



Installation Guide

Sybase Unwired Platform 2.0

Windows

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CHAPTER 1 **Getting Started**

Before you begin installing Sybase® Unwired Platform, familiarize yourself with system requirements, licensing options, deployment planning issues, and installation prerequisites.

Deployment Planning

Deployment planning considers Unwired Platform options, system requirements, and configuration scenarios—all in the context of your business requirements and your intended use of the platform.

Installable Components

There are three high-level components of Sybase Unwired Platform that you can choose to install. Lower-level components within those are installed automatically.

High-level Unwired Platform components are:

- Unwired Server — core runtime component of the platform
- Data tier — dedicated database servers that directly support Unwired Server
- Sybase Unwired WorkSpace — developer tools

Sybase Unwired Platform also includes relay server as a separately installed component. For relay server installation, see *System Administration, Component Deployment*.

System Deployment Scenarios

Sybase Unwired Platform supports several system deployment scenarios, ranging from a standalone developer system on a single workstation to large-scale production systems. Before you begin installation, you must identify the system deployment scenario, which determines how and where Unwired Platform components need to be installed.

All Components on a Single Host

In this scenario, the Sybase Unwired Platform is a standalone system, with no external dependencies.

This scenario is suitable mainly for prototyping, or test and evaluation purposes.

With all Unwired Platform components installed locally, there is no dependency on network connections between platform components.

Host system resources must be adequate to support all of the applications and services included in all Unwired Platform components.

See also

- *Chapter 2, Installing All Components on a Single Host* on page 31

Development Tools Only

A single developer workstation is provisioned in this scenario.

This scenario is suitable for a developer environment, in which Unwired Server and data tier resources are shared by several developers.

Each developer workstation relies on network connections to the remote Unwired Server and data tier resources.

See also

- *Chapter 3, Installing Sybase Unwired WorkSpace Only* on page 37

All Servers on a Single Host

In this scenario, all Unwired Platform server components (Unwired Server and data tier) are colocated on a single host.

This scenario is suitable mainly for supporting a developer environment, with shared Unwired Platform server resources. It may also be suitable for an Unwired Platform prototyping environment, or a minimal, low-volume production system, with no support for load balancing or high availability (i.e., failover).

With all Unwired Platform server components installed on a single host, there is no dependency on network connections between platform server components.

Host system resources must be adequate to support all of the applications and services included in Unwired Platform server components. Disk resources must be adequate to support all of the databases managed by data tier servers.

See also

- *Chapter 4, Installing All Servers on a Single Host* on page 41

Data Tier and Unwired Server on Separate Hosts

In this scenario, Unwired Server components share no host system resources with data tier components.

This scenario is suitable for a typical production system. It allows support for both:

- Load balancing across multiple instances of Unwired Server resources
- High availability (i.e., failover) of common data tier resources shared by multiple Unwired Server instances

Note: This is the only scenario that supports deployment of clustered systems, which are required to provide failover support.

Load balancing can be supported by:

- A front-end server application, such as Relay Server
- Network hardware, such as a layer 4 switch
- A Network Load Balancing cluster

When Unwired Server and data tier components are on separate hosts, they rely on network connections for some inter-process communication. The local network must be configured to allow all communication between Unwired Platform components.

Note: If the local network is secured by an intrusion detection/prevention appliance (IPS or IDPS), or if the host of any Unwired Platform component is secured by host-based intrusion prevention software (HIPS), the security device must be configured to allow all network communication between Unwired Platform components.

Host system resources must be adequate to support all of the applications and services included in the Unwired Platform component. Disk resources must be adequate to support all of the databases managed by data tier servers.

To complete an installation in this scenario, you must complete the tasks:

- *Installing the Data Tier* on each Unwired Platform data tier host
- *Installing the Unwired Server* on each Unwired Server host

Note: Unwired Server installation depends on a data tier installation. Data tier components must be installed first, before installing any Unwired Server components.

Shared Hosts in Failover Cluster

Sybase Unwired Platform supports a scenario in which Unwired Server components are colocated with data tier components, on hosts configured with Microsoft Cluster Service (or Failover Clustering).

This scenario is suitable for a production system that supports both load balancing for Unwired Server instances, and high availability of common data tier resources, with minimum hardware requirements — just two host systems. It is a variation of the "separate hosts" scenario described above.

In this scenario, the data tier and Unwired Server components are installed separately, on each host.

- Data tier components are configured during installation to use a shared cluster storage resource to house the database files.
- After data tier installations, the cluster is configured to define a managed cluster resource for each data tier server.
- Unwired Server components are installed on each host, after managed cluster resources are defined.

In essence, data tier servers are managed by the high availability cluster, while colocated Unwired Servers are independent of the cluster.

Unwired Server and data tier components rely on network connections, because the managed cluster resource must be addressed as a distinct host, independent of any host in the cluster.

The local network must be configured to allow all communication between Unwired Platform components.

Host system resources must be adequate to support all of the applications and services included in all Unwired Platform components. Disk resources must be adequate to support all of the databases managed by data tier servers.

See also

- *Chapter 5, Installing the Data Tier* on page 45
- *Chapter 6, Installing the Unwired Server* on page 49
- *Unwired Server or RSOE Startup Problems* on page 74

System Requirements

Before you install Sybase Unwired Platform or any of its components, identify each host on which Unwired Platform components will be installed, and confirm that each proposed host meets all the system requirements.

System requirements are listed by Unwired Platform component.

Unwired Server Requirements

Each Unwired Server host must meet the following requirements for operating system, hardware, and disk space available.

Note: Sybase Unwired Platform Enterprise Edition can be installed only on 64-bit operating systems. The Personal Developer Edition and Enterprise Developer Edition can be installed on either 32-bit or 64-bit operating systems.

Table 1. Host Operating System

Operating System	Service Pack
Microsoft Windows XP; Professional Edition (32-bit only)	SP2, SP3
Microsoft Windows Vista; Business, Enterprise, or Ultimate edition	
Microsoft Windows 7; Professional, Enterprise, or Ultimate Edition	
Microsoft Windows Server 2003; Standard or Enterprise Edition	SP2
Microsoft Windows Server 2008; Standard or Enterprise Edition	SP2
Microsoft Windows Server 2008 R2; Standard or Enterprise Edition	

Table 2. Hardware

CPU	RAM
Intel Core 2 Duo processor running at 2GHz or greater, or equivalent AMD processor	4GB

Table 3. Disk Space

Component	Required Space
Unwired Server (including Sybase Control Center)	1700MB

Table 4. Sybase Products that Cannot Coexist with Unwired Platform

Product	Restriction
Adaptive Server® Enterprise	You cannot install Adaptive Server Enterprise and Unwired Platform on the same host.

Data Tier Requirements

Each data tier host must meet the following requirements for operating system, hardware, and disk space available.

Note: Sybase Unwired Platform Enterprise Edition can be installed only on 64-bit operating systems. The Personal Developer Edition and Enterprise Developer Edition can be installed on either 32-bit or 64-bit operating systems.

Table 5. Host Operating System

Operating System	Service Pack
Microsoft Windows XP; Professional Edition (32-bit only)	SP2, SP3
Microsoft Windows Vista; Business, Enterprise, or Ultimate edition	
Microsoft Windows 7; Professional, Enterprise, or Ultimate Edition	
Microsoft Windows Server 2003; Standard or Enterprise Edition	SP2
Microsoft Windows Server 2008; Standard or Enterprise Edition	SP2
Microsoft Windows Server 2008 R2; Standard or Enterprise Edition	

Table 6. Hardware

CPU	RAM
Intel Core 2 Duo processor running at 2GHz or greater, or equivalent AMD processor	4GB

Table 7. Disk Space

Component	Required Space
Data tier (servers)	720MB

Sybase Unwired WorkSpace Requirements

Each Sybase Unwired WorkSpace host must meet the following requirements for operating system and disk space available.

Table 8. Host Operating System

Operating System	Service Pack
Microsoft Windows XP; Professional Edition (32-bit only)	SP2, SP3
Microsoft Windows Vista; Business, Enterprise, or Ultimate Edition	
Microsoft Windows 7; Professional, Enterprise, or Ultimate Edition	

Table 9. Disk Space

Component	Required Space
Sybase Unwired WorkSpace (including Eclipse and JDK)	910MB

Sybase Control Center Requirements

Each host you use as a Sybase Control Center client must have the following third-party applications installed.

Table 10. Sybase Control Center client

Software	Version
Adobe Flash Player	9.0.124+ or 10.x (recommended)
Internet Explorer	6.0 or later

If Adobe Flash Player is not installed when you connect to a Sybase Control Center server, you see a message with a link to "Get Flash."

If an outdated version of Adobe Flash Player is installed, you may see a blank page in the browser.

Sybase Unwired Platform installation media includes an installer for Adobe Flash Player in the 3rdParty folder.

Note: On Microsoft Windows 64-bit operating systems, you must use the 32-bit version of Internet Explorer.

Relay Server Requirements

Each relay server host must meet the following requirements for operating system, hardware, and disk space available. Otherwise, consider using Sybase-Hosted Relay Service (SHRS).

Table 11. Version Required for Sybase Unwired Platform

Relay Server Version	Support
Relay server 11.0.1 or higher	Recommended. Binaries and documentation included on installation media.
Sybase-Hosted Relay Service 11.0.1 or higher	Supported. Recommended only for development test environments.

Table 12. Host Operating System

Operating System	Service Pack
Microsoft Windows Server 2003; Standard or Enterprise Edition (32- or 64-bit)	SP2
Microsoft Windows Server 2008; Standard or Enterprise Edition (32- or 64-bit)	
Microsoft Windows Server 2008 R2; Standard or Enterprise Edition	
Red Hat Enterprise Linux 5 32-bit Kernel 2.6.18-8.el5 64-bit Kernel 2.6.18-92.1.1.el5	

Table 13. Web Server Platform

Web Server	Version
Microsoft Internet Information Services (IIS) on Microsoft Windows	6.0, 7.0, 7.5
Apache HTTP Server on Linux	2.2.8, 2.2.15

Table 14. Hardware

CPU	RAM
1 or more CPUs, 2GHz or greater	2GB

Table 15. Disk Space

Component	Required Space
Relay server 11.0.1	10MB
Sybase Hosted Relay Service	None

Port Number Reference

Components of Sybase Unwired Platform rely on communication ports for inter-process coordination, data transfer, and administrative access.

Unwired Server Ports

The following list identifies Unwired Server ports, and default port assignments.

Type	Default	Description
Administration	2000 2001 (secure)	Ports on which Unwired Server listens for IIOP requests. The secure administration port is disabled by default.
Data change notification (DCN)	8000 (HTTP) 8001 (HTTPS)	Ports on which Unwired Server listens for DCN requests.
Replication-based synchronization (RBS)	2480 2481 (secure)	Port used to synchronize data with mobile devices.
Messaging-based synchronization (MBS)	5001	Port used to synchronize data with mobile devices.
Messaging server administration	5100	Port used by the messaging service for Sybase messaging clients.

You can use Sybase Control Center (SCC) to change Unwired Server ports after installation.

Note: If there is a conflict for port 2480 or 2481, Unwired Server will not start. In that event, you will not be able to use SCC to modify those Unwired Server ports. To correct the problem, you must temporarily stop the service that uses the conflicting port, then start Unwired Server so you can change the port from the SCC console.

Data Tier Ports

The following list identifies data tier server ports, and default port assignments.

Type	Default	Description
Cluster database server	5300	SQL Anywhere® database server port
Consolidated database (CDB) server	5200	SQL Anywhere database server port
Messaging database server	6262	Advantage Database Server® port
Monitoring database server	5400	SQL Anywhere database server port

You can use Sybase Control Center to change data tier server ports after installation.

Sybase Control Center Ports

The following list identifies Sybase Control Center server ports, and default port assignments.

Type	Default	Description
RMI agent port	9999	Defined in: <InstallDir>\SCC-*\services\RMI\service-config.xml
JMS messaging service	2100	Defined in: <InstallDir>\SCC-*\services\Messaging\service-config.xml
SCC repository database	3638	Defined in: <InstallDir>\SCC-*\services\ScsSADataserver\service-config.xml
Web container	8282 (HTTP) 8283 (HTTPS)	Defined in: <InstallDir>\SCC-*\services\EmbeddedWebContainer\service-config.xml

To change a Sybase Control Center server port, you must edit the XML configuration file that defines the port.

Relay Server Ports

The following list identifies relay server ports, and default port assignments.

Type	Default	Description
HTTP	80	Port on which relay server listens for HTTP requests
HTTPS	443	Port on which relay server listens for HTTPS requests

You can use Sybase Control Center to change relay server ports after installation.

Reserved Ports

The following list identifies Sybase Unwired Platform reserved ports.

Do not use reserved port numbers for any purpose.

Type	Number	Description
Reserved port	4343	Ports reserved for internal use by Unwired Platform components.
	5500	
	8002	
	27000	

Even if the installer does not detect a conflict, the Windows operating system may use additional ports in the 1024-65535 range at a later time. In that event, you may encounter intermittent problems starting Unwired Platform services.

Refer to Microsoft operating system documentation to learn how to reserve ports and prevent the operating system from attempting to use them.

Other Ports

The following lists identify significant ports that are not directly associated with a Sybase Unwired Platform component.

OpenDS

The following ports are used by OpenDS LDAP server, which is supplied only with Sybase Unwired Platform Personal Developer Edition and Enterprise Developer Edition.

Type	Default	Description
LDAP server	10389	Port on which OpenDS server listens for LDAP requests.
Administration	4444	Not used by Unwired Platform.

Note: To change the OpenDS LDAP request port:

- Edit the file `<InstallDir>\Servers\UnwiredServer\OpenDS\config\config.ldif` to change the value of the `ds-cfg-listen-port` property.
- Edit the file `<InstallDir>\SCC-*\conf\csi.properties` to change the value of the `CSI.loginModule.8.options.ProviderURL` property.

SySAM License Server

If you deploy Unwired Platform with the served license model, all Unwired Platform hosts must have access to the SySAM license server port.

Type	Default	Description
SySAM license server	27000	Port on which SySAM license server listens for requests.

Installation Directories

Review the Sybase Unwired Platform installation directories to ensure a successful installation.

- 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, not all of the subfolders are present.

By default, Sybase Unwired Platform is installed in the `C:\Sybase\UnwiredPlatform` directory. You may have specified a different location.

Table 16. Unwired Platform installation directory subfolders

Folder	Description
<code>_jvm</code>	Files for Java Virtual Machine used by uninstaller.
<code>sup20ebflogs</code>	The output location of log files created each time Unwired Platform <code>installbf.bat</code> file is used. Use these logs to troubleshoot issues with the EBF installer. This directory is present in upgrade installations of Unwired Platform 2.0.
<code>Eclipse</code>	Files supporting the Eclipse development environment. Note: Present in developer installations only.
<code>InstallLogs</code>	The output location of log files created each time Unwired Platform installer is used. Use these logs to troubleshoot installer issues.

Folder	Description
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 for Sybase Control Center.
Servers	Server components that make up Unwired Platform and its mobile middleware services.
Servers\Advantage910	Device management components that 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 of required runtime files for other components integrated into the Unwired Platform environment. Contains the Free Download Terms PDF files from the Sybase Legal Department.
Uninstallers	The executable and supporting files used to uninstall Unwired Platform.
Unwired_WorkSpace	Executables and supporting files used by Unwired Workspace. Note: Present in developer installations only.
Util	Utilities that the 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 Sybase Control Center, which, by default, is installed in C:\Sybase\SCC-3_0.

Note: If you have other Sybase products installed, you may have two different versions of Sybase Control Center. Unwired Platform requires 3.0, so only this directory structure is documented.

Table 17. 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 its console plug-ins 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.
rtlib	Runtime library files used by SCC.
server	Class and library files used by the management framework server.
services	Class and library files used by SCC services.
shared	Class and library files shared by SCC and its plug-ins.
utility	Various utilities used by SCC.

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.
- Do not change a cluster name after you have installed the data tier. Doing so makes it impossible for Unwired Platform server services to start on the cluster nodes.

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)	
Sybase vendor daemon port for SySAM license server (optional for served license)	
Unwired Platform installation directory	

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	

Option	Value
Host name	
Information for consolidated database	
Database name	
Port number	
Login	
Password	
Information for cluster database	
Database name	
Port number	
Login	
Password	
Information for monitoring database (for primary node only)	
Database name	
Port number	
Login	
Password	

Table 21. Port numbers for data tier information

Option	Value
Database server port	
Messaging server port	
Cluster database port	
Monitoring database port	
If data tier is to be installed on a host configured with Microsoft Cluster Service (or Failover Clustering):	
Path to the shared cluster storage resource that will house the data tier database files	
Name of database server	

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	

Supported Third-Party Software and Hardware

Sybase Unwired Platform supports several versions of Microsoft Windows and Windows Mobile, Apple iOS, and RIM BlackBerry devices and operating systems.

Mobile Devices

Mobile devices and operating systems are supported in both the Sybase Mobile Workflow application and native code generation (Object API), unless otherwise noted.

Microsoft Windows (Object API only)

- Windows XP; Professional Edition, with SP2 or SP3 (32-bit only)
- Windows Vista; Business, Enterprise, and Ultimate Editions (32- and 64-bit)
- Windows 7; Professional, Enterprise, and Ultimate Editions (32- and 64-bit)

Windows Mobile Family

- Windows Mobile 6.0 Professional
- Windows Mobile 6.0 Standard (Object API only)
- Windows Mobile 6.1 Professional
- Windows Mobile 6.1 Standard (Object API only)
- Windows Mobile 6.5 Professional

- Windows Mobile 6.5 Standard (Object API only)

Recommended minimum hardware: 256MB RAM, CPU clock speed greater than 500MHz.

Apple iOS

- iPhone 3G iOS 4.2
- iPhone 3GS/4 iOS 4.2 and 4.3
- iPod touch 3rd/4th gen iOS 4.2 and 4.3
- iPad iOS 4.2 and 4.3
- iPad 2 iOS 4.3

The Sybase Mobile Workflow application is not supported on 3G devices due to their hardware limitations.

RIM BlackBerry

- BlackBerry OS 5.0.0
- BlackBerry OS 6.0.0

Recommended minimum hardware: 256MB RAM, CPU clock speed greater than 500MHz. Some 5.0 devices do not meet these minimums.

Native Application Development Environments

Unwired Platform supports native application development environments for mobile device platforms.

BlackBerry

- Java Plug-in for Eclipse v1.3
- Java Development Environment (JDE) v5.0 or v6.0

iPhone

- Mac OS X 10.6 (Snow Leopard), with Xcode 4.0.2 and iOS SDK 4.3

Windows Mobile

- Visual Studio 2008, Microsoft .NET Compact Framework 3.5

Windows

- Visual Studio 2008, Microsoft .NET Framework 3.5

Enterprise Information Systems (EIS) and Databases

Unwired Platform supports connections to several types of EIS and databases, which serve as the back end for mobile applications.

SAP® Connectors

- SAP Java Connector (SAP JCo) 2.1.x

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

Sybase Unwired Platform Licenses

Sybase Unwired Platform is available in three editions.

Edition	Summary
Personal Developer Edition	• Includes Unwired Server, data tier, and Sybase Unwired WorkSpace development tools. • Allows use in development systems and development-test systems only; not for use in production systems. • Requires all Unwired Platform components to be installed on the same host. • Allows a maximum of five client devices.
Enterprise Developer Edition	• Includes Unwired Server, data tier, and Sybase Unwired WorkSpace development tools. • Allows use in development systems and development-test systems only; not for use in production systems. • Allows each installable component to be located on a separate host. • Allows clustered systems. • Allows a maximum of 20 client devices.

Edition	Summary
Enterprise Edition	• Includes Unwired Server and data tier components only. • Allows use in production systems and production-test systems only; not for use in development systems. • Allows each installable component to be located on a separate host. • Allows clustered systems. • Requires separate license for client devices.

Installation License Requirements

Sybase Unwired Platform is licensed by servers, client devices, and developer workstations.

Before you install Sybase Unwired Platform on any host, you must obtain a license for:

- Each host on which an Unwired Platform server will be installed
- Each client device supported by a production system (Enterprise Edition)
- Each client device in excess of the limit in a development and test system (Personal Developer Edition or Enterprise Developer Edition)
- Each developer workstation

Note: 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.

License Checking Process

Unwired Server validates the status of both server and client device licenses.

Each Unwired Server instance must have its own server license.

In a cluster, all Unwired Server nodes can share a pool of client device licenses.

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.

Unserviced Model

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

- At start-up – if Unwired Server cannot retrieve the number of licensed servers from the license file, 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. See *System Administration Guide > Operations Maintenance > 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 start-up – if Unwired Server cannot retrieve the number of licensed servers from the license file, 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 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. See *System Administration Guide > Operations Maintenance > 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.

Device User License Limits

Licenses limit not just how many components you can install on a network, but how many users can connect to your servers.

If you notice messages similar to these errors in the Unwired Server log, then connection requests from registered users have exceeded the licensed limit:

```
2009-12-28 18:01:59.872 INFO      MMS      Thread-19
[com.sybase.sup.server.lm.LicenseUtil] The number of registered
devices has reached the maximum limit for your license.
2009-12-28 18:01:59.965 INFO      MMS      Thread-19
[com.sybase.djc.mobilink.LoginHandler] The number of registered
users has reached the maximum limit for your license.
2009-12-28 18:02:00.168 ERROR     Mobilink Thread-19
[com.sybase.ml.sup.Logger] [-10052] authenticate_parameters scripts
return 4000
```

For example, a trial license limits you to only five device users. If a sixth user tries to connect, the error is logged accordingly.

In cases where the number of users in your environment exceeds that of your license, you can either:

- Upgrade your license and manually change the license in your environment.
- Control the number of device user connections at a given moment in SCC. For example, you can view the total number of users in the User Statistics tab of the Monitor node. If the number of device users is too high for your license, you can manually delete unused devices from the system in the Devices node. See *Sybase Control Center online help > Manage > Managing Unwired Platform > Routine Command and Control Actions > Provision > Device Users > Devices > Deleting Replication and Messaging Devices*.

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 to 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 number of licensed servers cannot be retrieved from the license file, 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 enumerates each device connection made across clustered servers. Every server then checks out all device licenses when the servers start.

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
Unserviced 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.subscribe.net.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. Change to %SYBASE%\SYSAM-2_0\bin, Where *%SYBASE%* is the Sybase installation directory.
3. Run the license manager utility that obtains the host ID for a served license:

```
./lmutil lmhostid
```

```
lmutil lmhostid
```

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 is my Host ID?"

4. Obtain a host ID—in this case, the network adapter address. To find the network adapter address enter:

```
ipconfig /all
```

5. 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:
 - 00400516E525 on Linux platforms.
 - 170a3472 on Solaris platforms.
 - fb491d9 on AIX platforms.
 - ID_STRING= 972179e8-7b2b-11d7-bd55-4a651849415a on HP Itanium
 - 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.

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 23. 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 for the operating system you are using. The license agreement displays
3. In license agreement screen, select the appropriate country or region, read the agreement, then click **I Agree**.

Note: The license agreement appears only during your initial attempt to download a product. Once you agree to the license, the agreement no longer appears for subsequent downloads of the product.

4. On the Product Download page, click **License Keys**. The License Information page displays.
5. Verify that you have selected the license that matches the product name, edition, and license type with your company's purchase order, then click **Select to Generate** to generate the server or client license.

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

6. Select **Served License**, then click **Next**.
7. Enter the quantity of licenses to generate, then click **Next**. You can generate licenses for up to 10 machines.
8. 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 SySAM three-server redundant configuration. 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 SySAM 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.

9. Click **Generate.**

Once you have generated all the licenses your product requires, you can save your generated license with a `.lic` extension to the `licenses` directory in your license server installation, and:

- 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.

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 23.

Task

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

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 for the operating system you are using. The license agreement displays
3. In license agreement screen, select the appropriate country or region, read the agreement, then click **I Agree**.

Note: The license agreement appears only during your initial attempt to download a product. Once you agree to the license, the agreement no longer appears for subsequent downloads of the product.

4. On the Product Download page, click **License Keys**. The License Information page displays.
5. Verify that you have selected the license that matches the product name, edition, and license type with your company's purchase order, then click **Select to Generate** to generate the server or client license.

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

6. Select **Unreserved License** and click **Next**.
7. Select the number of machines to license and click **Next**. You can generate licenses for up to 10 machines.
8. 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.

9. Click **Generate**.

Once you have generated all the licenses your product requires, you can save your generated license with a `.lic` extension to the `licenses` directory in your license server installation, and:

- 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.

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:
 - Enterprise Edition – `INCREMENT SUP_ENTSRVR`
 - Enterprise Developer Edition – `INCREMENT SUP_ENTDEV`
 - Personal Developer Edition – `INCREMENT SUP_DEVEVELOPER`

For example:

- Enterprise 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 uncoun ted \
  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 Enterprise 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 uncoun ted \
  VENDOR_STRING=PE=EE;LT=CP HOSTID=000c29d300bd PLATFORMS="i86_n
\
...
```

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

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

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

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

- Locate the uncommented line, beginning with **INCREMENT SUP_ENTCLIENT**.

For example:

```
INCREMENT SUP_ENTCLIENT SYBASE 2011.11150 permanent uncoun ted \
  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="C0=Sybase,
Inc.;V=2.0;AS=A;MP=3120;CP=100;EGO=" \
...
```

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

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

- c) Determine the number of client licenses.

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

```
INCREMENT SUP_ENTCLIENT SYBASE 2011.11150 permanent uncounted \
  VENDOR_STRING=PE=EE;LT=ST HOSTID=000c29d300bd
PLATFORMS="i86_n \
  x64_n" ISSUER="C0=Sybase,
Inc.;V=2.0;AS=A;MP=3120;CP=100;EGO=" \
...
```

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

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

Setting a Fixed Port Number for SySAM License Server

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

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

This task is required when Sybase Unwired Platform is deployed in an environment where no ports are available for the licensing server to dynamically assign.

1. Obtain a port number that Unwired Platform can use to communicate with the SySAM license server.

Note: Back up the license file before you make any changes.

2. Use a text editor to open the license file, and locate the `VENDOR SYBASE` line, near the top of the file.
3. At the end of that line, type `PORT=` followed by the port number you obtained.

For example, if you use port 27010:

```
VENDOR SYBASE PORT=27010
```

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

4. Save and close the license file.

Switching from Served to Unserved License

You can switch from a served license to an unserved license, without reinstalling Unwired Platform components.

Repeat this task on each Unwired Server host.

1. Stop the Unwired Server.
2. Replace the license file (`*.lic`) at: `<InstallDir>\UnwiredPlatform\Servers\UnwiredServer\licenses\`
3. Restart the Unwired Server.

Switching from Unserved to Served License

You can switch from an unserved license to a served license, without reinstalling Unwired Platform components.

1. Download the SySAM license server software and installation instructions from <http://www.sybase.com/sysam/server>
2. Install the SySAM license server.
3. Copy the license file (`*.lic`) from `<InstallDir>\UnwiredPlatform\Servers\UnwiredServer\licenses\` to the `licenses` directory on the license server host.

Note: Back up the license file before you make any changes.

4. Edit the license file on the license server host to add the following lines:

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

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

5. Start the SySAM license server.
- See the *SySAM Users Guide* for more information.

Installing All Components on a Single Host

This installation scenario creates a standalone system, with no external dependencies, and suitable mainly for prototyping, or test and evaluation purposes.

1. *Preparing for Installation*

Ensure that the host on which you are installing Sybase Unwired Platform meets the system requirements and is ready for you to begin the installation.

2. *Entering License Information*

Start the Sybase Unwired Platform installer and enter license information.

3. *Selecting Installation Options*

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

4. *Completing the Installation*

Review the installation summary and launch the installation process.

5. *Verifying the Installation*

When you have completed the installation, verify that the installation was successful before proceeding.

See also

- *Migrating Unwired WorkSpace Projects from Version 1.2* on page 55

Preparing for Installation

Ensure that the host on which you are installing Sybase Unwired Platform meets the system requirements and is ready for you to begin the installation.

1. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components to be installed.
2. Verify that you have administrative privileges on the installation target host.
3. If the `%JAVA_TOOL_OPTIONS%` environment variable is set, remove it before installing Unwired Platform.
 - a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select **JAVA_TOOL_OPTIONS**, then click **Delete**.

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

Note: This includes any database servers, OpenDS server, Sybase Control Center, and SAP Data Orchestration Engine (if Sybase DOE Connector is present in an upgrade installation).

5. (Optional) If you want Web browser access to Sybase Control Center, from the installation target host, install Adobe Flash Player 9.0.124+ or 10.x (recommended).

See also

- *Deployment Planning* on page 1
- *System Requirements* on page 4

Entering License Information

Start the Sybase Unwired Platform installer and enter license information.

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 all the archive files 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.

Browse to the location of the `setup.exe` file, and double-click it to start the installer.

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

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

4. On the end-user license agreement page, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your License Product Edition and License Type. Enter the Number of Client Licenses, if applicable.

6. Enter the location of your license file.

- If you selected **Unservd (local) license**, enter the absolute path to the license file on the installation target host.
- If you selected **Served (remote) license**, enter the **Host Name of License Server** and **TCP Port of License Server**.

If you get an error, such as **Failed to check out license**, click **OK**, then click **Back** to confirm the license model (served or unserved), License Product Edition, and License Type.

See also

- *Sybase Unwired Platform Licenses* on page 18

Selecting Installation Options

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

1. Specify the installation location on the target host.

If you specify a non-default location, all directory names in the absolute path should contain only:

- ASCII alphanumeric characters
- Underscore (_) or hyphen (-) characters

No space characters and no other symbols are allowed in the path to the installation location.

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

3. (Optional) Select additional installation options.

- **Configure Unwired Platform communication ports** to change default ports.
- **Set Sybase Unwired Platform services to start automatically** to start services automatically when Windows starts.

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, dependent products will encounter problems.

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

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

5. (Optional) If you selected **Configure Unwired Platform communication ports**, change the port numbers as needed.

- General ports:
 - **Server administration**
 - **Data change notification**
- Synchronization ports:
 - **Messaging**
 - **Replication**

See also

- *Port Number Reference* on page 8
- *Installation Worksheet* on page 14

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, verify the installation features and click **Install**.
2. (Optional) Click **View Release Bulletin**.
3. Click **Finish**.

For information about configuring Sybase Unwired Platform, see:

- *Sybase Unwired WorkSpace - Mobile Business Object Development*
- *System Administration*

Verifying the Installation

When you have completed the installation, verify that the installation was successful before proceeding.

1. Log in to Sybase Control Center.
2. Make sure you can connect to each instance of Unwired Server.
3. If your Sybase Unwired Platform services do not run, or you have problems connecting, this may be due to a personal firewall or intrusion detection/prevention software (IPS or IDPS). See *Handling Intrusion Detection/Prevention Software*.
4. After making changes to work around host intrusion prevention software, repeat steps 1 and 2. Accept any security warnings to connect to Sybase Control Center.

Handling Intrusion Detection/Prevention Software

A personal firewall, or intrusion detection/prevention software (IPS or IDPS), can cause Unwired Platform components to malfunction or not function at all. Unwired Platform uses

regular IP communication between components on the primary network interface of a computer, even when all components are installed on the same host.

If the local network interface is secured by intrusion detection/prevention software (IPS or IDPS, for example, McAfee Host Intrusion Prevention software or equivalent), the security software must be configured to allow all network communication between Unwired Platform components.

For a single node installation of all of the Sybase Unwired Platform components, try one of these options to work around the limitations imposed by the host intrusion prevention software and policy settings, without violating any security policy, until the settings of your security software are adjusted to the needs of Unwired Platform to operate correctly.

1. Option One: Remove the host machine from the network.

Note: This local-only mode is especially suitable when you use your laptop in a network other than your corporate network, and want to demonstrate a mobile solution using a simulator or emulator with all components running on the same machine.

- a) Stop the Sybase Unwired Platform services in the correct order. See the *Starting and Stopping Unwired Platform Server Services* topic in the *Release Bulletin*.
- b) Disconnect the host from all networks.
- c) Restart Sybase Unwired Platform services in the correct order.
- d) Change the Sybase Control Center URL link to use "localhost" or *<yourhostname>* as the host name, instead of the original fully qualified host name of the machine that included the domain name (for example: `https://localhost:8283/scc`, or `https://yourhostname:8283/scc`). Accept any security warnings to connect to Sybase Control Center.

This ensures that all interconnections between Sybase Unwired Platform components are treated as local traffic and will not be flagged as incoming connections from external sources causing connection failures due to security policy setting.

2. Option Two: Connect the host to the corporate network.

Note: The option of connecting to corporate network through VPN is especially suitable when you use your laptop in a network other than your corporate network, and want to demonstrate a mobile solution using your physical devices, and need outgoing connections to a backend Enterprise Information System (EIS) or Relay Server (Sybase Hosted Relay Server or otherwise).

- a) Stop the Sybase Unwired Platform services in the correct order. See the *Starting and Stopping Unwired Platform Server Services* topic in the *Release Bulletin*.
- b) Reconnect the host to your corporate network directly or through corporate VPN, to ensure that the corporate network security policy applies.
- c) Restart Sybase Unwired Platform services in the correct order.
- d) Change the Sybase Control Center URL link to use "localhost" or *<yourhostname>* as the host name, instead of the original fully qualified host name of the machine that included the domain name (for example: `https://localhost:8283/scc`, or

`https://yourhostname:8283/scc`). Accept any security warnings to connect to Sybase Control Center.

This ensures that all interconnections among Sybase Unwired Platform components are internal to your corporate network and validated against the corporate network related security policy.

Always check for the latest available patches and updates for your Unwired Server version on *<http://downloads.sybase.com/swd/base.do?client=support>*.

Installing Sybase Unwired WorkSpace Only

This installation scenario creates a single developer workstation, which relies on network connections to Unwired Server and data tier instances. It is suitable for a developer environment, in which the Unwired Server and data tier resources are shared by several developers.

1. *Preparing for Installation*

Ensure that the host on which you are installing Sybase Unwired Platform meets the system requirements and is ready for you to begin the installation.

2. *Entering License Information*

Start the Sybase Unwired Platform installer and enter license information.

3. *Selecting Installation Options*

On the component selection page, select only Unwired WorkSpace.

4. *Completing the Installation*

Review the installation summary and launch the installation process.

See also

- *Migrating Unwired WorkSpace Projects from Version 1.2* on page 55

Preparing for Installation

Ensure that the host on which you are installing Sybase Unwired Platform meets the system requirements and is ready for you to begin the installation.

1. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components to be installed.
2. Verify that you have administrative privileges on the installation target host.
3. If the `%JAVA_TOOL_OPTIONS%` environment variable is set, remove it before installing Unwired Platform.
 - a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select **JAVA_TOOL_OPTIONS**, then click **Delete**.
 - d) Click **OK** to exit all dialogs.
4. Shut down all Sybase software, Sybase processes, and associated third-party processes running on the installation target host.

Note: This includes any database servers, OpenDS server, Sybase Control Center, and SAP Data Orchestration Engine (if Sybase DOE Connector is present in an upgrade installation).

5. (Optional) If you want Web browser access to Sybase Control Center, from the installation target host, install Adobe Flash Player 9.0.124+ or 10.x (recommended).

See also

- *Deployment Planning* on page 1
- *System Requirements* on page 4

Entering License Information

Start the Sybase Unwired Platform installer and enter license information.

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 all the archive files 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.

Browse to the location of the `set up . exe` file, and double-click it to start the installer.

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

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

4. On the end-user license agreement page, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your License Product Edition and License Type. Enter the Number of Client Licenses, if applicable.
6. Enter the location of your license file.
 - If you selected **Unserviced (local) license**, enter the absolute path to the license file on the installation target host.

- If you selected **Served (remote) license**, enter the **Host Name of License Server** and **TCP Port of License Server**.

If you get an error, such as **Failed to check out license**, click **OK**, then click **Back** to confirm the license model (served or unserved), License Product Edition, and License Type.

See also

- *Sybase Unwired Platform Licenses* on page 18

Selecting Installation Options

On the component selection page, select only Unwired WorkSpace.

1. Specify the installation location on the target host.

If you specify a non-default location, all directory names in the absolute path should contain only:

- ASCII alphanumeric characters
- Underscore (_) or hyphen (-) characters

No space characters and no other symbols are allowed in the path to the installation location.

2. On the installation type page, select **Custom** and click **Next**.
3. On the component selection page, click **Clear All**, then select **Unwired WorkSpace** and click **Next**.

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, verify the installation features and click **Install**.
2. (Optional) Click **View Release Bulletin**.
3. Click **Finish**.

For information about configuring Sybase Unwired Platform, see *Sybase Unwired WorkSpace - Mobile Business Object Development*.

Installing All Servers on a Single Host

This installation scenario locates all Unwired Platform server components (Unwired Server and data tier) on a single host. It is suitable mainly for a developer environment, with shared Unwired Platform server resources. It may also be suitable for an Unwired Platform prototyping environment, or a minimal, low-volume production system, with no support for load balancing or high availability (i.e., failover).

1. *Preparing for Installation*

Ensure that the host on which you are installing Sybase Unwired Platform meets the system requirements and is ready for you to begin the installation.

2. *Entering License Information*

Start the Sybase Unwired Platform installer and enter license information.

3. *Selecting Installation Options*

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

4. *Completing the Installation*

Review the installation summary and launch the installation process.

Preparing for Installation

Ensure that the host on which you are installing Sybase Unwired Platform meets the system requirements and is ready for you to begin the installation.

1. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components to be installed.
2. Verify that you have administrative privileges on the installation target host.
3. If the `%JAVA_TOOL_OPTIONS%` environment variable is set, remove it before installing Unwired Platform.
 - a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select **JAVA_TOOL_OPTIONS**, then click **Delete**.
 - d) Click **OK** to exit all dialogs.
4. Shut down all Sybase software, Sybase processes, and associated third-party processes running on the installation target host.

Note: This includes any database servers, OpenDS server, Sybase Control Center, and SAP Data Orchestration Engine (if Sybase DOE Connector is present in an upgrade installation).

See also

- *Deployment Planning* on page 1
- *System Requirements* on page 4

Entering License Information

Start the Sybase Unwired Platform installer and enter license information.

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 all the archive files 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.

Browse to the location of the `setup.exe` file, and double-click it to start the installer.

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

Options	Description
Unserviced (local) license	Standalone license managed locally by the host.
Served (remote) license	Standalone license managed by a license server.

4. On the end-user license agreement page, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your License Product Edition and License Type.
Enter the Number of Client Licenses, if applicable.
6. Enter the location of your license file.
 - If you selected **Unserviced (local) license**, enter the absolute path to the license file on the installation target host.
 - If you selected **Served (remote) license**, enter the **Host Name of License Server** and **TCP Port of License Server**.

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

See also

- *Sybase Unwired Platform Licenses* on page 18

Selecting Installation Options

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

1. Specify the installation location on the target host.

If you specify a non-default location, all directory names in the absolute path should contain only:

- ASCII alphanumeric characters
- Underscore (_) or hyphen (-) characters

No space characters and no other symbols are allowed in the path to the installation location.

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

3. On the component selection page, click **Select All**.

If Unwired WorkSpace appears in the list of features, uncheck that item, then click **Next**.

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

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

5. (Optional) Select additional installation options.

- **Configure Unwired Platform communication ports** to change default ports.
- **Set Sybase Unwired Platform services to start automatically** to start services automatically when Windows starts.

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, dependent products will encounter problems.

6. (Optional) If you selected **Configure Unwired Platform communication ports**, change the port numbers as needed.

- General ports:
 - **Server administration**
 - **Data change notification**
- Synchronization ports:
 - **Messaging**

- **Replication**

See also

- *Port Number Reference* on page 8
- *Installation Worksheet* on page 14

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, verify the installation features and click **Install**.
2. (Optional) Click **View Release Bulletin**.
3. Click **Finish**.

For information about configuring Sybase Unwired Platform, see *System Administration*.

CHAPTER 5 Installing the Data Tier

This installation scenario locates Unwired Platform data tier components on a separate host from Unwired Server. It is suitable for a typical production system, allowing support for high availability (i.e., failover) of common data tier resources shared by multiple Unwired Server instances.

1. *Preparing for Installation*

Ensure that the host on which you are installing Sybase Unwired Platform meets the system requirements and is ready for you to begin the installation.

2. *Entering License Information*

Start the Sybase Unwired Platform installer and enter license information.

3. *Selecting Installation Options*

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

4. *Completing the Installation*

Review the installation summary and launch the installation process.

Preparing for Installation

Ensure that the host on which you are installing Sybase Unwired Platform meets the system requirements and is ready for you to begin the installation.

1. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components to be installed.
2. Verify that you have administrative privileges on the installation target host.
3. If the `%JAVA_TOOL_OPTIONS%` environment variable is set, remove it before installing Unwired Platform.
 - a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select **JAVA_TOOL_OPTIONS**, then click **Delete**.
 - d) Click **OK** to exit all dialogs.
4. Shut down all Sybase software, Sybase processes, and associated third-party processes running on the installation target host.

Note: This includes any database servers, OpenDS server, Sybase Control Center, and SAP Data Orchestration Engine (if Sybase DOE Connector is present in an upgrade installation).

See also

- *Deployment Planning* on page 1
- *System Requirements* on page 4

Entering License Information

Start the Sybase Unwired Platform installer and enter license information.

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 all the archive files 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.

Browse to the location of the `setup.exe` file, and double-click it to start the installer.

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

Options	Description
Unserviced (local) license	Standalone license managed locally by the host.
Served (remote) license	Standalone license managed by a license server.

4. On the end-user license agreement page, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your License Product Edition and License Type.
Enter the Number of Client Licenses, if applicable.
6. Enter the location of your license file.
 - If you selected **Unserviced (local) license**, enter the absolute path to the license file on the installation target host.
 - If you selected **Served (remote) license**, enter the **Host Name of License Server** and **TCP Port of License Server**.

If you get an error, such as **Failed to check out license**, click **OK**, then click **Back** to confirm the license model (served or unserved), License Product Edition, and License Type.

See also

- *Sybase Unwired Platform Licenses* on page 18

Selecting Installation Options

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

1. Specify the installation location on the target host.

If you specify a non-default location, all directory names in the absolute path should contain only:

- ASCII alphanumeric characters
- Underscore (_) or hyphen (-) characters

No space characters and no other symbols are allowed in the path to the installation location.

2. On the installation type page, select **Cluster** and click **Next**.
3. On the cluster setup selection page, select **Install the data tier for your Unwired Platform cluster** and click **Next**.
4. (Optional) Select additional installation options.
 - Select **Configure data tier** to:
 - Change default ports used by data tier servers, or
 - Install the data tier on a host configured with Microsoft Cluster Service (or Failover Clustering).
5. Enter the cluster administrator password for Unwired Platform.

Note: This password is for Unwired Platform configuration only. It is not associated with a user ID authenticated by Active Directory, or locally on the installation target host. It must be used in any subsequent Unwired Platform installation or upgrade.

6. If you selected **Configure Data Tier**:
 - a) Enter port numbers or accept the defaults for:
 - **Consolidated Database Server**
 - **Cluster Database Server**
 - **Monitoring Database Server**
 - **Messaging Database Server**
 - b) If you are installing the data tier on a host configured with Microsoft Cluster Service (or Failover Clustering), select **Install Data Tier into high availability environment**, then complete the following fields.
 - **Enter a path for the location of the high availability data** – Enter the path to the shared cluster storage resource that will house the data tier database files.

The path must use a drive letter mapped on each data tier host. It cannot be a UNC path.

The path must point to an empty directory, or a new directory to be created by the installer, in the shared cluster storage resource.

- **Enter a name for database server** – Enter the database server name to be used for the Unwired Platform cluster database, consolidated database, and monitoring database server.

For more information on using Microsoft Cluster Service (or Failover Clustering) with Unwired Platform, see *System Administration, Implementing an N+2-node Cluster for Optimal Redundancy*.

See also

- *Port Number Reference* on page 8
- *Installation Worksheet* on page 14

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, verify the installation features and click **Install**.
2. (Optional) Click **View Release Bulletin**.
3. Click **Finish**.

For information about configuring Sybase Unwired Platform, see *System Administration*.

CHAPTER 6 Installing the Unwired Server

This installation scenario locates Unwired Server components on a separate host from the data tier. It is suitable for a typical production system, allowing support for load balancing among Unwired Server instances.

Prerequisites

Unwired Server installation depends on data tier installation. Data tier components must be installed first, before installing Unwired Server components.

1. *Preparing for Installation*

Ensure that the host on which you are installing Sybase Unwired Platform meets the system requirements and is ready for you to begin the installation.

2. *Entering License Information*

Start the Sybase Unwired Platform installer and enter license information.

3. *Selecting Installation Options*

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

4. *Completing the Installation*

Review the installation summary and launch the installation process.

Preparing for Installation

Ensure that the host on which you are installing Sybase Unwired Platform meets the system requirements and is ready for you to begin the installation.

1. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components to be installed.
2. Verify that you have administrative privileges on the installation target host.
3. If the `%JAVA_TOOL_OPTIONS%` environment variable is set, remove it before installing Unwired Platform.
 - a) Right-click **My Computer** and select **Properties**.
 - b) Select the **Advanced** tab, then click **Environment Variables**.
 - c) Select **JAVA_TOOL_OPTIONS**, then click **Delete**.
 - d) Click **OK** to exit all dialogs.
4. Shut down all Sybase software, Sybase processes, and associated third-party processes running on the installation target host.

Note: This includes any database servers, OpenDS server, Sybase Control Center, and SAP Data Orchestration Engine (if Sybase DOE Connector is present in an upgrade installation).

See also

- *Deployment Planning* on page 1
- *System Requirements* on page 4

Entering License Information

Start the Sybase Unwired Platform installer and enter license information.

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 all the archive files 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.

Browse to the location of the `setup.exe` file, and double-click it to start the installer.

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

Options	Description
Unserviced (local) license	Standalone license managed locally by the host.
Served (remote) license	Standalone license managed by a license server.

4. On the end-user license agreement page, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your License Product Edition and License Type.
Enter the Number of Client Licenses, if applicable.
6. Enter the location of your license file.
 - If you selected **Unserviced (local) license**, enter the absolute path to the license file on the installation target host.
 - If you selected **Served (remote) license**, enter the **Host Name of License Server** and **TCP Port of License Server**.

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

See also

- *Sybase Unwired Platform Licenses* on page 18

Selecting Installation Options

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

1. Specify the installation location on the target host.

If you specify a non-default location, all directory names in the absolute path should contain only:

- ASCII alphanumeric characters
- Underscore (_) or hyphen (-) characters

No space characters and no other symbols are allowed in the path to the installation location.

2. On the installation type page, select **Cluster** and click **Next**.
3. On the cluster setup selection page, select the option for this Unwired Server node and click **Next**.
 - **Install the first server node and connect it to the data tier**
 - **Install an additional server node and connect it to the data tier**
4. If a page appears, indicating that the installer detected missing third-party software, click:
 - **Next** to install the required software.
 - **Back** to select components to install that do not require the third-party software.
 - **Cancel** to stop the current installation.
5. (Optional) Select additional installation options.
 - **Configure Unwired Platform communication ports** to change default ports.
 - **Set Sybase Unwired Platform services to start automatically** to start services automatically when Windows starts.
 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, dependent products will encounter problems.
6. Enter information that the Unwired Platform installer needs to access the data tier.
 - a) Enter the Unwired Platform cluster administrator password.
 The Unwired Platform cluster administrator password is specified when the data tier is installed.
 - b) Enter the UNC path to the file system that houses database files for the data tier.
 The UNC path must use a fully qualified server name (host . domain).

If you installed the data tier on hosts configured with Microsoft Cluster Service (or Failover Clustering), enter the UNC path to the shared cluster storage resource that houses database files for the data tier.

7. Enter information for the Windows account under which Unwired Server services will run.

The user ID (account name) must:

- Be a Windows domain user ID
- Be a member of the local Administrator's group on the installation target host
- Have read/write access to the file system that houses database files for the data tier.

Note: If you are installing Unwired Server nodes in an Unwired Platform cluster, you must enter identical Windows account information for each Unwired Server node.

8. Enter information that Unwired Server needs to connect to the data tier.

- a) Enter the name of the data tier host.

If the data tier is installed on hosts with Microsoft Cluster Service (or Failover Clustering), enter the name of the cluster service that acts as a "virtual host" for the data tier.

- b) Enter the following for each configurable database (consolidated database, cluster database, and monitoring database):

- **Database Name**
- **Port Number**
- **Login**
- **Password**

Values shown in those fields are populated by the Unwired Platform installer, from a properties file created when the data tier was installed. In a typical installation, you need not change any pre-populated field value.

9. (Optional) If you selected **Configure Unwired Platform communication ports**, change the port numbers as needed.

- General ports:
 - **Server administration**
 - **Data change notification**
- Synchronization ports:
 - **Messaging**
 - **Replication**

See also

- *Port Number Reference* on page 8
- *Installation Worksheet* on page 14

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, verify the installation features and click **Install**.
2. (Optional) Click **View Release Bulletin**.
3. Click **Finish**.

For information about configuring Sybase Unwired Platform, see *System Administration*.

CHAPTER 7 **Upgrading to Sybase Unwired Platform 2.0**

The upgrade to Unwired Platform 2.0 is performed in place.

Migrating Unwired WorkSpace Projects from Version 1.2

Project artifacts created in Unwired WorkSpace version 1.2 must be migrated to version 1.5.x, before you upgrade Unwired WorkSpace to version 2.0.

If your Unwired WorkSpace was upgraded from version 1.2 to 1.5.5, without migrating projects to version 1.5.x, you must migrate the projects manually, before you upgrade to Unwired WorkSpace version 2.0.

1. Follow the steps in *Sybase Unwired Platform 1.5.2 Installation Guide*, "Performing Migration Tasks" and "API Differences."

See <http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00838.0152/doc/html/title.html>.

These steps migrate the project artifacts to version 1.5.2. You can perform these steps in Unwired WorkSpace version 1.5.2, 1.5.3, or 1.5.5. No further migration is required, when upgrading Unwired WorkSpace from version 1.5.x to 2.0.

2. Upgrade your Unwired WorkSpace 1.5.5 installation to version 2.0.

Upgrading Sybase Unwired Platform

Follow these guidelines when upgrading in place an existing Unwired Platform installation in any configuration.

You can upgrade your existing Unwired Platform installation by installing this version "in place" – overwriting files in the earlier installation. When you run the installer you follow the same instructions you would for a new installation. Before running the installer, review the relevant information in this chapter:

- The information in this topic applies to all upgrades.
- Additional information in the rest of the topics in this chapter applies specifically to different configurations of Unwired Server.

When upgrading Unwired Platform, on a single server or in any type of cluster:

- The existing Unwired Platform installation must be version 1.5.5.
- If version 1.5.5 and version 1.2 are installed on the same server, remove the version 1.2 installation before upgrading to version 2.0.
- Perform a full system backup.
- If Sybase DOE Connector is present, shut down SAP Data Orchestration Engine.

Backing Up an Existing Installation before Upgrading

As insurance against the possibility that the upgrade cannot be successfully completed, your backup will allow you to quickly restore the earlier version.

Before you upgrade, perform these steps on all servers where Unwired Server or the data tier have been installed.

Note: On developer workstations where only Unwired WorkSpace is installed, you only need to back up the project source files.

1. Perform a full system backup.
In a virtual machine (VM) installation, take a snapshot of the VM.
2. Back up the Windows registry.

Upgrading a Simple Load Balancing Cluster Installation

Where the cluster uses only the basic load balancing cluster support that is built into Unwired Platform.

1. Shut down all Sybase-related processes on cluster nodes in this sequence:
 1. Secondary nodes.
 2. Primary node.
 3. Data tier.
2. Upgrade servers in this sequence, leaving Sybase services restarted on completion of each upgrade:
 1. Data tier.
 2. Primary node.
 3. Secondary nodes.

Upgrading a Microsoft Cluster Service or Failover Cluster

Follow this sequence for shutting down, upgrading, and restarting cluster components.

1. Shut down all Sybase-related processes on cluster nodes in this sequence:
 1. Secondary nodes.
 2. Primary node.
2. On the active data tier server, launch the Microsoft Cluster Administrator and take the following active resources offline for this node:

- Advantage Cluster Service
- AFDB Cluster Service
- CDB Cluster Service

All other resources must remain online and accessible. If a resource other than those listed above becomes unavailable, the data tier upgrade fails.

3. Upgrade the active data tier.
4. Validate the upgrade on the data tier node by bringing the stopped Microsoft Cluster resources online and confirming that they are restarted.
5. Upgrade the passive node.
 1. Launch Microsoft Cluster Administrator.
 2. Failover the active node to the passive node. The passive node is now active.
 3. Repeat steps 2-4.
6. With all data tiers started, upgrade Unwired Platform on the remaining server nodes in this sequence:
 1. Primary node.
 2. Secondary nodes.

Note: Ensure that the user credentials used to perform the upgrade on the Unwired Server nodes has the same permissions to read/write to the shared data path of the data tier node.

7. Restart all Unwired Servers, beginning with the primary server.

Upgrading and Migrating Relay Server Components

You must upgrade existing Relay Servers and RSOEs, when you upgrade Unwired Platform to version 2.0.

1. *Upgrading Relay Server with an Archive*

Find the relay server archive on the Unwired Platform installation media. This archive upgrades relay server binaries when you extract content on the relay server host.

2. *Upgrading RSOE and Migrating Configuration Files*

As of this release, configuring RSOE with the relayserver.properties file is no longer supported, nor is the RSOE installed to run as a separate service. Now, RSOE runs as a separate process with Unwired Server service. Consequently, you must migrate this file and upgrade RSOE on each Unwired Server node in your environment.

Upgrading Relay Server with an Archive

Find the relay server archive on the Unwired Platform installation media. This archive upgrades relay server binaries when you extract content on the relay server host.

1. From the 2.0 installation media, get the relevant relay server archive file:
 - For 32-bit operating systems on Windows, use `relayserver.zip`.
 - For 64-bit operating systems on Windows, use `relayserver_x64.zip`.
 - For Linux on Intel-based systems, use `relayserver_linux_x86.tar.gz`.

The archive contains the current executables and DLLs for the relay server.

Note: These files are available only on the installation media for the Deployment (Enterprise) Edition of Unwired Platform.

2. Stop the Web server and the relay server.
3. Complete the upgrade by following the update steps for your Web server.

Extracted files overwrite existing files.

In *System Administration*, search for the corresponding topic:

- *Updating Relay Server for IIS on Windows*
- *Updating Relay Server for Apache on Linux*

Upgrading RSOE and Migrating Configuration Files

As of this release, configuring RSOE with the `relayserver.properties` file is no longer supported, nor is the RSOE installed to run as a separate service. Now, RSOE runs as a separate process with Unwired Server service. Consequently, you must migrate this file and upgrade RSOE on each Unwired Server node in your environment.

When you upgrade an Unwired Server node, the installer automatically removes all existing RSOEs and migrates the `relayserver.properties` configuration file—but only if the `relayserver.properties` is in the default install location (that is, `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer\config`).

Before running the installer, ensure that `relayserver.properties` is accurate and current. If errors appear, review *RSOE Migration Error Reference* to help you diagnose and resolve the error, before rerunning the installer.

If you would like to perform these actions post-install, use **regRelayServer** utility with the `migrate` command. For details, see *Removing RSOE and Migrating Configuration Files With Scripts* and *Register Relay Server (regRelayServer) Utility* in *System Administration*.

Once the RSOEs are migrated, the RSOEs can be managed using Sybase Control Center. For details, see *RSOEs* in Sybase Control Center online help.

See also

- *RSOE Migration Error Reference* on page 84

Verifying an Upgrade Installation

When you have completed an upgrade installation, verify that the upgrade was successful before proceeding. If necessary, restore the earlier version.

1. Log in to Sybase Control Center.
2. Make sure you can connect to each instance of Unwired Server.
3. As you connect to each instance of Unwired Server, make sure the server management functions you are familiar with are available.

This section describes the steps to migrate artifacts (such as mobile applications, MBOs, packages, projects, etc.) that were working in version 1.5.5 of Sybase Unwired Platform to version 2.0.

Migrating Mobile Application Projects

Migrate mobile application projects from version 1.5.5 of Unwired WorkSpace.

Migration happens automatically when you first open a mobile application project in the current version of Unwired WorkSpace.

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

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

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

The migration 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 and warnings. 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. To view the connection profiles referenced by the migrated project, expand the Data Source References subfolder within the mobile application project folder.

If a previous Unwired WorkSpace project version opens in the Mobile Application Diagram and you exit Unwired WorkSpace, the migration confirmation dialog appears the next time you open Unwired WorkSpace. For example:

1. Locate an Unwired Workspace project.
2. Right-click the project and select **Open in diagram editor**.
3. In the migration dialog, click **Yes** to confirm migration, but 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 appears when Unwired WorkSpace is in the process of opening. This is normal Eclipse behavior.

Note: If you disable the Migrate dialog in **Window > Preferences > Sybase, Inc > Mobile Development > Miscellaneous**, migration occurs without prompting.

3. (Optional) If you wish to modify the MBO, redeploy the mobile application project.
If earlier 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. (Optional) If you wish to use new or enhanced methods in the Object API, 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 the "Migration Guidelines and Limitations" topic in the *Installation Guide for Sybase Unwired Platform*, version 1.5.2.

Migrating Mobile Workflow Projects

Mobile workflow projects work properly without special handling, unless you want to upgrade to the new workflow client containers.

After upgrading Unwired Platform to version 2.0:

- Unwired Platform version 1.5.5 Workflow packages work properly within 1.5.5 Workflow Client Containers on iOS and Windows Mobile platforms.
- Unwired Platform version 1.5.5 Workflow packages for iOS and Windows Mobile work properly in 2.0 Workflow Client Containers. These packages do not work for Blackberry; the container for Blackberry does not support 1.5.5 packages.
- To use the new workflow client containers:
 1. Reopen the workflow project and redeploy it to Unwired Server instances that have been upgraded to version 2.0.
 2. Upgrade the client containers on devices and emulators manually, or through Afaria®.

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:

- Uninstall any Sybase products that required Unwired Platform to be installed 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 all Sybase software, Sybase processes, and associated third-party processes running on the installation target host..

Note: This includes any database servers, OpenDS server, Sybase Control Center, and SAP Data Orchestration Engine (if Sybase DOE Connector is present in an upgrade installation).

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.
- 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 it exists.
- Preserve your data by backing up the database if you plan to reinstall Unwired Platform. See *System Administration for Sybase Unwired Platform > Systems Maintenance and Monitoring > Backup and Recovery*.

Task

Uninstall Sybase Unwired Platform components before reinstalling them or upgrading to a new version.

1. In Windows, select **Start > Settings > Control Panel > Add or Remove Programs**.
2. Select **Sybase Unwired Platform <version>**, 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 <version>.
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 cannot delete the Sybase Control Center installation directory (C:\Sybase\SCC-3_0 by default), see *Troubleshooting Uninstallation* on page 83.

Scripting Silent Installation or Uninstallation

You can automate Unwired Platform installation or uninstallation by specifying settings in a text file, then running a .bat file that reads the text file settings and silently runs the Unwired Platform installer or uninstaller.

Silent Installation

Use the `SilentInstall_Win.bat` file from the command line to automate the installation process. The Unwired Platform installer then runs silently, taking input from the `SilentInstall_Win.txt` file.

The silent installation capability allows you to perform any particular type of Unwired Platform installation without manually entering information through the installer interface.

- You configure installer settings in a `SilentInstall_Win.txt` file.
- You then run the installer from the command prompt through a `SilentInstall_Win.bat` file.
- Each different type of installation requires a `SilentInstall_Win.txt` file with one or more settings that are required to perform that type of installation. For example, different settings perform a single-server installation, or one of the three types of installation required in a cluster.

Planning a Silent Installation

Review the content of the default `SilentInstall_Win.txt` file and determine what changes you need to make for the different types of Unwired Platform installation you want to automate.

1. Locate the `SilentInstall_Win.bat` and `SilentInstall_Win.txt` file in the root directory of your installation media.
2. If you cannot modify these files in this location on the installation media, create a copy of the installer image in a location from which you can run the installer.
3. From the top level directory in the installer image, open the `SilentInstall_Win.txt` file in a text editor and review the current default settings.

Comments above each group of settings provide a description of the valid options available and any special requirements for the entry.
4. Determine what changes you want to make in the installation settings.

For example, you may want to match the non-default settings you have used for port numbers in your existing installation.

Modifying Properties in the SilentInstall_Win.txt File

Edit a separate copy of the default `SilentInstall_Win.txt` file for each different type of Unwired Platform installation you want to automate.

1. From the top level directory in the installer image, open `SilentInstall_Win.txt` in a text editor.
2. Make the changes you have determined are necessary. Some settings must be different for different types of installation, for example:

```
...
#Note: Only one of the three properties can be set to true at any
given time.
#
#####
#-V clusterCDB="true"
#-V clusterCreateNew="false"
#-V clusterAddToExisting="false"
...
```

3. Save your changes.

If you are preparing to perform several different types of silent install, say for different types of cluster node, save the file with a unique name, or in a separate folder. When you perform a silent install, this file must be named `SilentInstall_Win.txt` and it must be located in the top level directory in the installer image.

Performing a Silent Installation

Make sure you have the correct version of the modified `SilentInstall_Win.txt` file in the installer image, then run the `SilentInstall_Win.bat` file from the command prompt.

1. On temporary or test servers, for each type of installation that you are automating, perform a trial run of these instructions using your modified `SilentInstall_Win.txt` files. Verify that each modified `SilentInstall_Win.txt` file is producing the desired installation outcome before proceeding with silent installations on the real target hosts.
2. Make sure that the top level directory in the installer image you are using contains the correct version of the `SilentInstall_Win.txt` file that you have modified for a particular installation type.
3. From the command prompt on that server, navigate to the top level directory in the installer image and enter:

```
SilentInstall_Win.bat
```

4. Check the log files for errors.
 - Errors that cause the silent installation to fail before the install destination is created are logged in `<InstallDrive>\UPInstall.log`.

- Errors encountered after the install destination is created are logged in `<UnwiredPlatformHome>\InstallLogs\UPInstall.log`.
5. Repeat these steps on different servers for each different type of installation you are automating.

Silent Uninstallation

Use the `SilentUninstall_Win.bat` file from the command line to automate the uninstallation process. The Unwired Platform uninstaller then runs silently, taking input from the `SilentUninstall_Win.txt` file.

The silent uninstallation capability allows you to perform selective uninstallation of Unwired Platform components without manually entering information through the uninstaller interface.

- You control which Unwired Platform components are uninstalled through settings in a `SilentUninstall_Win.txt` file. The default settings remove all Unwired Platform components.
- You then run the uninstaller from the command prompt through a `SilentUninstall_Win.bat` file.
- The `SilentUninstall_Win.txt` and `SilentUninstall_Win.bat` files are copied to the `<UnwiredPlatformHome>\Uninstallers\UnwiredPlatform` directory when you perform a silent install. If you did not perform a silent install, copy these files to this location from the root directory of your installation media.
- Each uninstallation that removes a different combination of Unwired Platform components requires a separate `SilentUninstall_Win.txt` file.

Planning a Silent Uninstallation

Review the content of the default `SilentUninstall_Win.txt` file and determine what if any changes you need to make to keep one or more Unwired Platform components in the different uninstallations you want to automate.

1. Locate the `SilentUninstall_Win.txt` file in the `<UnwiredPlatformHome>\Uninstallers\UnwiredPlatform` directory on the host where you want to perform a silent uninstall.

If this file is not present, the Unwired Platform installation was not performed silently. Copy the `SilentUninstall_Win.txt` and `SilentUninstall_Win.bat` files to this location from the root directory in the installation media.

2. From the `<UnwiredPlatformHome>\Uninstallers\UnwiredPlatform` directory, open the `SilentUninstall_Win.txt` file in a text editor and review the current default settings.

The comment above the group of settings you can modify explains the settings. Anything set to `true`, the default, will be removed.

3. Determine components you want to keep.

The default settings remove all Unwired Platform components.

Modifying Properties in the SilentUninstall_Win.txt File

Edit a separate copy of the default `SilentUninstall_Win.txt` file for each different type of Unwired Platform uninstallation you want to automate.

1. From the `<UnwiredPlatformHome>\Uninstallers\UnwiredPlatform` directory on the host where you want to perform the silent uninstall, open the `SilentUninstall_Win.txt` file in a text editor.
2. Make any changes you have determined are necessary. Change `true` to `false` for any Unwired Platform component you do not want to uninstall:

```
# false here = KEEP feature
...
# Data Tier Feature
-P SupDB.activeForUninstall=true

# Unwired Server Feature
-P MobileServer.activeForUninstall=true

# Unwired Workspace Feature
-P EclipseWorkspace.activeForUninstall=true
```

3. Save your changes.

If you are preparing to perform several different types of silent uninstallation, keeping different combinations of Unwired Platform components, save the file with a unique name, or in a separate folder. When you perform a silent uninstallation, this file must be named `SilentUninstall_Win.txt` and it must be located in the `<UnwiredPlatformHome>\Uninstallers\UnwiredPlatform` directory on the host where you want to perform a silent uninstall.

Performing a Silent Uninstallation

Make sure you have the correct version of the modified `SilentUninstall_Win.txt` file in the correct location on the host where you want to perform a silent uninstall, then run the `SilentUninstall_Win.bat` file from the command prompt.

1. On temporary or test servers, for each type of uninstallation that you are automating, perform a trial run of these instructions using your modified `SilentUninstall_Win.txt` files.

Verify that each modified `SilentUninstall_Win.txt` file is producing the desired uninstallation outcome before proceeding with silent uninstallations on the real target hosts.

2. Make sure that the `<UnwiredPlatformHome>\Uninstallers\UnwiredPlatform` directory on the host where you want to perform a silent uninstall contains the correct version of the `SilentUninstall_Win.txt` file that you have modified for a particular uninstallation type.
3. From the command prompt on that server, navigate to the `<UnwiredPlatformHome>\Uninstallers\UnwiredPlatform` directory and enter:
`SilentUninstall_Win.bat`
4. Check for errors in `<UnwiredPlatformHome>\InstallLogs\UPUninstall.log`.
5. Repeat these steps on different servers for each different type of uninstallation you are automating.

CHAPTER 11 **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 *Sybase Unwired Platform Troubleshooting* 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_24 to launch the uninstaller with the following, where <i><jdk_installdir></i> is similar to C:\jdk1.6.0_24\bin: <pre><jdk_installdir>\java -Dtemp.dir=%TEMP% -jar C:\Sybase\UnwiredPlatform\Uninstallers\UnwiredPlatform\uninstall.jar</pre> 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 un-installation	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 <i>System Administration > System Reference > Unwired Platform Windows Services</i>.

Problem	Resolution
Cannot start Sybase Control Center	Make sure that you have installed an appropriate version of Adobe Flash Player.

Problem	Resolution
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. 1. Shut down Unwired Server and Unified Agent services. 2. Obtain the correct host and domain name. 3. Open a command window and enter: <code>ipconfig /all</code> 4. Run: <code>configure-mms.bat <clustername></code> 5. To set the proper domain name in all the Unwired Server configuration files, run: <code><UnwiredPlatform_InstallDir>\Servers\UnwiredServer\bin\configure.bat</code> 6. Manually edit %SYBASE%\SCC-3_0\services\RMI\service-config.xml, modifying the address property to reflect the new fully qualified host name. <pre> <properties> <set-property property="address" value="supvm.mycompany.com" /> <set-property property="port" value="9999" /> <set-property property="timeout" value="43200" /> </properties> </pre> Replace <i>supvm</i> with your host name and <i>mycompany.com</i> with your domain name. 7. If the DNS server cannot resolve the fully qualified name and this server is accessed only locally, edit the <code>C:\Windows\system32\drivers\etc\hosts</code> file to add 127.0.0.1 to the current fully qualified name. You can add as many 127.0.0.1 entries as needed for each host and domain in which your machine works. 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 <code>C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\</code> and running <code>installutil</code>. 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.

Unwired Server or RSOE Startup Problems

Problem: Problems, such as Unwired Server or RSOE failing to start, are encountered without any obvious error messages.

Explanation: This may occur if the Unwired Server host machine is running intrusion detection software, such as the McAfee Host Intrusion Prevention service. This may cause a connection from the CDB to the Unwired Server node to be flagged as an attack, and the CDB host to be added to the list of Blocked Hosts, preventing communication between Unwired Server and the CDB. The Unwired Server log reports connectivity problems with the CDB, and startup failure problems similar to:

```
YYYY-MM-DD HH:MM:SS.SSS ERROR MMS Thread-55
[com.sybase.djc.log.SystemExceptionLog]
com.sybase.djc.DataStoreException was thrown by method
com.sybase.djc.server.PartitionLock.updateLock(boolean)
\ncom.sybase.djc.DataStoreException: Connection Failed:
java.sql.SQLException: JZ006: Caught IOException:
java.net.SocketException: Software caused connection abort:
connect ...
```

Solution 1: You may want to set up some exclusion rules to allow the required communication between the CDB and Unwired Server nodes. Use the following information to formulate the exclusion rules; rules may vary depending on the intrusion detection software used.

- SQL Anywhere® to Unwired Server – SQL Anywhere sends UDP packets on port 2638 in response to discovery probes. The JDBC/ODBC client (on Unwired Server) sends a UDP broadcast on 2638 outbound to all servers on the local network(s) with the name of the database service to which the client is trying to connect. If a SQL Anywhere hosting the given database sees that UDP broadcast request, it responds with a UDP targeted directly back to the host that sent the broadcast.

The installer also issues a 'dblocate' query, which receives UDP responses back from every SQL Anywhere on the local network. Unwired Server uses that to filter out < *cluster-name* > *_clusterdb* responses to form a list of reachable Sybase Unwired Platform clusters to populate the dropdown list for subsequent installs where the user is adding a new Unwired Server to an existing cluster. If Sybase Unwired Platform is installed in a cluster, the MobiLink™ services also open connections among each other to coordinate activities of the MobiLink farm. Those connections are on the MobiLink listener ports.

- Sybase Unwired Platform to CDB – uses a JDBC connection through jConnect™ for JDBC™ driver. There are two kinds of protocols between Sybase Unwired Platform and CDB:
 - The MobiLink and CDB connection uses Command Sequence.
 - The jConnect for JDBC connection uses TDS.
- RSOE to Relay Server – uses either an HTTP and HTTPS connection.
- Unwired Server to Unwired Server – for administration communication uses:
 - Administration communication (MMS to MMS) uses IIOP protocol.
 - Administration communication (MMS to Mobile Office service) uses IIOP protocol.
- Unwired Server to Advantage Database Server – uses an OLE DB connection through ADO driver.

Solution 2: If your RSOE upgrade failed, you may need to take manual steps to add the RSOE definition and the backend server information to the cluster database. Contact technical support for assistance.

See also

- *Data Tier and Unwired Server on Separate Hosts* on page 2

Enterprise Developer Edition on Virtual Machine (VM) with Unserved License

VMs typically require installation with a served license.

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.

Changing Unwired Server Host Name (Single Server)

Change the Unwired Server host name when running as a single 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. Restart the machine.
4. Install Unwired Server.

Changing Unwired Server Host Name (Node in a Cluster)

Change the Unwired Server host name when running as a node in a cluster.

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. Restart the machine.
4. Install the Unwired Server cluster node.

Troubleshooting SySAM

If you do not address SySAM errors in a timely fashion, Sybase Unwired Platform may cease to function.

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 in grace mode, 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 24. Troubleshooting SySAM

Problem	Resolution
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 <i>Sybase Software Asset Management Users Guide</i>. 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 <i>Sybase Software Asset Management Users Guide</i> 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 <i>Sybase Software Asset Management Users Guide</i> for information about updating your license.

Problem	Resolution
The license server executables and scripts are not installed	The <code>sysam.bat</code> wrapper script and the executables for the license server (<code>lmgrd.exe</code> and <code>SYBASE.exe</code>) cannot be found in the SySAM <code>bin</code> 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.
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 <code>licenses</code> 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 <code>licenses</code> 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 <code>"netstat -a"</code> 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 <code>"this_host"</code>, 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.

Problem	Resolution
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.
With a served license, Sybase Unwired Platform installer generates a license checkout 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 <code>sybase.log</code> file in the <code>SYSAM-2_0\log</code> directory where the SySAM license server is installed. Locate the line containing "FLEXnet Licensing" – your log file may look something like this: <pre>11:20:27 (lmgrd) FLEXnet Licensing (v11.6.1.0 ... 11:20:27 (lmgrd) Copyright (c) 1988-2008 Acresso ... 11:20:27 (lmgrd) US Patents 5,390,297 and 5,671,412. 11:20:27 (lmgrd) World Wide Web: http://... 11:20:27 (lmgrd) lmdown/lmreread only allowed on ... 11:20:27 (lmgrd) License file(s): .../licenses/... 11:20:27 (lmgrd) lmgrd tcp-port 27000 11:20:27 (lmgrd) Starting vendor daemons ... 11:20:27 (lmgrd) Started SYBASE (internet ...</pre> 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, this indicates that 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 <code>sybase.log</code> file again to be sure that the port was successfully opened. • If you see the "Started SYBASE" line, with no error messages, this indicates that the license server successfully opened a port for the VENDOR SYBASE daemon. Edit this port number from the "lmgrd tcp-port" line into your Sybase Unwired Platform license file.

Problem	Resolution
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 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.

Problem	Resolution
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 <i>feature_name</i> 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 to be checked 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 <i>Sybase Software Asset Management Users Guide</i>. For information on updating your license, see the "Updating your Sybase licenses" section in Chapter 3, "Getting and Using your License," in the <i>Sybase Software Asset Management Users Guide</i>.

Problem	Resolution
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 <i>feature_name</i>" 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 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 license 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. 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

Information 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 *Sybase Unwired Platform Troubleshooting* for the most recent troubleshooting information.

Problem	Resolution
Sybase Control Center installation directory, SCC-3_0, cannot be removed	The Windows uninstaller fails to remove the Sybase Control Center installation directory (C:\Sybase\SCC-3_0 by default). Manual attempt to delete the directory fails saying that the files could not be deleted. To remove the directory: - Find: <code><SCC-install_dir>\services\EmbeddedWeb-Container\container\Jetty-6.1.22\work\Jet-ty_0_0_0_0_8282_help.war__help__.smpe97</code> - Change the name of Jet-ty_0_0_0_0_8282_help.war__help__.smpe97 to a single character, such as j. - Retry deleting the Sybase Control Center installation directory.

RSOE Migration Error Reference

During the migration of the `relayserv.properties` file, the installer may report an error.

Typically, most errors the installer reports involve missing or incorrect property values.

Problem	Resolution
A file cannot be found, for example, a properties file or a certificate. The installer was expecting the file to be in the location reported in the error.	Move the file to this location and try again.
The relay server host is not defined. This property was not configured in the <code>relayserv.properties</code> file.	Set the value for this property and try again.
A property value is invalid, for example, relay server farm name, protocol, or port. A value was defined that is not supported.	Set the correct value and try again.
A token is not configured. The installer expected a value for the token, but this property was not configured.	Set a token value and try again.

CHAPTER 12 Obtaining Help and Additional Information

Use the Sybase Getting Started CD, Product Documentation site, 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 Documentation 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/News groups, 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 Documentation Web site.

Documentation Roadmap for Unwired Platform

Learn more about Sybase® Unwired Platform documentation.

Table 25. Sybase Unwired Platform Documentation

Document	Description
<i>Sybase Unwired Platform Installation Guide</i>	Describes how to install or upgrade Sybase Unwired Platform. Check the <i>Sybase Unwired Platform Release Bulletin</i> 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
<i>Sybase Unwired Platform Release Bulletin</i>	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.
<i>New Features</i>	Describes new or updated features. Audience: all users. Use: any time to learn what is available.
<i>Fundamentals</i>	Describes basic mobility concepts and how Sybase Unwired Platform enables you to design mobility solutions. Audience: all users. Use: during the planning and installation phase, or any time for reference.
<i>System Administration</i>	Describes how to plan, configure, manage, and monitor Sybase Unwired Platform. Use with the <i>Sybase Control Center for Sybase Unwired Platform</i> 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
<i>Sybase Control Center for Sybase Unwired Platform</i>	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 > Programs > 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.
<i>Troubleshooting</i>	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.
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: • <i>Tutorial: Mobile Business Object Development</i> • Create native mobile device applications: • <i>Tutorial: BlackBerry Application Development</i> • <i>Tutorial: iOS Application Development</i> • Create a mobile workflow package: • <i>Tutorial: Mobile Workflow Package Development</i>
<i>Sybase Unwired WorkSpace – Mobile Business Object Development</i>	Online help for developing MBOs. Audience: new and experienced developers. Use: after system installation.

Document	Description
<i>Sybase Unwired WorkSpace – Mobile Workflow Package Development</i>	Online help for developing mobile workflow applications. Audience: new and experienced developers. Use: after system installation.
Developer guides 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. • <i>Developer Guide for BlackBerry</i> • <i>Developer Guide for iOS</i> • <i>Developer Guide for Mobile Workflow Packages</i> • <i>Developer Guide for Windows and Windows Mobile</i>
Developer guide for Unwired Server side customization – <i>Developer Guide for Unwired Server</i>	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 <i>Fundamentals</i> and <i>Sybase Unwired WorkSpace – Mobile Business Object Development</i>.
Developer guide for system administration customization – <i>Developer Guide for Unwired Server Management API</i>	Information for custom coding using administration APIs. Audience: experienced developers. Use: to customize and automate administration at a coding level. Dependencies: Use with <i>Fundamentals</i> and <i>System Administration</i>.

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