on page 84.

Task

1. Start the Sybase Unwired Platform installer using one of these methods:

   - Insert the Sybase Unwired Platform installation media.
   - Install from a Web download. Extract the four archives to the same temporary directory on a local disk, not a shared drive.
   - Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

   a) If installing from installation media, select **Start > Run**.
   b) Browse to the location of the setup.exe file on the installation media or in the temporary directory, and click **OK**.

2. On the installer welcome page, click **Next**.
3. On the license type page, select your license type and click **Next**.

Options	Description
Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (local) license	A standalone license managed locally by your workstation. Be sure you know the location of the license file.
Served (remote) license	A standalone license managed by a license server. Be sure you know your license manager host name and TCP port.

4. On the end-user license agreement page, accept the terms of the license agreement.
   a) Select the appropriate geographic location and read the license agreement.
   b) Click **I Do Agree to the Terms of the Sybase License, for the Install Location Specified**, then click **Next**.
5. On the license details page, select or enter the information for your product license.
   See *Locating Information in a License File* on page 23.

Field	Valid values
License product edition	• **ED**: Enterprise Developer Edition • **EE**: Enterprise Deployment Edition (available only with Deployment Edition) • **PD**: Personal Developer Edition
License type	If you selected **ED** for license product edition, license type must be **DT**: Development and Test License. If you selected **EE** for license product edition, license type can be one of: • **CP**: CPU License • **AC**: OEM version of CPU License • **DT**: Development and Test License If you selected **PD** for license product edition, license type must be **SS**: Standalone Seat License.
Number of licenses	If you selected **EE** for license product edition, enter the number of client licenses here. If you did not select **EE** for license product edition, leave this field blank.

Note: If you enter a combination of values on this page that does not match your license file, the error is not detected until the installer attempts to check out your license on the next page.

6. Enter your license information.

   If you selected "Unserved (local) license" as the license type, on the unserved license file page enter the full path to the license file. Click **Browse** to browse to the file location.

   If you selected "Served (remote) license" as the license type, on the SySAM license manager server page enter the **Host Name of License Server** and, optionally, change the **TCP Port of License Server** entry.

   If you see a `Failed to check out license` error, and you think you may have entered license settings that do not match your license, click **OK**, then click **Back** to reenter the license settings.

7. On the installation directory page, accept the default installation directory or choose a different one.

   - If the directory does not exist, click **OK** to create it.
   - For best results, use English or Western European characters (cp1252/ISO-8859-1) for the installation directory path and directory names.
   - You can use the underscore or hyphen character, but do not use symbols or spaces in the installation directory name.

   Note: The directory path where Sybase Control Center is installed varies. If the SYBASE environment variable is defined and valid, Sybase Control Center installs in the directory path specified by the variable. Otherwise, Sybase Control Center installs in a sibling directory to the installation directory specified here. For example, if the installation directory is `C:\Sybase\UnwiredPlatform`, Sybase Control Center installs into `C:\Sybase\SCC-3_0`.

8. On the installation type page, select **Cluster** and click **Next**.

9. On the cluster setup selection page, select **Install the data tier for your Unwired Platform cluster** and click **Next**.

10. (Optional) Select additional installation options. The available options on the additional installation options page depend on the selections you made on the component selection page; you may not see all of the options listed below. Choose:

    - **Configure data tier** to change default port numbers for the data tier or to install data tier into a high availability environment. This option appears only when you install the data tier without Unwired Server.
    - **Use Unwired Platform with an existing JDK Installation** to indicate the fully qualified path to an existing JDK installation directory. Sybase Unwired Platform requires JDK 1.6.0_16.

> **Note:** On 64-bit systems, specify the fully qualified path to an existing 32-bit JDK installation.

11. On the cluster configuration information page, enter the information necessary to access the data tier in a cluster.

Option	Description
Cluster Configuration Password	Enter the password used by the cluster administrator to configure the cluster.
Confirm Cluster Configuration Password	Reenter the cluster configuration password.
UNC path to shared data folder **Note:** This field appears only when you are installing Unwired Server without the data tier	Universal naming convention path to the shared data folder. This folder must already exist, with the data tier installed and be shared to your network with write privileges. If the data tier is installed in the default installation directory on its host, the local path would be `C:\Sybase\UnwiredPlatform\Data`. You would share this directory to your network. If you share this directory with the name `Data`, and the computer where you are installing is named `myserver`, the UNC path would be `\\myserver\Data`.

12. If you selected "Configure Data Tier" on the additional installation options page, on the port numbers for data tier page, enter port numbers and, optionally, specify a high availability environment:

Option	Description
Database Server	Port number for the data tier that manages transactions between the enterprise information system and mobile devices. The default is 5200.
Messaging Server	HTTP port for the messaging configuration Web service, used by Sybase Control Center to perform deployment and administration tasks related to the Unwired Server messaging server and devices, and workflow application. The default is 6262.
Afaria Database	The Afaria Server database port number. The default is 4343.

Option	Description
Install Data Tier into high availability environment	Select this option to install the data tier in a Microsoft cluster.
	The next two fields appear only when you select this option.
	For more information on using a Microsoft cluster with Unwired Platform, see *System Administration for Sybase Unwired Platform > Systems Design > Clustered Environments > Implementing an N+2-node Cluster for Optimal Redundancy*.
Enter a path to Microsoft cluster setup	Enter the location of the high availability Microsoft cluster, beginning with a drive letter.
	Note: This cannot be a UNC path. If the high availability data location is on a different server, map a path to that server as a network drive and use the mapped drive letter in the path you enter here.
Enter a name for database server	Enter the name to be used for the data tier server in the Microsoft cluster.
	Note: The data tier server is renamed to *<name_you_enter_here>*. The Afaria database server is renamed to AFDB_*<name_you_enter_here>*.

13. If you selected "Configure Data Tier" on the additional installation options page, on the port numbers for data tier page, enter port numbers and, optionally, specify a high availability environment:

Option	Description
Database Server	Port number for the data tier that manages transactions between the enterprise information system and mobile devices. The default is 5200.

Option	Description
Messaging Server	HTTP port for the messaging configuration Web service, used by Sybase Control Center to perform deployment and administration tasks related to the Unwired Server messaging server and devices, and workflow application. The default is 6262.
Afaria Database	The Afaria Server database port number. The default is 4343.
Install Data Tier into high availability environment	Select this option to install the data tier in a Microsoft cluster.
	The next two fields appear only when you select this option.
	For more information on using a Microsoft cluster with Unwired Platform, see *System Administration for Sybase Unwired Platform > Systems Design > Clustered Environments > Implementing an N+2-node Cluster for Optimal Redundancy*.
Enter a path to Microsoft cluster setup	Enter the location of the high availability Microsoft cluster, beginning with a drive letter.
	Note: This cannot be a UNC path. If the high availability data location is on a different server, map a path to that server as a network drive and use the mapped drive letter in the path you enter here.
Enter a name for database server	Enter the name to be used for the data tier server in the Microsoft cluster.
	Note: The data tier server is renamed to *<name_you_enter_here>*. The Afaria database server is renamed to AFDB_*<name_you_enter_here>*.

14. On the summary information page, verify the installation features and click **Install**.

15. (Optional) Click **View Release Bulletin**.

16. Click **Finish**.

Next

- Install the first node for the cluster. See *Installing the First Node for a Deployment Cluster Installation* on page 68.

Installing the First Node of a Cluster for a Deployment Installation

Install Sybase Unwired WorkSpace, JDK 1.6.0_16, Sybase Control Center, and Unwired Server on the first 64-bit server node in a cluster. Do this after installing the data tier on its own host.

Prerequisites

Going through the task flow in *Deployment (Production) Edition Task Flows* on page 4, you should have performed these tasks:

- Download a license file. See *Obtaining a License* on page 19.
- If you are installing with a served license in an environment where there may not be a port free for the license server to open dynamically on startup, edit your license file to specify a port number. See *Setting a Fixed Port Number for SySAM License Server* on page 25.
- (Optional) Create an installation image on your network. See *Creating an Installation Image on the Network* on page 143.
- Install the data tier on its own server. See *Installing the Data Tier on its Own Host for a Deployment Installation* on page 32.
- Verify that the databases on the data tier server are up and running.
- Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
- Verify that you are logged in with administrative rights.
- Install Adobe Flash Player 9.0.124+ or FP10.x (recommended).
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Unless you are installing the Deployment Edition of Unwired Platform to coexist with version 1.2, uninstall any existing versions of Unwired Platform. See *Chapter 8, Uninstalling Sybase Unwired Platform* on page 127.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.

Note: The host name where you install the first server node of the cluster becomes the cluster by default.

Note: The deployment edition of Unwired Platform can only be installed on 64-bit Windows systems. This is necessary to provide optimal performance for a production system. When you run the deployment installer on a 32-bit system, only Afaria is available for installation.

Note: If you run the Deployment Edition installer again on a machine where you have already installed Unwired Platform version 1.5.2, the installer detects the existing installation and

takes you to the component selection page as soon as you have accepted the end user licensing agreement. Resume with step 12 in *Performing a Custom Installation of Deployment Edition* on page 84.

Task

1. Start the Sybase Unwired Platform installer using one of these methods:
   - Insert the Sybase Unwired Platform installation media.
   - Install from a Web download. Extract the four archives to the same temporary directory on a local disk, not a shared drive.
   - Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

   a) If installing from installation media, select **Start > Run**.
   b) Browse to the location of the setup.exe file on the installation media or in the temporary directory, and click **OK**.
2. On the installer welcome page, click **Next**.
3. On the license type page, select your license type and click **Next**.

Options	Description
Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (local) license	A standalone license managed locally by your workstation. Be sure you know the location of the license file.
Served (remote) license	A standalone license managed by a license server. Be sure you know your license manager host name and TCP port.

4. On the end-user license agreement page, accept the terms of the license agreement.
   a) Select the appropriate geographic location and read the license agreement.
   b) Click **I Do Agree to the Terms of the Sybase License, for the Install Location Specified**, then click **Next**.
5. On the license details page, select or enter the information for your product license.
   See *Locating Information in a License File* on page 23.

Field	Valid values
License product edition	• **ED**: Enterprise Developer Edition • **EE**: Enterprise Deployment Edition (available only with Deployment Edition) • **PD**: Personal Developer Edition

Field	Valid values
License type	If you selected **ED** for license product edition, license type must be **DT**: Development and Test License.
	If you selected **EE** for license product edition, license type can be one of:
	• **CP**: CPU License
	• **AC**: OEM version of CPU License
	• **DT**: Development and Test License
	If you selected **PD** for license product edition, license type must be **SS**: Standalone Seat License.
Number of licenses	If you selected **EE** for license product edition, enter the number of client licenses here.
	If you did not select **EE** for license product edition, leave this field blank.

Note: If you enter a combination of values on this page that does not match your license file, the error is not detected until the installer attempts to check out your license on the next page.

6. Enter your license information.

   If you selected "Unserved (local) license" as the license type, on the unserved license file page enter the full path to the license file. Click **Browse** to browse to the file location.

   If you selected "Served (remote) license" as the license type, on the SySAM license manager server page enter the **Host Name of License Server** and, optionally, change the **TCP Port of License Server** entry.

   If you see a `Failed to check out license` error, and you think you may have entered license settings that do not match your license, click **OK**, then click **Back** to reenter the license settings.

7. On the installation directory page, accept the default installation directory or choose a different one.
   • If the directory does not exist, click **OK** to create it.
   • For best results, use English or Western European characters (cp1252/ISO-8859-1) for the installation directory path and directory names.
   • You can use the underscore or hyphen character, but do not use symbols or spaces in the installation directory name.

Note: The directory path where Sybase Control Center is installed varies. If the SYBASE environment variable is defined and valid, Sybase Control Center installs in the directory path specified by the variable. Otherwise, Sybase Control Center installs in a sibling directory to the installation directory specified here. For example, if the installation

directory is `C:\Sybase\UnwiredPlatform`, Sybase Control Center installs into `C:\Sybase\SCC-3_0`.

8. On the installation type page, select **Cluster** and click **Next**.

9. On the cluster setup selection page, select **Install the first server node and connect it to the data tier** and click **Next**.

10. A page that says, "One or more required components (prerequisites) are not installed on the system," indicates that the installer has detected missing third-party software.

    Click:
    - **Next** to have the installer install the required software.
    - **Back** to select components to install that do not require the third party software.
    - **Cancel** to cancel the current installation.

11. (Optional) Select additional installation options. The available options on the additional installation options page depend on the selections you made on the component selection page; you may not see all of the options listed below. Choose:

    - **Configure Unwired Platform communication ports** to change default port numbers.
    - **Set Unwired Platform services to start automatically** to start Unwired Platform services automatically when Windows starts. If Unwired Platform services are not set to start automatically, you must manually start these services from the Windows **Start** menu.

      Note: Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® DOE Connector and Sybase Mobile Sales for SAP® CRM. If Unwired Platform services do not start automatically, these product installations will encounter problems.

    - **Use Unwired Platform with an existing JDK Installation** to indicate the fully qualified path to an existing JDK installation directory. Sybase Unwired Platform requires JDK 1.6.0_16.

      Note: On 64-bit systems, specify the fully qualified path to an existing 32-bit JDK installation.

12. On the cluster configuration information page, enter the information necessary to access the data tier in a cluster.

Option	Description
Cluster Configuration Password	Enter the password used by the cluster administrator to configure the cluster.
Confirm Cluster Configuration Password	Reenter the cluster configuration password.

Option	Description
UNC path to shared data folder **Note:** This field appears only when you are installing Unwired Server without the data tier	Universal naming convention path to the shared data folder. This folder must already exist, with the data tier installed and be shared to your network with write privileges. If the data tier is installed in the default installation directory on its host, the local path would be `C:\Sybase\UnwiredPlatform\Data`. You would share this directory to your network. If you share this directory with the name `Data`, and the computer where you are installing is named `myserver`, the UNC path would be `\\myserver\Data`.

13. On the Windows account page, enter the information for the Windows account under which Sybase Unwired Platform will run.

Note: The user should be a domain user. If you are installing in a cluster, enter the exact same information on this page as you install on each node. A local account can also be used in installing in a cluster, as long as that account has read/write access to the shared data folder on the data tier machine.

Option	Description
Windows Account Name	Use the form, *<Windows_domain>\<login_id>* or *<login_id>*, for example, `sybase\jdoe`, or `jdoe`. Domain name is optional. The account must exist on the local machine and have administrator privileges.
Windows Account Password	Enter the password for the account.
Confirm Windows Account Password	Reenter the password for the account.

14. On the information for the data tier page, enter the information for your data tier installation.

Option	Description
SQL Anywhere 11.0.1 database	

Option	Description
Host Name	The name of the machine on which the database server is running. Enter this name with capitalization exactly as it is defined in the Windows network environment.
Port Number	Port number that the database server uses on the host machine.
Login	The account login for database administrator for the data tier.
	Warning! Do not change the "dba" default unless you have changed the database administrator account.
Password	The account password for the database administrator for the data tier.
	Warning! Enter the "sql" default password, unless you have changed the password for the database administrator account.
Consolidated database	
Database Name	The SQL Anywhere database name for the consolidated database.
	Warning! Do not change the default name from "default" unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.
Cluster database	
Database Name	The SQL Anywhere database name for the cluster database.
	Warning! Do not change the default name from "clusterdb" unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.
Monitoring database	

Option	Description
Database Name	The SQL Anywhere database name for the monitoring database.
	Warning! Do not change the default name from "monitordb" unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.

15. (Optional) If you selected "Configure Unwired Platform communication ports" on the additional installation options page, you can change port numbers as required, on the port numbers for Unwired Server page.

Option	Description
General	
Server Administration	Standard Internet Inter-ORB Protocol (IIOP) port used by Eclipse and Sybase Control Center to connect to Unwired Server for deployment and administration tasks. The default is 2000.
	To change the port number after installation, use Sybase Control Center (administration console).
Data Change Notification	HTTP port used for data change notification (DCN). The default is 8000.
Synchronization	
Messaging	The port used for messaging clients to communicate with Unwired Server's messaging server, to synchronizes data between the enterprise information system and messaging-based mobile devices. The default is 5001.
Replication	Port number on which Unwired Server synchronizes data between the enterprise information system and replication-based mobile devices. The default is 2480.

16. On the summary information page, verify the installation features and click **Install**.

17. (Optional) Click **View Release Bulletin**.

18. Click **Finish**.

Next

- Install an additional node in the cluster. See *Installing Additional Nodes in an Existing Cluster for a Deployment Installation* on page 75.

Installing Additional Nodes in an Existing Cluster for a Deployment Installation

Install Unwired Server on second and subsequent 64-bit server nodes of an existing Unwired Platform cluster. Do this after installing the data tier on its own host and Unwired Server on the first server node.

Prerequisites

Going through the task flow in *Deployment (Production) Edition Workflows* on page 4, you should have performed these tasks:

- Download a license file. See *Obtaining a License* on page 19.
- (Optional) Create an installation image on your network. See *Creating an Installation Image on the Network* on page 143.
- Install the data tier on its own server. See *Installing the Data Tier on its Own Host for a Deployment Installation* on page 32.
- Install Unwired Server on the first node in the cluster. See *Installing the First Node for a Deployment Cluster Installation* on page 68.
- Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
- Verify that you are logged in with administrative rights.
- Install Adobe Flash Player 9.0.124+ or FP10.x (recommended).
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Unless you are installing the Deployment Edition of Unwired Platform to coexist with version 1.2, uninstall any existing versions of Unwired Platform. See *Chapter 8, Uninstalling Sybase Unwired Platform* on page 127.
- If you are installing the deployment edition of Sybase Unwired Platform version 1.5.2 to coexist on a system with the deployment edition of version 1.2, see the limitations listed in *Installing the Deployment Edition to Coexist with Version 1.2* on page 95.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.

Note: The deployment edition of Unwired Platform can only be installed on 64-bit Windows systems. This is necessary to provide optimal performance for a production system. When you run the deployment installer on a 32-bit system, only Afaria is available for installation.

Note: If you run the Deployment Edition installer again on a machine where you have already installed Unwired Platform version 1.5.2, the installer detects the existing installation and

takes you to the component selection page as soon as you have accepted the end user licensing agreement. Resume with step 12 in *Performing a Custom Installation of Deployment Edition* on page 84.

Task

1. Start the Sybase Unwired Platform installer using one of these methods:

   - Insert the Sybase Unwired Platform installation media.
   - Install from a Web download. Extract the four archives to the same temporary directory on a local disk, not a shared drive.
   - Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

   a) If installing from installation media, select **Start > Run**.
   b) Browse to the location of the setup.exe file on the installation media or in the temporary directory, and click **OK**.

2. On the installer welcome page, click **Next**.
3. On the license type page, select your license type and click **Next**.

Options	Description
Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (local) license	A standalone license managed locally by your workstation. Be sure you know the location of the license file.
Served (remote) license	A standalone license managed by a license server. Be sure you know your license manager host name and TCP port.

4. On the end-user license agreement page, accept the terms of the license agreement.
   a) Select the appropriate geographic location and read the license agreement.
   b) Click **I Do Agree to the Terms of the Sybase License, for the Install Location Specified**, then click **Next**.
5. On the license details page, select or enter the information for your product license.
   See *Locating Information in a License File* on page 23.

Field	Valid values
License product edition	• **ED**: Enterprise Developer Edition • **EE**: Enterprise Deployment Edition (available only with Deployment Edition) • **PD**: Personal Developer Edition

Field	Valid values
License type	If you selected **ED** for license product edition, license type must be **DT**: Development and Test License.
	If you selected **EE** for license product edition, license type can be one of:
	• **CP**: CPU License
	• **AC**: OEM version of CPU License
	• **DT**: Development and Test License
	If you selected **PD** for license product edition, license type must be **SS**: Standalone Seat License.
Number of licenses	If you selected **EE** for license product edition, enter the number of client licenses here.
	If you did not select **EE** for license product edition, leave this field blank.

Note: If you enter a combination of values on this page that does not match your license file, the error is not detected until the installer attempts to check out your license on the next page.

6. Enter your license information.

   If you selected "Unserved (local) license" as the license type, on the unserved license file page enter the full path to the license file. Click **Browse** to browse to the file location.

   If you selected "Served (remote) license" as the license type, on the SySAM license manager server page enter the **Host Name of License Server** and, optionally, change the **TCP Port of License Server** entry.

   If you see a `Failed to check out license` error, and you think you may have entered license settings that do not match your license, click **OK**, then click **Back** to reenter the license settings.

7. On the installation directory page, accept the default installation directory or choose a different one.
   • If the directory does not exist, click **OK** to create it.
   • For best results, use English or Western European characters (cp1252/ISO-8859-1) for the installation directory path and directory names.
   • You can use the underscore or hyphen character, but do not use symbols or spaces in the installation directory name.

Note: The directory path where Sybase Control Center is installed varies. If the SYBASE environment variable is defined and valid, Sybase Control Center installs in the directory path specified by the variable. Otherwise, Sybase Control Center installs in a sibling directory to the installation directory specified here. For example, if the installation

directory is `C:\Sybase\UnwiredPlatform`, Sybase Control Center installs into `C:\Sybase\SCC-3_0`.

8. On the installation type page, select **Cluster** and click **Next**.

9. On the cluster setup selection page, select **Install an additional server node and connect it to the data tier** and click **Next**.

10. A page that says, "One or more required components (prerequisites) are not installed on the system," indicates that the installer has detected missing third-party software.

   Click:
   • **Next** to have the installer install the required software.
   • **Back** to select components to install that do not require the third party software.
   • **Cancel** to cancel the current installation.

11. (Optional) Select additional installation options. The available options on the additional installation options page depend on the selections you made on the component selection page; you may not see all of the options listed below. Choose:

   • **Configure Unwired Platform communication ports** to change default port numbers.
   • **Set Unwired Platform services to start automatically** to start Unwired Platform services automatically when Windows starts. If Unwired Platform services are not set to start automatically, you must manually start these services from the Windows **Start** menu.

   Note: Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® DOE Connector and Sybase Mobile Sales for SAP® CRM. If Unwired Platform services do not start automatically, these product installations will encounter problems.

   • **Use Unwired Platform with an existing JDK Installation** to indicate the fully qualified path to an existing JDK installation directory. Sybase Unwired Platform requires JDK 1.6.0_16.

   Note: On 64-bit systems, specify the fully qualified path to an existing 32-bit JDK installation.

12. On the cluster configuration information page, enter the information necessary to access the data tier in a cluster.

Option	Description
Cluster Configuration Password	Enter the password used by the cluster administrator to configure the cluster.
Confirm Cluster Configuration Password	Reenter the cluster configuration password.

Option	Description
UNC path to shared data folder **Note:** This field appears only when you are installing Unwired Server without the data tier	Universal naming convention path to the shared data folder. This folder must already exist, with the data tier installed and be shared to your network with write privileges. If the data tier is installed in the default installation directory on its host, the local path would be `C:\Sybase\UnwiredPlatform\Data`. You would share this directory to your network. If you share this directory with the name `Data`, and the computer where you are installing is named `myserver`, the UNC path would be `\\myserver\Data`.

13. On the Windows account page, enter the information for the Windows account under which Sybase Unwired Platform will run.

Note: The user should be a domain user. If you are installing in a cluster, enter the exact same information on this page as you install on each node. A local account can also be used in installing in a cluster, as long as that account has read/write access to the shared data folder on the data tier machine.

Option	Description
Windows Account Name	Use the form, *<Windows_domain>\<login_id>* or *<login_id>*, for example, `sybase\jdoe`, or `jdoe`. Domain name is optional. The account must exist on the local machine and have administrator privileges.
Windows Account Password	Enter the password for the account.
Confirm Windows Account Password	Reenter the password for the account.

14. On the information for the data tier page, enter the same information you indicated when installing the first node.

Option	Description
SQL Anywhere 11.0.1 database	

Option	Description
Host Name	The name of the machine on which the database server is running. Enter this name with capitalization exactly as it is defined in the Windows network environment.
Port Number	Port number that the database server uses on the host machine.
Login	The account login for database administrator for the data tier. **Warning!** Do not change the "dba" default unless you have changed the database administrator account.
Password	The account password for the database administrator for the data tier. **Warning!** Enter the "sql" default password, unless you have changed the password for the database administrator account.
Consolidated database	
Database Name	The SQL Anywhere database name for the consolidated database. **Warning!** Do not change the default name, unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.
Cluster database	
Database Name	The SQL Anywhere database name for the cluster database. **Warning!** Do not change the default name, unless you have changed the database name after you installed the data tier, or you are using a SQL Anywhere installation where this database has a different name.

15. (Optional) If you selected "Configure Unwired Platform communication ports" on the additional installation options page, you can change port numbers as required, on the port numbers for Unwired Server page.

Option	Description
General	
Server Administration	Standard Internet Inter-ORB Protocol (IIOP) port used by Eclipse and Sybase Control Center to connect to Unwired Server for deployment and administration tasks. The default is 2000. To change the port number after installation, use Sybase Control Center (administration console).
Data Change Notification	HTTP port used for data change notification (DCN). The default is 8000.
Synchronization	
Messaging	The port used for messaging clients to communicate with Unwired Server's messaging server, to synchronizes data between the enterprise information system and messaging-based mobile devices. The default is 5001.
Replication	Port number on which Unwired Server synchronizes data between the enterprise information system and replication-based mobile devices. The default is 2480.

16. On the summary information page, verify the installation features and click **Install**.
17. (Optional) Click **View Release Bulletin**.
18. Click **Finish**.

Next

- Repeat the procedure to install another additional node in the cluster.
- Install Afaria on a 32-bit system. See *Installing Afaria on a 32-bit System for a Deployment Cluster* on page 82.

Installing Afaria on a 32-bit System for a Deployment Cluster

Install Afaria on a 32-bit system after you have installed the rest of your cluster components on 64-bit systems.

Prerequisites

Going through the task flow in *Deployment (Production) Edition Task Flows* on page 4, you should have performed these tasks:

- Download a license file. See *Obtaining a License* on page 19.
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Verify that you are logged in with administrative rights.
- Install Adobe Flash Player 9.0.124+ or FP10.x (recommended).
- Unless you are installing the Deployment Edition of Unwired Platform to coexist with version 1.2, uninstall any existing versions of Unwired Platform. See *Chapter 8, Uninstalling Sybase Unwired Platform* on page 127.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.

Task

1. Start the Sybase Unwired Platform installer using one of these methods:

   - Insert the Sybase Unwired Platform installation media.
   - Install from a Web download. Extract the four archives to the same temporary directory on a local disk, not a shared drive.
   - Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

   a) If installing from installation media, select **Start > Run**.
   b) Browse to the location of the setup.exe file on the installation media or in the temporary directory, and click **OK**.
2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, accept the terms of the license agreement.
   a) Select the appropriate geographic location and read the license agreement.
   b) Click **I Do Agree to the Terms of the Sybase License, for the Install Location Specified**, then click **Next**.
4. On the installation directory page, accept the default installation directory or choose a different one.

- If this directory does not exist, click **OK** to create it.
- For best results, use English or Western European characters (cp1252/ISO-8859-1) for the installation directory path and directory names.
- You can use the underscore or hyphen character, but do not use symbols or spaces in the installation directory name.

5. On the component selection page, click **Select All**. then click **Next**.

6. A page that says, "One or more required components (prerequisites) are not installed on the system," indicates that the installer has detected missing third-party software.

   Click:
   - **Next** to have the installer install the required software.
   - **Back** to select components to install that do not require the third party software.
   - **Cancel** to cancel the current installation.

7. (Optional) Select additional installation options. Choose:

   - **Use Unwired Platform with an existing JDK Installation** to indicate the fully qualified path to an existing JDK installation directory. Sybase Unwired Platform requires JDK 1.6.0_16.

     Note: On 64-bit systems, specify the fully qualified path to an existing 32-bit JDK installation.

8. On the Windows account page, enter the information for the Windows account under which Sybase Unwired Platform will run.

   Note: The user should be a domain user. If you are installing in a cluster, enter the exact same information on this page as you install on each node. A local account can also be used in installing in a cluster, as long as that account has read/write access to the shared data folder on the data tier machine.

Option	Description
Windows Account Name	Use the form, *<Windows_domain>\<login_id>* or *<login_id>*, for example, `sybase\jdoe`, or `jdoe`. Domain name is optional. The account must exist on the local machine and have administrator privileges.
Windows Account Password	Enter the password for the account.
Confirm Windows Account Password	Reenter the password for the account.

9. If you selected Afaria Server on the component selection page, but did not select Data Tier on that page, enter server and port information on the port numbers for device management page.

Option	Description
Afaria Server	The Afaria server HTTP port number. The default is 4041.
Host Name	The host name of the machine on which the data tier is installed, where the Afaria database service is running.
Port Number	Port number the Afaria database service on the data tier host machine. The default is 4343.
Server Name	The name of the existing data tier server that the Afaria server is to use. The default is AFDB_*<datatier_hostname>*.
Login	The account name used to log in to the database. The default is dba.
Password	The password for the database login. The default is SQL.

10. On the summary information page, verify the installation features and click **Install**.

11. (Optional) Click **View Release Bulletin**.

12. Click **Finish**.

Next

- Perform postinstallation tasks for all nodes in your cluster. See *Chapter 6, Postinstallation Tasks* on page 117.

Performing a Custom Installation of Deployment Edition

Perform a custom installation of Deployment Edition on a single 64-bit server, or to add components to an existing 64-bit installation.

Prerequisites

Going through the task flow in *Deployment (Production) Edition Task Flows* on page 4, you should have performed these tasks:

- Download a license file. See *Obtaining a License* on page 19.
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Verify that you are logged in with administrative rights.

- Install Adobe Flash Player 9.0.124+ or FP10.x (recommended).
- Unless you are installing the Deployment Edition of Unwired Platform to coexist with version 1.2, uninstall any existing versions of Unwired Platform. See *Chapter 8, Uninstalling Sybase Unwired Platform* on page 127.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.

Note: To install Afaria for the deployment edition, run the installer on a 32-bit system.

Note: If the installer detects an existing installation of Unwired Platform, it takes you directly to the component selection screen after you complete the end user license agreement. There you can select additional components to install. To uninstall any components that are already installed, must completely uninstall Unwired Platform.

Task

1. Start the Sybase Unwired Platform installer using one of these methods:

   - Insert the Sybase Unwired Platform installation media.
   - Install from a Web download. Extract the four archives to the same temporary directory on a local disk, not a shared drive.
   - Install from an image on the network. You must access the installation image from a mapped drive, not a UNC path.

   a) If installing from installation media, select **Start > Run**.
   b) Browse to the location of the setup.exe file on the installation media or in the temporary directory, and click **OK**.
2. On the installer welcome page, click **Next**.
3. On the license type page, select your license type and click **Next**.

Options	Description
Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (local) license	A standalone license managed locally by your workstation. Be sure you know the location of the license file.
Served (remote) license	A standalone license managed by a license server. Be sure you know your license manager host name and TCP port.

4. On the end-user license agreement page, accept the terms of the license agreement.
   a) Select the appropriate geographic location and read the license agreement.
   b) Click **I Do Agree to the Terms of the Sybase License, for the Install Location Specified**, then click **Next**.

5. On the license details page, select or enter the information for your product license. See *Locating Information in a License File* on page 23.

Field	Valid values
License product edition	• **ED**: Enterprise Developer Edition • **EE**: Enterprise Deployment Edition (available only with Deployment Edition) • **PD**: Personal Developer Edition
License type	If you selected **ED** for license product edition, license type must be **DT**: Development and Test License. If you selected **EE** for license product edition, license type can be one of: • **CP**: CPU License • **AC**: OEM version of CPU License • **DT**: Development and Test License If you selected **PD** for license product edition, license type must be **SS**: Standalone Seat License.
Number of licenses	If you selected **EE** for license product edition, enter the number of client licenses here. If you did not select **EE** for license product edition, leave this field blank.

Note: If you enter a combination of values on this page that does not match your license file, the error is not detected until the installer attempts to check out your license on the next page.

6. Enter your license information.

   If you selected "Unserved (local) license" as the license type, on the unserved license file page enter the full path to the license file. Click **Browse** to browse to the file location.

   If you selected "Served (remote) license" as the license type, on the SySAM license manager server page enter the **Host Name of License Server** and, optionally, change the **TCP Port of License Server** entry.

   If you see a `Failed to check out license` error, and you think you may have entered license settings that do not match your license, click **OK**, then click **Back** to reenter the license settings.

7. On the installation directory page, accept the default installation directory or choose a different one.
   • If the directory does not exist, click **OK** to create it.

- For best results, use English or Western European characters (cp1252/ISO-8859-1) for the installation directory path and directory names.
- You can use the underscore or hyphen character, but do not use symbols or spaces in the installation directory name.

Note: The directory path where Sybase Control Center is installed varies. If the SYBASE environment variable is defined and valid, Sybase Control Center installs in the directory path specified by the variable. Otherwise, Sybase Control Center installs in a sibling directory to the installation directory specified here. For example, if the installation directory is `C:\Sybase\UnwiredPlatform`, Sybase Control Center installs into `C:\Sybase\SCC-3_0`.

8. On the installation type page, select **Custom** and click **Next**.

9. On the component selection page, select the specific Sybase Unwired Platform components to install, then click **Next**.

10. A page that says, "One or more required components (prerequisites) are not installed on the system," indicates that the installer has detected missing third-party software.

Click:
- **Next** to have the installer install the required software.
- **Back** to select components to install that do not require the third party software.
- **Cancel** to cancel the current installation.

11. (Optional) Select additional installation options. The available options on the additional installation options page depend on the selections you made on the component selection page; you may not see all of the options listed below. Choose:

- **Configure Unwired Platform communication ports** to change default port numbers.
- **Set Unwired Platform services to start automatically** to start Unwired Platform services automatically when Windows starts. If Unwired Platform services are not set to start automatically, you must manually start these services from the Windows **Start** menu.

Note: Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® DOE Connector and Sybase Mobile Sales for SAP® CRM. If Unwired Platform services do not start automatically, these product installations will encounter problems.

- **Configure data tier** to change default port numbers for the data tier or to install data tier into a high availability environment. This option appears only when you install the data tier without Unwired Server.
- **Use Unwired Platform with an existing JDK Installation** to indicate the fully qualified path to an existing JDK installation directory. Sybase Unwired Platform requires JDK 1.6.0_16.

Note: On 64-bit systems, specify the fully qualified path to an existing 32-bit JDK installation.

12. If you selected either Unwired Server or Data Tier, but not both, on the component selection page, on the cluster configuration information page enter the information necessary to access the data tier in a cluster.

Option	Description
Cluster Configuration Password	Enter the password used by the cluster administrator to configure the cluster.
Confirm Cluster Configuration Password	Reenter the cluster configuration password.
UNC path to shared data folder **Note:** This field appears only when you are installing Unwired Server without the data tier	Universal naming convention path to the shared data folder. This folder must already exist, with the data tier installed and be shared to your network with write privileges. If the data tier is installed in the default installation directory on its host, the local path would be `C:\Sybase\UnwiredPlatform\Data`. You would share this directory to your network. If you share this directory with the name `Data`, and the computer where you are installing is named `myserver`, the UNC path would be `\\myserver\Data`.

13. On the Windows account page, enter the information for the Windows account under which Sybase Unwired Platform will run.

Note: The user should be a domain user. If you are installing in a cluster, enter the exact same information on this page as you install on each node. A local account can also be used in installing in a cluster, as long as that account has read/write access to the shared data folder on the data tier machine.

Option	Description
Windows Account Name	Use the form, *<Windows_domain>\<login_id>* or *<login_id>*, for example, `sybase\jdoe`, or `jdoe`. Domain name is optional. The account must exist on the local machine and have administrator privileges.
Windows Account Password	Enter the password for the account.
Confirm Windows Account Password	Reenter the password for the account.

14. If you selected Data Tier without Unwired Server on the component selection page, and you selected Configure Data Tier on the additional install options page, on the port

numbers for data tier page enter port numbers and, optionally, specify a high availability environment:

Option	Description
Database Server	Port number for the data tier that manages transactions between the enterprise information system and mobile devices. The default is 5200.
Messaging Server	HTTP port for the messaging configuration Web service, used by Sybase Control Center to perform deployment and administration tasks related to the Unwired Server messaging server and devices, and workflow application. The default is 6262.
Afaria Database	The Afaria Server database port number. The default is 4343.
Install Data Tier into high availability environment	Select this option to install the data tier in a Microsoft cluster. The next two fields appear only when you select this option. For more information on using a Microsoft cluster with Unwired Platform, see *System Administration for Sybase Unwired Platform > Systems Design > Clustered Environments > Implementing an N+2-node Cluster for Optimal Redundancy.*
Enter a path to Microsoft cluster setup	Enter the location of the high availability Microsoft cluster, beginning with a drive letter. **Note:** This cannot be a UNC path. If the high availability data location is on a different server, map a path to that server as a network drive and use the mapped drive letter in the path you enter here.

Option	Description
Enter a name for database server	Enter the name to be used for the data tier server in the Microsoft cluster.
	Note: The data tier server is renamed to *<name_you_enter_here>*. The Afaria database server is renamed to AFDB_*<name_you_enter_here>*.

15. (Optional) If you selected "Configure Unwired Platform communication ports" on the additional installation options page, you can change port numbers as required, on the port numbers for Unwired Server page.

Option	Description
General	
Server Administration	Standard Internet Inter-ORB Protocol (IIOP) port used by Eclipse and Sybase Control Center to connect to Unwired Server for deployment and administration tasks. The default is 2000.
	To change the port number after installation, use Sybase Control Center (administration console).
Data Change Notification	HTTP port used for data change notification (DCN). The default is 8000.
Synchronization	
Messaging	The port used for messaging clients to communicate with Unwired Server's messaging server, to synchronizes data between the enterprise information system and messaging-based mobile devices. The default is 5001.
Replication	Port number on which Unwired Server synchronizes data between the enterprise information system and replication-based mobile devices. The default is 2480.

16. On the summary information page, verify the installation features and click **Install**.

17. (Optional) Click **View Release Bulletin**.

18. Click **Finish**.

Next

- Install Afaria on a 32-bit system. See *Installing Afaria on a 32-bit System for a Deployment Cluster* on page 82.
- Perform postinstallation tasks for all nodes in your cluster. See *Chapter 6, Postinstallation Tasks* on page 117.

CHAPTER 5 **Upgrading and Migrating**

Upgrade from an existing installation of Sybase Unwired Platform and migrate your data and projects.

Prerequisites

Going through the task flow in *Upgrade Installation Task Flow* on page 5, you should have performed these tasks:

- Download a license file. See *Obtaining a License* on page 19.
- Verify the installation prerequisites. See *System Requirements for Unwired Platform* on page 9.
- Verify that you are logged in with administrative rights.
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running on the server where you are now installing. This includes any database servers, OpenDS server, and Sybase Control Center.
- Unless you are installing the Deployment Edition of Unwired Platform to coexist with version 1.2, uninstall any existing versions of Unwired Platform. See *Chapter 8, Uninstalling Sybase Unwired Platform* on page 127.
- If you are installing the deployment edition of Sybase Unwired Platform version 1.5.2 to coexist on a system with the deployment edition of version 1.2, see the limitations listed in *Installing the Deployment Edition to Coexist with Version 1.2* on page 95.
- Due to a NetBIOS limitation, make sure the host name is fewer than 15 characters. See the Microsoft Help and Support article *Naming Conventions in Active Directory (909264)*.
- Print the *Installation Worksheet* on page 151 to note pertinent installation details. Having this information available will expedite the completion of installations on subsequent cluster nodes.

Task

1. Review the information in *Migration Guidelines and Limitations* on page 95 and *API Differences in this Version of Unwired Platform* on page 108.
2. Export projects and applications from the earlier version 1.2 installation.
   See *Exporting Eclipse Projects and Applications* on page 100.
3. (Optional) If you are not installing Afaria from the Unwired Platform installation media, prepare your existing Afaria installation:

   If you installed Afaria 6.0 as part of Sybase Unwired Platform version 1.2, or if you are an existing Afaria customer who is installing Sybase Unwired Platform for the first time, save all important Afaria data.

See *Installing Afaria > Preparing to Upgrade Afaria* for data migration considerations. To locate the Afaria documentation, see *Afaria Documentation* on page 101.

4. Install Sybase Unwired Platform version 1.5.2.

If you are installing Unwired Platform version 1.5.2 to coexist with an existing installation of version 1.2, see the limitations listed in *Installing the Deployment Edition to Coexist with Version 1.2* on page 95.

Follow the appropriate installation procedure for your edition and configuration. In a cluster environment, be sure to install the data tier first, then the first server node, then additional server nodes.

- *Installing Developer Edition on a Single Server* on page 27
- *Installing the Data Tier on its Own Host for a Developer Installation* on page 32
- *Installing the First Node for a Developer Cluster Installation* on page 37
- *Installing Additional Nodes in an Existing Cluster for a Developer Installation* on page 44
- *Installing the Data Tier on its Own Host for a Deployment Installation* on page 61
- *Installing the First Node for a Deployment Cluster Installation* on page 68
- *Installing Additional Nodes in an Existing Cluster for a Deployment Installation* on page 75

Perform a custom installation of your edition to install a particular combination of features, or to add features:

- *Performing a Custom Installation of Developer Edition* on page 51
- *Performing a Custom Installation of Deployment Edition* on page 84

5. (Optional) If you are upgrading a production system, migrate the runtime data.

See *Migrating Production Unwired Server Runtime Data* on page 106

In a cluster environment, migrate the runtime data as soon as you have installed the data tier for the cluster in the new installation.

6. Import projects and applications that you exported from the version 1.2 installation.

See *Importing Eclipse Projects and Applications* on page 102.

In a cluster environment, you only need to do this on the primary server node.

7. (Optional) If you saved your Afaria data, import that data now.

See *Installing Afaria > Preparing to Upgrade Afaria* for data migration considerations. To locate the Afaria documentation, see *Afaria Documentation* on page 101.

8. Perform additional migration tasks. See:

- *Migrating Device Applications* on page 103
- *Migrating Mobile Application Projects* on page 105

9. Perform postinstallation tasks for your installation.

See *Chapter 6, Postinstallation Tasks* on page 117.

Installing the Deployment Edition to Coexist with Version 1.2

Understand the limitations involved in installing the deployment edition of Unwired Platform on the same hardware as the deployment edition of version 1.2.

You can install the deployment edition of Unwired Platform on the same hardware as the deployment edition of version 1.2 and both can operate concurrently, with these limitations:

- Cluster names must be different. The installer prompts for a cluster name if the version 1.2 cluster name is the same as the host name.
- Port numbers must be different. The installer handles this automatically.
- Afaria for version 1.5.2 cannot be installed on the same host where Afaria for version 1.2 is installed.
- The Sybase Unified Agent services must have different names. The installer handles this automatically by naming the 1.5.2 service "Sybase Unified Agent 3.0."
- The Start menu option and desktop shortcut for Sybase Control Center must have different names. The installer handles this by changing the name for the 1.2 installation from "Sybase Control Center" to "Sybase Control Center (old)."
- File MBOs from version 1.2 are not supported in version 1.5.2. See *Migrating Eclipse Projects and Applications* on page 100.
- Upgrade Relay Server from the 1.2 environment to the version used in version 1.5.2.
- Data change notifications (DCNs) must have separate versions for each Unwired Platform version.

Migration Guidelines and Limitations

Follow these guidelines to resolve issues with migrated Unwired WorkSpace projects, mobile business objects (MBOs), and mobile applications.

Resource	Migration behavior
General	- Default values and Fill from attributes are updated by name matching. If you change names, you may need to modify these values after migration. - If complex arguments do not flatten properly and convert to structure types for a given MBO, re-create the MBO.

Resource	Migration behavior
Projects	Remove references to missing JAR files from imported projects after generating client code. Missing JAR file references are a result of differences between JAR file references in earlier versions of Unwired WorkSpace and the current version, and generate error messages when you generate client code. 1. From WorkSpace Navigator, right-click the project and select **Generate code**. Follow the wizard instructions to generate client code. 2. Right-click the project and select **Properties**. 3. Select **Java build path**, then the **Libraries** tab. 4. Remove all invalid JAR references and click **OK** to exit.
Connection profiles	• Data sources must be available to properly refresh and import MBO and operation results into Unwired WorkSpace. That is, the connection profiles to be migrated must exist and be available to connect to; the enterprise information system (EIS) must also be available. Sybase recommends that you connect the connection profiles as soon as you migrate them, to avoid problems that could arise when Unwired WorkSpace refreshes metadata from the EIS, • Imported connection profiles that reference the "Sybase ASE v15.x Default" driver are invalid in the current version of Unwired WorkSpace, and have been replaced with "Sybase JDBC Driver for Sybase ASE 15.x Default." Update these connection profiles to access the related data source; otherwise, you see `Driver files not specified in driver definition` error messages. To change the driver reference: 1. Right-click the imported connection profile and select **Properties**. 2. Select **Sybase ASE Connection Properties**. 3. From the drivers list, select **Sybase JDBC Driver for Sybase ASE 15.x Default**. 4. Change other properties if needed and click **Test connection** to verify access to the data source.

Resource	Migration behavior
Web service MBOs	• Complex arguments are flattened in version 1.2 and are converted to complex arguments after migration. The corresponding default values are also converted. • Earlier versions of Unwired WorkSpace supported the setting of one read/operation for each XSLT. The current version of Unwired WorkSpace supports multiple XSLTs, so the migrated XSLT is the first XSLT after migration. • Qualified names (QNames) are supported in the current version of Unwired WorkSpace. During migration, the Web service definition is refreshed and uses the new definition. • You cannot migrate HTTP and SOAP1.2 bindings.
SAP MBOs	• Complex arguments are flattened and converted to structure types. • Imported and flattened SAP table default values are converted to structure default values. • The current version of Unwired WorkSpace does not support mapping of SAP MBOs to multiple output tables, other than migrated MBOs, which are exempt from this rule. If a migrated MBO has been mapped to multiple output tables, it retains the mapping and the MBO is unchanged when imported. When working with these MBOs, the output table mapping option is unavailable.
File MBOs	Unwired WorkSpace does not support File MBOs, which are removed during migration.
Datatypes	• **Nullable –** if the imported attribute is a primary key, Nullable is false, that is, the primary key does not support null. All other attributes are set to true. • **Unknown –** all unknown datatypes are converted to strings. • **Datetime/Time –** time zone offset is not supported, and is removed from existing argument or attribute default values during migration. • **Complex –** arguments are flattened and converted to complex datatypes (structure MBO), and the default values, Filterby setting, personalization key, and so on, for attributes and parameters are preserved.
Cache groups	All imported MBOs are assigned to the Default cache group.

Resource	Migration behavior
Cache update policies	The current version of Unwired WorkSpace supports only **Apply results to the cache** and **Invalidate the cache** cache update policies: • Apply results to the cache – merges previously supported cache update policies **Apply operation results** and **Apply operation parameters**. Upon migration all operations that used these policies are set as **Apply results to the cache**. • Invalidate the cache – upon migration, operations previously defined as **Invalidate cache** use this policy and behave the same. Operations previously defined as **No invalidate cache**, migrate without a cache update policy setting. • Alternate read – is not supported in this release and migrated alternate read operations are ignored.
Synchronization groups	All imported MBOs are assigned to the Default synchronization group.
Personalization keys	Migrated personalization keys are automatically set with these values: • **Type** – string • **Nullable** – true • **Protected** – false • **Owner** – server

Resource	Migration behavior

Relationships	Migrated relationships are automatically set with these values:
	
	• Migrated one-to-one and one-to-many relationships are set as bidirectional relationships.
	• All mapped attributes and mapped parameter's propagate-to attributes are set as primary keys:
	    • For one-to-many bidirectional and unidirectional, and one-to-one bidirectional relationships, the primary key is set in the source MBO.
	    • For many-to-one bidirectional and unidirectional, and one-to-one unidirectional relationships, the primary key is set in the target MBO.
	• For relationships that link parameters, a new attribute with the same name and datatype as the parameter is generated for the parameter as a propagate-to attribute.
	
	Alternate keys and alternate foreign keys must have a one-to-one mapping:
	
	• All primary-key attributes must be mapped and all non-primary-key attributes must not be mapped.
	• For **One to many** relationship, both bidirectional and unidirectional, and one-to-one bidirectional relationship, the rule is applied on the source MBO.
	• For **Many to one** bidirectional and unidirectional, and **One to one** unidirectional relationships, the rule is applied on the target MBO.
	
	For example, if a **One to many** relationship contains a parent MBO with multiple primary key attributes, and the child target MBO has only one primary key attribute, the relationship cannot be imported successfully, since there cannot be a one-to-one mapping of the primary key attributes.
	
	If you have MBOs in a relationship that do not meet this requirement, you must recreate the project in the current version of Unwired WorkSpace and either remove extra primary key settings, or create additional relationships to support all primary key mappings. If not properly mapped, you see this error message in the Edit Relationship dialog:
	<pre>There is an error on primary key setting for the relationship mapping.
	To auto-reset it by re-map or just finish the editing dialog.</pre>

Old value argument	Migrated value argument naming prefixes of "sup_oldvalue_" have been replaced with "old".

Resource	Migration behavior
@OP parameter syntax	@OP parameter syntax is no longer supported. Migrated **@OP[id=1]** syntax is replaced with **:id**, and default values are ignored.
Result-set filters	Result-set filters that produce result sets for which SQL metadata contains null-valued column names must be redefined so that column names are not null.

Exporting Eclipse Profiles and Application Projects

Export Eclipse projects and applications from an earlier version of Sybase Unwired Platform while that installation is still fully functional.

Exporting Connection Profiles

Export connection profiles to an external file.

Exported connection profiles retain their connection information, allowing you to use them later (provided connection information remains the same) by importing them into other Unwired WorkSpace installations or when migrating to a more current version of Unwired WorkSpace.

1. From Enterprise Explorer, select the **Export** icon to launch the Export Connection Profiles wizard .
2. Select the connection profiles to include in the export, or click **Select all** to export all connection profiles.
3. Specify a file name, or **Browse** to the location of an existing file.

   A single file can contain multiple connection profiles. Files are encrypted by default.
4. Click **OK** to export the selected connection profiles to the specified file.

Exporting Mobile Application Projects

Export mobile application projects to an external directory.

Exported mobile application projects retain all of their reference information (data sources, roles, generated code, and so on), allowing you to use them later by importing them into other Unwired WorkSpace installations or when migrating to a more current version of Unwired WorkSpace.

1. From WorkSpace Navigator, right-click the mobile application project you are exporting and select **Export**.

   To select multiple projects, either:

- Left-click while pressing "Ctrl" to select individual projects, or
- Select "Shift" and left-click a project to include all projects between the two selections

2. From the Export wizard select **General > File System** and click **Next**.
3. Complete the following:
   a) Select all of the projects you want to export. By default, all project resources are also exported.
   b) Enter, or **Browse** to the target directory of the exported mobile application projects. A subdirectory with the name of the mobile application project is created for each of the selected projects.
   c) Click **Finish** to export the projects to the selected directory.

Upgrade Considerations for Afaria

Before you upgrade your Afaria components, back up your Afaria system and then follow the instructions in the Installing Afaria guide.

If you installed Afaria 6.0 as part of Sybase Unwired Platform 1.2, complete these tasks before upgrading to Sybase Unwired Platform 1.5.2:

- Save all important Afaria 6.0 data before upgrading. See *Installing Afaria > Preparing to Upgrade Afaria* for data migration considerations.
- Uninstall Sybase Unwired Platform 1.2.
- After installing Sybase Unwired Platform 1.5.2, import Afaria data.

Afaria Documentation

Use the Afaria documentation for information about using Afaria for device provisioning in an Unwired Platform environment.

The *System Administration Guide for Unwired Platform* gives some overview and context for administrators who want to use Afaria to provision devices that act as clients to Unwired Server. However, Afaria documentation describes in detail the features set of this product.

See these Afaria PDFs: *Installing Afaria*, *Afaria Reference | Platform*, and *Afaria Reference| Components*. These documents are available at *http://infocenter.sybase.com/*. Go to *Sybase Unwired Platform 1.5.2 > System Administration for Unwired Platform > Systems Design > Afaria Setup > Afaria Documentation*.

You can also review the onlinle help associated with Afaria Administrator. The documentation can be located on the Afaria server host: `<UnwiredPlatform_InstallDir>` `\Servers\AfariaWebUI\Help`.

Importing Eclipse Profiles and Application Projects

Import Eclipse projects and applications previously exported from a previous version of Sybase Unwired Platform into the new installation.

Importing Connection Profiles

Import connection profiles that were exported to an external file.

Prerequisites
You must export the connection profile.

Exported connection profiles retain their connection information, allowing you to use them later (provided connection information remains the same) by importing them into other Unwired WorkSpace installations or when migrating to a more current version of Unwired WorkSpace.

Task

1. From Enterprise Explorer, select the **Import** icon to launch the Import Connection

   Profiles wizard .

2. Specify a file name, or **Browse** to the location of exported file that contains the connection profile you are importing.

3. Optionally select **Overwrite existing connection profiles with same names** to overwrite a connection profile.

4. Click **OK** to import the selected connection profiles from the specified file.

   After import, the connection profiles are automatically refreshed.

Importing Mobile Application Projects

Import mobile application projects that have been exported to an external directory.

Prerequisites
You must export the mobile application project.

Exported mobile application projects retain all of their reference information, allowing you to use them later by importing them into other Unwired WorkSpace installations or when migrating to a more current version of Unwired WorkSpace.

Task

1. Select **File > Import**.
2. Select **General > Existing Projects into Workspace** and click **Next**.
3. Browse to and select the root directory that contains the mobile application projects and click **OK**.

   If there are multiple projects in a folder, select the parent folder and it will be scanned for mobile application projects.
4. In the **Projects** section of the Import wizard, select the projects you want to import.

   If the root folder contains projects that already exist in Unwired WorkSpace, they are unavailable.
5. Select **Copy projects into workspace** and click **Finish**.
6. If projects are in various root directories, repeat this process until all projects are imported.

Performing Migration Tasks

After importing the Eclipse profiles and application projects you exported from the previous Unwired Platform installation, perform these tasks to complete the migration.

Migrating Device Applications

Device applications created in Unwired Platform 1.0 or 1.2 are automatically updated for version 1.5.2.

Migration of device application files from Sybase Unwired Platform 1.0 and 1.2 to 1.5.2 is automatic when you:

1. Open the version 1.0 or 1.2 device application file.

   Note: Device applications created in Unwired Platform versions earlier than 1.2 are migrated to version 1.2 and then migrated to version 1.5.2.
2. Save the device application file.
3. Re-deploy the device application file.

When opening device application files from earlier Unwired Platform versions, the device application is updated or changed in the following ways:

Feature	Change
User templates	Version control will be added to user template screens. When a create or delete is performed on a template screen, if the template screen's version is not current, the template screen migration will be performed on each of the user template screens.
	Template screens that are not migrated are written to a `tem-plate_screen_name.xml.bad` file.
Styles	Device Application Designer 1.5.2 uses style sets instead of styles, so the style definition of versions earlier than 1.5.2 are no longer valid. When an earlier version of the device application file is opened, the XML structure of the style is silently modified.
Tab folder and tab panel	Tab folders can no longer have any sibling controls on the display. When a device application file is opened, if there are controls outside of tab folders, they are removed.
	Actions that reference removed controls are reported by problem check.
	Tab panel
	When device application files that have controls within a tab panel are opened, the controls are silently moved to the panel display.
Headers and footers	Headers and footers are no longer used and are silently removed.
Stock screen properties	Unused and unsupported stock screen properties are removed when the device application file is opened. Platform-specific properties are moved to the RIM section.
Stock screens	The About, Push Settings, Screen Saver, and Profile stock screens are now settings screens. When a device application file that contains these screens is opened, those stock screens are removed, as well as connections to and from those screens.
Radio button	Style definitions are now defined once for all Radio Buttons within a Radio Group. The style that was assigned to the Radio Button with the lowest ID is now used for the Radio Group.
	A **text_equals_value** attribute has been added to the radio button element definition. During migration, it is checked for each radio button and if the name and the value are identical, the **text_equals_value** attribute is set to true and the value attribute is removed.
	If the value is uniquely defined or defined as NULL, the **text_equals_value** attribute is set to false.
Menu items	When a Device Application Designer containing device context menus and Unwired Platform context menus is opened, the create, update, delete, details, and relationship context menu items are silently removed.

Feature	Change
Hyperlink	During migration the hyperlink attribute **activation** will be removed if it was set, because the logical type is unknown. Verify the device application file and use the content assist feature to define the logical types.

Migrating Mobile Application Projects

Migrate mobile application projects from prior versions of Unwired WorkSpace.

Prerequisites

You must first import the connection profiles and mobile application projects into the current version of Unwired WorkSpace.

Before you can work within mobile application projects created in prior releases of Unwired WorkSpace, you must migrate them to the current version of Unwired WorkSpace. Migration happens automatically when you first open an imported mobile application project in the current version of Unwired WorkSpace.

Task

1. From WorkSpace Navigator, right-click the project and select **Open in Diagram Editor**.

   If the project needs to migrate to the current release of Unwired WorkSpace, a Migrate dialog appears.

2. Click **Yes** in the Migrate dialog.

   Status displays in the Migrating Results dialog, identifying the MBO and other relevant information, including any errors. Open the Problems view to isolate and correct any errors. Click **OK** to open the project in the Mobile Application Diagram and fix any errors. If the migration does not complete successfully, you may need to run it again (by opening the project) after correcting any errors.

   Migration errors can occur if connection profile information changed or the profiles were not imported. To view the connection profiles referenced by the migrated project, expand the Data Source References subfolder within the mobile application project folder.

   Note: If you disable the displaying of the dialog box in **Mobile Development > Miscellaneous** preferences, migration occurs without prompting.

3. Redeploy the mobile application project.

   If previous versions of the mobile application project are deployed to Unwired Server, redeploy the project and overwrite the existing project, making sure you map logical to physical roles and configure server connection mappings, since deployment profile settings are not retained after migration.

4. Generate code for device applications.

   Replace any previously generated Object API code in the mobile application project.

For guidance in resolving issues that remain after migrating mobile application projects, see *Migration Guidelines and Limitations* on page 95.

If there is a version 1.2 Unwired WorkSpace project open in the Mobile Application Diagram and you exit Unwired WorkSpace, the migration confirmation dialog displays the next time you open Unwired WorkSpace. For example:

1. Import an Unwired Workspace version 1.2 project.
2. Right-click the project and select **Open in diagram editor**.
3. The migration dialog displays. Click **Yes** to confirm migration, do not select **Do not show this dialog again**. The project's connection profile is unavailable.
4. Leave the project open in the Mobile Application Diagram and exit Unwired WorkSpace.
5. Restart Unwired WorkSpace. The migration dialog displays when Unwired WorkSpace is in the process of opening. This is normal Eclipse behavior.

Migrating Production Unwired Server Runtime Data

Follow the steps in this topic to migrate your production runtime data to your new Unwired Platform installation.

Sybase recommends that you perform these migration tasks soon after installing the first Sybase Unwired Platform 1.5.2 production server, then configure CSI security for Unwired Server.

1. Install Sybase Unwired Platform Deployment Edition, either on the same server on a different machine from the earlier version.
2. From your existing Sybase Unwired Platform installation, back up runtime information using the primary Unwired Server directories:

   - Required files in your system (for example, connections, configuration files, security providers, etc). While you cannot copy all these files into the new folder structure, you can reference the existing configuration values to help your configure the new version of Unwired Server. For a summary of the new directory structure used by this version of Unwired Platform, see *System Administration > System Reference > Directory Structure Reference*.
   - System data

3. Determine in the new install of Sybase Control Center, which new Unwired Server is acting as the new primary server:

   a) Stop the primary server.
   b) Copy any custom connections backed up from the existing primary Unwired Server to the new version of the primary Unwired Server. These files were originally in the `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer\Repository\Instance\com\sybase\djc\sql\DataSource` directory. They now go in the `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer\Repository` directory.

The files under the directory above will be named
`<domain_name>_<endpoint_name>.properties`. For example,
`sampledb.properties` in version 1.2 is named as
`default_sampledb.properties` in version 1.5.2. You would need to rename
the endpoint files as required. So, if in Device Application Designer you create a new
endpoint named "sampledb" under the default domain, the server is able to read the
connection properties.

Note: Do not overwrite files with the same name.

c) Restart Unwired Server.

d) Reconfigure Unwired Server by using the Sybase Control Center online
documentation to set values that are similar to those in your backups of configuration
files from the earlier version.

4. Install any third-party software you had used in the previous version of Unwired Platform
and on each server in the cluster.

For details, see *System Administration > Environment Setup > Installing Third-Party
Software*.

5. Validate the environment. If you experience port conflicts, you may need to adjust ports as
required in Sybase Control Center. Adjusting ports in Sybase Control Center writes values
correctly to the new files. For a list of ports used by Unwired Platform, see *System
Administration > System Reference > Port Number Reference*.

6. Recreate personalization keys and values, registered users, subscriptions, and
schedules.

Outside of the personalization keys, you can use the system data you have backed up as a
point of reference.

7. Once developers have either migrated or regenerated new MBO packages for this version
of Unwired Platform, deploy them to Unwired Server.

API Differences

Review the API differences introduced in this version of Unwired Platform to determine what you need to do differently in your application code.

Connection APIs

New behavior	Impact on code
Additional coding needed to create or access a connection profile instance inside a sync thread.	**Issue:** In version 1.2 (EBF4 and later), you could create or access a Connection (connection profile) instance inside a sync thread without additional coding. In version 1.5.2 you must lock the `MyDatabase` class before creating or accessing a connection profile inside a sync thread. **Action:** To create or access a connection profile from within a sync thread, use code similar to this to lock the `MyDatabase` class first: ```\nlock(typeof(MyDatabase))\n{\n Connection conn = new Connection();\n conn....\n conn.Save();\n ConnectionManager.Instance.DefaultConnection =\nconn;\n Customer.Synchronize();\n List<Customer> items = Customer.FindAll();\n}\n```
Simultaneously accessing multiple packages from multiple threads is not supported.	**Issue:** In version 1.2 (EBF4 and later) it is possible to access multiple packages from multiple threads at the same time. In version 1.5.2, this is not supported. **Action:** Do not attempt to simultaneously access multiple packages from multiple threads. You can access multiple MBOs from different publications within the same package.

New behavior	Impact on code
MobiLinkStreamType property in Connection class can have only one type.	**Issue:** In version 1.2 the `MobiLinkStreamType` property could have a type of either `MobiLinkStreamType` or `string`. In version 1.5.2 this property can only be type `string`. **Action:** Change the `MobiLinkStreamType` property to a type of `Sybase.Persistence.MobiLinkStreamType` as follows:. ``` Sybase.Persistence.Connection conn; ... conn.MobiLinkStreamType = Sybase.Persistence.MobiLinkStreamType.Http.To- String(); or conn.MobiLinkStreamType = Sybase.Persistence.MobiLinkStreamType.Https.To- String(); ```

Synchronization APIs

New behavior	Impact on code
setPending() is deprecated.	**Issue:** In version 1.2, all transactions are non-pending by default and calling `synchronize()` after `save` would sync all of them. You could use `setPending(true)` to make a transaction pending before synchronization and thus prevent it from being submitted. In version 1.5.2, `setPending()` is deprecated. In version 1.5.2, all transactions are pending by default and `synchronize()` internally calls `submitPendingOperations()` to submit all the pending transactions. **Action:** Do not use `setPending()` while working with 1.2-compatible code in version 1.5.2.

New behavior	Impact on code
| SyncResult must always be refreshed. | **Issue:** In version 1.2 it was not always necessary to refresh the `syncResult` object. In version 1.5.2, you must always refresh the `syncResult` object.<br><br>**Action:** This code sample shows a refresh of the `SyncResult` object.<br><br>```
SyncResult result = Customer.SyncResult();
List<OperationLog> logs = result.GetOperation-
Log();
for each (OperationLog log in logs)
{
log.Delete();
}
result = Customer.SyncResult(); // This step is
needed in 1.5.2 to refresh sync result
Console.WriteLine("log count after delete: " + re-
sult.GetOperationLog().Count);
``` |
A syncParamater that exceeds its maxlength no longer causes an error.	**Issue:** In version 1.2, if the length set for `syncParameter` is greater than the `maxlength` specified for the `syncParameter`, the synchronization gives an error. In version 1.5.2 the same synchronization succeeds. **Action:** You can safely ignore the restriction on `syncParamater` exceeding its `maxlength` limit for in version 1.5.2.
Backend synchronization failure is accessed in a different way.	**Issue:** In version 1.2 a back-end synchronization failure returns an error message to the client in `SyncResult.ErrorMessage`. In version 1.5.2, with the same failure the device client sync gets a `SynchronizeException`, and then you have to call `MyDatabase.GetLogRecords()` to get the error message. **Action:** The system publication is automatically synchronized if the first sync fail due to a server error. There is no need to do anything different in your code, unless you want the code to return the error message. To capture the error message for a back-end sync failure in version 1.5.2, use `SynchronizeException` to call `MyDatabase.GetLogRecords()` to get the error message.
IsSynchronized and LastSynchronized return only publication level information.	**Issue:** In version 1.2, these properties provided MBO level information. In version 1.5.2 these provide only publication level information. **Action:** Change code as necessary to work with publication level information.

New behavior	Impact on code
SyncResult supports only GetOperationLog().	**Issue:** In version 1.5.2, various `get` methods of `SyncResult` return only the default values corresponding to their underlying variable's data types. The only supported method is `SyncResult.GetOperationLog()`. **Action:** Do not use these properties in your code: • BadPlaybackCount • ErrorCategory • ErrorMessage • LastGoodPlayback • LastPlayback
OperationLog has only three properties.	**Issue:** In version 1.5.2, `OperationLog` has only `Status`, `Message`, and `OperationName` properties. In version 1.2, `OperationLog` has several more properties. **Action:** Change code as necessary to use only the three properties available for `OperationLog`.
Four classes are deprecated.	**Issue:** These four version 1.2 classes are not available in version 1.5.2: • Sybase.UnwiredPlatform.Data.Transaction • Sybase.UnwiredPlatform.Data.SavedTransaction • Sybase.UnwiredPlatform.Data.Log • Sybase.Persistence.ServerSyncListner **Action:** Change code as necessary to use methods from classes that are still available.

Database APIs

New behavior	Impact on code
DeleteAllDatabases() is replaced by DeleteDatabase().	**Issue:** In version 1.2 the `Sybase.UnwiredPlatform.Data.DatabaseUtilities.DeleteAllDatabases()` method is used to delete all UltraLite databases in the same folder of a client application. In version 1.5.2, `DatabaseClass.DeleteDatabase()` is the comparable method . **Action:** Use `DeleteDatabase()` in place of `DeleteAllDatabases()`.

Query APIs

New behavior	Impact on code
Returned datasets are cumulative.	**Issue:** In version 1.2, the data obtained using a new sync parameter value always overwrites the data obtained using the previous value; so a `Find-dAll()` returns only the data from the current sync parameter. In version 1.5.2 the datasets are added; so a `FindAll()` returns the data for all the sync parameters previously used. **Action:** To achieve the same result in version 1.5.2 that `FindAll()` achieved in version 1.2, use query limiting for the sync parameter. For example, to achieve the same result as in version 1.2, the `FindAll()` query definition will look like: `select x.* from customer x where x.state=:state` Where *state* is the sync parameter.
FindById() is deprecated.	**Issue:** In version 1.2 the FindById() method is generated in the Other Operation class. In version 1.5.2 the method is not generated. **Action:** Use the `FindAll()` method to search the Other Operations.
FindAll(), Find(query), FindBy(?int), Find-ByPK(pk), and Find-WithQuery(query) are not automatically generated.	**Issue:** In version 1.2 `FindAll()`, `Find(query)`, `FindBy(?int)`, `FindByPK(pk)`, and `FindWithQuery(query)` are generated in each MBO. In version 1.5.2, only `Find(long)` and `Find(long?)` are generated. **Action:** To generate `FindAll()`, `Find(query)`, `FindBy(?int)`, and `FindByPK(pk)`, define them in the model. To simulate `FindBy()` and `FindByPk()`, define an object query in the MBO definition.

Operation APIs

New behavior	Impact on code
Deleting created record before synchronization is treated as cancel-Pending.	**Issue:** In version 1.2, if the client deletes a pending record before synchronization, it causes an error. In version 1.5.2 the deletion of a pending record is treated as a `cancelPending`. **Action:** You do not have to be concerned about calling `cancelPending` to prevent an error when a pending record is deleted before synchronization.

New behavior	Impact on code
SetPending() is no longer needed and will cause code to fail.	**Issue:** In version 1.2, you must call `SetPending(true)` to keep a transaction (operation) pending on the client. In version 1.5.2, however, an operation is always pending until `SubmitPending()` is called on it; calling `SetPending(true)` on the transaction causes it to fail. **Action:** Ensure that you do not call `SetPending(true)` on a pending transaction.
MBO DeleteData method is deprecated.	**Issue:** The version 1.2 MBO `DeleteData()` method is no longer supported in 1.5.2. **Action:** Change code as necessary to avoid using `DeleteData()`.

Personalization APIs

New behavior	Impact on code
IsPersonalized and Is-PrimaryKey properties have moved.	**Issue:** In version 1.2 the `IsPersonalized` and `IsPrimarykey` properties are in metadata for MBO attribute. In version the metadata classes reside in the `Sybase.Reflection` package (`com.sybase.reflection` for Java). **Action:** Change code as necessary to ensure that `IsPersonalized` and `IsPrimarykey` properties are accessible.
Personalization keys must be obtained by synchronizing publication.	**Issue:** In version 1.2, to get or set a personalization key, you must synchronize the system package. In version 1.5.2, you must synchronize the system publication in each package. **Action:** Change code as necessary to continue getting or setting personalization keys.
SetOverridePersonalization() and UndoOverridePersonalization() are deprecated.	**Issue:** The `SetOverridePersonalization()` and `UndoOverridePersonalization()` methods, which can be called in version 1.2 for both sync and operation parameters, are not available in version 1.5.2. **Action:** Change code as necessary to avoid using `SetOverridePersonalization()` and `UndoOverridePersonalization()`.

Object State APIs

New behavior	Impact on code
isInserted() internally calls isCreated().	**Issue:** In version 1.5.2 `isInserted()` internally calls `isCreated()`. **Action:** Change code as necessary to accommodate this change.

MBO Attributes or Behavior

New behavior	Impact on code
Structured parameter arrays are now Lists.	**Issue:** In version 1.2 the Structure Parameter array is specified as an `Array(A[])`. In version 1.5.2 it is represented as a `List(AList)` **Action:** Change code as necessary to accommodate this change.
Binary data with max-length exceeding 32767 bytes is treated as a BLOB.	**Issue:** In version 1.2, if `maxlength` for a binary type is set greater than 2048 bytes, the binary is treated as a BLOB. In version 1.5.2, if `maxlength` for a binary is set greater than 32767 bytes or is not specified, the binary is treated as a BLOB, with a maximum length of -1. **Action:** Change code as necessary to accommodate this change. For more detailed information on changes from version 1.2 behavior for maxlength, see the "Version 1.2 behavior with maxlength for binary data" table immediately below this table.
MBOs can no longer be non-syncable.	**Issue:** In version 1.2, an MBO can be specified to be either syncable (top level) or non-syncable. In version 1.5.2, every MBO in a publication is syncable; the MBOs can not be synchronized individually. **Action:** Change code as necessary to accommodate this change.
IsPending() remains true until successfully submitted on back end.	**Issue:** In version 1.2, if the MBO operation is called with `isPending=false`, the next `IsPending()` returns `false` even if the MBO is not synchronized, or if the synchronization fails. In version 1.5.2, `IsPending` remains `IsPending=true` for the MBO operation until it is submitted successfully in the back end. **Action:** Change code as necessary to accommodate this change.
Only MBO MetaData class is generated automatically.	**Issue:** In version 1.2 metadata classes are generated automatically for the MBO, the attributes, the sync parameters, and the operation parameters. In version 1.5.2, only the MBO metadata class is generated automatically. **Action:** To generate all metadata classes, select the **Create metadata classes** option in the MBO Code Generation wizard.

Table 16. Version 1.2 behavior with maxlength for binary data

Maximum size or maxlength	Upper supplied data size	Result
Max. size < 2KB	Any size > max. size	Silent truncation of data
2KB < Max. size < 32 KB	Any size > max. size	Right truncation not allowed error written to `ml.log`
Max. size > 32 KB	Any size > max. size	Parameter length mismatch error in SyncResult
`maxlength` < 8 KB	Any size > `maxlength`	Silent truncation of data
`maxlength` > 8 KB	Any size > `maxlength`	Parameter length mismatch error in SyncResult

CHAPTER 6   **Postinstallation Tasks**

After running the Sybase Unwired Platform installer one or more times to complete your installation, perform additional tasks as needed to make your installation fully functional.

Component	Description
Unwired Server	- For the deployment edition, configure security for LDAP, or other source of user information, for Sybase Control Center. See *Sybase Control Center online help > Set Up > Security > Configuring Security Providers.* - Install third-party software required by some mobile business object (MBO) packages. See *System Administration for Sybase Unwired Platform > Environment Setup > Installing Third-Party Software.* - Configure Unwired Server. See *System Administration for Sybase Unwired Platform > Environment Setup > Cluster Setup.* - Optionally configure the Unwired Server listener. See *System Administration for Sybase Unwired Platform > Systems Administration > Server Environment Administration > Server Administration Overview > Configuring Listener Behavior.* - Create and assign security configurations for device application security (authentication and authorization). See *System Administration for Sybase Unwired Platform > Security Administration > Implementing System Wide Security.* - Optionally upgrade your license to update the license type or date. See *Upgrading License Files* on page 120. - Create data source connections. See *System Administration for Sybase Unwired Platform > Environment Setup > EIS Connections.* - Implement additional security measures as required by your organization's policies. See *System Administration Guide > Security Administration > Implementing System Wide Security.* For additional postinstallation configuration tasks, see the Sybase Control Center for Unwired Platform online help or *Sybase Unwired Platform System Administration Guide.*

Component	Description
Afaria	• Install additional Afaria components, which you can obtain on the Sybase Unwired Platform installation media. See *Installing Additional Afaria Components* on page 118. • Configure the Afaria provisioning environment. See *System Administration for Sybase Unwired Platform > Environment Setup > Afaria Setup*. • Configure your cluster. See *Web Server Administration Tools for Relay Server* and *System Designs* in the *Sybase Unwired Platform System Administration Guide*.
Relay Server	To use the relay server service hosted by Sybase, see *System Administration for Sybase Unwired Platform > Environment Setup > Relay Server Setup > Using the Sybase Relay Server Hosted Service*. To set up your own local relay server, complete these tasks: • Set up relay servers and install relay server outbound enablers (RSOEs) as required. See *System Administration for Sybase Unwired Platform > Environment Setup > Relay Server Setup*. • (Optional) Set up RSOE to run as a service. See *System Administration for Sybase Unwired Platform > Environment Setup > Relay Server Setup > Configuring Relay Server Outbound Enabler to Run as a Service*. **Note:** This is an option with Afaria Relay Server Outbound Enabler (RSOE). For other RSOEs – such as SUP(RBS) RSOE, Messaging RSOE, WebServer RSOE – the regRelayServer utility handles service creation. See *System Administration Guide > System Reference > Command Line Utilities > Relay Server Utilities > Register Relay Server (regRelayServer) Utility*
Sample Database	The sample database is automatically installed as a service with developer editions. With the deployment edition, it is present but not installed as a service. If you need to change the way the sample database is configured in your installation, see *System Administration Guide > System Reference > Command Line Utilities > Unwired Server Runtime Utilities > Start and Stop sampledb Server (sampledb) Utility*

Installing Additional Afaria Components

Install additional Afaria components from the Sybase Unwired Platform installation media.

1. Insert the Sybase Unwired Platform installation media (Deployment Edition).
2. Open the \modules\afaria\Extras directory, which contains executables and support files for Afaria components.

Folder	Component description
DeploymentCenter	Scripts that support OTA (over-the-air) deployment.
Packager	Contains the installation files for Software Packager.
RemoteControl	Contains third-party files for the Afaria Remote Control solution, with subdirectories for supported devices: Pocket PC, Pocket PC Windows Mobile, and Smartphone Windows Mobile. Includes product installation and product documentation. Remote Control allows an administrator to view and manipulate a client's environment, typically for troubleshooting purposes.
SnapIns	Contains supporting components for the Afaria SMS Integration Suite setup program.
SWMTuner	Contains the primary installation files for Afaria Software Manager Tuner, which enables you to customize a Windows installer package.
TuneInst	Contains supporting files used during the Software Manager Tuner installation.

Setting Up Security Certificates

To avoid security exceptions when launching Sybase Control Center, set up security certificates correctly. If you are opening a browser on the same computer as Sybase Control Center, this step is not required as the installer effects required changes locally for you.

This task is required when:

- The browser session starts from a host computer that is remote from the Sybase Control Center installation.
- The host computer does not have Visual Studio Certificate Manager SDK installed.

Alternatively, follow browser-specific instructions to accept the certificate into the Windows certficate store.

1. Change the default shortcut to use full host name of the computer on which Sybase Control Center has been installed.

   The host name is required because the default self-signed generated certificate the installer issues is assigned to an actual host name and not "localhost."

   For example, instead of using:

```
"%ProgramFiles%\Internet Explorer\iexplore.exe" https://
localhost:8283/scc
```

Change the shortcut URL to:

```
"%ProgramFiles%\Internet Explorer\iexplore.exe" https://
SCChost.mydomain.com:8283/scc
```

2. Add the certificate to the Windows certificates store.

   a) Extract the self-signed certificate using the keytool utility.

   ```
   <UnwiredPlatform_InstallDir>\JDK1.6.0_16\bin\keytool.exe -
   exportcert -alias jetty
   -keystore <UnwiredPlatform_InstallDir>\services
   \EmbeddedWebContainer\keystore -file cert.crt
   ```

   b) Click **Start > Run**, type mmc, and then click **OK** to import the cert.crt file into the host computer's Windows store with the Windows Certificate Manager.

Next
You can now open Sybase Control Center from any browser without generating a security exception.

Upgrading License Files

To update the license type or date, run a script to update the Unwired Server license file.

1. Stop Unwired Server.

   Choose **Start > Programs > Sybase > Unwired Platform 1.5.2 > Stop Unwired Platform Services**.

2. Obtain the license information that is needed from your license file.

   In all cases, you need to obtain the product edition and license type.

   If the product edition is "EE" (Enterprise Edition), you must obtain the number of client licenses from your license file.

   See *Locating Information in a License File* on page 23.

3. Copy the new license file to `<UnwiredPlatform_InstallDir>\Servers \UnwiredServer\licenses`.

4. Go to `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer \bin` and run:

   ```
   license.bat PE LT [CP]
   ```

   Where *PE*, *LT*, and *CP* are the values of PE, LT, and CP that you noted from your license file. For an Enterprise Deployment Edition license, *CP* is required. For other product editions, omit *CP*.

5. Restart Unwired Server.

Choose **Start > Programs > Sybase > Unwired Platform 1.5.2 > Start Unwired Platform Services**.

CHAPTER 7   **Starting and Stopping Unwired Platform Components**

Once you have completed the postinstallation tasks for your installation, you need start and stop Unwired Platform components in the normal course of operations.

A set of Windows services support Unwired Server. If you did not set these services to start automatically on system startup, you can change them to start automatically at any time after installation. See *System Administration Guide > System Reference > Unwired Platform Windows Services.*

Starting Sybase Unwired WorkSpace

Start Unwired WorkSpace from the Windows Start menu.

Prerequisites

To ensure that Eclipse starts properly, be sure the PATH environment variable does not include any embedded double quote characters.

If Unwired Server is not running, you can still create and edit MBOs and generation code, but you cannot deploy MBOs.

Task

1. From Windows, select **Start > Programs > Sybase > Unwired Platform<version> > Unwired WorkSpace**.

   Create a new workspace for Sybase Unwired WorkSpace Eclipse Edition the first time you launch it.

2. If you are unable to start or stop Unwired Platform Server services through the Windows Start menu, see *Troubleshooting Sybase Unwired Platform > Troubleshoot Sybase Control Center for Sybase Unwired Platform > Unwired Server Fails to Start.* .

Starting and Stopping Unwired Platform Server Services

You must start Unwired Platform server services before you can access Sybase Control Center or Sybase Unwired WorkSpace. Sometimes you must stop Unwired Platform server services to install, uninstall, or upgrade related software.

Sybase recommends that you start and stop Unwired Platform server services using the Windows Start menu or desktop shortcuts, starting and stopping these services manually only

when the Start menu or shortcuts do not affect a particular service. For more information on Unwired Platform services, see *System Administration for Sybase Unwired Platform > System Reference > Unwired Platform Windows Services*.

- From Windows, select **Start > Programs > Sybase > Unwired Platform 1.5.2 > Start Unwired Platform Services**.
- From Windows, select **Start > Programs > Sybase > Unwired Platform 1.5.2 > Stop Unwired Platform Services**.
- If you cannot start or stop Unwired Platform Server services using the Windows Start menu, see *Troubleshooting Sybase Unwired Platform > Troubleshoot Sybase Control Center for Sybase Unwired Platform > Unwired Server Fails to Start*.

Note: In all cases, the menu options above start or stop these server services:

- SybaseUnwiredPlatform*<clustername>*Server1

  Note: In the additional server nodes in a cluster environment, the "Server1" portion of the service name is incremented.

- SybaseUnwiredPlatform*<clustername>*Database1 (only for single-server installation)
- SybaseUnwiredPlatform*<clustername>*SampleDatabase1 (installed by default only with Developer Edition)
- Sybase Messaging Service

The *<clustername>* above is the *<hostname>* of the first server on which you installed the Unwired Server component of Unwired Platform after installing the data tier on its own host. In a single-server installation, the *<clustername>* is the *<hostname>* of host server.

If the data tier and Unwired Server are installed on the same host, and the License Product Edition is PD (Personal Developer), the menu options above also start or stop the Advantage Database Server® service.

Starting Sybase Control Center

Start Sybase Control Center from the Windows Start menu, and log in to the server.

1. Launch Sybase Control Center.
2. Log into Unwired Server.

Launching Sybase Control Center for Unwired Platform

Launch the Sybase Control Center administration console remotely or from the desktop to access the login screen.

1. Confirm that the Sybase Unified Agent and Unwired Server services are running.
2. Launch Sybase Control Center (SCC) using one of the following:

- Launch SCC from the desktop – double-click the Sybase Control Center shortcut.
- Connect to SCC remotely – open a Web browser and enter `https://<hostname>.<domainname>:<port>/scc`. The default port is 8283. Use this option if you do not have an instance of SCC installed on your machine.

Logging in to Sybase Control Center to Administer Unwired Platform

Log in to Sybase Control Center (SCC) to access Unwired Platform administration features that you have been authorized to use. Administrators of any Sybase product can log in to SCC. However, only users assigned to the SUP Administrator or SUP Domain Administrator roles for Unwired Platform can log in to Unwired Server from SCC.

In a production environment, although roles are established, you still need to map Unwired Platform administrator roles to existing roles in the security provider's repository. Perform role mapping after you log in to SCC.

When administering a remote server, logging in to SCC gains you access only to the SCC interface. You must still authenticate with Unwired Server later in this task flow.

1. In Sybase Control Center, enter a valid:

   - **User name** – can be a valid Unwired Platform user that is assigned an administration role. The default Unwired Platform administrator user name is supAdmin.
   - **Password** – must be valid for the user name you provide. The password field is case-sensitive. The default supAdmin password is s3pAdmin.

2. Click **Login**.

   Note: The administrator account is locked out after three unsuccessful login attempts.

CHAPTER 8   **Uninstalling Sybase Unwired Platform**

Uninstall Sybase Unwired Platform using the Add or Remove Programs option on the Control Panel, which launches the uninstaller. The uninstaller removes the specified Sybase Unwired Platform features from the installation directories. Uninstall Sybase Unwired Platform before reinstalling or upgrading.

Prerequisites

Before you uninstall Sybase Unwired Platform, Sybase recommends that you:

- If any Sybase products have been installed that require Unwired Platform to be installed first, you must uninstall them first, while Unwired Server is running. This applies to products such as Sybase SAP® DOE Connector, Sybase Mobile Sales for SAP® CRM, and Sybase Mobile Workflow for SAP® Business Suite. See the Installation Guide for the products involved for instructions on uninstalling them.
- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running, including the data tier, database servers, OpenDS server, and Sybase Control Center. Shut down all Unwired Servers before shutting down the data tier.
- Open the Windows Services panel and manually stop any services that are still running. See *Chapter 7, Starting and Stopping Unwired Platform Components* on page 123.
- Move any user-created files and log files you want to keep from the installation directories to another location.
- Delete the JAVA_TOOL_OPTIONS environmental variable.
- If you plan to reinstall Unwired Platform, and want to preserve your data, back up the database so that it is available to migrate after you reinstall. See *System Administration for Sybase Unwired Platform 1.5.2 > Systems Maintenance and Monitoring > Backup and Recovery*.

Uninstall Sybase Unwired Platform components before reinstalling them or upgrading to a new version. See *Chapter 9, Reinstalling Sybase Unwired Platform* on page 129.

Task

1. In Windows, select **Start > Settings > Control Panel > Add or Remove Programs**.
2. Select **Sybase Unwired Platform 1.5.2**, and click **Change/Remove**.
3. Click **Next** in the welcome window.
4. Select the components to remove, and click **Next**.

5. Review the list of components to remove, then click **Uninstall** to remove the selected components.

6. Click **Finish** when you see:

   ```
   The InstallShield wizard has successfully uninstalled
   Sybase Unwired Platform 1.5.2.
   ```

7. Restart the system.

   System restart is necessary to allow deletion of folders and files remaining in the Sybase Unwired Platform installation directory.

8. Delete any files and directories in the Sybase Unwired Platform installation directory that the uninstaller did not remove.

   If you are unable to delete the Sybase Control Center installation directory (`C:\Sybase\SCC-3_0` by default), see the "Sybase Control Center installation directory..." entry in *Troubleshooting Uninstallation* on page 140.

CHAPTER 9 **Reinstalling Sybase Unwired Platform**

Re-run the installer to install additional features, reinstall an existing feature, or perform a complete reinstallation. To reinstall a feature, you must uninstall it and then install it again.

Prerequisites

- If necessary, upgrade your Afaria license. See *Afaria Licenses* on page 17.

  Note: To upgrade your Unwired Platform license it is not necessary to rerun the installer. See *Upgrading License Files* on page 120.

- Shut down any Sybase products, Sybase processes, and associated third-party processes that are currently running, including the data tier, database servers, OpenDS server, and Sybase Control Center. Shut down all Unwired Servers before shutting down the data tier.
- Completely uninstall Sybase Unwired Platform, including restarting the system and deleting the Sybase Unwired Platform installation directory and all subdirectories. See *Chapter 8, Uninstalling Sybase Unwired Platform* on page 127.

Task

1. Completely uninstall Sybase Unwired Platform, including restarting the system and deleting the Sybase Unwired Platform installation directory and all subdirectories.

   See *Chapter 8, Uninstalling Sybase Unwired Platform* on page 127.

2. Install Sybase Unwired Platform.

   See the instructions for your edition:
   - *Chapter 3, Installing Developer Editions* on page 27
   - *Chapter 4, Installing the Deployment (Production) Edition* on page 61

3. If you want to continue working with data that you have backed up from the previous installation and want to continue working with it, migrate the data. See *Migrating Production Unwired Server Runtime Data* on page 106.

CHAPTER 10 **Troubleshooting**

Review information about common problems that arise in the Sybase Unwired Platform installation process, including SySAM licensing issues.

Troubleshooting Installation

Determine the cause of installation problems and apply the recommended solution.

See the *Sybase Unwired Platform Release Bulletin* for the most recent troubleshooting information.

Problem	Resolution
Uninstaller might not run on Windows Vista	Sometimes, the uninstaller does not launch on Windows Vista. This may be caused by the operating system changing the launch command for the Unwired Platform uninstaller, preventing it from using its own JVM to start itself.
	Workaround: Run an external 32-bit JDK version 1.6.0_16 to launch the uninstaller with the following, where *<jdk_installdir>* is similar to `C:\jdk1.6.0_16\bin`:
	`<jdk_installdir>\java -Dtemp.dir=%TEMP% -jar C:\Sybase\UnwiredPlatform\Uninstallers\UnwiredPlatform\uninstall.jar`
	When you uninstall—or cancel out of uninstalling—Unwired Platform, the Program Compatibility Assistant dialog appears with the message `This program might not have uninstalled correctly`. At this point, you can avoid the uninstaller issue altogether by selecting the **This program uninstalled correctly** option in the dialog instead of **Uninstall with recommended settings**.
Unwired Servers do not shut down during an uninstallation	Shut down all Sybase products, Sybase processes, and associated third-party products and processes before launching the uninstaller.
	Note: Shut down the Unwired Servers before shutting down the data tier.
Cannot start an Unwired Platform component	Make sure that all services are started for the installed components. See *System Administration > System Reference > Unwired Platform Windows Services*.

Problem	Resolution
Cannot start Sybase Control Center	Make sure that you have installed an appropriate version of Adobe Flash Player. See *Sybase Control Center Installation Prerequisites* on page 13.
Network domain name is invalid on virtual machine (VM) installation or when switching to different networks after installation	Configure Unwired Server to use the valid network domain name.

Configure Unwired Server to use the valid network domain name.

1. Shut down Unwired Server and Unified Agent services.
2. Obtain the correct host and domain name.
3. Open a command window and enter: `ipconfig /all`
4. Run `configure-mms.bat <clustername>`
5. Run `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer\bin\configure.bat` to set the proper domain name in all the Unwired Server configuration files.
6. Manually edit `%SYBASE%\SCC-3_0\services\RMI\service-config.xml` and modify the address property to reflect the new fully qualified host name.

```
<properties>
    <set-property property="address" val-
ue="supvm.mycompany.com" />
    <set-property property="port" val-
ue="9999" />
    <set-property property="timeout" val-
ue="43200" />
  </properties>
```

Replace *supvm* with your host name and *mycompany.com* with your domain name.

7. If the DNS server cannot resolve the fully qualified name and this server is accessed only locally, edit the `c:\Windows\system32\drivers\etc\hosts` file and 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.
8. Restart Sybase Unified Agent and Unwired Server.
9. Log in to Sybase Control Center.
10. Open **Perspective Resources** view.
11. Update the **host** property of the registered resource for Unwired Server for which the network domain name changed.
12. Choose **Authenticate** and then launch Management Console using **Manage** option on the resource.
13. For Unwired WorkSpace components only, launch Eclipse and modify the domain name in the connection profile for Unwired Server.

Problem	Resolution
Cannot connect to Unwired Server from Unwired WorkSpace	If the LDAP service is not started properly, you will cannot connect to Unwired Server from the development environment. If this happens: 1. Access the Control Panel, and select **Administrative Tools > Services > OpenDS**. 2. Make sure your LDAP service (OpenDS) is running. 3. Verify that the location of the LDAP service is your Sybase Unwired Platform installation directory.
`Unable to open Service` error appears during installation and, after installation, Messaging service is not in Windows Service list.	The root cause of this problem may be that the local .NET framework is corrupted. Check this by going to `C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\` and running `installutil`. A configuration error message indicates that the local .NET framework is corrupted. Help information indicates normal function. If the local .NET framework is corrupted, uninstall and reinstall .NET 2.0.
Port number conflicts	See *Port Number Reference* on page 145 for information on which port numbers you can change after installation and how.

Changing Unwired Server Host Name (Single Server)

Describes how to change the Unwired Server host name when running as a single server.

To change the host name of the machine on which you installed Unwired Server:

1. Uninstall Unwired Server completely as described in the *Installation Guide*.
2. Change the host name using the manufacturer's instructions for the machine.
3. Reboot the machine.
4. Install the Unwired Server.

Changing Unwired Server Host Name (Node in a Cluster)

Describes how to change the Unwired Server host name when running as a node in a cluster.

To change the host name of the machine on which you installed Unwired Server:

1. Uninstall the Unwired Server cluster node as described in the *Installation Guide*.
2. Change the host name using the manufacturer's instructions for the machine.
3. Reboot the machine.
4. Install the Unwired Server cluster node.

Troubleshooting SySAM

If SySAM errors are not addressed in a timely fashion, Sybase Unwired Platform may cease to function. Learn about the SySAM grace period.

There may be more recent information published in the *SySAM Asset Management Users Guide* online at *SySAM FAQ*. If your Sybase 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 under grace, the Sybase product error log entry includes the grace period expiry date and time. To view the expiration date for your license, in the Sybase Control Center folder for your server, open the **Users** folder, go to the **Messaging** tab, and click **Licensing**.

The Sybase product log includes information about licenses awarded under grace mode. The warnings in the Sybase product error log are repeated daily while the license is under grace mode.

SySAM-Related Errors

All SySAM-related errors print in your Sybase product error log.

The error log for Sybase Unwired Platform is `<UnwiredPlatform_InstallDir>\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 the `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer\sysam-2.0\log` directory, provides information about any license checkout issues.

SySAM Troubleshooting Details

Learn about troubleshooting SySAM.

Table 17. Troubleshooting SySAM

Description	What to do
The installation program issues a warning about not finding a suitable license	If you select a served license model, the installation program checks for a license with the selected product edition and license type. You see a warning message if no suitable license is available.
	If the existing Sybase Unwired Platform server can check-out licenses, verify that the license you are using authorizes the update you are applying. This can be determined using the date-based version of your license file and the release date of the update. You must have a license with a date-based license file that is later than or equal to the date the update was released. Sybase Unwired Platform provides a grace period for updating the licenses after support is renewed.
	To view the expiration date for your license, in the Sybase Control Center folder for your server, open the **Users** folder, go to the **Messaging** tab, and click **Licensing**. The date-based version of the license can be determined by looking at the license checkout message in the Sybase Unwired Platform error log, or by examining the license itself. See Appendix A, "Anatomy of a License," in the *Sybase Software Asset Management Users Guide*.
	Determine the release date of Sybase Unwired Platform by the date in the version string, cover letter, or SPDC download link. This date is also included in the error message.
	You can download an updated license from SPDC if your support has been paid through the release date the update. If your support has not been paid, you are not authorized to install an update.
	See Appendix B of *Sybase Software Asset Management Users Guide* for an explanation of how SySAM uses date-based versioning. See "Updating your Sybase licenses" in Chapter 3, "Getting and Using your Licenses," in the *Sybase Software Asset Management Users Guide* for information about updating your license.
The license server executables and scripts are not installed	The sysam.bat wrapper script and the executables for the license server (lmgrd.exe and SYBASE.exe) cannot be found in the SySAM bin directory.
	The SySAM license server has a separate installer. To install the license server, run the license server installer that is included on your product installation media.
	Alternatively, you can download a standalone SySAM license server installation program from SPDC.

Description	What to do
The license server does not start	The most common cause for the license server failing to start is that there are no served licenses in the server; there must be at least one served license in the `licenses` directory. When you install a new license server, there are no served licenses in the licenses directory and the license server does not start until you activate a license from SPDC and copy it into the `licenses` directory.
	Other causes for license server not to start include:
	• The license activated from SPDC is an unserved license. Examine the license files. Served licenses always start with a SERVER header. If you do not see a line starting with SERVER, you are using an unserved license. • The port number you are using for the license may already be in use. Use "netstat -a" to determine whether the port number is available. If it is not, either free the port or use a different port number for the license server. • The host name recorded in the SERVER header does not match the actual host name. The host name is recorded next to the SERVER keyword. If it does not match, correct the host name in the license file or set it to "this_host", which is a keyword that works with any host name. • The licenses copied may be activated for a different machine. Examine the host ID recorded in the line. It is recorded next to the host name in the SERVER header. It must match the host ID for the machine where the license server will be running.
The license server does not recognize the license files	If the license server refuses to serve the licenses, it may be because:
	• The license was activated for a different machine or using an incorrect host ID. Compare the host ID in the license with the host ID for the machine. If they do not match, check the license back in to SPDC, then regenerate it with the correct host ID. • The license has been altered. The license is rejected if you change information. If you create the license by typing from a paper copy, verify that there have been no data entry errors. You can also download a new copy of the activated license from SPDC.
	If the Host ID for your platform is based on the network adapter identification, verify that you have used an ID associated with a valid network interface controller (NIC). IDs associated with loopback adapters are invalid. If the ID associated with a removable network adapter was used, ensure that the adapter is attached to the computer.

Description	What to do
With a served license, Sybase Unwired Platform installer generates a license check-out failure error and cannot complete the installation	This is most likely due to unavailability of a port for the license server's VENDOR SYBASE daemon to use in communicating with Sybase Unwired Platform. Check the entries in the `sybase.log` file in the `SYSAM-2_0\log` directory where the SySAM license server is installed. Locate the line containing "FLEXnet Licensing" – your log file may look something like this: ``` 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 ... ``` 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." • If you do not see the "Started SYBASE" line, with no error messages in it or immediately following it, the license server started up 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 `sybase.log` file again to be sure that the port was successfully opened. • If you see the "Started SYBASE" line, with no error messages, the license server successfully opened a port for the VENDOR SYBASE daemon. Edit this port number from the "lmgrd tcp-port" line into your Sybase Unwired Platform license file. See *Setting a Fixed Port Number for SySAM License Server* on page 25.
Sybase Unwired Platform does not start, and generates a license check-out failure error	If Sybase Unwired 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 Sybase Unwired Platform (SUP_ENTSRVR , for Enterprise Deployment 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, Sybase Unwired Platform fails to start. For more information, see "Sybase Unwired Platform cannot check out a license and starts with license in grace mode" in this table. The troubleshooting tips for resolving licenses issued in grace mode apply to solve this issue as well.

Description	What to do
Sybase Unwired Platform cannot check out a license and starts with license in grace mode	Execute the **sysam diag feature_name** command from the SySAM `bin` directory , where *feature_name* is the SySAM feature name for Sybase Unwired Platform or the optional feature that is in grace mode. The feature name is printed in the Sybase Unwired Platform error log and in the optional e-mail notifications.

If the **diag** command shows that there are no licenses available for check-out, it may be due to one of these reasons:

- If you are using a served model:
    - Verify that the license server is running and reachable from the machine you are using. Use `"sysam status"` 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 `"sysam status -f feature_name"` to determine whether the license server is serving a license for the given feature. If not, obtain the correct licenses from SPDC.
    - All licenses on the license server may be in use. If `"sysam status -f feature_name"` indicates that no licenses are available, obtain additional licenses or shut down existing instances of Sybase Unwired Platform.
- If you are using an unserved model:
    - The license for the given feature may not be in the local `licenses` directory. Obtain the correct licenses from SPDC and copy them to the local `licenses` directory.
    - The license may have been activated for a different machine or with an incorrect host ID. Check the license back in to SPDC 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.
- 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 Sybase Unwired Platform. For information about date based versioning, see Appendix B, "Installing Product Updates, EBFs, and Support Renewal" in the *Sybase Software Asset Management Users Guide*. For information on updating your license, see the "Updating your Sybase licenses" section in Chapter 3, "Getting and Using your License," in the *Sybase Software Asset Management Users Guide*.

Description	What to do
Sybase Unwired Platform cannot check out a license and starts with license in grace mode (continued)	If the **diag** command shows that the license for the given feature is available, Sybase Unwired Platform may not be able to check it out because: • The product edition or license type does not match the requirement. If the **product edition** and **license type** configuration parameters are set, Sybase Unwired Platform uses only the license that matches these settings. • Also see "Sybase Unwired Platform cannot find license for optional feature, even though the license exists" in this table.
Sybase Unwired Platform shows licenses as being in grace mode even after the issue has been fixed	Sybase Unwired 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.
Sybase Unwired Platform cannot find license for an optional feature, even though the license exists	Execute "sysam diag *feature_name*" to ensure that license for the optional feature exists and can be checked out from the machine on which Sybase Unwired Platform is running. If the feature exists, but cannot be checked out from Sybase Unwired Platform, it may be because: • The optional feature is for a different edition. • The active or standby flags do not match for the base server license for Sybase Unwired Platform and the optional feature.
Sybase Unwired Platform does not start with the expected edition or license type	If the **edition** and **license type** configuration parameters are not set, Sybase Unwired Platform uses the first available base license (SUP_ENTSRVR, for Enterprise Deployment Edition, SUP_ENTDEV for Enterprise Developer Edition, or SUP_DEVELOPER for Personal Developer Edition) . If you have multiple base licenses with different editions and license types, the first-available depends on many factors such as license file directory sort order, available licenses on the license server, and so on. The product edition and license type that are granted by SySAM cannot be guaranteed. Sybase recommends that you set the **edition** and **license type** configuration parameters. During installation, you set these parameters on the license details page, following the end user license agreement. To change these parameters after installation, see *Upgrading License Files* on page 120. When these parameters are set, Sybase Unwired Platform starts with that configuration. If a matching license is unavailable, Sybase Unwired Platform starts in grace mode (if available) to allow you to resolve the licensing issue.

Calling Sybase Technical Support

Learn about the information you have to have available if you call Sybase Technical Support for SySAM-related issues.

- The Sybase Unwired Platform error log.
  - `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer\logs\<server_name>-server.log`
- The bootstrap log file that is created on license expiration, if it exists.
  - `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer\logs\bootstrap<randomNo>.log`
- If Sybase Unwired Platform does not start, check the server's properties file:
  - `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer\Repository\Instance\com\sybase\sup\server\SUPServer\sup.properties`
- The license files (`.lic` extension) saved in the `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer\sysam-2.0\licenses` directory on the machine running Unwired Server.
- 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

See the *Sybase Unwired Platform Release Bulletin* for the most recent troubleshooting information.

Problem description	Problem resolution
Sybase Control Center installation directory, SCC-3_0, can not be removed	The Windows uninstaller fails to remove the Sybase Control Center installation directory (`C:\Sybase\SCC-3_0` by default) and attempt to manually delete the directory fails saying that `about_files` could not be deleted. To remove the directory: 1. Locate this directory: `<SCC-install_dir>\services\EmbeddedWeb-Container\container\Jetty-6.1.22\work\Jet-ty_0_0_0_0_8282_help.war__help__.smpe97` 2. Shorten the path by changing the name of `Jet-ty_0_0_0_0_8282_help.war__help__.smpe97` to a single character, such as j. 3. Now try to delete the SCC installation directory (`C:\Sybase\SCC-3_0` by default).

CHAPTER 11 **Installation Reference**

Use the information in the installation reference topics to aid you during installation and configuration of Sybase Unwired Platform.

Reference information	Description
Creating an Installation Image on the Network on page 143	How to create an image on your network to facilitate installing on multiple machines.
Host and Cluster Naming Guidelines on page 144	Guidelines for naming host machines and clusters for Unwired Platform.
Port Number Reference on page 145	Default port numbers and how to change them after installation.
Installation Worksheet on page 151	Worksheet to capture important installation details. May be helpful in preparing for any installation, but especially useful when installing multiple nodes in a cluster where the information must match for all nodes.
Installation Directories on page 153	Determine whether your installation is successful, and get an overview of the Sybase Unwired Platform installation directories.

Creating an Installation Image on the Network

If you are installing Sybase Unwired Platform on multiple machines in your enterprise, you can create an image on the network to facilitate the installation process.

1. Copy the installation image to a computer in your enterprise.
   See *Restrictions on Path Name where Installer is Copied* on page 143.
2. On the machines on which you are installing Sybase Unwired Platform, create a mapped drive to the installation directory.
3. Share the folder with read-only permissions.

Restrictions on Path Name where Installation Image is Copied

If you copy the installation image to a network or local drive, the path must not contain any special characters.

When copying the Sybase Unwired Platform installation image from the installation media to another location, the resulting path to that location must contain only these characters:

- Alphanumerics
- Dash ("-")
- Underscore ("_")
- Ampersand ("&")

Host and Cluster Naming Guidelines

Guidelines for naming host machines and clusters for Sybase Unwired Platform.

- Avoid hyphens and underscores when naming clusters and back-end servers.
- If you use hyphens, slashes, or underscores, you cannot register the Sybase Unwired Platform installation with a hosted relay server.
- Never change a cluster name after you have installed the data tier. Doing so makes it impossible for Unwired Platform server services to start up on the cluster nodes.

Additional Steps to Use an Existing Eclipse Installation

Additional steps are required for the existing Eclipse installation you specify in the installer to work correctly with Unwired Platform.

1. Download these three .ZIP files from *http://download.eclipse.org/eclipse/downloads/drops/R-3.5-2009061115440/index.php*:
   - `eclipse-platform-3.5-win32.zip` – Eclipse platform runtime
   - `eclipse-JDT-3.5.zip` – Eclipse JDT runtime
   - `eclipse-PDE-3.5.zip` – Eclipse PDE runtime
2. Unzip the three .ZIP files into a temporary location, `<temp>`.
3. Locate your existing Eclipse installation directory – `<eclipse_install>` in the steps below.
4. Copy files from directory `<temp>\eclipse-platform-3.5-win32\` into `<eclipse_install>\eclipse-platform-3.5-win32\`.
5. Copy files from directory `<temp>\eclipse-JDT-3.5\eclipse\features\` into `<eclipse_install>\eclipse-platform-3.5-win32\eclipse\features\`.
6. Copy files from directory `<temp>\eclipse-PDE-3.5\eclipse\features\` into `<eclipse_install>\eclipse-platform-3.5-win32\eclipse\features\`.
7. Copy files from directory `<temp>\eclipse-JDT-3.5\eclipse\plugins\` into `<eclipse_install>\eclipse-platform-3.5-win32\eclipse\plugins\`.

8. Copy files from directory `<temp>\eclipse-PDE-3.5\eclipse\plugins\` into `<eclipse_install>\eclipse-platform-3.5-win32\eclipse\plugins\`.

9. Copy the directory `<temp>\eclipse-JDT-3.5\eclipse\binary` into `<eclipse_install>\eclipse-platform-3.5-win32\eclipse\`.

10. When you run the installer, on the additional Installation options page select **Use an existing Eclipse installation for use with Sybase Unwired Platform**, then browse to the directory `<eclipse_install>\eclipse-platform-3.5-win32\eclipse\`.

Port Number Reference

Change Sybase Unwired Platform component port numbers as needed postinstallation.

Proceed with caution when changing port numbers because the change might impact other configuration files that point to that port. You need to be aware of the default Sybase Control Center port numbers so you do not accidentally use these ports when you change Sybase Unwired Platform ports. You can change some Sybase Control Center default ports, but, in some cases, you should not.

Note: To make Unwired Server port number changes, you need to temporarily stop the other service consuming those ports so that Unwired Server can start properly, make the change using Sybase Control Center, and then restart.

Port	Description	Default port	How to change postinstallation
OpenDS LDAP server	Developer Editions only. Port number on which the OpenDS LDAP server listens for requests. The default administrator password for the LDAP server is **secret**.	10389	Edit the `ds-cfg-listen-port: 10389` property in `<Unwired-Platform_InstallDir>\Servers\UnwiredServer\OpenDS\config\config.ldif`. **Note:** If you change the port, remember to change the edit Provider URL property.
Data Tier (CDB) server	Port number for the data tier that manages transactions between the enterprise information system and mobile devices	5200	Do not change the CDB port. See *System Administration > Environment Setup > Databases > Changing a CDB Port in a Clustered Environment.*

Port	Description	Default port	How to change postinstallation
Management ports	IIOP port number on which the Unwired Server listens for requests	2000 2001 for secure management (disabled by default)	Configure in Sybase Control Center by expanding the Servers > *<ServerName>* folder and selecting Server Configuration. In the General tab, select the Communication Ports subtab and enter a new management port or secure management port, as required. See *Sybase Control Center online help > Configuring > Configuring Unwired Platform > Unwired Server > Server Properties > General Server Ports > Configuring Communication Port Properties.*
Data Change Notification (DCN)	Port numbers on which Sybase Control Center listens for requests	8000 for HTTP 8001 for HTTPS	Configure in Sybase Control Center by expanding the Servers > *<ServerName>* folder and selecting Server Configuration. In the General tab, select the Communication Ports subtab and enter a new DCN port or secure DCN port, as required. See *Sybase Control Center online help > Configuring > Configuring Unwired Platform > Unwired Server > Server Properties > General Server Ports > Configuring Communication Port Properties.*

Port	Description	Default port	How to change postinstallation
Replication-Based Synchronization (RBS) and Messaging-Based Synchronization (MBS)	Port numbers on which Unwired Server synchronizes data between the enterprise information system and mobile devices MBS port uses a proprietary encryption method, so MBS communication is always encrypted.	2480 for RBS 2481 for RBS (secure) 5001 for MBS	Configure in Sybase Control Center by expanding the Servers > *<ServerName>* folder and selecting Server Configuration. In the Replication or Messaging tab, select the Synchronization Listener sub-tab and enter a new synchronization port, as required. **Note:** If there is a port conflict for 2480 or 2481, Unwired Server cannot start. This means you cannot use SCC to modify these ports. Therefore, you need to temporarily stop the other service currently using 2480 and start Unwired Server so that you can change the required ports in SCC. For RBS, see *Sybase Control Center online help > Configure > Configuring Unwired Platform > Unwired Server > Server Properties > Replication > Configuring General Synchronization Properties.* For MBS, see *Sybase Control Center online help > Configure > Configuring Unwired Platform > Unwired Server > Server Properties > Messaging > Configuring Messaging Synchronization Properties* .
Advantage Database Server	Port number for the messaging database	6262	Port changes are not recommended.

Port	Description	Default port	How to change postinstallation
Messaging server administration	Port number for the messaging service for Sybase Messaging Clients	5100 for administration services	Not alterable through the Sybase Control Center. Use the `<<UnwiredPlatform_InstallDir>>\Servers\Messaging Server\Bin\AdminWebServicesTool.exe` command line tool to change the messaging service Web service port. This tool has built in online help describing how to use the tool. From the command prompt run: `<UnwiredPlatform_InstallDir>\Servers\Messaging Server\Bin>AdminWebServicesTool.exe set=<port> restart`

Port	Description	Default port	How to change postinstallation

Sybase Control Center	Additional default port numbers of which to be aware, when modifying port numbers	9999 for default RMI agent port
		
		2100 for default JMS messaging service port
		
		3638 for default SCC repository database port
		
		8282, 8283 for default Web container ports
			• 9999 – default RMI agent port. The port is set in:
			`<<UnwiredPlatform_InstallDir>>\SCC-XX\services\RMI\service-config.xml`
			• 2100 – default JMS Messaging Service port. The port is set in:
			`<<UnwiredPlatform_InstallDir>>\SCC-XX\services\Messaging\service-config.xml`
			• 3638 – default SCC Repository database port. The default port is set in:
			`<<UnwiredPlatform_InstallDir>>\SCC-XX\services\SccSADataserver\service-config.xml`
			• 8282, 8283 – default Web Container ports. The default ports are set in:
			`<<UnwiredPlatform_InstallDir>>\SCC-XX\services\EmbeddedWebContainer\service-config.xml`
			
			Before you make any changes to these files, stop Sybase Unified Agent service. Start the service after you complete the changes. If any of the sub-systems fail to start, check the SCC `agent.log` for error messages.

Port	Description	Default port	How to change postinstallation
Relay Server	Port numbers on which Relay Server listens for requests	80 for HTTP 443 for HTTPS	Edit `<<UnwiredPlatform_In-stallDir>>\Servers\Un-wiredServer\config\re-layserver.properties`. Run `regRelayServer.bat` after editing the file. Ensure that the Web server (IIS or Apache) is configured with these ports specified in `relayserver.properties`: • `relayserver.http_port = 80` • `relayserver.https_port = 443` See *System Administration > System Reference > Command Line Utilities > Relay Server Utilities > Register Relay Server (regRelayServer) Utility*.
Afaria Server	Port number on which Afaria Server listens for requests	4041 for HTTP 4444 for HTTPS 4343 for Afaria Database 3007 for XNET 3008 for XNETS	Modify Afaria Server default ports through the Afaria Administrator Web interface, which is launched from Sybase Control Center after you register the Afaria Server. See *System Administration > Environment Setup > Afaria Setup* for information about setting up Afaria Server in the Sybase Unwired Platform environment.

Installation Worksheet

When installing Sybase Unwired Platform, use the installation worksheet to note the pertinent installation details. Having this information available expedites subsequent installations.

Table 18. Licensing and installation directories

Option	Value
Location of license file, for local, unserved license	
Host Name of SySAM license server, for served license	
TCP port of SySAM license server (optional for served license)	
Unwired Platform installation directory	
Existing JDK installation directory, if applicable	
Existing Eclipse installation directory, if applicable, for Developer Editions only	

Table 19. Windows account information

Option	Value
Windows account name	
Windows account password	

Note: If you are installing in a cluster, you must use the exact same Windows account and password on each node you are installing.

If security policies in your organization allow it, create a user account with ID and password that will never change. Use this account when installing Unwired Platform.

If security policies in your organization do not allow an account to have a password that is never changed, be prepared to update the password for the Sybase Messaging Service each time the password changes for the account used to install Unwired Platform. See *Troubleshooting Guide > Troubleshoot Servers > Messaging Server > Messaging Service Failure*.

Table 20. Existing data tier information (if applicable)

Option	Value
Information for SQL Anywhere 11.0.1 database server	
Host Name	
Port Number	
Login	
Password	
Information for consolidated database	
Database Name	
Information for cluster database	
Database Name	
Information for monitoring database (for primary node only)	
Database Name	

Table 21. Port numbers for data tier information

Option	Value
Database Server port	
Messaging Server port	
Afaria Database port	
If data tier is to be installed into high availability Microsoft cluster:	
Path to Microsoft cluster setup	
Name of database server in MS cluster	

Table 22. Cluster configuration information

Option	Value
Cluster configuration password	
UNC path to shared data folder	

Table 23. Unwired Server port numbers

Option	Value
General	
Server Administration	
Data Change Notification	
Replication	
Messaging	
Replication	

Table 24. Port numbers for device management (if applicable)

Option	Value
Afaria Server HTTP port	
Data tier host name	
Port number for Afaria database on data tier host	
Login for Afaria database	
Password for login	

Installation Directories

Review the Sybase Unwired Platform installation directories to ensure a successful installation.

Guidelines for interpreting this information on the Unwired Platform installation directories:

- The following tables document only the high-level folder structure in a complete installation on a single server.
- In all installations, most of the directories listed have subfolders.
- In custom installations, including installations for cluster environments, some of the subfolders listed will not be present.

By default Sybase Unwired Platform is installed to the `C:\Sybase\UnwiredPlatform` directory. You may have specified a different location.

Table 25. Unwired Platform 1.5.2 installation directory subfolders

Folder	Description
`_jvm`	Files for Java Virtual Machine used by uninstaller.
`Eclipse`	Files supporting the Eclipse development environment. **Note:** Present in developer installations only.
`InstallLogs`	The output location of log files created each time Unwired Platform installer is used. Use these logs to troubleshoot issues with the installer.
`JDKx.x.x_x` or `JDKx.x.x_x-x64`	Files used for version of JDK required by Unwired Platform. If the folder ends in -x64, this is the JDK for 64-bit operating systems in a production deployment environment.
`scc_cert`	Certificate file used for Sybase Control Center.
`Servers`	Server components that make up Unwired Platform and its mobile middleware services.
`Servers\Advantage910`	Device management components used to administer devices from Sybase Control Center. Includes online help.
`Servers\MessagingServer`	Synchronization components used for messaging-based synchronization.
`Servers\SQLAnywhere11`	Synchronization components used for replication-based synchronization. Frequently used folders include: • `BINXX` – for utilities you might use. • `data` – for database files used by Unwired Platform.
`Servers\UnwiredServer`	The application server used in an Unwired Platform mobility environment.
`Servers\UnwiredServer\licenses`	Location where Unwired Platform licenses are saved. Every time a license is updated, copy new licenses here.
`ThirdParty`	Location where required runtime files for other components integrated into the Unwired Platform environment are saved.
`Uninstallers`	The executable and supporting files used to uninstall Unwired Platform.

Folder	Description
Unwired_WorkSpace	Executables and supporting files used by Unwired Work-space.
	Note: Present in developer installations only.
Util	Contains utilities installer executes to check and validate external information, such as third party software installations, database information, and Windows account information.

Your Sybase Unwired Platform license includes the Sybase Control Center. By default, Sybase Control Center is installed to the C:\Sybase\SCC-3_0 directory.

Note: If you have other Sybase Products installed, you may have two different versions of Sybase Control Center installed. Unwired Platform requires 3.0, so only this directory structure is documented.

Table 26. Sybase Control Center 3.0 installation directory subfolders

Folder	Description
auth	Library files used for related services in SCC. For example, JAAS.
bin	Scripts you can use to start or stop components of the SCC management framework.
common	Required files shared by SCC components.
conf	Configuration files used for SCC, including security providers for administration logins.
ldap	The LDAP related files for SCC.
log	Log files used by SCC and it's console plugins used capture management framework events exclusively. No Unwired Platform data is captured here, except for administration logins.
plugins	Location for managed resource plug-ins, including one for Unwired Platform.
rtlilb	Runtime library files used by SCC.
server	Class and library files used by the management framework server.

Folder	Description
services	Class and library files used by SCC services.
shared	Class and library files shared by SCC and its plugins.
utility	Various utilities used by SCC.

CHAPTER 12 **Obtaining Help and Additional Information**

Use the Sybase Getting Started CD, Product Manuals site (SyBooks™ Online), and online help to learn more about this product release.

- The Getting Started CD (or download) – contains release bulletins and installation guides in PDF format, and may contain other documents or updated information.
- Product Manuals at *http://sybooks.sybase.com/* – is an online version of Sybase documentation that you can access using a standard Web browser. You can browse documents online, or download them as PDFs. In addition to product documentation, the Web site also has links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, Community Forums/Newsgroups, and other resources.
- Online help in the product, if available.

To read or print PDF documents, you need Adobe Acrobat Reader, which is available as a free download from the *Adobe* Web site.

Note: A more recent release bulletin, with critical product or document information added after the product release, may be available from the Product Manuals Web site.

Documentation Road Map for Unwired Platform

Learn more about Sybase® Unwired Platform documentation.

Table 27. Unwired Platform documentation

Document	Description
Sybase Unwired Platform Installation Guide	Describes how to install or upgrade Sybase Unwired Platform. Check the *Sybase Unwired Platform Release Bulletin* for additional information and corrections.
	Audience: IT installation team, training team, system administrators involved in planning, and any user installing the system.
	Use: during the planning and installation phase.

Document	Description
Sybase Unwired Platform Release Bulletin	Provides information about known issues, and updates. The document is updated periodically.
	Audience: IT installation team, training team, system administrators involved in planning, and any user who needs up-to-date information.
	Use: during the planning and installation phase, and throughout the product life cycle.
New Features	Describes new or updated features.
	Audience: all users.
	Use: any time to learn what is available.
Fundamentals	Describes basic mobility concepts and how Sybase Unwired Platform enables you design mobility solutions.
	Audience: all users.
	Use: during the planning and installation phase, or any time for reference.
System Administration	Describes how to plan, configure, manage, and monitor Sybase Unwired Platform. Use with the *Sybase Control Center for Sybase Unwired Platform* online documentation.
	Audience: installation team, test team, system administrators responsible for managing and monitoring Sybase Unwired Platform, and for provisioning device clients.
	Use: during the installation phase, implementation phase, and for ongoing operation, maintenance, and administration of Sybase Unwired Platform.

Document	Description
Sybase Control Center for Sybase Unwired Platform	Describes how to use the Sybase Control Center administration console to configure, manage and monitor Sybase Unwired Platform. The online documentation is available when you launch the console (**Start > Sybase > Sybase Control Center**, and select the question mark symbol in the top right quadrant of the screen).
	Audience: system administrators responsible for managing and monitoring Sybase Unwired Platform, and system administrators responsible for provisioning device clients.
	Use: for ongoing operation, administration, and maintenance of the system.
Troubleshooting	Provides information for troubleshooting, solving, or reporting problems.
	Audience: IT staff responsible for keeping Sybase Unwired Platform running, developers, and system administrators.
	Use: during installation and implementation, development and deployment, and ongoing maintenance.

Document	Description
Getting started tutorials	Tutorials for trying out basic development functionality.
	Audience: new developers, or any interested user.
	Use: after installation.
	• Learn mobile business object (MBO) basics, and create a mobile device application:
	• *Tutorial: Mobile Business Object Development*
	• *Tutorial: BlackBerry Application Development using Device Application Designer*
	• *Tutorial: Windows Mobile Device Application Development using Device Application Designer*
	• Create native mobile device applications:
	• *Tutorial: BlackBerry Application Development using Custom Development*
	• *Tutorial: iPhone Application Development using Custom Development*
	• *Tutorial: Windows Mobile Application Development using Custom Development*
	• Create a mobile workflow package:
	• *Tutorial: Mobile Workflow Package Development*
Sybase Unwired WorkSpace – Mobile Business Object Development	Online help for developing MBOs.
	Audience: new and experienced developers.
	Use: after system installation.
Sybase Unwired WorkSpace – Device Application Development	Online help for developing device applications.
	Audience: new and experienced developers.
	Use: after system installation.

Document	Description
Developer references for device application customization	Information for client-side custom coding using the Client Object API.
	Audience: experienced developers.
	Use: to custom code client-side applications.
	• *Developer Reference for BlackBerry* • *Developer Reference for iPhone* • *Developer Reference for Mobile Workflow Packages* • *Developer Reference for Windows and Windows Mobile*
Developer reference for Unwired Server side customization – *Reference: Custom Development for Unwired Server*	Information for custom coding using the Server API.
	Audience: experienced developers.
	Use: to customize and automate server-side implementations for device applications, and administration, such as data handling.
	Dependencies: Use with *Fundamentals* and *Sybase Unwired WorkSpace – Mobile Business Object Development*.
Developer reference for system administration customization – *Reference: Administration APIs*	Information for custom coding using administration APIs.
	Audience: experienced developers.
	Use: to customize and automate administration at a coding level.
	Dependencies: Use with *Fundamentals* and *System Administration*.

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