SYBASE®
An SAP® Company

Installation Guide for Runtime

Sybase Unwired Platform 2.2

Windows

DOCUMENT ID: DC01698-01-0220-04
LAST REVISED: April 2013

Sybase, Inc., One Sybase Drive, Dublin, CA 94568.

Contents

CHAPTER 1: Planning the Landscape 1

CHAPTER 2: Obtaining a License 3

Determining Host IDs 3
Comparing License Deployment Models 4
Generating Licenses at SMP 5
Generating License Keys 6
Generating Licenses at SPDC 6
Logging in to SPDC and Beginning License Generation 7
Generating Unserved Licenses 9
Generating Served Licenses 10
Locating Information in a License File 11
Setting a Fixed Port Number for SySAM License Server 13
Switching from Served to Unserved License 14
Switching from Unserved to Served License 14
Switching to a New License 15

CHAPTER 3: Installing Unwired Platform on a Single Server 17

Preparing for Installation 18
Entering License Information 19
Selecting Installation Options 20
Completing the Installation 22
Verifying the Installation 23

CHAPTER 4: Installing Unwired Platform in a Simple Load-Balancing Cluster 25

Installing the Data Tier 26

Preparing for Installation 27

Entering License Information 28

Selecting Installation Options 29

Completing the Installation 31

Verifying the Installation 31

Installing the Unwired Server 32

Preparing for Installation 33

Entering License Information 34

Selecting Installation Options 35

Completing the Installation 38

Verifying the Installation 39

Verifying the Full Unwired Platform Cluster Installation 39

CHAPTER 5: Installing Unwired Platform with a Standard Microsoft Failover Cluster 43

Critical Prerequisite Tasks 45

Adding a Data Folder to the Cluster Share Disk 45

Verifying the Microsoft Failover Cluster Configuration 46

Installing the First Data Tier 46

Preparing for Installation 47

Entering License Information 48

Selecting Installation Options 49

Completing the Installation 52

Verifying the Installation 52

Preparing Microsoft Failover Cluster for Second Data Tier Installation 52

Installing the Second Data Tier 54

Preparing for Installation 54

Entering License Information 55
Selecting Installation Options 56
Completing the Installation 60
Verifying the Installation 60
Installing the First Unwired Server Node 60
Preparing for Installation 61
Entering License Information 62
Selecting Installation Options 63
Completing the Installation 66
Verifying the Installation 67
Installing the Second Unwired Server Node 67
Preparing for Installation 68
Entering License Information 69
Selecting Installation Options 70
Completing the Installation 73
Verifying the Installation 73
(Optional) Installing Sybase Unwired Platform Scale-Out Nodes 74
Preparing for Installation 74
Entering License Information 75
Selecting Installation Options 76
Completing the Installation 79
Verifying the Installation 80
Verifying the Full Unwired Platform Cluster Installation 80

CHAPTER 6: Installing Unwired Platform with a Microsoft Failover Cluster with Shared Hosts 83

Critical Prerequisite Tasks 84
Adding a Data Folder to the Cluster Share Disk 85
Verifying the Microsoft Failover Cluster Configuration . .86
Installing the First Data Tier 86
Preparing for Installation 87
Entering License Information 88

Selecting Installation Options 88
Completing the Installation 92
Verifying the Installation 92
Preparing Microsoft Failover Cluster for Second Data Tier Installation 92
Installing the Second Data Tier 93
Preparing for Installation 94
Entering License Information 95
Selecting Installation Options 96
Completing the Installation 99
Verifying the Installation 99
Installing the First Unwired Server Node 99
Preparing for Installation 100
Entering License Information 101
Selecting Installation Options 102
Completing the Installation 105
Verifying the Installation 105
Installing the Second Unwired Server Node 105
Preparing for Installation 106
Entering License Information 107
Selecting Installation Options 108
Completing the Installation 110
Verifying the Installation 111
Verifying the Full Unwired Platform Cluster Installation 111

CHAPTER 7: Adding an Unwired Server Node to an Existing Cluster 115
Preparing for Installation 116
Entering License Information 117
Selecting Installation Options 118
Completing the Installation 121
Upgrading the New Node to Your Current Unwired Platform Version 122

Verifying the Installation 122

CHAPTER 8: Upgrading 123

Recreating a Removed supAdmin User 123
Ensuring That Applications Have Domain Assignments 124
Removing Introscope from an Existing Installation 124
Upgrade Paths 125
Native Client Version Compatibility Matrix 127
Hybrid Web Container Compatibility Matrix 128
OData Client Compatibility Matrix 129
Migrating Applications that Use a Custom SAP Result Checker 131
Upgrading a Single-Server Installation 131
Preparing to Upgrade 132
Accepting the End-User License Agreement 133
Selecting Upgrade Options 133
Completing the Upgrade 134
Verifying the Upgrade 134
Upgrading a Simple Load-Balancing Cluster 135
Upgrading the Data Tier 135
Preparing to Upgrade 136
Accepting the End-User License Agreement 137
Selecting Upgrade Options 137
Completing the Upgrade 138
Verifying the Upgrade 138
Upgrading Unwired Server 138
Preparing to Upgrade 139
Accepting the End-User License Agreement 140
Selecting Upgrade Options 140
Completing the Upgrade 141
Verifying the Upgrade 141
Verifying the Upgraded Cluster 141
Upgrading a Standard Microsoft Failover Cluster 143

Preparing for the First Data Tier Upgrade 144
Upgrading the First Data Tier 144
Preparing to Upgrade 145
Accepting the End-User License Agreement 146
Selecting Upgrade Options 146
Completing the Upgrade 147
Verifying the Upgrade 147
Preparing for the Second Data Tier Upgrade 147
Upgrading the Second Data Tier 147
Preparing to Upgrade 148
Accepting the End-User License Agreement 149
Selecting Upgrade Options 149
Completing the Upgrade 150
Verifying the Upgrade 150
Preparing for Unwired Server Upgrades 150
Upgrading Unwired Server 150
Preparing to Upgrade 151
Accepting the End-User License Agreement 152
Selecting Upgrade Options 152
Completing the Upgrade 153
Verifying the Upgrade 153
Verifying the Upgraded Cluster 153
Upgrading a Microsoft Failover Cluster with Shared Hosts 155
Preparing for the First Host Upgrade 156
Upgrading the First Host 156
Preparing to Upgrade 157
Accepting the End-User License Agreement 158
Selecting Upgrade Options 158
Completing the Upgrade 159
Verifying the Upgrade 159
Preparing for the Second Host Upgrade 159
Upgrading the Second Host 160
Preparing to Upgrade 160
Accepting the End-User License Agreement 161

Selecting Upgrade Options 162
Completing the Upgrade 162
Verifying the Upgrade 162
Verifying the Upgraded Cluster 163
Upgrading Relay Servers 164

CHAPTER 9: Uninstalling 165

Preparing to Uninstall 165
Uninstalling Unwired Platform Servers 166

CHAPTER 10: Scripting Silent Installation, Upgrade, or Uninstallation 169

Silent Installation or Upgrade 169
Planning a Silent Installation or Upgrade 170
Modifying Properties in the SilentInstall_Win.txt File . . 170
Running a Silent Installation or Upgrade 171
Silent Uninstallation 172
Planning a Silent Uninstallation 173
Modifying Properties in the SilentUninstall_Win.txt File 173
Running a Silent Uninstallation 174

CHAPTER 11: Troubleshooting 177

Troubleshooting Installation 177
Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name 183
Exception in Shared Host for Unwired Platform and EAServer Installations 184
VMWare Fusion Stops Responding when Running Installer on Some MacBook Models 185
Test Package Deployment Skipped when Upgrading Unwired Server from 2.1.x to 2.2 185
Workflow Deployment Fails with SoapException 185

Unwired Server or RSOE Startup Problems 185
Cannot Access sampledb 186
Unwired Server Upgrade Stalls if Cluster Name is Longer than 16 Characters 187
Troubleshooting SySAM 188
SySAM-Related Errors 188
SySAM Problems and Solutions 189
Problems and Solutions for Unwired Platform 195
Calling Sybase Technical Support 197
Troubleshooting Uninstallation 198

APPENDIX A: System Deployment Reference 199
Port Number Reference 199
Unwired Server Ports 199
Data Tier Ports 200
Sybase Control Center Ports 200
Sybase Control Center Port Assignments 200
Relay Server Ports 201
Reserved Ports 201
Other Ports 201
Installation Directories 202
Service Reference 204
Unwired Server Services 204
Data Tier Services 205
Starting Required Services 206
Starting and Stopping Unwired Server 206

Index 207

CHAPTER 1 Planning the Landscape

To successfully install Sybase® Unwired Platform for the first time, you must do a considerable amount of planning, make a number of strategic decisions, and gather many specific pieces of information about the technical environment into which you are installing. Upgrading an existing installation also requires you to collect key pieces of information.

If you have an existing installation of Sybase Unwired Platform to upgrade, after you have filled in the upgrade worksheet for your scenario, go to the *Upgrading* chapter in this document.

If you are about to perform a new installation of Sybase Unwired Platform, before you run the installer for the first time, go through the Sybase Unwired Platform *Landscape Design and Integration* document and:

1. Select one of these installation scenarios
   - Single-server installation
   - Simple load-balancing cluster installation
   - Installation with a standard Microsoft Failover Cluster
   - Installation with a Microsoft Failover Cluster with shared hosts

   Each of these is described in detail in *Landscape Design and Integration*.
2. Resolve all licensing issues.

   Landscape Design and Integration details all the licensing options, and how licenses are managed. It also provides instructions for obtaining a license, if your company has not already purchased one.
3. Complete the worksheet provided for the scenario.

   Use the worksheet to record all the important information that configure values in the installer. The information in the worksheets is organized in the same order in which the installer asks you to provide it.

Next

If you are upgrading an existing installation, go to *Chapter 8, Upgrading* on page 123.

To add a server node to an existing Unwired Platform cluster, see *Chapter 7, Adding an Unwired Server Node to an Existing Cluster* on page 115.

For new installations, proceed to the instructions for your chosen scenario:

- *Chapter 3, Installing Unwired Platform on a Single Server* on page 17

- *Chapter 4, Installing Unwired Platform in a Simple Load-Balancing Cluster* on page 25
- *Chapter 5, Installing Unwired Platform with a Standard Microsoft Failover Cluster* on page 43
- *Chapter 6, Installing Unwired Platform with a Microsoft Failover Cluster with Shared Hosts* on page 83

CHAPTER 2 Obtaining a License

There are two ways to obtain your Unwired Platform license, depending on how you purchased the product.

When you purchase SySAM 2-enabled Sybase products, you must generate, download, and deploy SySAM product licenses.

- If you ordered your product under an SAP® contract and were directed to download from SAP Service Marketplace (SMP), you can use SMP at *http://service.sap.com/licensekeys* (login required) to generate license keys for Sybase products that use SySAM 2-based licenses.
- If you purchased your product from Sybase® or an authorized Sybase reseller, go to the secure Sybase Product Download Center (SPDC) at *https://sybase.subscribenet.com* and log in to generate license keys. The license generation process may vary slightly, depending on whether you ordered directly from Sybase or from a Sybase reseller.

For more complete information about SySAM, see:

- *SySAM 2 Users Guide* online at *http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00530.0220/doc/html/title.html*
- *Fast Track to SySAM 2.0* white paper, available at *Fast Track to SySAM 2.0*
- *SySAM FAQ* online at *http://www.sybase.com/detail?id=1038615*
- *SySAM* product page online at *http://www.sybase.com/products/allproductsa-z/sysam*

Determining Host IDs

When you generate licenses at SMP or SPDC, you must specify the host ID of the machine where the licenses will be deployed.

- For unserved licenses, specify the host ID of the machine where the product will run. If you are running a product with per-CPU or per-CHIP licensing that supports SySAM sub-capacity, and you want to run the product in a virtualized environment, see *SySAM Sub-capacity Licensing* in the *SySAM Users Guide* for information about determining the host ID for unserved licenses.
- For served licenses, specify the host ID of the machine where the license server will run.

SMP or SPDC remembers the host information so that you can select the same license server when generating additional licenses.

To determine the host ID of the machine, run the **lmutil** utility from a terminal window or the Windows command prompt. For example:

```
lmutil lmhostid
```

Note: You can download the **lmutil** utility from the Flexera Software Web site at *http://www.globes.com/support/fnp_utilities_download.htm*.

You can also determine the host ID using native operating system commands. See the Frequently Asked Questions topic "What is my Host ID?":

- SMP: *https://websmp208.sap-ag.de/~sapidb/011000358700001006652011E* (requires login)
- SPDC: *https://sybase.subscribenet.com/control/sybs/faqs#30-4*

Comparing License Deployment Models

Learn about license deployment models.

Unserved Licenses	Served Licenses
Licenses can be used only on the machine for which the license was generated.	Licenses can be distributed from a network license server to products running on any network machine.
Generate licenses at SMP or SPDC for each machine that will run the product: **1.** Specify the host ID of the machine where the product will run. **2.** Generate a license for that machine. **3.** Save the license to the specified machine. **4.** Repeat steps 1 – 3 for each machine where the product will run.	Generate licenses at SMP or SPDC for products running on multiple machines: **1.** Specify the host ID of the license server. **2.** Specify the number of required licenses. **3.** Save the licenses to the license server host machine.
No license administration is required. However, when new licenses are required for product updates, you must update and deploy each license for each machine where the product update will run.	The license server requires administration. When new licenses are required for product updates, SMP or SPDC lets you update all licenses for a specific license server in a single step.
No license reporting or asset management capabilities are available.	Allows license monitoring and reporting of license use, capacity planning, and asset management using SAMreport.
Installed locally and always available.	Requires a functioning license server and network. If the license server or network fails, you must fix the problem or install an alternate license server before the product grace period expires.

Unserved Licenses	Served Licenses
If a machine where the product is running fails, you must regenerate all of its licenses and deploy those licenses to the replacement machines.	If a machine where the product is running fails, you can move the product to a new machine, and it will acquire licenses from the running license server. If the license server host machine fails, use the Manage License Hosts functionality at SMP or SPDC to move its licenses to a new network license server host.
License files are distributed across each machine running a product, and therefore they are difficult to manage and control.	License files are centrally located and managed.
Unserved Standalone Seat (SS) licenses do not allow product use via Remote Desktop Connection or other terminal services clients.	Products can be used via Remote Desktop Connection or other Terminal Services clients, irrespective of the type of license in use.

Generating Licenses at SMP

Before you log in to SMP and generate licenses, gather the necessary information and complete these tasks.

Table 1. Information Needed Before License Generation

Required Information or Action	License Model		Description
	Served	Unserved	
License deployment model	X	X	Decide whether to use a served or unserved license deployment model. Typically, this is a company-wide decision that is made only once. Therefore, this is one of the most important things to determine before license generation.
Product machine host ID		X	Determine the host ID of the machine, or machine partition where the product will run.
License server – download and install	X		Download and install the SySAM license server before you generate the product's licenses, and before you install the product.
License server host ID	X		Determine the host ID of the machine where the license server will run.

Required Information or Action	License Model		Description
	Served	Unserved	
License server host name	X		Determine the host name of the machine where the license server will run.
License server TCP/IP port numbers	X		Determine the two port numbers on which the license server will listen for license requests.

Generating License Keys

If you have purchased Sybase products that use SySAM 2-based licenses under SAP contract and are directed to download from SAP Service Marketplace (SMP), you can use SMP to generate license keys.

1. Go to the SAP Marketplace main page at *http://service.sap.com/licensekeys*.
2. Log in using your SMP credentials.
3. Select **SAP Support Portal**.
4. Select **Keys & Requests** > **License Keys**.
5. Follow the instructions in the "How to generate license keys for SAP Sybase products" presentation available under the "Documentation and Helpful Resources" quick access link.

Generating Licenses at SPDC

Before you log in to SPDC and generate licenses, gather the necessary information and complete these tasks.

Table 2. Information Needed Before License Generation

Required Information or Action	License Model		Description
	Served	Unserved	
License deployment model	X	X	Decide whether to use a served or unserved license deployment model. Typically, this is a company-wide decision that is made only once. Therefore, this is one of the most important things to determine before license generation.

Required Information or Action	License Model		Description
	Served	Unserved	
Product machine host ID		X	Determine the host ID of the machine, or machine partition where the product will run.
License server – download and install	X		Download and install the SySAM license server before you generate the product licenses, and before you install the product.
License server host ID	X		Determine the host ID of the machine where the license server will run.
License server host name	X		Determine the host name of the machine where the license server will run.
License server TCP/IP port numbers	X		Determine the port numbers on which the license server will listen for license requests. **Note:** If you do not specify the license server port numbers during license generation, the license server uses the first available ports in the range 27000 to 27009. If a firewall exists between the server and the client machines, fix the license server port numbers to allow access to the ports. See *Access Through a Firewall or VPN* in the *SySAM Users Guide*.

Logging in to SPDC and Beginning License Generation

Once you log in to SPDC and begin license generation, complete your product's license generation using the procedure that applies to the license deployment model you chose, either for generating served licenses or for generating unserved licenses.

If your product has been ordered from a Sybase reseller, perform the "Web Key step" instructions, where noted.

1. Go to the SPDC login page at *https://sybase.subscribenet.com*.
   - Go to the SPDC Web Key Registration page at *https://sybase.subscribenet.com/webkey*.
2. Enter the login ID and password, then click **Login**. If you forget your password, click **Password Finder**.

   Your password is sent to you in an e-mail message.
   - Enter the authorization string from the Web Key Certificate provided by the reseller when your Sybase product was purchased, then click **Submit Web Key**.

Note: If you do not know your SPDC account login ID and password, or Web Key Certificate authorization string, contact the person who ordered your product.

- At the Web Key Registration page, enter your account information, then click one of these options:
  - **Submit My Registration Information** – to register your product using your direct account information.
  - **Anonymous Activation** – to activate your product anonymously.

3. Select the product family that includes the product for which you want to generate a license; for example, Adaptive Server Enterprise.
4. Depending on the product family you choose, you may see an additional Product Information page.
   a. Product suites – if your product is included in one or more suites, select the suite that includes your product; for example, ASE Small Business Edition.
   b. Product version and platform – select the product version, name, and operating system that matches your product order.
5. If this is the first time you selected a specific product edition and platform, you must accept the Sybase License Agreement before you are allowed to generate a license for that product.
6. If your product software installation requires a license key (also referred to as the license file), click **License Keys** on the Product Download page.
7. On the License Information page:
   a. Select the option button to the left of the product for which to generate a license; for example, "CPU License (CP), ASE Enterprise Edition 15.7 for Sun Solaris SPARC 64-bit."
   b. Scroll down and click **Select to Generate**.
8. In the Generate Licenses wizard, choose a license deployment model:
   - **Served license** – go to *Generating Served Licenses* in the *Sybase Software Asset Management (SySAM) 2 Users Guide* to complete the license generation and download process.
   - **Unserved license** – go to *Generating Unserved Licenses* in the *Sybase Software Asset Management (SySAM) 2 Users Guide* to complete the license generation and download process.

Note: Some Sybase products or license types do not offer a choice of license deployment models and do not display this page. If this is the case, continue through the Generate Licenses wizard to generate your license.

Click **Next**.

Generating Unserved Licenses

Generate and download an unserved license for your product.

1. Enter the number of machines (up to 10) for which to generate unserved licenses, and click **Next**.
2. Enter:
   - Node Host ID – enter the host ID of the machine where the product will be run. If you do not know the host ID, select **What Is My Host ID?** or see *Determining Host IDs* in the *Sybase Software Asset Management (SySAM) 2 Users Guide* at *http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00530.0220/doc/html/title.html*.
   - Host Name – enter the machine host name.

   For some license types, you must enter the number of licenses to generate. If you are unsure of the license quantity, select **How Many Licenses Should I Generate?**.
3. Click **Generate.**
4. When the license has generated, review the information on the View Licenses page, then, if the license information is correct, select one of:
   - If you generated only one license, click **Download License File**.
   - If you generated several licenses, click **Download All Licenses for Host**.

     Note: Before you download and save generated licenses, you can select **Print Friendly** to print a paper copy of the license, or **License Overview** to return to the License Information page and generate additional licenses.
   - To correct license information before downloading the license, click **License Overview**, select the license to be corrected and click **Check In** to reset the license to its original state. Repeat the license generation process.
5. If you chose to download licenses, when the File Download dialog box opens, click **Save**.
6. Save the generated licenses with a `.lic` file name extension. Although *$SYBASE* / `SYSAM-2_0/licenses` is typically the directory where unserved licenses are located, your product may have a different requirement. See your product installation guide and release bulletin for product-specific information.

   Note: If you do not save the license files with a `.lic` extension, SySAM does not recognize the licenses.

Next, install your licensed product using the instructions in the product installation guide and release bulletin.

Generating Served Licenses

Generate and download a served license for your product.

1. Enter the number of licenses to generate and click **Next**.

   If you are unsure of the license quantity, select **How Many Licenses Should I Generate?**.
2. Select an existing license server host, or enter the host ID, and an optional host name and port number, of a new license server host.

   When completing this step, use these recommendations:

   - If you do not know the license server host ID, select **What Is My Host ID?** or see *Determining Host IDs* in the *Sybase Software Asset Management (SySAM) 2 Users Guide* at *http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00530.0220/doc/html/title.html*.
   - Although the host name is optional, Sybase recommends that you provide the host name to ease future license administration.
   - The port number is optional unless your product configuration is going to use three-server redundancy (see the next bullet item). Any unused port number between 0 and 64000 is valid. On UNIX, choose a port number greater than 1024; most port numbers less than 1024 are privileged port numbers. If you do not specify a TCP/IP port number, a default port between 27000 and 27009 is used.
   - To generate a license for a three-server redundant configuration, enter the required information: license server host ID, host name, and port number for all three machines. Enter a port number outside of the 27000 to 27009 range. You must enter the fully qualified domain name (FQDN) as the host name if any client machine requires an FQDN to contact a license server machine.

     Note: You cannot upgrade SySAM 1.0 licenses and use them in a three-server redundant configuration.
3. Click **Generate.**
4. When the license has generated, review the information on the View Licenses page, then, if the license information is correct and you do not need to generate additional licenses, select one of:

   - If you generated only one license, click **Download License File**.
   - If you generated several licenses, click **Download All Licenses for Host**.

     Note: Before you download and save generated licenses, you can select **Print Friendly** to print a paper copy of the license.

   a) To correct license information, click **License Overview**, select the license to be corrected and click **Check In** to reset the license to its original state. Repeat the license generation process, starting with step 1 of this procedure.

b) To generate additional licenses, click **License Overview** and repeat the generation process for the additional product licenses.

5. When the File Download dialog box opens, click **Save.**
6. Save the license files with a `.lic` file name extension to the `SYSAM-2_0/licenses` directory of the license server installation.

   Warning! If you do not save the license files with a `.lic` extension, SySAM does not recognize the licenses.

7. After you save the license files to the license server, enter in a command prompt (Windows) or a shell window (Linux/UNIX) on the machine where your license server is running:

   ```
   sysam reread
   ```

   Your new licenses are registered with the license server.

Locating Information in a License File

After you download a license file, you may need to get some information from it to complete your installation.

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_DEVELOPER`

   For example:
   - For Enterprise Edition:

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

   - For Enterprise Developer Edition:

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

   - For Personal Developer Edition:

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

```
PLATFORMS="i86_n \
...
```

The rest of the examples in this section show the beginning of this line as it appears for Enterprise Edition; the details equally apply to all editions.

3. Determine whether the server license is served or unserved.

   If the line you located in step 2 ends with "uncounted", it is an unserved license. For example:

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

   If that line ends with a number immediately following a date, it is a served license. For example:

```
...
INCREMENT SUP_ENTSRVR SYBASE 2011.11150 permanent 10 \
   VENDOR_STRING=PE=EE;LT=CP HOSTID=000c29d300bd PLATFORMS="i86_n
\
...
```

4. Determine the product edition and license type for the license.

   For both served and unserved licenses, note the value of PE (product edition) and LT (license type) in the line following the line you located in step 2. For example:

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

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

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

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

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

   a) Locate the uncommented line, beginning with INCREMENT SUP_ENTCLIENT.

      For example:

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

   b) Determine whether the client licenses are served or unserved.

      If the line beginning with INCREMENT SUP_ENTCLIENT ends with "uncounted", the client licenses are unserved. For example:

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

```
   x64_n" ISSUER="CO=Sybase,
Inc.;V=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="CO=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 in which there are no available ports in the 27000 – 27009 range for the licensing server to dynamically assign.

1. Obtain a port number that Unwired Platform can use to communicate with the SySAM license server.
2. Back up the license file.
3. Use a text editor to open the license file, and locate the `VENDOR SYBASE` line, near the top of the file.
4. At the end of that line, type `PORT=` followed by the port number you obtained.

   For example, if you use port 27010, enter:

```
VENDOR SYBASE PORT=27010
```

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

5. Save and close the license file.

Switching from Served to Unserved License

You can switch an Unwired Server from a served license to an unserved license without reinstalling.

Repeat this task on each Unwired Server host.

1. Stop Unwired Server.
2. Replace the license file (`*.lic` extension) at the location below with a revised license file:

   SUP_HOME`\Servers\UnwiredServer\licenses\`
3. Restart Unwired Server.

Switching from Unserved to Served License

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

1. Download the SySAM license server software and installation instructions from *http://www.sybase.com/sysam/server*.

   Click the **Download the SySAM Standalone License Server** link on that page and follow the instructions provided.
2. Install the SySAM license server.
3. Copy the license file (`*.lic`) from *SUP_HOME*`\Servers\UnwiredServer\licenses\` to the `licenses` directory on the license server host.
4. Back up the license file.
5. 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.
6. Start or restart the SySAM license server.

   If the SySAM license server is running, an alternative to restarting it is to run the `reread` command on that server. See the *SySAM Users Guide*.

7. Create a license file in the *SUP_HOME*\Servers\UnwiredServer\licenses\ folder of each Unwired Server node and name it with SySAM server host name and .lic extension.
8. Edit the license file you just created and add the following lines:

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

   Replace <host> with the name of the SySAM license server host and <port> with the port number for the SySAM license server.
9. Remove the old license file.
10. (Optional) Run *SUP_HOME*\Servers\UnwiredServer\bin license.bat to update the license.
11. Restart the Unwired Server.

Switching to a New License

You can switch an Unwired Server from an existing license to a new license, without reinstalling.

- **Unserved license** – simply replace the old license file with the new license file in *SUP_HOME*\Servers\UnwiredServer\licenses\ on each Unwired Server node.
- **Served license** – follow the steps below on each Unwired Server node.

1. Copy the new license file (with .lic extension) to *SUP_HOME*\Servers\UnwiredServer\licenses.
2. Navigate to *SUP_HOME*\Servers\UnwiredServer\bin and execute this command:

   ```
   license.bat <PE> <LT> [LicenseNumber]
   ```

   Note: A [LicenseNumber] value is required for *<ED>* *<EE>* editions.

   Value for product edition, *<PE>*, must match your new license:
   - EE for Enterprise Edition
   - ED for Enterprise Developer Edition
   - PD for Personal Developer Edition

   Value for license type, *<LT>*, must match your new license:
   - AC for Application deployment CPU license
   - AS for Application deployment seat license
   - CP for CPU license (client-server licenses)

- ST for Seat license
- OT for Other license
- SS for Standalone seat license
- DT for Development and test license

See *License Upgrade (license) Utility* in *System Administration*.

3. Start or restart the SySAM license server.

   If the SySAM license server is running, an alternative to restarting it is to run the `reread` command on that server. See the *SySAM Users Guide*.

CHAPTER 3 Installing Unwired Platform on a Single Server

This scenario places all Unwired Platform server components (Unwired Server and data tier) on a single host. This scenario is suitable for a developer environment, with shared Unwired Platform server resources. It may also be suitable for an Unwired Platform prototyping environment, or a low-volume production system that does not require load balancing or failover.

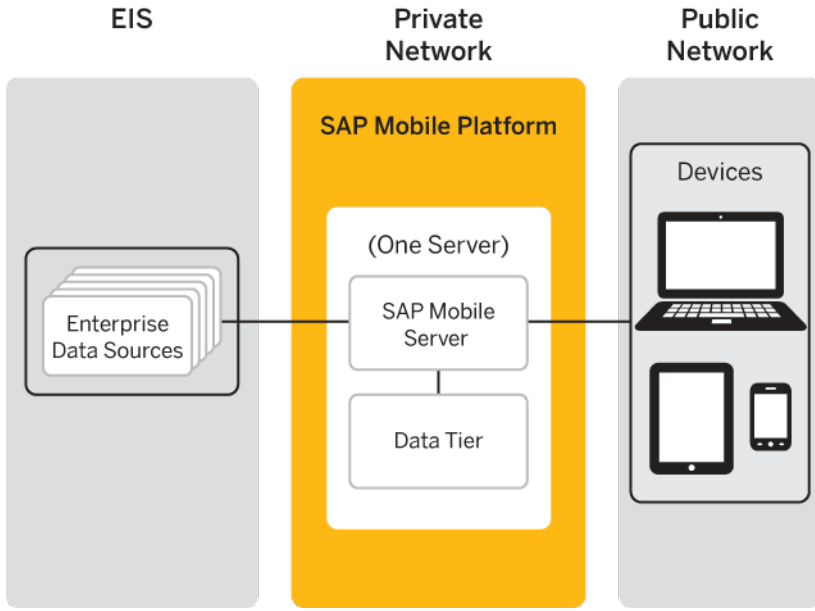
Prerequisites

The architecture, design characteristics, and use cases for this installation scenario are described in *Landscape Design and Integration* > *Designing the Landscape* > *Single Server Installation*. The installation instructions in this chapter assume that you have used the *Landscape Design and Integration* document to design the landscape.

Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SUP22_Worksheets.zip*.

Note: Personal Development Server license terms require all Unwired Platform server components to be installed on the same, single-user host as the Sybase Mobile SDK.

This diagram illustrates the single-server scenario:



1. *Preparing for Installation*

   Ensure that the host on which you are installing Sybase Unwired Platform is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log, and verify that key services are functioning, that you can log into Sybase Control Center, and that you can see the properties of the Unwired Server.

Preparing for Installation

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

1. If you are using a served license, set up the SySAM license server. See:
   - *SySAM FAQ* online at *http://www.sybase.com/detail?id=1038615*
   - *Fast Track to SySAM 2.0* white paper, available at *http://www.sybase.com/detail?id=1037788*
2. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first Unwired Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

   See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.
5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

a) Right-click **My Computer** and select **Properties**.
b) Select the **Advanced** tab, then click **Environment Variables**.
c) Select JAVA_TOOL_OPTIONS and click **Delete**.
d) Click **OK** to exit all dialogs.

6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   This includes any database servers, Sybase Control Center, and if Sybase SAP® Data Orchestration Engine Connector is present in an upgrade installation, SAP Data Orchestration Engine.

   To verify that services are stopped, open the Services pane from Windows Control Panel.
7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

   - Insert the Sybase Unwired Platform Runtime 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.

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

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

Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (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, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select:

   - License product edition – Personal Development
   - License type – Standalone Seat License

   Click **Next**.
6. Enter the location of your license file.

   - If you selected **Unserved (local) license**, enter the absolute path to the license file on the installation target host, using only ASCII characters.
   - If you selected **Served (remote) license**, enter the host name and TCP port of the license server.

   Click **Next**.

   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.

Selecting Installation Options

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

The installation path you specify below is referred to as *SUP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:

- ASCII alphanumeric characters
- Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "UnwiredPlatform" and the preceding "\" character.

2. Select **Single Server** and click **Next**.
3. If a page appears, indicating that the installer detected missing third-party software, click:

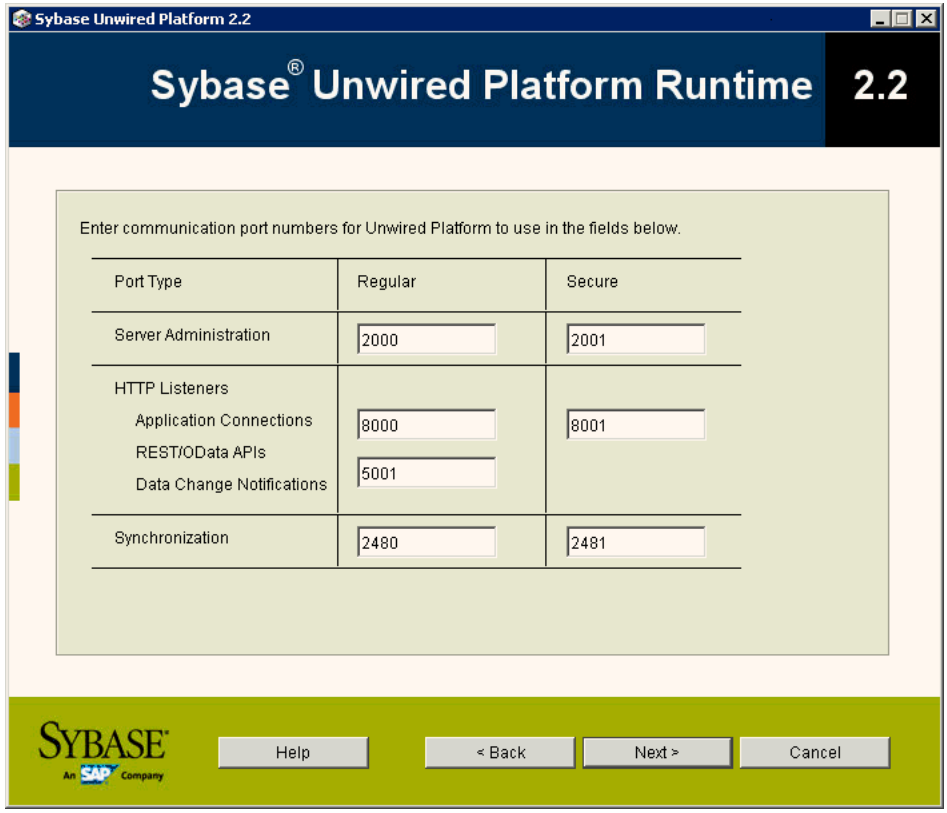
   - **Next** to install the required software.
   - **Back** to select components to install that do not require the third-party software.
   - **Cancel** to stop the current installation.
4. (Optional) Select additional installation options.

   - **Configure Unwired Platform communication ports** to change default ports.
   - **Set Sybase Unwired Platform services to start automatically** to start services automatically when Windows starts. By default, this option is selected.

     Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® Data Orchestration Engine Connector and Sybase Mobile Sales for SAP CRM. If Unwired Platform services do not start automatically, dependent products will encounter problems.
   - **Set Unwired Server name and cluster name** to set a name that is unique on the network segment.
5. (Optional) If you selected **Set Unwired Server name and cluster name**, enter a name for this Unwired Server instance (name must be unique on network segment) and a name for the Unwired Server cluster.

   Each server or cluster name:
   - Must contain only:
     - ASCII alphanumeric characters
     - Underscore ("_"), hyphen ("-"), and period (".") characters
   - Server names must be 32 characters or less and must begin with an alphanumeric character.
   - Cluster names must be 22 characters or less.
6. (Optional) If you selected **Configure Unwired Platform communication ports**, change the regular and secure port numbers as needed.

   - Server administration
   - HTTP listeners
     - Application connections
     - REST/OData APIs
     - Data change notifications
   - Synchronization



7. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

   The password must:
   - Be at least 8 characters, and no longer than 32 characters.
   - Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log into Sybase Control Center, and that you can see the properties of the Unwired Server.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Control Center *X.X*
   - Sybase Unwired CacheDB
   - Sybase Unwired SampleDB
   - Sybase Unwired Server
3. Verify that you can log in to Sybase Control Center.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the Unwired Server is accessible from Sybase Control Center and that you can see the properties of that node.

Next

Go to the SAP Software Download Center at *https://websmp209.sap-ag.de/swdc* (requires an S-user ID with `SWDOWNLAD Software download` authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of Sybase Unwired Platform you have just installed.

- If a support package is available for this version of Sybase Unwired Platform:
  1. Use the *Readme* for the support package to upgrade your Sybase Unwired Platform installation to the support package version now.
  2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

CHAPTER 4 Installing Unwired Platform in a Simple Load-Balancing Cluster

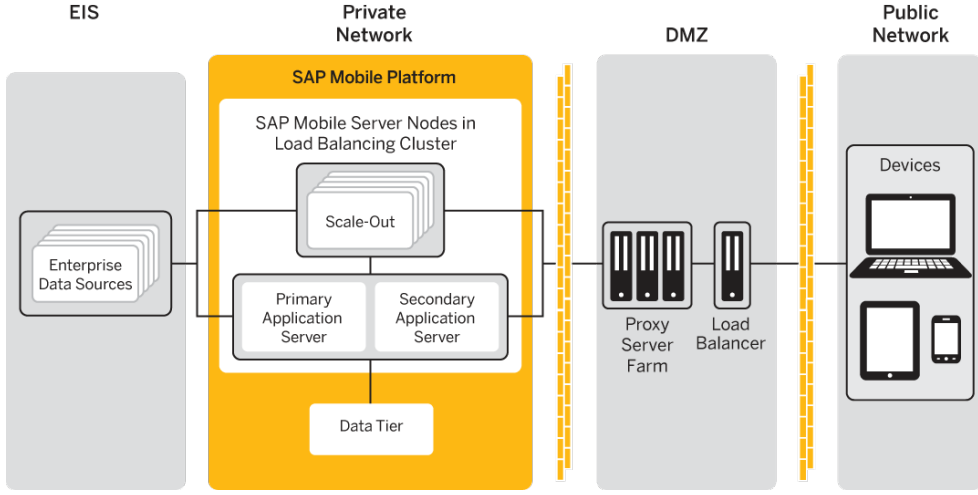
This installation scenario places a data tier on one server and two or more Unwired Server instances on separate servers. Components work together as a cluster, providing load balancing between the Unwired Server instances. This scenario is suitable for a low-volume production environment that does not require a failover capability for the data tier.

Prerequisites

The architecture, design characteristics, and use cases for this installation scenario are described in *Landscape Design and Integration* > *Designing the Landscape* > *Simple Load-Balancing Cluster*. The installation instructions in this chapter assume that you have used the *Landscape Design and Integration* document to design the landscape

Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SUP22_Worksheets.zip*.

This diagram illustrates the system you are installing:



Note: You cannot install cluster nodes concurrently. You must install the nodes in this cluster in this order:

1. Install the data tier.
2. Install the primary Unwired Server as an application server node.
3. Install the secondary Unwired Server as an application server node.

4. (Optional) Install Unwired Server scale-out nodes as needed. You can install multiple scale-out nodes, one at a time, in any order.

Task

1. *Installing the Data Tier*

   This installation scenario places Unwired Platform common data tier resources on a separate host, from which they can be shared by multiple Unwired Server instances.
2. *Installing the Unwired Server*

   Install all of the Unwired Server nodes in your simple load-balancing cluster. This scenario uses two Unwired Servers as application server nodes, and (optionally) as many scale-out nodes as necessary.
3. *Verifying the Full Unwired Platform Cluster Installation*

   When you have completed installing and verifying all cluster nodes, verify the functionality of the full cluster to ensure that the installation process has been completely successful.

Installing the Data Tier

This installation scenario places Unwired Platform common data tier resources on a separate host, from which they can be shared by multiple Unwired Server instances.

Prerequisites

Ensure that all servers on which you install Unwired Server and data tier in a cluster are set to the same time and time zone.

Task

1. *Preparing for Installation*

   Ensure that the host on which you are installing Sybase Unwired Platform is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log and verify that database services are functioning.

See also

- *Installing the Unwired Server* on page 32

Preparing for Installation

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

1. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
2. Verify that you have Administrator privileges on the installation target host.
3. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.
   b) Select the **Advanced** tab, then click **Environment Variables**.
   c) Select JAVA_TOOL_OPTIONS and click **Delete**.
   d) Click **OK** to exit all dialogs.
4. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   This includes any database servers, Sybase Control Center, and if Sybase SAP® Data Orchestration Engine Connector is present in an upgrade installation, SAP Data Orchestration Engine.

   To verify that services are stopped, open the Services pane from Windows Control Panel.
5. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
6. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. Select your license model and click **Next**.

Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (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, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type.

   (Enterprise Server Edition only) Enter the number of client licenses.

   Click **Next**.
6. Enter the location of your license file.
   - If you selected **Unserved (local) license**, enter the absolute path to the license file on the installation target host, using only ASCII characters.

- If you selected **Served (remote) license**, enter the host name and TCP port of the license server.

Click **Next**.

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.

Selecting Installation Options

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

The installation path you specify below is referred to as *`SUP_HOME`* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:
   - ASCII alphanumeric characters
   - Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
   - No characters between "UnwiredPlatform" and the preceding "\" character.
2. Select **Cluster** and click **Next**.
3. Select **Install the data tier for your Unwired Platform cluster** and click **Next**.
4. (Optional) On the additional installation options pane, select **Configure data tier** to change default server ports, passwords, or database file locations.
5. (Optional) If you selected **Configure data tier**:
   a) Enter port numbers and passwords, or accept the defaults for the ports listed:

   Note: These passwords can contain only alphanumeric ASCII characters and underscore ("_"), start with a letter, and be no more than 32 characters in length.

   In a new installation, the default password for all databases is `sql`.

   - Cache database server
   - Cluster database server

   Enter a port number, or accept the default for:

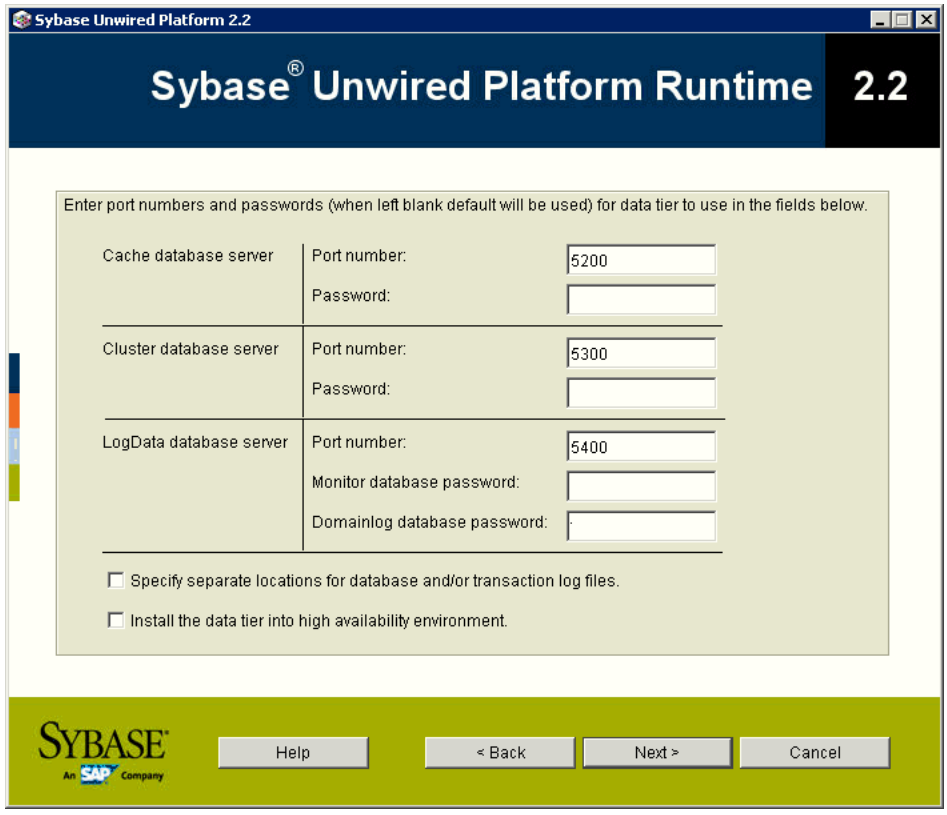
   - LogData database server

   Enter passwords, or accept the defaults for:

- Monitor database
- Domainlog database

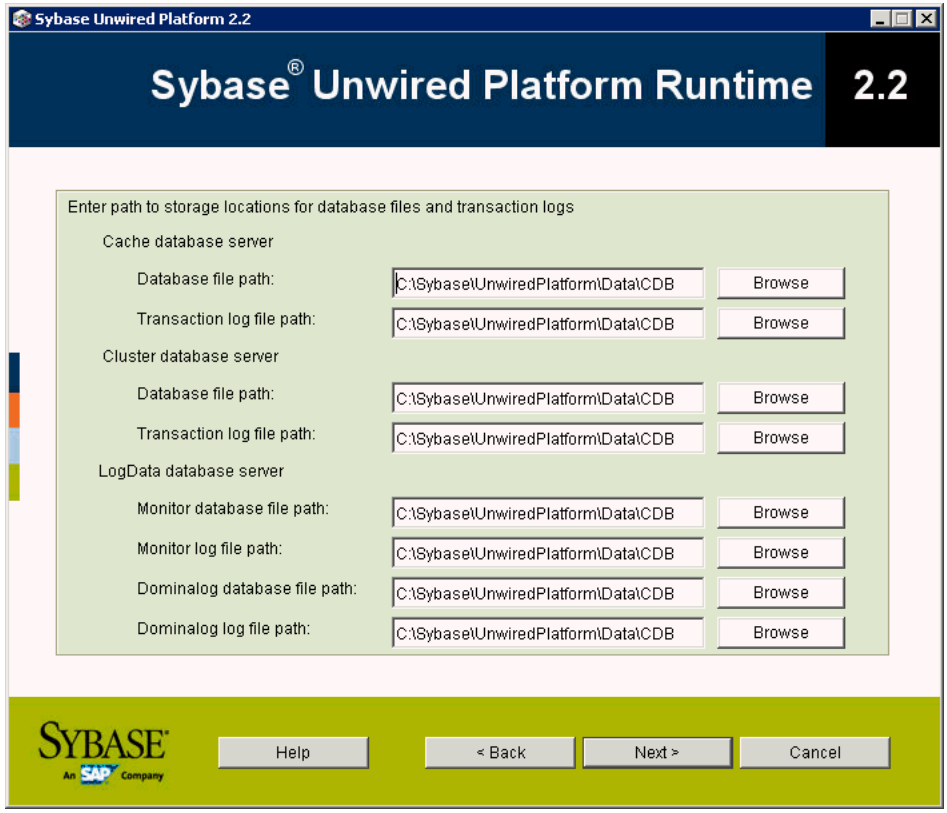
b) (Optional) To specify nondefault locations for database files and transaction logs, select **Specify separate locations for database and/or transaction log files**.

c) Click **Next**.



6. (Optional) If you selected **Configure data tier**, and then selected **Specify separate locations for database and/or transaction log files**, complete these fields:
   - **... file path –** (optional) enter the path to a storage location for the database files, for each database listed.
   - **... log file path –** (optional) enter the path to a storage location for the transaction logs, for each database listed.

   Each path must:
   - Point to an existing directory in the shared data folder.
   - Be no longer than 228 characters.
   - Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").



Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

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

Verifying the Installation

Check for errors in the installation log and verify that database services are functioning.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.

2. Verify that these services are started:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB

Installing the Unwired Server

Install all of the Unwired Server nodes in your simple load-balancing cluster. This scenario uses two Unwired Servers as application server nodes, and (optionally) as many scale-out nodes as necessary.

Prerequisites

- Unwired Server installation depends on data tier installation. Install data tier components first, before installing Unwired Server components.
- Ensure that all servers on which you install Unwired Server and data tier in a cluster are set to the same time and time zone.

Task

1. *Preparing for Installation*

   Ensure that the host on which you are installing Sybase Unwired Platform is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

See also

- *Installing the Data Tier* on page 26
- *Verifying the Full Unwired Platform Cluster Installation* on page 39

Preparing for Installation

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

1. Make sure you have installed and verified the data tier node.
2. If you are using a served license, set up the SySAM license server. See:
   - *SySAM FAQ* online at *http://www.sybase.com/detail?id=1038615*
   - *Fast Track to SySAM 2.0* white paper, available at *http://www.sybase.com/detail?id=1037788*
3. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
4. Verify that you have Administrator privileges on the installation target host.
5. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first Unwired Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

   See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.
6. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.
   b) Select the **Advanced** tab, then click **Environment Variables**.
   c) Select JAVA_TOOL_OPTIONS and click **Delete**.
   d) Click **OK** to exit all dialogs.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   This includes any database servers, Sybase Control Center, and if Sybase SAP® Data Orchestration Engine Connector is present in an upgrade installation, SAP Data Orchestration Engine.

   To verify that services are stopped, open the Services pane from Windows Control Panel.
8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
9. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. Select your license model and click **Next**.

Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (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, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type.

   (Enterprise Server Edition only) Enter the number of client licenses.

   Click **Next**.
6. Enter the location of your license file.

- If you selected **Unserved (local) license**, enter the absolute path to the license file on the installation target host, using only ASCII characters.
- If you selected **Served (remote) license**, enter the host name and TCP port of the license server.

Click **Next**.

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.

Selecting Installation Options

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

The installation path you specify below is referred to as *SUP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:
   - ASCII alphanumeric characters
   - Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
   - No characters between "UnwiredPlatform" and the preceding "\" character.
2. Select **Cluster** and click **Next**.
3. Select the option for this Unwired Server cluster 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. By default, this option is selected.

     Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® Data Orchestration Engine

Connector and Sybase Mobile Sales for SAP CRM. If Unwired Platform services do not start automatically, dependent products will encounter problems.

- **Set Unwired Server name and cluster name**. You can specify the cluster name, only when you install the first node in an Unwired Server cluster.

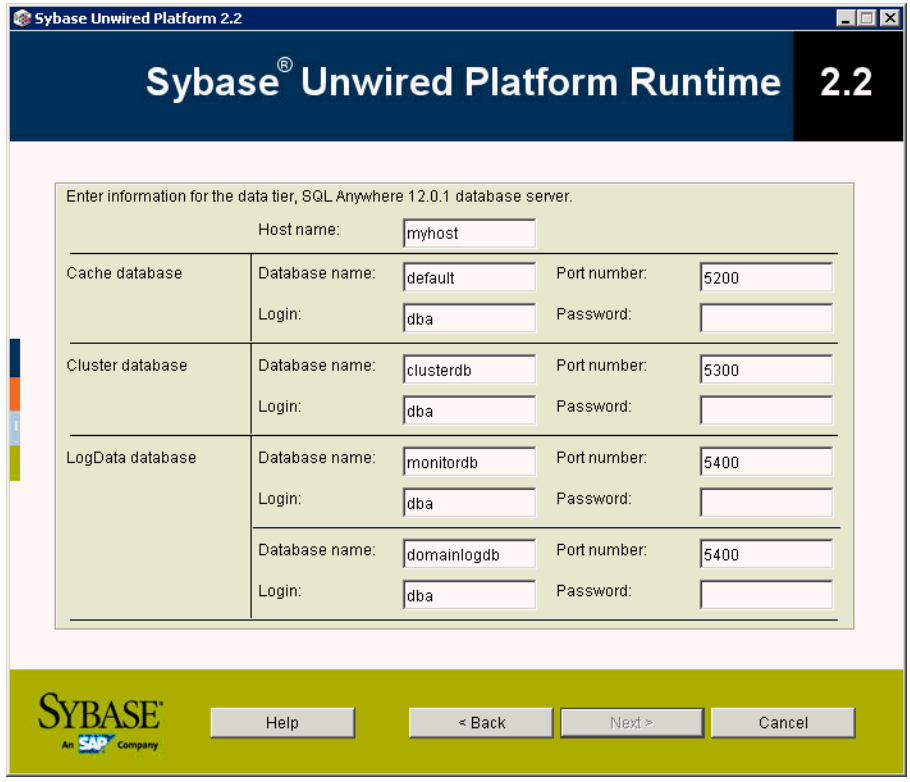
  Set Unwired Server name on subsequent nodes in an Unwired Server cluster. The name must be unique on the network segment.
- **Install node as scale-out node** to streamline the server node to support high-volume business-to-consumer transactions. (This is available only after you first install Unwired Server in the same cluster. Recommended: Install a second Unwired Server node in the cluster before you install the first scale-out node.)

6. (Optional) If you selected **Set Unwired Server name**, enter a name for this Unwired Server instance. The name must be unique on the network segment.

   If you are installing the first node in the Unwired Server cluster, you can also enter a name for the cluster.

   Each server or cluster name:
   - Must contain only:
     - ASCII alphanumeric characters
     - Underscore ("_"), hyphen ("-"), and period (".") characters
   - Server names must be 32 characters or less and must begin with an alphanumeric character.
   - Cluster names must be 22 characters or less.
7. Enter information that Unwired Server needs to connect to the data tier.
   a) Enter the name of the data tier host.
   b) Enter the following for each configurable database listed:
      - Database Name
      - Port Number
      - Login
      - Password

      In a typical new installation, you need not change any prepopulated value, enter `sql` as the default password for each database.



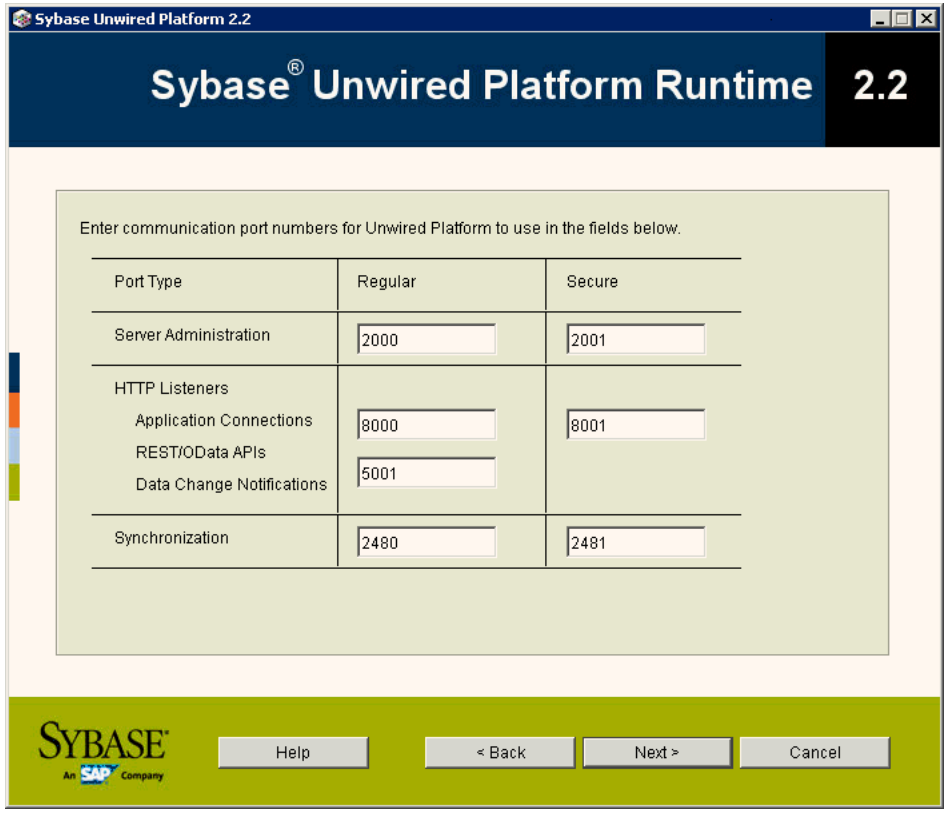
8. (Optional) If you selected **Configure Unwired Platform communication ports**, change the default port numbers as needed.

   Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

   Every Unwired Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each Unwired Server in the cluster.

   - Server administration
   - HTTP listeners
     - Application connections
     - REST/OData APIs
     - Data change notifications
   - Synchronization

     Note: Synchronization ports do not appear when you are installing a scale-out node.



9. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

   The password must:
   - Be at least 8 characters, and no longer than 32 characters.
   - Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

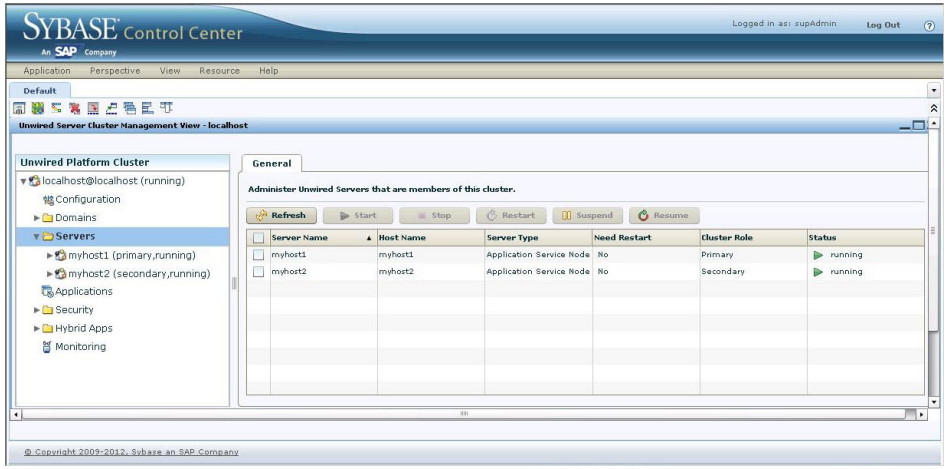
   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Control Center *X.X* (on Application Server nodes only)
   - Sybase Unwired SampleDB (not present in Enterprise Server Edition)
   - Sybase Unwired Server
3. Log in to Sybase Control Center. If you are installing a scale-out node, go to one of the systems where you installed Unwired Server as an application server node.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the node you just installed is accessible from Sybase Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Verifying the Full Unwired Platform Cluster Installation

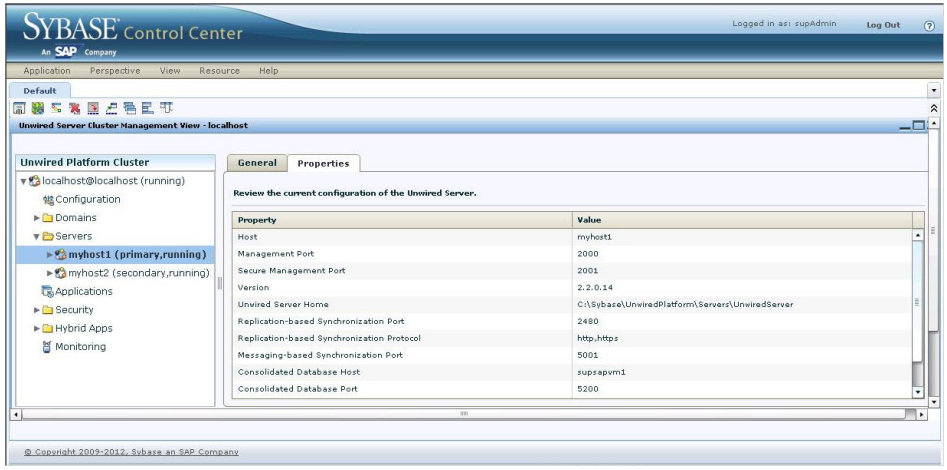
When you have completed installing and verifying all cluster nodes, verify the functionality of the full cluster to ensure that the installation process has been completely successful.

1. Start Sybase Control Center. From an Unwired Server node that is not a scale-out node, choose **Start > (All) Programs > Sybase > Sybase Control Center**.
2. Make sure you can see all the Unwired Server nodes (both application server and scale-out) in the cluster.



3. Select each Unwired Server node (both application server and scale-out nodes) and inspect the settings.

   All information should be filled in, with no error messages.



Next

Go to the SAP Software Download Center at *https://websmp209.sap-ag.de/swdc* (requires an S-user ID with `SWDOWNLAD Software download` authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of Sybase Unwired Platform you have just installed.

- If a support package is available for this version of Sybase Unwired Platform:
  1. Use the *Readme* for the support package to upgrade your Sybase Unwired Platform installation to the support package version now.

2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

See also

- *Installing the Unwired Server* on page 32

CHAPTER 5

Installing Unwired Platform with a Standard Microsoft Failover Cluster

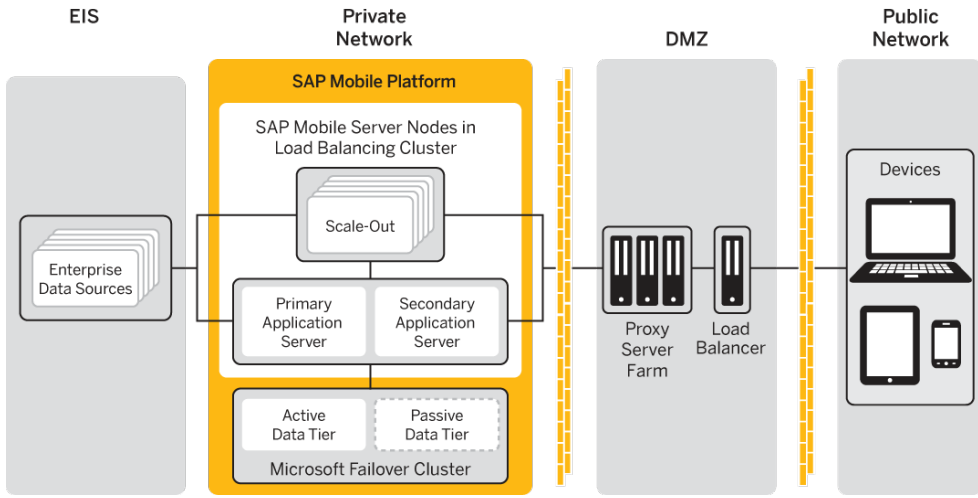
This installation scenario places two data tiers on separate servers within a Microsoft Failover Cluster, and two Unwired Server nodes on separate servers outside the failover cluster, with optional Unwired Server scale out nodes on additional servers. This provides failover capability for the data tier servers and load balancing between the Unwired Server instances. This scenario is suitable for a high-volume production environment that cannot have a single point of failure.

Prerequisites

The architecture, design characteristics, and use cases for this installation scenario are described in *Landscape Design and Integration* > *Designing the Landscape* > *Standard Microsoft Failover Cluster*. The installation instructions in this chapter assume that you have used the *Landscape Design and Integration* document to design the landscape.

Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SUP22_Worksheets.zip*.

This diagram illustrates the system you are installing with this scenario:



Note: You cannot install cluster nodes concurrently. You must perform Microsoft Failover Cluster tasks and install the nodes in this cluster in this order:

1. Perform critical Microsoft Failover Cluster setup tasks.
2. Install the first data tier.
3. Prepare Microsoft Failover Cluster for second data tier.
4. Install the second data tier.
5. Install the first Unwired Server as an application server node.
6. Install the second Unwired Server as an application server node.
7. (Optional) Install Unwired Server scale-out nodes as needed. You can install multiple scale-out nodes, one at a time, in any order.

Task

1. *Critical Prerequisite Tasks*

   Perform all critical tasks before you attempt to install the first data tier in your Microsoft Failover Cluster environment.
2. *Installing the First Data Tier*

   Install the first of two data tiers on a server that is the active node in a Microsoft Failover Cluster.
3. *Preparing Microsoft Failover Cluster for Second Data Tier Installation*

   With the first data tier installed, you can complete the configuration of the failover cluster to handle all the tasks involved in switching the two data tier nodes between active and passive states.
4. *Installing the Second Data Tier*

   Install the second of two data tiers on the second server in the Microsoft Failover Cluster where the first data tier is installed.
5. *Installing the First Unwired Server Node*

   Install the first Unwired Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the primary Unwired Server node for the cluster.
6. *Installing the Second Unwired Server Node*

   Install the second Unwired Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the secondary Unwired Server node for the cluster.
7. *(Optional) Installing Sybase Unwired Platform Scale-Out Nodes*

   (Optional) Repeat needed to install all of the Sybase Unwired Platform scale-out nodes required to complete your Unwired Platform installation with a standard Microsoft Failover Cluster.
8. *Verifying the Full Unwired Platform Cluster Installation*

   Verify that you can see all Unwired Server nodes in the cluster in Sybase Control Center, and that you can inspect the settings for each.

Critical Prerequisite Tasks

Perform all critical tasks before you attempt to install the first data tier in your Microsoft Failover Cluster environment.

1. Set up the number of physical servers that your Unwired Platform installation plan requires.

   Ensure that these hosts meet all the requirements specified in *Supported Hardware and Software*.
2. Have your IT support team set up and build a Microsoft Failover cluster with two server nodes on which you will install Unwired Platform data tiers.

   Supply your IT support team with the names for the cluster and the two servers.
3. Acquire a license file, customized to reflect the Unwired Platform configuration your company has purchased, from SAP Service Marketplace (SMP) or Sybase Product Download Center (SPDC), as described in *Obtaining a License*.
4. Install and configure a SySAM license server that can manages license information for all the data tiers and Unwired Server nodes in your cluster.

   For more complete information about SySAM, see:
   - *SySAM 2 Users Guide* online at *http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00530.0220/doc/html/title.html*
   - *Fast Track to SySAM 2.0* white paper, available at *Fast Track to SySAM 2.0*
   - *SySAM FAQ* online at *http://www.sybase.com/detail?id=1038615*
   - *SySAM* product page online at *http://www.sybase.com/products/allproductsa-z/sysam*

   Note: You cannot use the unserved license model in a Microsoft Failover Cluster.

See also

- *Installing the First Data Tier* on page 46

Adding a Data Folder to the Cluster Share Disk

Your IT team has created a share disk that will always be available to the active data tier node, as Microsoft Failover Cluster switches the data tier nodes between active and passive states. Create a data folder on that share disk.

Prerequisites

Verify that your IT team created the Microsoft Failover Cluster by inlcuding the two servers you specified, and setting up a share disk for the cluster to use.

Task

1. On the active cluster node, open Windows Explorer and navigate to **Share Disk**.

   If Share Disk does not appear, verify that you are not on the desktop of the passive node. Look for the share disk on the other node.
2. Create a folder for Unwired Platform shared data, for example, `SMPData`.

   Instructions that follow assume the name used for the folder is `SMPData`.

Verifying the Microsoft Failover Cluster Configuration

Before you install the first data tier for Unwired Platform, ensure that the Microsoft Failover Cluster is operating correctly. This simplifies the troubleshooting process for any issues that may arise during installation of Unwired Platform components.

1. From the desktop of the active cluster node, use Windows Explorer to navigate to the Share Disk.
2. Expand the folder you created in the previous task (for example, `SMPData`), and create a `test.txt` file.
3. Fail over to the other node of the cluster to make it active.
4. On the desktop of the new active node, verify that you can now see the `test.txt` file in the data folder of the Share Drive there:
   a) Navigate to the share disk in Windows Explorer.
   b) Open the data folder you created earlier and see the `test.txt` file.
   c) Delete the `test.txt` file.
5. Fail over to the other node of the cluster to make it active.
6. On the desktop of the new active node in the cluster, verify that the `test.txt` file is no longer in the Share Drive there:
   a) Navigate to the share disk in Windows Explorer.
   b) Open the data folder you created and confirm the `test.txt` file no longer exists.

Installing the First Data Tier

Install the first of two data tiers on a server that is the active node in a Microsoft Failover Cluster.

Prerequisites

Test the Microsoft Failover Cluster setup and configure the cluster to be ready for Unwired Platform installation.

1. *Preparing for Installation*

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log and verify that database services are functioning.

See also

- *Critical Prerequisite Tasks* on page 45
- *Preparing Microsoft Failover Cluster for Second Data Tier Installation* on page 52

Preparing for Installation

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

1. Verify that you are on the active node.
2. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.
   b) Select the **Advanced** tab, then click **Environment Variables**.
   c) Select JAVA_TOOL_OPTIONS and click **Delete**.
   d) Click **OK** to exit all dialogs.

5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
7. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

   - Insert the Sybase Unwired Platform Runtime 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.

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:

   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type.

   (Enterprise Server Edition only) Enter the number of client licenses.

   Click **Next**.
6. Enter the host name and TCP port of the license server.

   Click **Next**.

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.

Selecting Installation Options

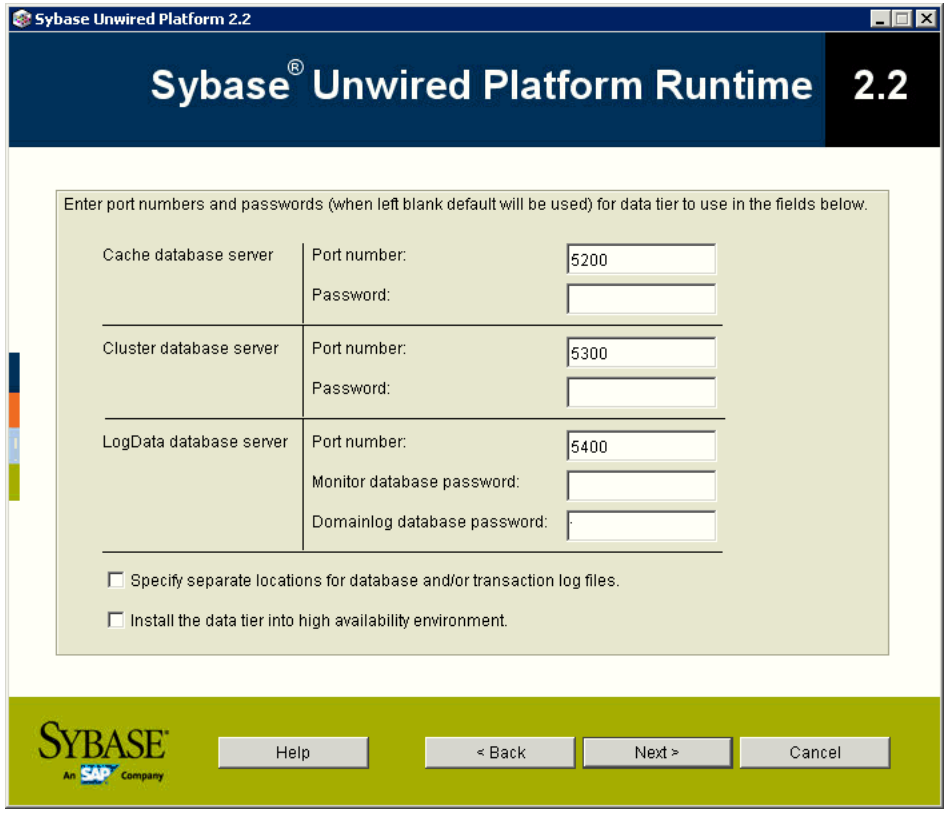
Specify the installation directory, installation type, Unwired Platform components, and additional installation options.

The installation path you specify below is referred to as *SUP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

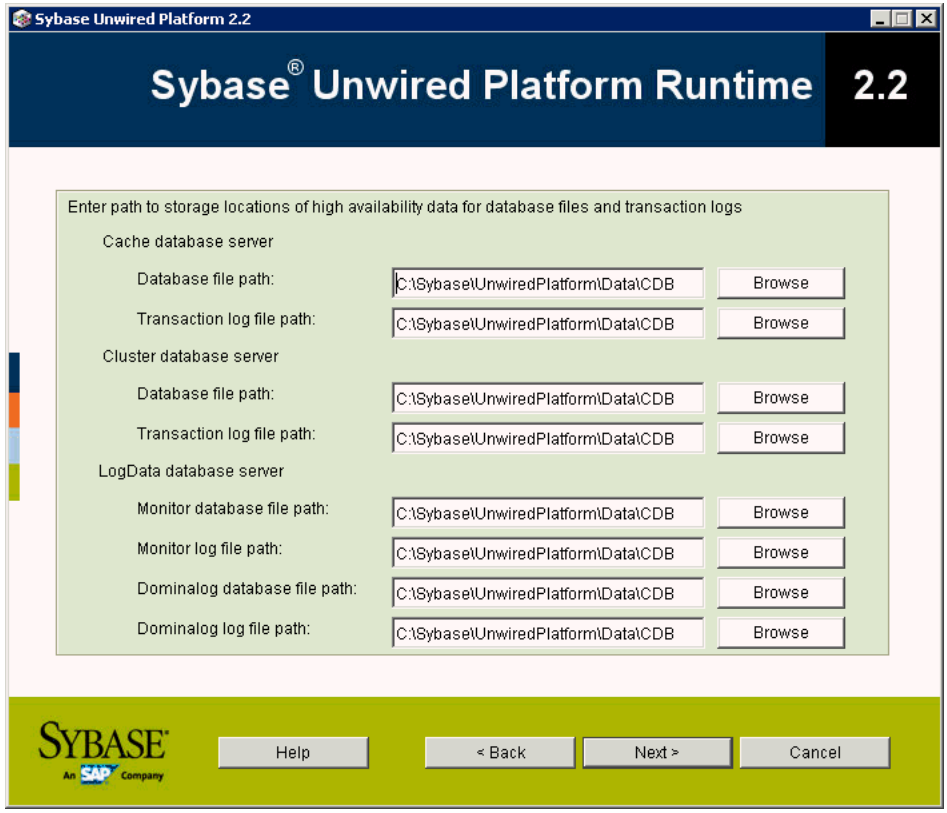
   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:
   - ASCII alphanumeric characters
   - Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
   - No characters between "UnwiredPlatform" and the preceding "\" character.
2. Select **Cluster** and click **Next**.
3. Select **Install the data tier for your Unwired Platform cluster** and click **Next**.
4. On the additional installation options panel, select **Configure data tier**.
5. On the port numbers and passwords panel:
   a) Do not change the default password, which is `sql`. You will change the default passwords when you install the second data tier.
   b) (Optional) Enter port numbers, or accept the defaults for:
      - Cache database server
      - Cluster database server
      - LogData database server
   c) (Optional) If you want to specify non-default locations for database files and transaction logs, select **Specify separate locations for database and/or transaction log files**.
   d) Select **Install the data tier into high availability environment**.
   e) Click **Next**.



6. If you selected **Specify separate locations for database and/or transaction log files**, enter the full path to each of the following that you want to change:
   - **... file path –** (optional) enter the path to a storage location that will house the database files, for each database listed.
   - **... log file path –** (optional) enter the path to a storage location that will house the transaction logs, for each database listed.

   Each path must:
   - Be either a file share resource group, or a Client Access Point.
   - Not be a UNC path.
   - Point to an existing directory in the shared data folder.
   - Use the same drive letter mapped on all data tier hosts.
   - Be no longer than 228 characters.
   - Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").



7. If you selected only **Install the data tier into high availability environment**, enter a path for the location of the high availability data.

   Enter the path to the location that will hold the data tier database and transaction log files.

   The path must:
   - Be either a file share resource group, or a Client Access Point.
   - Not be a UNC path.
   - Point to an existing directory within the shared data folder you added to the cluster share disk (for example, *SMPData*).
   - Use the same drive letter mapped on all data tier hosts.
   - Be no longer than 228 characters.
   - Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

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

Verifying the Installation

Check for errors in the installation log and verify that database services are functioning.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB

Preparing Microsoft Failover Cluster for Second Data Tier Installation

With the first data tier installed, you can complete the configuration of the failover cluster to handle all the tasks involved in switching the two data tier nodes between active and passive states.

1. On the active cluster node, verify that all Unwired Platform database services are started:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB
2. In Windows Explorer, navigate to the folder in which you installed the database when you installed the first data tier.

   If you did not change the default location, this folder is *SMPData*`\CDB`, where *SMPData* is the data folder you added to the cluster share disk.
3. Open each `*errorlog.txt` file and look for `Now accepting requests` as the last line.

If you see error messages, there is a problem with the installation that you must fix before proceeding.

If you do not check the error logs immediately after installing the data tier, the log contains pairs of lines beginning `Starting checkpoint...` and `Finished checkpoint....` As long as these are the only lines logged after `Now accepting requests`, the database is operating properly.

4. On the active cluster node, stop all Unwired Platform database services.
5. In Windows Services panel, set all Unwired Platform database services to be started manually:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB

   Set these services to start manually so that Microsoft Failover Cluster can have full control over starting and stopping them.
6. In the Microsoft Failover Cluster, define a managed cluster resource group, and add the database services to it, so that they move from the current active node to the new active node when the active node fails over.

   For details, refer to the Microsoft Failover Cluster documentation.
7. Verify that all the database services stop when you take the resource group offline, and start when you take the resource group online.
8. Verify that services switch to the new active node when active and passive nodes are switched.
   a) Fail over to the other node to make it active.
   b) Verify that all Unwired Platform database services shut down on the current passive node.
   c) Go to the desktop on the active node and fail that node over to the first node.
   d) Go to the desktop on the new active node and check the database log files.

      There should be no errors.
9. Fail over to the other node to make it active.

See also

- *Installing the First Data Tier* on page 46

Installing the Second Data Tier

Install the second of two data tiers on the second server in the Microsoft Failover Cluster where the first data tier is installed.

Prerequisites

You have successfully installed the first data tier in the Microsoft Failover Cluster and verified its functionality.

1. *Preparing for Installation*

   Ensure that the host on which you are installing this data tier is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log, and verify that database services are functioning and online in Microsoft cluster management software, and that you can manually fail them over.

See also

- *Installing the First Unwired Server Node* on page 60

Preparing for Installation

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

1. Make sure you have installed and verified the first data tier node.
2. Verify that the installation target host is the active node in the Microsoft Failover Cluster into which you are installing.

   If it is not the active node, either:
   - Switch to the desktop of the active node, or,
   - Make the current node active by failing the other node over to it.

3. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
4. Verify that you have Administrator privileges on the installation target host.
5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.
   b) Select the **Advanced** tab, then click **Environment Variables**.
   c) Select JAVA_TOOL_OPTIONS and click **Delete**.
   d) Click **OK** to exit all dialogs.
6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: "Sybase Control Center" and all services with names that begin with "Sybase Unwired…"
7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

   - Insert the Sybase Unwired Platform Runtime 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.

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:

   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.

- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type.

   (Enterprise Server Edition only) Enter the number of client licenses.

   Click **Next**.
6. Enter the host name and TCP port of the license server.

   Click **Next**.

   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.

Selecting Installation Options

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

The installation path you specify below is referred to as *`SUP_HOME`* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:
   - ASCII alphanumeric characters
   - Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
   - No characters between "UnwiredPlatform" and the preceding "\" character.
2. Select **Cluster** and click **Next**.
3. Select **Install the data tier for your Unwired Platform cluster** and click **Next**.
4. On the additional installation options panel, select **Configure data tier**.
5. On the port numbers and passwords panel:
   a) (Optional) Enter port numbers and passwords, or accept the defaults for the ports listed:

Note: The port number settings here must match exactly those you set for the first data tier.

The passwords here must contain only alphanumeric ASCII characters and underscore ("_"), start with a letter, and be no more than 32 characters in length.

- Cache database server
- Cluster database server

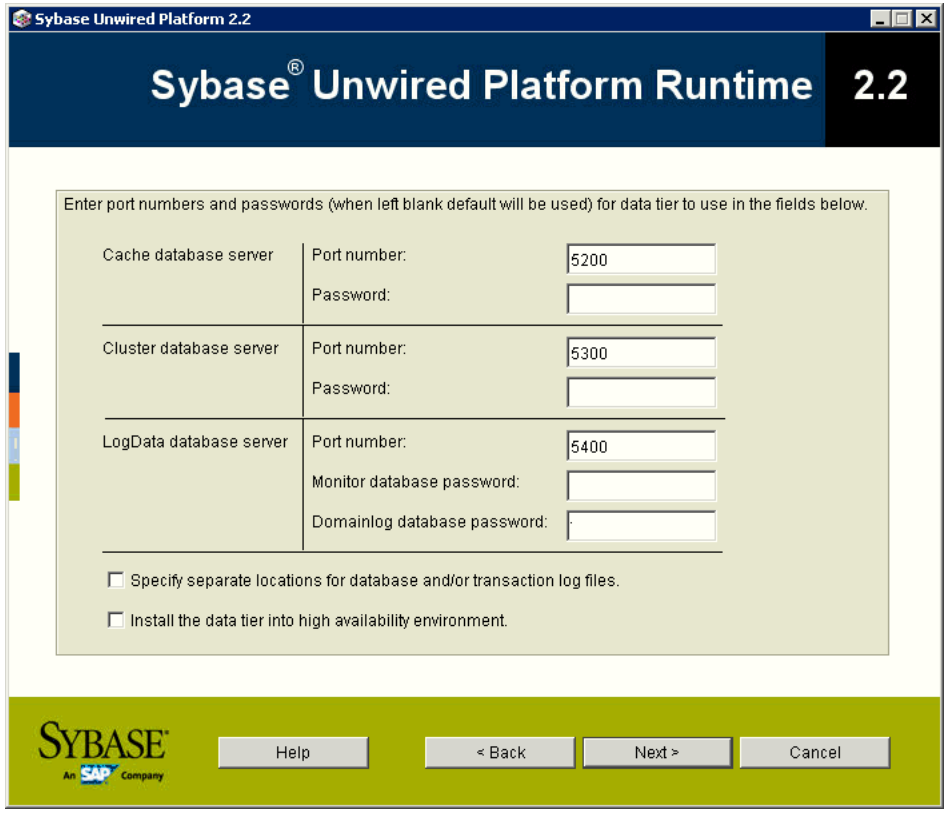
Enter a port number, or accept the default, for:

- LogData database server

Enter passwords, or accept the defaults, for:

- Monitor database
- Domainlog database

b) (Optional) If you want to specify non-default locations for database files and transaction logs, select **Specify separate locations for database and/or transaction log files**.
c) Select **Install the data tier into high availability environment**.
d) Click **Next**.



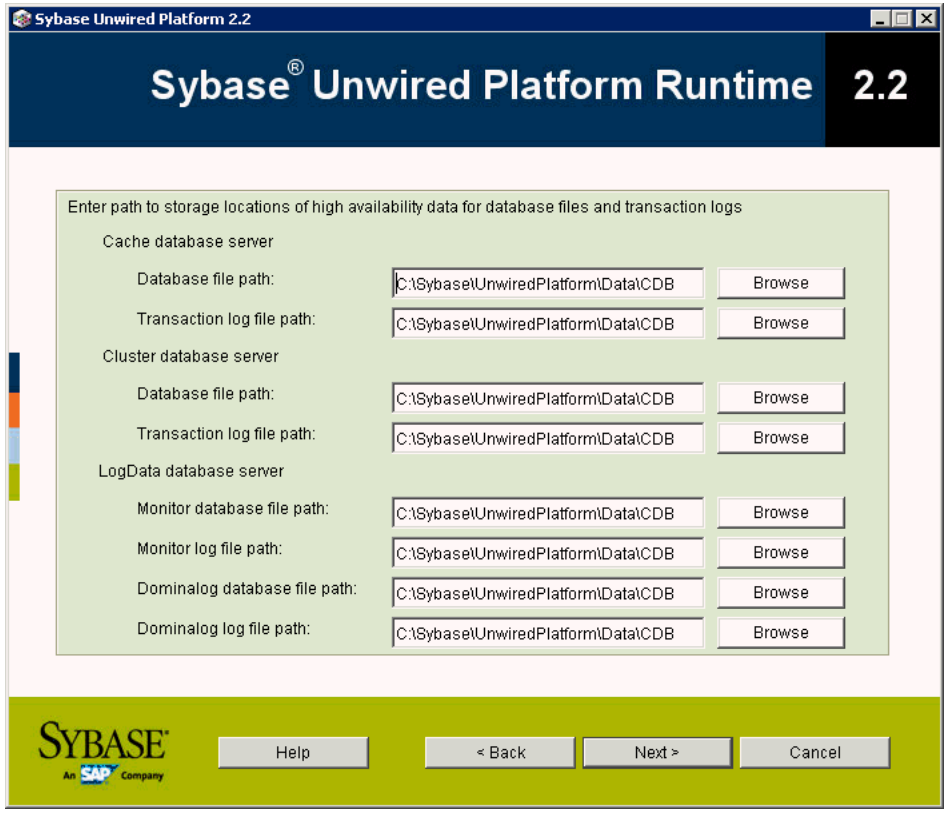
6. If you selected **Specify separate locations for database and/or transaction log files**, enter the full path to each of the following that you want to change:

Note: The path settings here must match exactly those you set for the first data tier.

- **... file path –** (optional) enter the path to a storage location that will house the database files, for each database listed.
- **... log file path –** (optional) enter the path to a storage location that will house the transaction logs, for each database listed.

Each path must:

- Be either a file share resource group, or a Client Access Point.
- Not be a UNC path.
- Point to an existing directory in the shared data folder.
- Use the same drive letter mapped on all data tier hosts.
- Be no longer than 228 characters.
- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").



7. If you selected only **Install the data tier into high availability environment**, enter a path for the location of the high availability data.

   Note: The path settings here must match exactly those you set for the first data tier.

   Enter the path to the location that will hold the data tier database and transaction log files.

   The path must:
   - Be either a file share resource group, or a Client Access Point.
   - Not be a UNC path.
   - Point to an existing directory within the shared data folder you added to the cluster share disk (for example, *SMPData*).
   - Use the same drive letter mapped on all data tier hosts.
   - Be no longer than 228 characters.
   - Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

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

Verifying the Installation

Check for errors in the installation log, and verify that database services are functioning and online in Microsoft cluster management software, and that you can manually fail them over.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB
3. In the Microsoft cluster management software, verify that these same services are online.
4. Verify that you can fail over to the first installed node, and then back to the second.

Installing the First Unwired Server Node

Install the first Unwired Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the primary Unwired Server node for the cluster.

Prerequisites

You have successfully installed both data tiers in the Microsoft Failover Cluster and verified their functionality.

1. *Preparing for Installation*

   Ensure that the host on which you are installing this Unwired Server as an application server node is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

See also

- *Installing the Second Data Tier* on page 54
- *Installing the Second Unwired Server Node* on page 67

Preparing for Installation

Ensure that the host on which you are installing this Unwired Server as an application server node is ready for you to begin the installation.

1. Make sure you have installed and verified the data tier nodes.
2. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first Unwired Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

   See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.

5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.
   b) Select the **Advanced** tab, then click **Environment Variables**.
   c) Select JAVA_TOOL_OPTIONS and click **Delete**.
   d) Click **OK** to exit all dialogs.

6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”

7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type.

   (Enterprise Server Edition only) Enter the number of client licenses.

   Click **Next**.
6. Enter the host name and TCP port of the license server.

   Click **Next**.

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.

Selecting Installation Options

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

The installation path you specify below is referred to as *SUP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:
   - ASCII alphanumeric characters
   - Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
   - No characters between "UnwiredPlatform" and the preceding "\" character.
2. Select **Cluster** and click **Next**.
3. Select **Install the first server node and connect it to the data tier** and 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. By default, this option is selected.

     Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® Data Orchestration Engine Connector and Sybase Mobile Sales for SAP CRM. If Unwired Platform services do not start automatically, dependent products will encounter problems.
   - **Set Unwired Server name and cluster name** . Names must be unique on the network segment.
6. (Optional) If you selected **Set Unwired Server name and cluster name**, enter a name for this Unwired Server instance (name must be unique on network segment) and a name for the Unwired Server cluster.

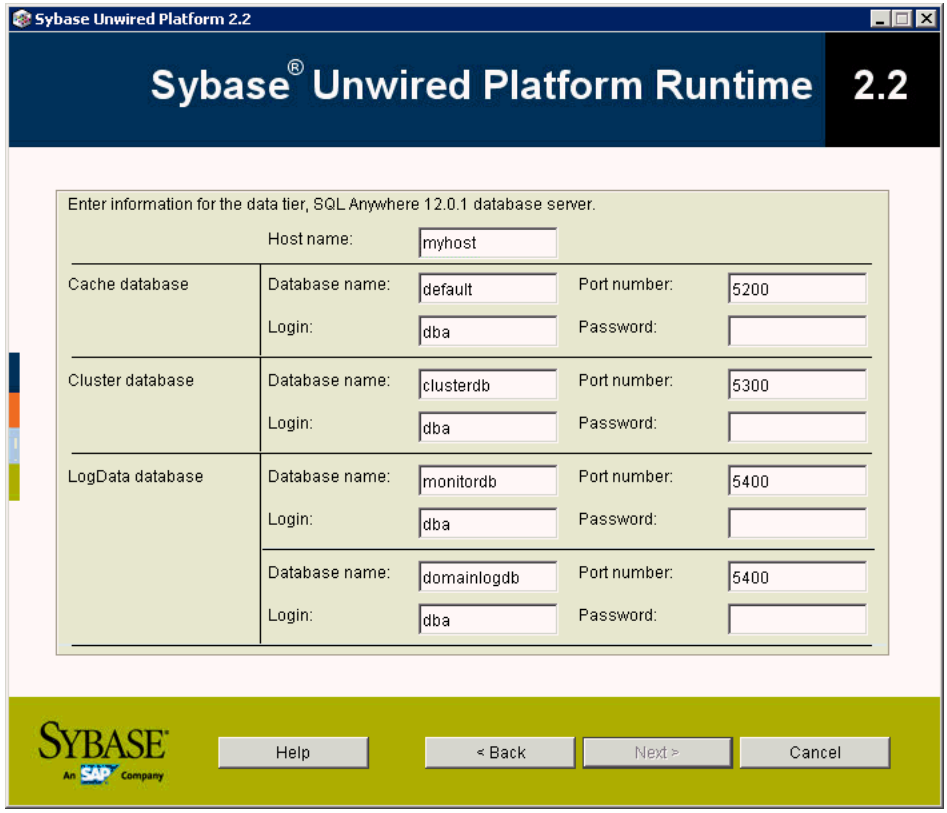
Note: The Unwired Server cluster name refers to the Unwired Server load balancing cluster; it is different from the Microsoft Failover Cluster, which contains the Unwired Platform data tier nodes.

Each server or cluster name:

- Must contain only:
  - ASCII alphanumeric characters
  - Underscore ("_"), hyphen ("-"), and period (".") characters
- Server names must be 32 characters or less and must begin with an alphanumeric character.
- Cluster names must be 22 characters or less.

7. Enter information that Unwired Server needs to connect to the data tier:
   a) For host name, enter the fully qualified cluster service name that is assigned to the Microsoft Failover Cluster.
   b) For each configurable database listed, enter:
      - Database Name
      - Port Number
      - Login
      - Password

      Match exactly the passwords set for each database in the second data tier installation.

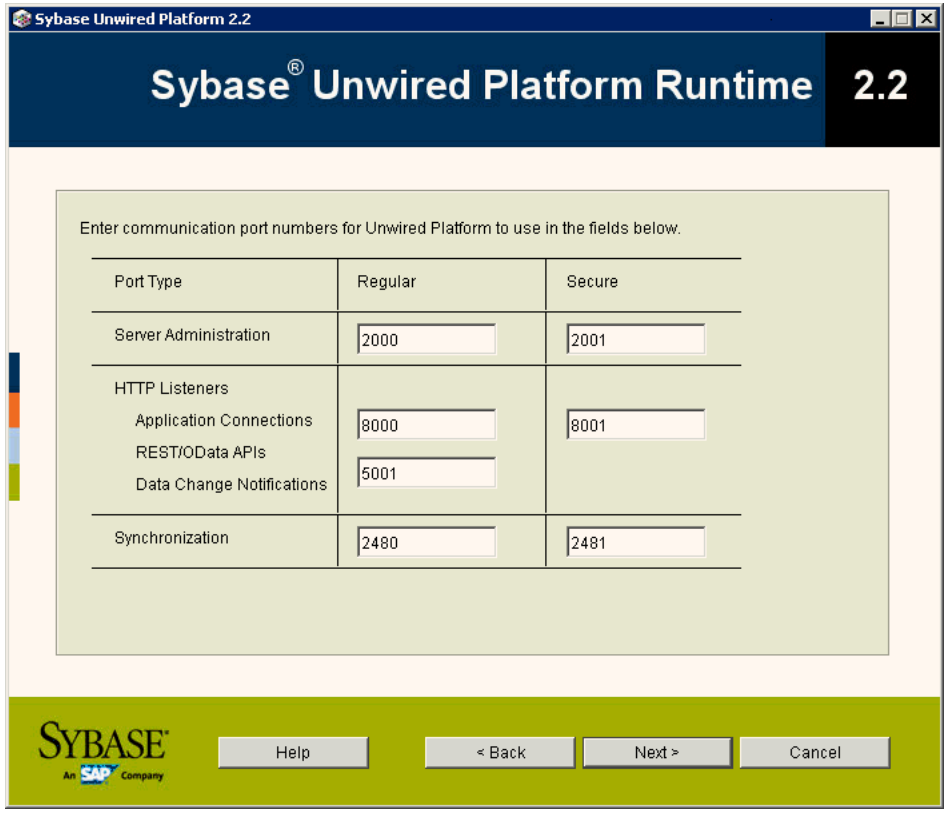


8. (Optional) If you selected **Configure Unwired Platform communication ports**, change the default regular and secure port numbers as needed.

   Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

   Every Unwired Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each Unwired Server in the cluster.

   - Server administration
   - HTTP listeners
     - Application connections
     - REST/OData APIs
     - Data change notifications
   - **Synchronization**



9. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

   The password must:
   - Be at least 8 characters, and no longer than 32 characters.
   - Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Control Center *X.X*
   - Sybase Unwired SampleDB (not present in Enterprise Server Edition)
   - Sybase Unwired Server
3. Verify that you can log in to Sybase Control Center.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the node you just installed is accessible from Sybase Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Installing the Second Unwired Server Node

Install the second Unwired Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the secondary Unwired Server node for the cluster.

Prerequisites

Install the first Unwired Server application server node and verify its functionality.

1. *Preparing for Installation*

   Ensure that the host on which you are installing this Unwired Server as an application server node is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

See also

- *Installing the First Unwired Server Node* on page 60
- *(Optional) Installing Sybase Unwired Platform Scale-Out Nodes* on page 74

Preparing for Installation

Ensure that the host on which you are installing this Unwired Server as an application server node is ready for you to begin the installation.

1. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
2. Verify that you have Administrator privileges on the installation target host.
3. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first Unwired Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

   See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.
4. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.
   b) Select the **Advanced** tab, then click **Environment Variables**.
   c) Select JAVA_TOOL_OPTIONS and click **Delete**.
   d) Click **OK** to exit all dialogs.
5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
7. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

   - Insert the Sybase Unwired Platform Runtime 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.

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:

   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type.

   (Enterprise Server Edition only) Enter the number of client licenses.

   Click **Next**.
6. Enter the host name and TCP port of the license server.

   Click **Next**.

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.

Selecting Installation Options

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

The installation path you specify below is referred to as *SUP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:
   - ASCII alphanumeric characters
   - Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
   - No characters between "UnwiredPlatform" and the preceding "\" character.
2. Select **Cluster** and click **Next**.
3. Select **Install an additional server node and connect it to the data tier** and 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. By default, this option is selected.

     Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® Data Orchestration Engine Connector and Sybase Mobile Sales for SAP CRM. If Unwired Platform services do not start automatically, dependent products will encounter problems.
   - **Set Unwired Server name** to enter a name that is unique on the network segment.
   - Do not select **Install node as scale-out node**. For high availability, install two Unwired Server nodes as application servers before you install a scale-out node.
6. (Optional) If you selected **Set Unwired Server name**, enter a name for this Unwired Server instance. The name must be unique on the network segment.)

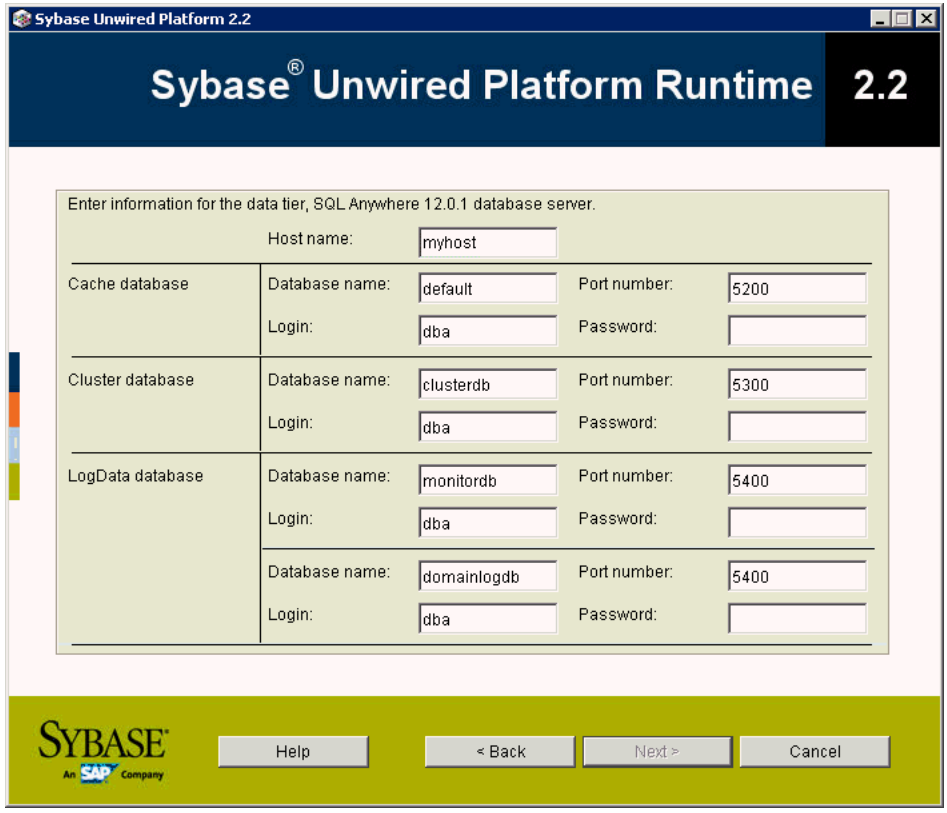
Each server name must contain only:

- ASCII alphanumeric characters
- Underscore ("_"), hyphen ("-"), and period (".") characters
- An alphanumeric character in the first position

Length of server names must be 32 characters or less.

7. Enter information that Unwired Server needs to connect to the data tier:
   a) For host name, enter the fully qualified cluster service name that is assigned to the Microsoft Failover Cluster.
   b) For each configurable database listed, enter:
      - Database Name
      - Port Number
      - Login
      - Password

      Match exactly the passwords set for each database in the second data tier installation.

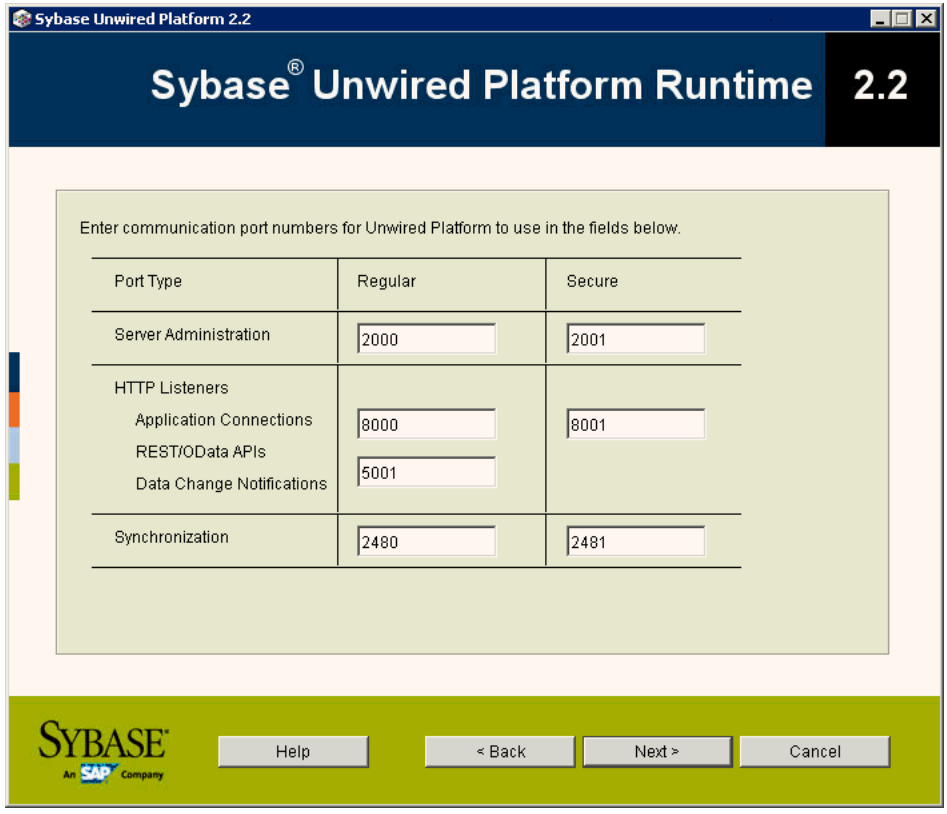


8. (Optional) If you selected **Configure Unwired Platform communication ports**, change the default regular and secure port numbers as needed.

Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

Every Unwired Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each Unwired Server in the cluster.

- Server administration
- HTTP listeners
  - Application connections
  - REST/OData APIs
  - Data change notifications
- **Synchronization**



9. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

   The password must:
   - Be at least 8 characters, and no longer than 32 characters.

- Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Control Center *X.X*
   - Sybase Unwired SampleDB
   - Sybase Unwired Server
3. Verify that you can log in to Sybase Control Center.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the node you just installed is accessible from Sybase Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

(Optional) Installing Sybase Unwired Platform Scale-Out Nodes

(Optional) Repeat needed to install all of the Sybase Unwired Platform scale-out nodes required to complete your Unwired Platform installation with a standard Microsoft Failover Cluster.

Prerequisites

Successfully install the two Sybase Unwired Platform nodes as application servers for the data tiers in the Microsoft Failover Cluster and verify their functionality.

1. *Preparing for Installation*

   Ensure that the host on which you are installing this Unwired Server scale-out node is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

See also

- *Installing the Second Unwired Server Node* on page 67
- *Verifying the Full Unwired Platform Cluster Installation* on page 80

Preparing for Installation

Ensure that the host on which you are installing this Unwired Server scale-out node is ready for you to begin the installation.

1. Make sure you have installed and verified all the nodes specified in the preceding subtasks for this installation scenario.

2. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first Unwired Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

   See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.
5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.
   b) Select the **Advanced** tab, then click **Environment Variables**.
   c) Select JAVA_TOOL_OPTIONS and click **Delete**.
   d) Click **OK** to exit all dialogs.
6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: "Sybase Control Center" and all services with names that begin with "Sybase Unwired…"
7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

   - Insert the Sybase Unwired Platform Runtime 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.

Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).

- 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:

- On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
- On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type.

   (Enterprise Server Edition only) Enter the number of client licenses.

   Click **Next**.
6. Enter the host name and TCP port of the license server.

   Click **Next**.

   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.

Selecting Installation Options

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

The installation path you specify below is referred to as *`SUP_HOME`* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:

   - ASCII alphanumeric characters

- Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
- No characters between "UnwiredPlatform" and the preceding "\" character.

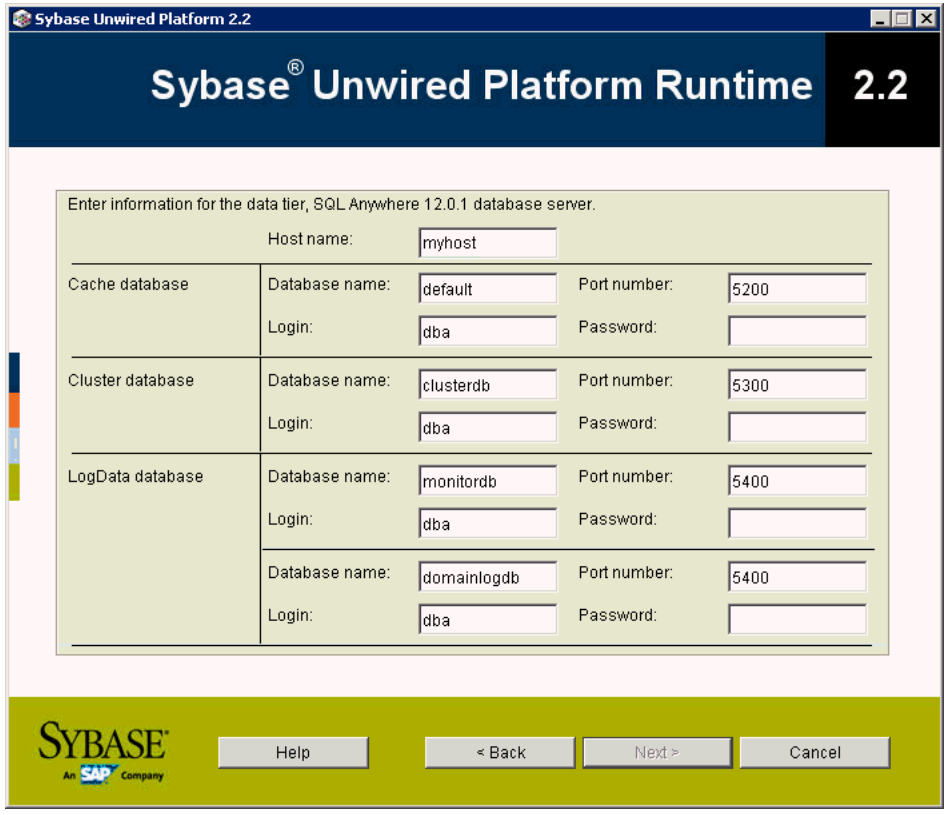
2. Select **Cluster** and click **Next**.
3. Select **Install an additional server node and connect it to the data tier** and click **Next**.
4. If a page appears, indicating that the installer detected missing third-party software, click:
   - **Next** to install the required software.
   - **Back** to select components to install that do not require the third-party software.
   - **Cancel** to stop the current installation.
5. Select additional installation options.
   - (Optional) **Configure Unwired Platform communication ports** to change default ports.
   - (Optional) **Set Sybase Unwired Platform services to start automatically** to start services automatically when Windows starts. This option is selected by default.

     Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® Data Orchestration Engine Connector and Sybase Mobile Sales for SAP CRM. If Unwired Platform services do not start automatically, dependent products will encounter problems.
   - (Optional) **Set Unwired Server name** (name must be unique on network segment).
   - **Install node as scale-out node** to install this Unwired Server node to be streamlined to support high-volume business-to-consumer transactions.
6. (Optional) If you selected **Set Unwired Server name**, enter a name for this Unwired Server instance. The name must be unique on the network segment.)

   Each server name must contain only:
   - ASCII alphanumeric characters
   - Underscore ("_"), hyphen ("-"), and period (".") characters
   - An alphanumeric character in the first position

   Length of server names must be 32 characters or less.
7. Enter information that Unwired Server needs to connect to the data tier:
   a) For host name, enter the fully qualified cluster service name that is assigned to the Microsoft Failover Cluster.
   b) For each configurable database listed, enter:
      - Database Name
      - Port Number
      - Login
      - Password

Match exactly the passwords set for each database in the second data tier installation.

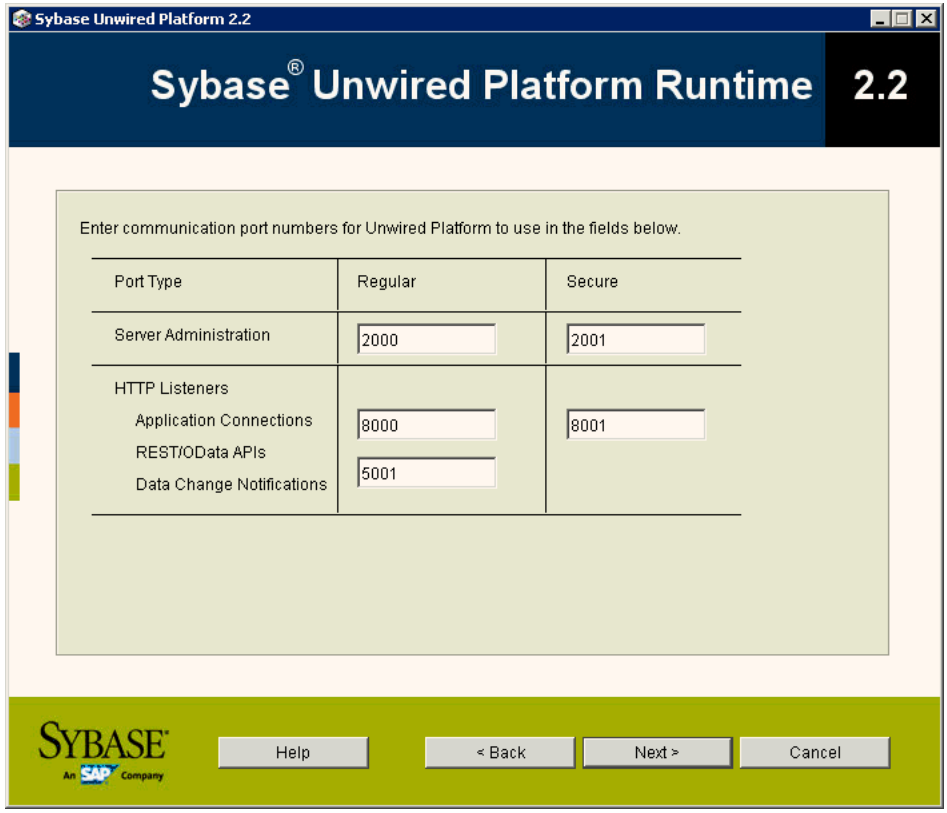


8. (Optional) If you selected **Configure Unwired Platform communication ports**, change the default regular and secure port numbers as needed.

   Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

   Every Unwired Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each Unwired Server in the cluster.

   - Server administration
   - HTTP listeners
     - Application connections
     - REST/OData APIs
     - Data change notifications



9. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

   The password must:
   - Be at least 8 characters, and no longer than 32 characters.
   - Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

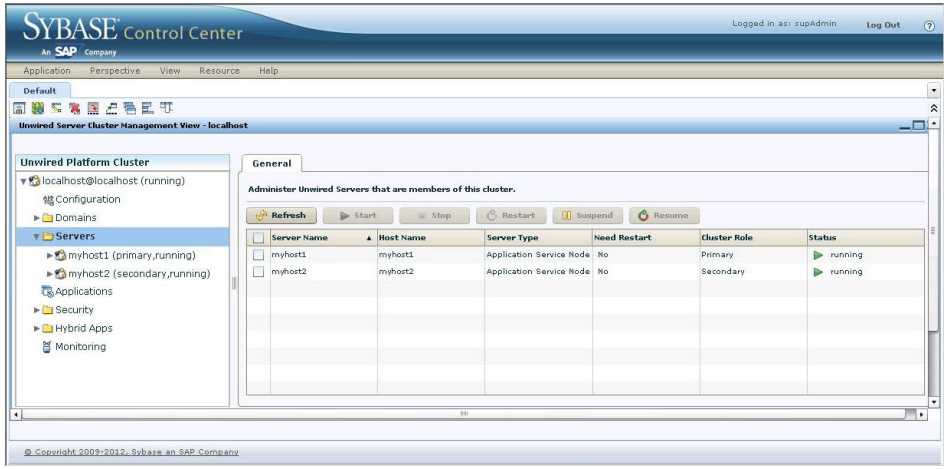
   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Unwired SampleDB (not present in Enterprise Server Edition)
   - Sybase Unwired Server
3. Go to one of the systems where you installed Unwired Server as an application server node and log in to Sybase Control Center.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the node you just installed is accessible from Sybase Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Verifying the Full Unwired Platform Cluster Installation

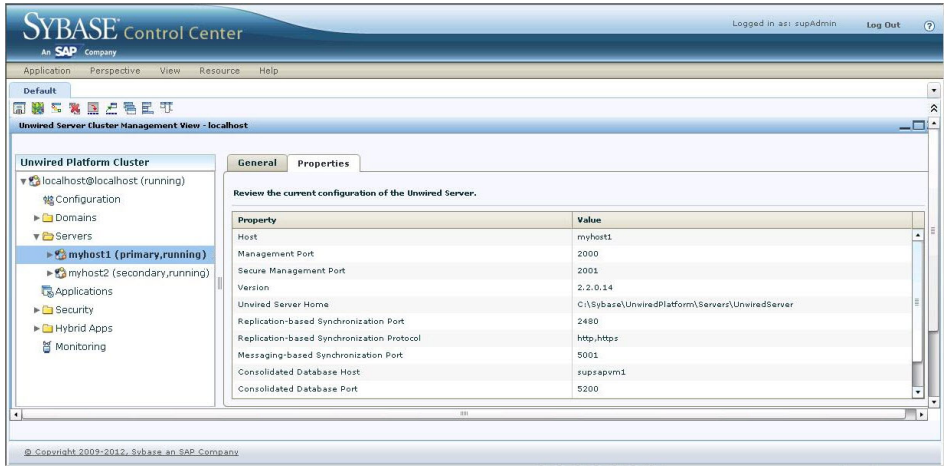
Verify that you can see all Unwired Server nodes in the cluster in Sybase Control Center, and that you can inspect the settings for each.

1. Start Sybase Control Center. From an Unwired Server node that is not a scale-out node, choose **Start > (All) Programs > Sybase > Sybase Control Center**.
2. Make sure you can see all the Unwired Server nodes (both application server and scale-out) in the cluster.



3. Select each Unwired Server node (both application server and scale-out nodes) and inspect the settings.

   All information should be filled in, with no error messages.



Next

Go to the SAP Software Download Center at *https://websmp209.sap-ag.de/swdc* (requires an S-user ID with `SWDOWNLAD Software download` authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of Sybase Unwired Platform you have just installed.

- If a support package is available for this version of Sybase Unwired Platform:
  1. Use the *Readme* for the support package to upgrade your Sybase Unwired Platform installation to the support package version now.

2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

See also

- *(Optional) Installing Sybase Unwired Platform Scale-Out Nodes* on page 74

CHAPTER 6

Installing Unwired Platform with a Microsoft Failover Cluster with Shared Hosts

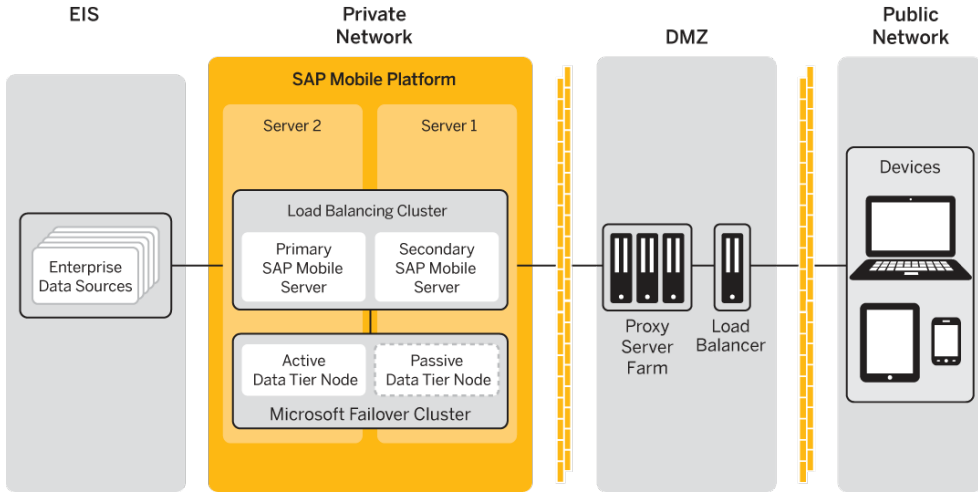
This installation scenario locates two data tiers on separate servers within a Microsoft Failover Cluster, and two Unwired Server Application Server nodes are colocated on the same servers, one with each data tier, but outside the failover cluster. This provides failover capability for the data tier servers and load balancing between the Unwired Server instances on minimal hardware.

Prerequisites

The architecture, design characteristics, and use cases for this installation scenario are described in *Landscape Design and Integration* > *Designing the Landscape* > *Microsoft Failover Cluster with Shared Hosts*. The installation instructions in this chapter assume that you have used the *Landscape Design and Integration* document to design the landscape

Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SUP22_Worksheets.zip*.

This diagram illustrates the system you are installing with this scenario:



Note: You cannot install cluster nodes concurrently. You must perform Microsoft Failover Cluster tasks and install the nodes in this cluster in this order:

1. Perform critical Microsoft Failover Cluster setup tasks.

2. Install the first data tier.
3. Prepare Microsoft Failover Cluster for second data tier.
4. Install the second data tier.
5. Install the first Unwired Server as an application server node.
6. Install the second Unwired Server as an application server node.

Task

1. *Critical Prerequisite Tasks*

   Perform all critical tasks before you attempt to install the first data tier in your Microsoft Failover Cluster environment.
2. *Installing the First Data Tier*

   Install the first of two data tiers on a server that is the active node in a Microsoft Failover Cluster.
3. *Preparing Microsoft Failover Cluster for Second Data Tier Installation*

   With the first data tier installed, in preparation for installing the second data tier, complete the configuration of the failover cluster to handle all the tasks involved in switching the two data tier nodes between active and passive states.
4. *Installing the Second Data Tier*

   Install the second of two data tiers on the second server in the Microsoft Failover Cluster where the first data tier is installed.
5. *Installing the First Unwired Server Node*

   Install the first Unwired Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the primary Unwired Server node for the cluster.
6. *Installing the Second Unwired Server Node*

   Install the second Unwired Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the secondary Unwired Server node for the cluster.
7. *Verifying the Full Unwired Platform Cluster Installation*

   Verify that you can see all Unwired Server nodes in the cluster in Sybase Control Center, and that you can inspect the settings for each.

Critical Prerequisite Tasks

Perform all critical tasks before you attempt to install the first data tier in your Microsoft Failover Cluster environment.

1. Set up the number of physical servers that your Unwired Platform installation plan requires.

Ensure that these hosts meet all the requirements specified in *Supported Hardware and Software*.

2. Have your IT support team set up and build a Microsoft Failover cluster with two server nodes on which you will install Unwired Platform data tiers.

   Supply your IT support team with the names for the cluster and the two servers.

3. Acquire a license file, customized to reflect the Unwired Platform configuration your company has purchased, from SAP Service Marketplace (SMP) or Sybase Product Download Center (SPDC), as described in *Obtaining a License*.

4. Install and configure a SySAM license server that can manages license information for all the data tiers and Unwired Server nodes in your cluster.

   For more complete information about SySAM, see:
   - *SySAM 2 Users Guide* online at *http://infocenter.sybase.com/help/topic/com.sybase.infocenter.dc00530.0220/doc/html/title.html*
   - *Fast Track to SySAM 2.0* white paper, available at *Fast Track to SySAM 2.0*
   - *SySAM FAQ* online at *http://www.sybase.com/detail?id=1038615*
   - *SySAM* product page online at *http://www.sybase.com/products/allproductsa-z/sysam*

   Note: You cannot use the unserved license model in a Microsoft Failover Cluster.

See also

- *Installing the First Data Tier* on page 86

Adding a Data Folder to the Cluster Share Disk

Your IT team has created a share disk that will always be available to the active data tier node, as Microsoft Failover Cluster switches the data tier nodes between active and passive states. Create a data folder on that share disk.

Prerequisites

Verify that your IT team created the Microsoft Failover Cluster by inlcuding the two servers you specified, and setting up a share disk for the cluster to use.

Task

1. On the active cluster node, open Windows Explorer and navigate to **Share Disk**.

   If Share Disk does not appear, verify that you are not on the desktop of the passive node. Look for the share disk on the other node.

2. Create a folder for Unwired Platform shared data, for example, `SMPData`.

   Instructions that follow assume the name used for the folder is `SMPData`.

Verifying the Microsoft Failover Cluster Configuration

Before you install the first data tier for Unwired Platform, ensure that the Microsoft Failover Cluster is operating correctly. This simplifies the troubleshooting process for any issues that may arise during installation of Unwired Platform components.

1. From the desktop of the active cluster node, use Windows Explorer to navigate to the Share Disk.
2. Expand the folder you created in the previous task (for example, `SMPData`), and create a `test.txt` file.
3. Fail over to the other node of the cluster to make it active.
4. On the desktop of the new active node, verify that you can now see the `test.txt` file in the data folder of the Share Drive there:
   a) Navigate to the share disk in Windows Explorer.
   b) Open the data folder you created earlier and see the `test.txt` file.
   c) Delete the `test.txt` file.
5. Fail over to the other node of the cluster to make it active.
6. On the desktop of the new active node in the cluster, verify that the `test.txt` file is no longer in the Share Drive there:
   a) Navigate to the share disk in Windows Explorer.
   b) Open the data folder you created and confirm the `test.txt` file no longer exists.

Installing the First Data Tier

Install the first of two data tiers on a server that is the active node in a Microsoft Failover Cluster.

Prerequisites

Test the Microsoft Failover Cluster setup and configure the cluster to be ready for Unwired Platform installation.

1. *Preparing for Installation*

   Ensure that the host on which you are installing this data tier is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log and verify that database services are functioning.

See also

- *Critical Prerequisite Tasks* on page 84
- *Preparing Microsoft Failover Cluster for Second Data Tier Installation* on page 92

Preparing for Installation

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

1. Verify that you are on the active node.
2. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.
   b) Select the **Advanced** tab, then click **Environment Variables**.
   c) Select JAVA_TOOL_OPTIONS and click **Delete**.
   d) Click **OK** to exit all dialogs.

5. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”

6. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
7. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type.

   (Enterprise Server Edition only) Enter the number of client licenses.

   Click **Next**.
6. Enter the host name and TCP port of the license server.

   Click **Next**.

   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.

Selecting Installation Options

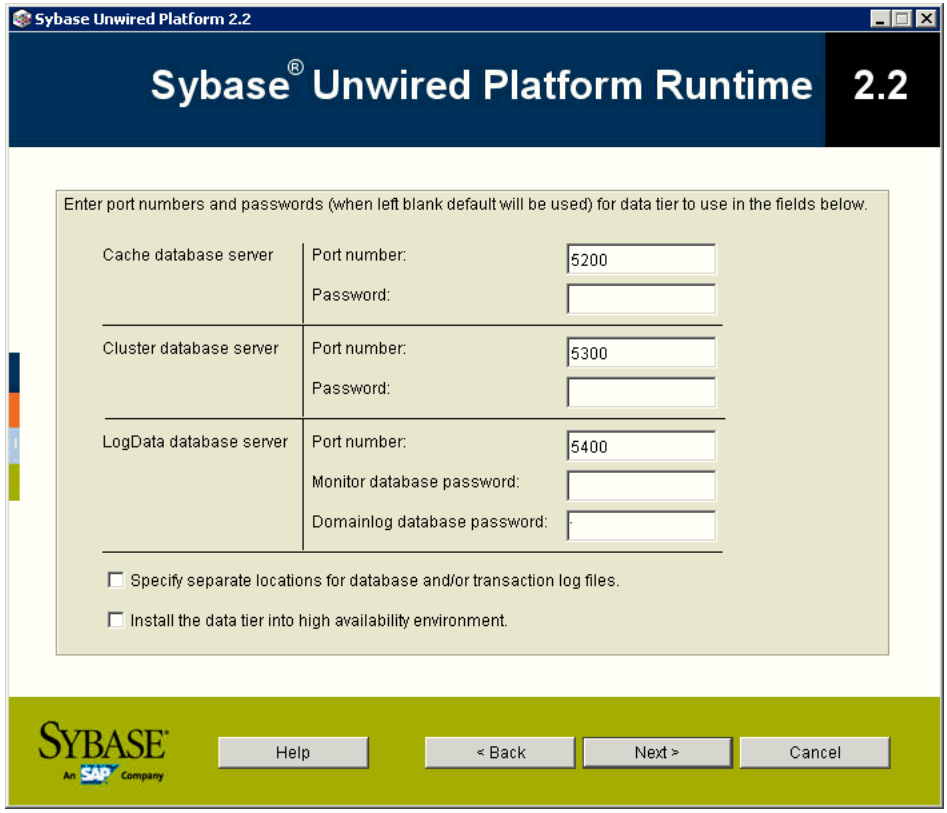
Specify the installation directory, installation type, Unwired Platform components, and additional installation options.

The installation path you specify below is referred to as *`SUP_HOME`* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

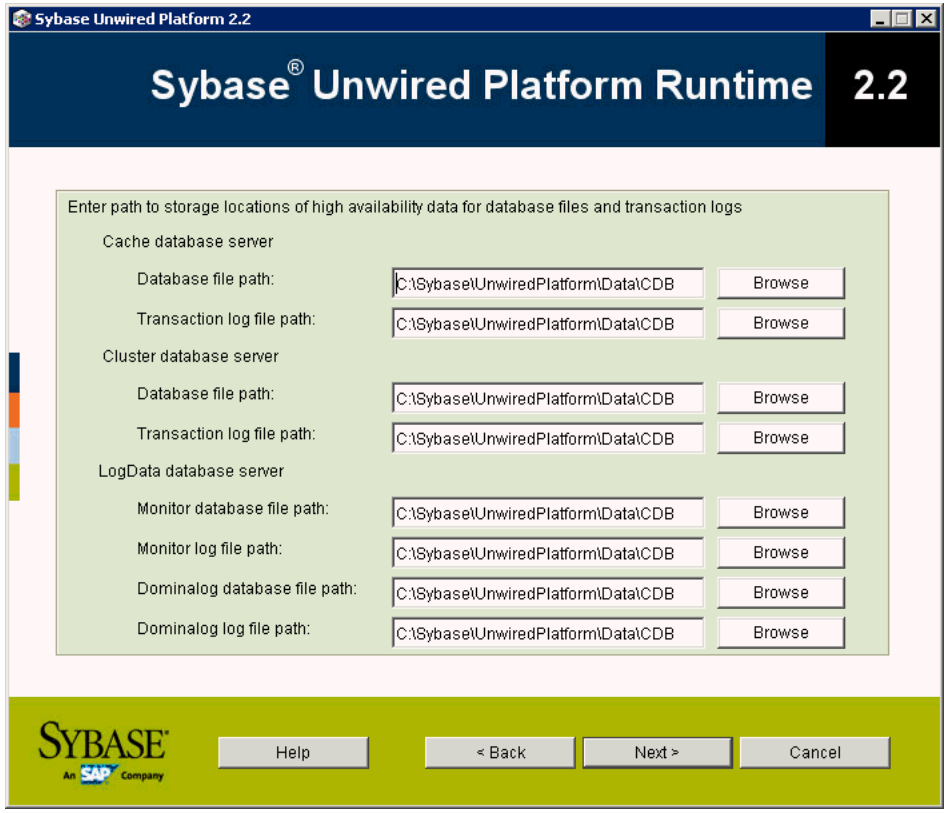
   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:
   - ASCII alphanumeric characters
   - Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
   - No characters between "UnwiredPlatform" and the preceding "\" character.
2. Select **Cluster** and click **Next**.
3. Select **Install the data tier for your Unwired Platform cluster** and click **Next**.
4. On the additional installation options panel, select **Configure data tier**.
5. On the port numbers and passwords panel:
   a) Do not change the default password, which is `sql`. You will change the default passwords when you install the second data tier.
   b) (Optional) Enter port numbers, or accept the defaults for:
      - Cache database server
      - Cluster database server
      - LogData database server
   c) (Optional) If you want to specify non-default locations for database files and transaction logs, select **Specify separate locations for database and/or transaction log files**.
   d) Select **Install the data tier into high availability environment**.
   e) Click **Next**.



6. If you selected **Specify separate locations for database and/or transaction log files**, enter the full path to each of the following that you want to change:
   - **... file path –** (optional) enter the path to a storage location that will house the database files, for each database listed.
   - **... log file path –** (optional) enter the path to a storage location that will house the transaction logs, for each database listed.

   Each path must:
   - Be either a file share resource group, or a Client Access Point.
   - Not be a UNC path.
   - Point to an existing directory in the shared data folder.
   - Use the same drive letter mapped on all data tier hosts.
   - Be no longer than 228 characters.
   - Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").



7. If you selected only **Install the data tier into high availability environment**, enter a path for the location of the high availability data.

   Enter the path to the location that will hold the data tier database and transaction log files.

   The path must:
   - Be either a file share resource group, or a Client Access Point.
   - Not be a UNC path.
   - Point to an existing directory within the shared data folder you added to the cluster share disk (for example, *SMPData*).
   - Use the same drive letter mapped on all data tier hosts.
   - Be no longer than 228 characters.
   - Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

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

Verifying the Installation

Check for errors in the installation log and verify that database services are functioning.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB

Preparing Microsoft Failover Cluster for Second Data Tier Installation

With the first data tier installed, in preparation for installing the second data tier, complete the configuration of the failover cluster to handle all the tasks involved in switching the two data tier nodes between active and passive states.

1. On the active cluster node, verify that all Unwired Platform database services are started.
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB
2. In Windows Explorer, navigate to the folder in which you installed the database when you installed the first data tier.

   If you did not change the default location, this folder is *SMPData*`\CDB`, where *SMPData* is the data folder you added to the cluster share disk.
3. Open each `*errorlog.txt` file and look for "Now accepting requests" as the last line.

   If instead you see error messages, there is a problem with the installation that you must fix before proceeding.

If you do not check the error logs immediately after installing the data tier, you will see pairs of lines beginning "Starting checkpoint..." and "Finished checkpoint...". As long as these are the only lines logged after "Now accepting requests," the database is operating properly.

4. On the active cluster node, stop the Unwired Platform database services.
5. In Windows Services panel, set all Unwired Platform database services to be started manually.
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB

   These services need to be set to start manually so that Microsoft Failover Cluster can have full control over starting and stopping them.
6. Define a managed cluster resource group in the Microsoft Failover Cluster and add the database services to it, so that they move from the current active node to the new active node when the active node fails over.

   For details, refer to the Microsoft Failover Cluster documentation.
7. Verify that all the database services stop when you take the resource group offline and start and when you take the resource group online.
8. Verify that everything moves to the new active node when active and passive nodes are switched.
   a) Fail over to the other node to make it active.
   b) Verify that all Unwired Platform database services shut down on the current, passive node.
   c) Go to the desktop on the other, active node and fail over that node back to the first node.
   d) Go to the desktop on the new active node and check the database log files.

      There should be no errors.

See also

- *Installing the First Data Tier* on page 86

Installing the Second Data Tier

Install the second of two data tiers on the second server in the Microsoft Failover Cluster where the first data tier is installed.

Prerequisites

You have successfully installed the first data tier in the Microsoft Failover Cluster and verified its functionality.

1. *Preparing for Installation*

   Ensure that the host on which you are installing this data tier is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log, and verify that database services are functioning and online in Microsoft cluster management software, and that you can manually fail them over.

See also

- *Installing the First Unwired Server Node* on page 99

Preparing for Installation

Ensure that the host on which you are installing this data tier is ready for you to begin the installation.

1. Make sure you have installed and verified the first data tier node.
2. Verify that the installation target host is the active node in the Microsoft Failover Cluster into which you are installing.

   If it is not the active node, either:
   - Switch to the desktop of the active node, or,
   - Make the current node active by failing the other node over to it.
3. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
4. Verify that you have Administrator privileges on the installation target host.
5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.
   b) Select the **Advanced** tab, then click **Environment Variables**.
   c) Select JAVA_TOOL_OPTIONS and click **Delete**.

d) Click **OK** to exit all dialogs.

6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”

7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

   - Insert the Sybase Unwired Platform Runtime 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.

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:

   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. Select **Served (remote) license** and click **Next**.
4. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type.

   (Enterprise Server Edition only) Enter the number of client licenses.

Click **Next**.

6. Enter the host name and TCP port of the license server.

   Click **Next**.

   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.

Selecting Installation Options

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

The installation path you specify below is referred to as *SUP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:
   - ASCII alphanumeric characters
   - Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
   - No characters between "UnwiredPlatform" and the preceding "\" character.
2. Select **Cluster** and click **Next**.
3. Select **Install the data tier for your Unwired Platform cluster** and click **Next**.
4. On the additional installation options panel, select **Configure data tier**.
5. On the port numbers and passwords panel:
   a) (Optional) Enter port numbers and passwords, or accept the defaults for the ports listed:

   Note: The port number settings here must match exactly those you set for the first data tier.

   The passwords here must contain only alphanumeric ASCII characters and underscore ("_"), start with a letter, and be no more than 32 characters in length.

   - Cache database server
   - Cluster database server

   Enter a port number, or accept the default, for:

   - LogData database server

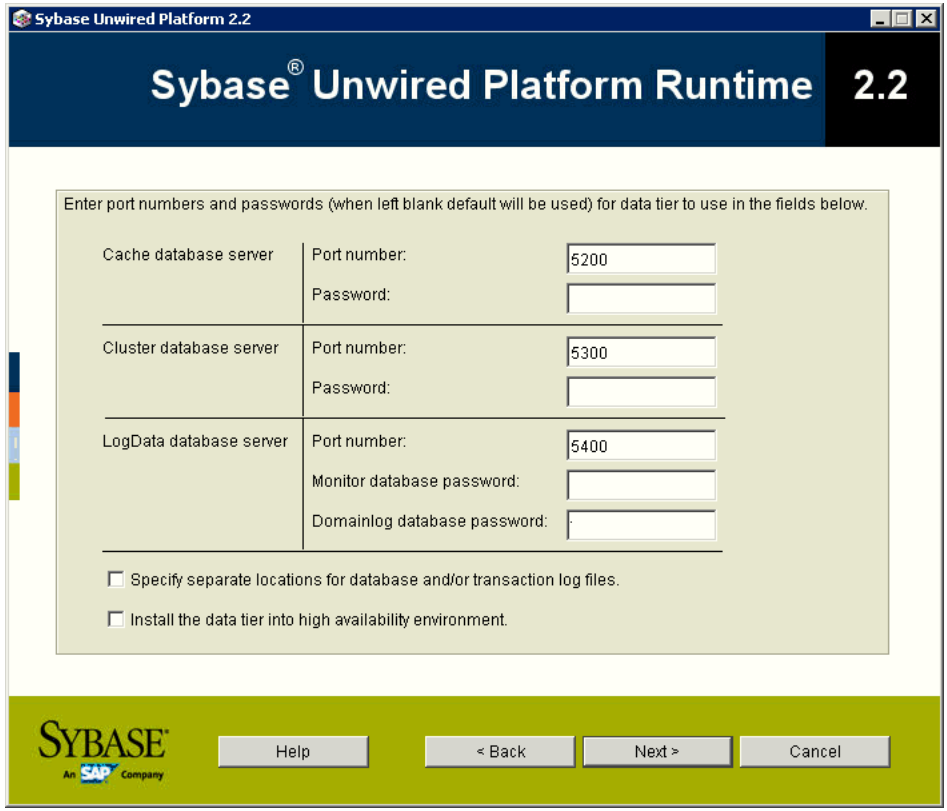
   Enter passwords, or accept the defaults, for:

- Monitor database
- Domainlog database

b) (Optional) If you want to specify non-default locations for database files and transaction logs, select **Specify separate locations for database and/or transaction log files**.

c) Select **Install the data tier into high availability environment**.

d) Click **Next**.



6. If you selected **Specify separate locations for database and/or transaction log files**, enter the full path to each of the following that you want to change:

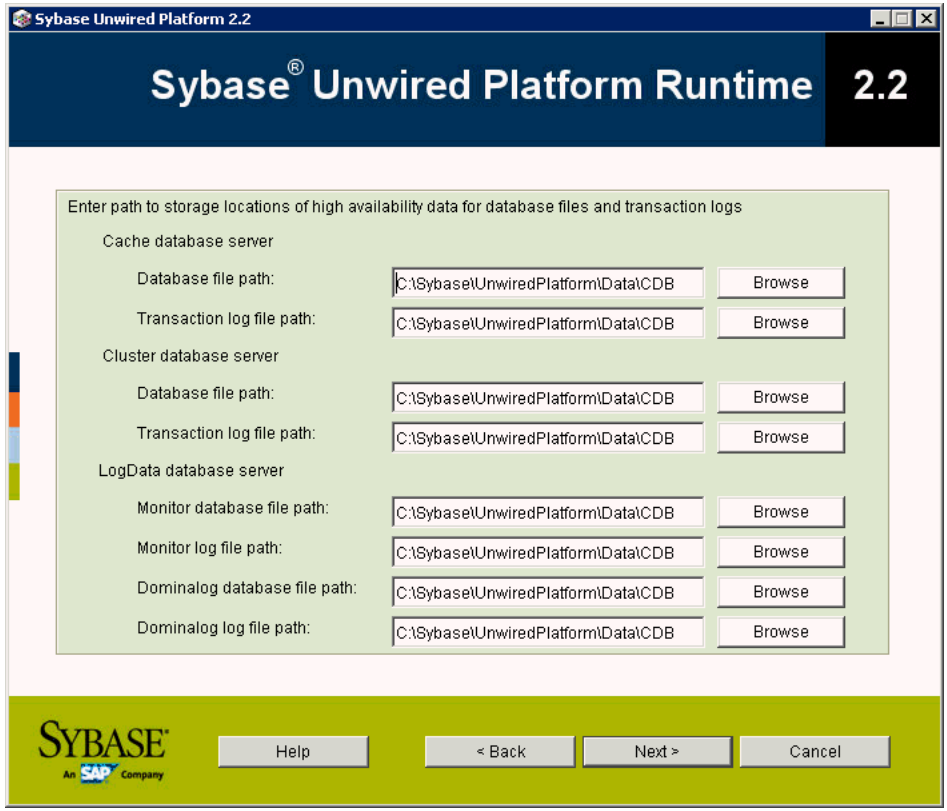
Note: The path settings here must match exactly those you set for the first data tier.

- **... file path –** (optional) enter the path to a storage location that will house the database files, for each database listed.
- **... log file path –** (optional) enter the path to a storage location that will house the transaction logs, for each database listed.

Each path must:

- Be either a file share resource group, or a Client Access Point.

- Not be a UNC path.
- Point to an existing directory in the shared data folder.
- Use the same drive letter mapped on all data tier hosts.
- Be no longer than 228 characters.
- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").



7. If you selected only **Install the data tier into high availability environment**, enter a path for the location of the high availability data.

Note: The path settings here must match exactly those you set for the first data tier.

Enter the path to the location that will hold the data tier database and transaction log files.

The path must:

- Be either a file share resource group, or a Client Access Point.
- Not be a UNC path.
- Point to an existing directory within the shared data folder you added to the cluster share disk (for example, `SMPData`).

- Use the same drive letter mapped on all data tier hosts.
- Be no longer than 228 characters.
- Contain only ASCII alphanumeric characters, space, underscore ("_"), hyphen ("-"), and period (".").

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

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

Verifying the Installation

Check for errors in the installation log, and verify that database services are functioning and online in Microsoft cluster management software, and that you can manually fail them over.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB
3. In the Microsoft cluster management software, verify that these same services are online.
4. Verify that you can fail over to the first installed node, and then back to the second.

Installing the First Unwired Server Node

Install the first Unwired Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the primary Unwired Server node for the cluster.

Prerequisites

You have successfully installed both data tiers in the Microsoft Failover Cluster and verified their functionality.

1. *Preparing for Installation*

Ensure that the host on which you are installing this Unwired Server as an application server node is ready for you to begin the installation.

2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

See also

- *Installing the Second Data Tier* on page 93
- *Installing the Second Unwired Server Node* on page 105

Preparing for Installation

Ensure that the host on which you are installing this Unwired Server as an application server node is ready for you to begin the installation.

1. Make sure you have installed and verified the data tier nodes.
2. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first Unwired Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

   See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.

5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.

b) Select the **Advanced** tab, then click **Environment Variables**.
c) Select JAVA_TOOL_OPTIONS and click **Delete**.
d) Click **OK** to exit all dialogs.

6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   This includes any database servers, Sybase Control Center, and if Sybase SAP® Data Orchestration Engine Connector is present in an upgrade installation, SAP Data Orchestration Engine.

   This excludes the following list of database services. Leave these services running:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB

   To verify that services are stopped, open the Services pane from Windows Control Panel.
7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

   - Insert the Sybase Unwired Platform Runtime 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.

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Installation Options

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

The installation path you specify below is referred to as *SUP_HOME* in the rest of these installation instructions.

1. Click **Next** to use the existing Unwired Platform installation directory.

   This was set in the data tier installation and cannot be changed.
2. On the cluster installation step page, select **Install the first server node and connect it to the data tier** and click **Next**.
3. 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.
4. (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. By default, this option is selected.

     Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® Data Orchestration Engine Connector and Sybase Mobile Sales for SAP CRM. If Unwired Platform services do not start automatically, dependent products will encounter problems.
   - **Set Unwired Server name and cluster name** . Names must be unique on the network segment.
5. (Optional) If you selected **Set Unwired Server name and cluster name**, enter a name for this Unwired Server instance (name must be unique on network segment) and a name for the Unwired Server cluster.

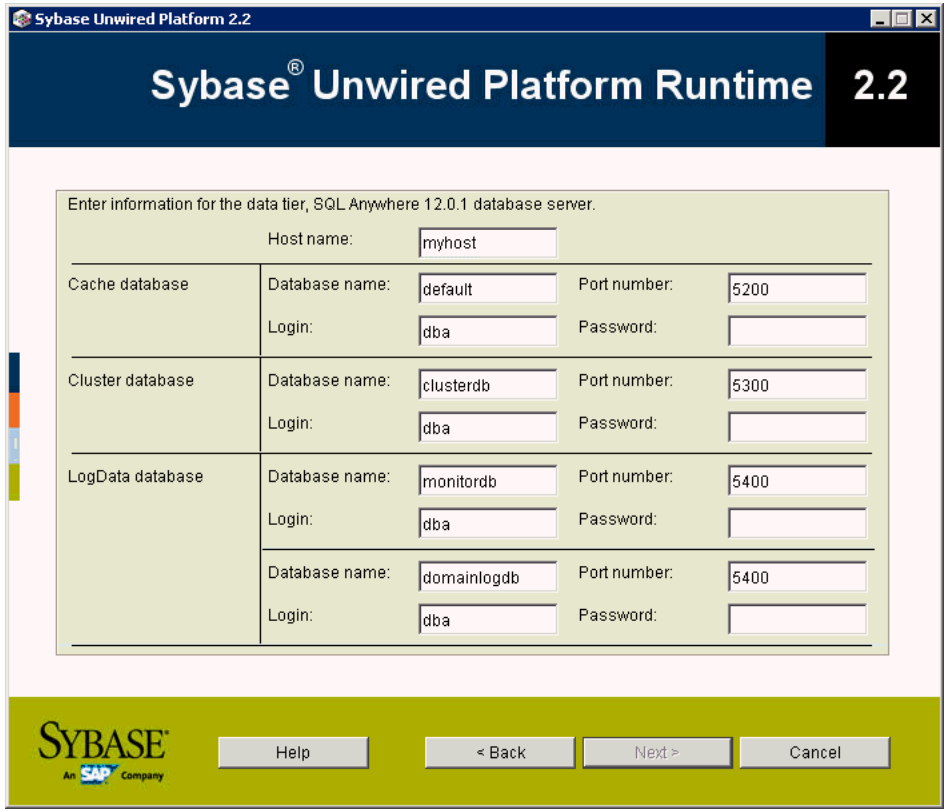
   Note: The Unwired Server cluster name refers to the Unwired Server load balancing cluster; it is different from the Microsoft Failover Cluster, which contains the Unwired Platform data tier nodes.

   Each server or cluster name:

- Must contain only:
  - ASCII alphanumeric characters
  - Underscore ("_"), hyphen ("-"), and period (".") characters
- Server names must be 32 characters or less and must begin with an alphanumeric character.
- Cluster names must be 22 characters or less.

6. Enter information that Unwired Server needs to connect to the data tier:
   a) For host name, enter the fully qualified cluster service name that is assigned to the Microsoft Failover Cluster.
   b) For each configurable database listed, enter:
      - Database Name
      - Port Number
      - Login
      - Password

      Match exactly the passwords set for each database in the second data tier installation.

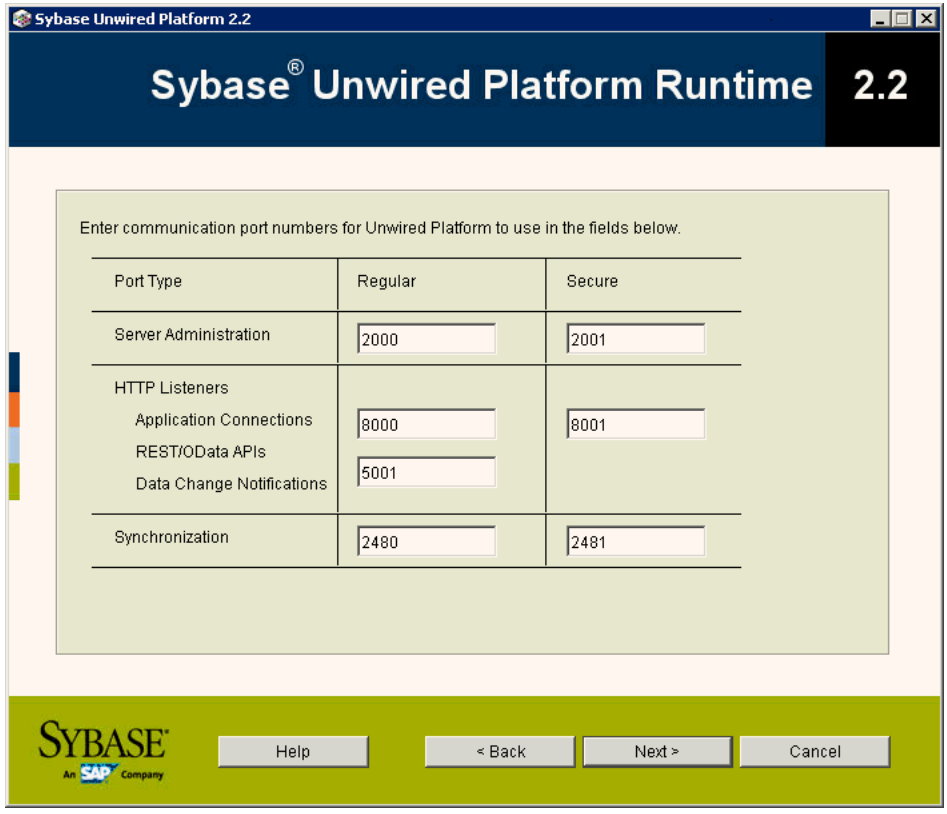


7. (Optional) If you selected **Configure Unwired Platform communication ports**, change the default regular and secure port numbers as needed.

Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

Every Unwired Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each Unwired Server in the cluster.

- Server administration
- HTTP listeners
  - Application connections
  - REST/OData APIs
  - Data change notifications
- **Synchronization**



8. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

   The password must:

   - Be at least 8 characters, and no longer than 32 characters.

- Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Control Center *X.X*
   - Sybase Unwired SampleDB (not present in Enterprise Server Edition)
   - Sybase Unwired Server
3. Verify that you can log in to Sybase Control Center.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the node you just installed is accessible from Sybase Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Installing the Second Unwired Server Node

Install the second Unwired Server as an application server node outside of the Microsoft Failover Cluster. Initially this is the secondary Unwired Server node for the cluster.

Prerequisites

Install the first Unwired Server application server node and verify its functionality.

1. *Preparing for Installation*

   Ensure that the host on which you are installing this Unwired Server as an application server node is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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*

   Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

See also

- *Installing the First Unwired Server Node* on page 99
- *Verifying the Full Unwired Platform Cluster Installation* on page 111

Preparing for Installation

Ensure that the host on which you are installing this Unwired Server as an application server node is ready for you to begin the installation.

1. Make sure you have installed and verified all the nodes specified in the preceding subtasks for this installation scenario.
2. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first Unwired Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

   See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.
5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

a) Right-click **My Computer** and select **Properties**.
b) Select the **Advanced** tab, then click **Environment Variables**.
c) Select JAVA_TOOL_OPTIONS and click **Delete**.
d) Click **OK** to exit all dialogs.

6. Shut down all Sybase software, Sybase processes, and associated third-party processes running on the installation target host.

   If the host is the active node in the Microsoft Failover Cluster, you must leave these services running:

   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB

7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

1. Start the installer using one of these methods:

   - Insert the Sybase Unwired Platform Runtime 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.

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:

   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.

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

3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Installation Options

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

The installation path you specify below is referred to as *SUP_HOME* in the rest of these installation instructions.

1. Click **Next** to use the existing Unwired Platform installation directory.

   This was set in the data tier installation and cannot be changed.
2. Select **Install an additional server node and connect it to the data tier** and click **Next**.
3. 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.
4. (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. By default, this option is selected.

     Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® Data Orchestration Engine Connector and Sybase Mobile Sales for SAP CRM. If Unwired Platform services do not start automatically, dependent products will encounter problems.
   - **Set Unwired Server name** to enter a name that is unique on the network segment.
   - Do not select **Install node as scale-out node**. For high availability, install two Unwired Server nodes as application servers before you install a scale-out node.
5. (Optional) If you selected **Set Unwired Server name**, enter a name for this Unwired Server instance. The name must be unique on the network segment.)

   Each server name must contain only:
   - ASCII alphanumeric characters
   - Underscore ("_"), hyphen ("-"), and period (".") characters
   - An alphanumeric character in the first position

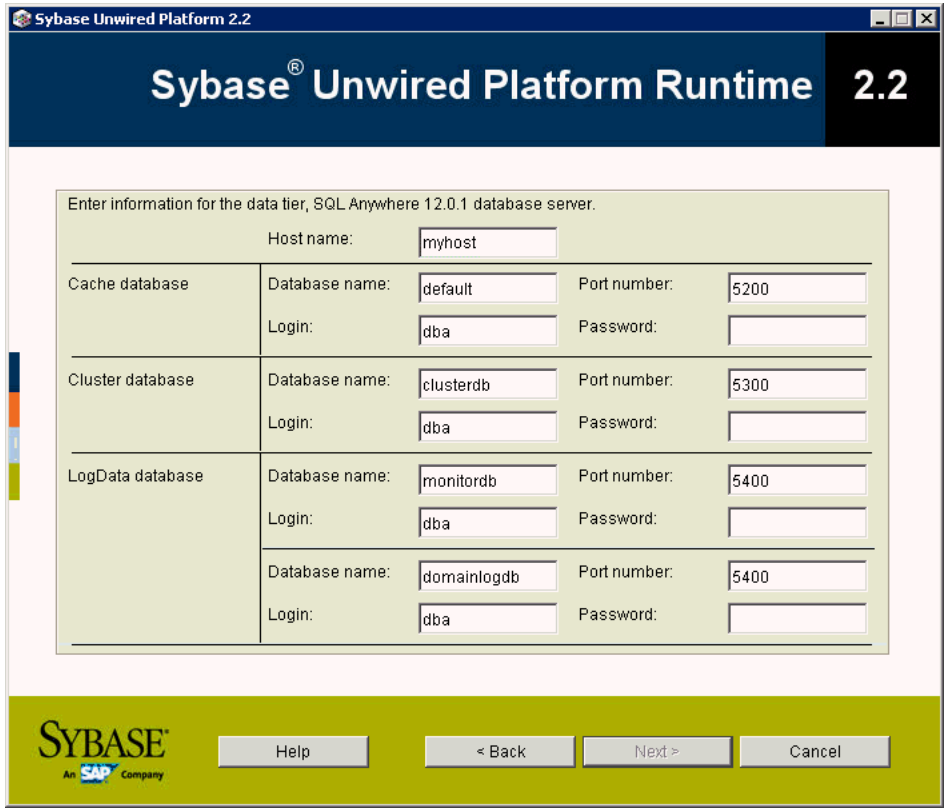
   Length of server names must be 32 characters or less.
6. Enter information that Unwired Server needs to connect to the data tier:

   a) For host name, enter the fully qualified cluster service name that is assigned to the Microsoft Failover Cluster.

b) For each configurable database listed, enter:

- Database Name
- Port Number
- Login
- Password

Match exactly the passwords set for each database in the second data tier installation.



7. (Optional) If you selected **Configure Unwired Platform communication ports**, change the default regular and secure port numbers as needed.

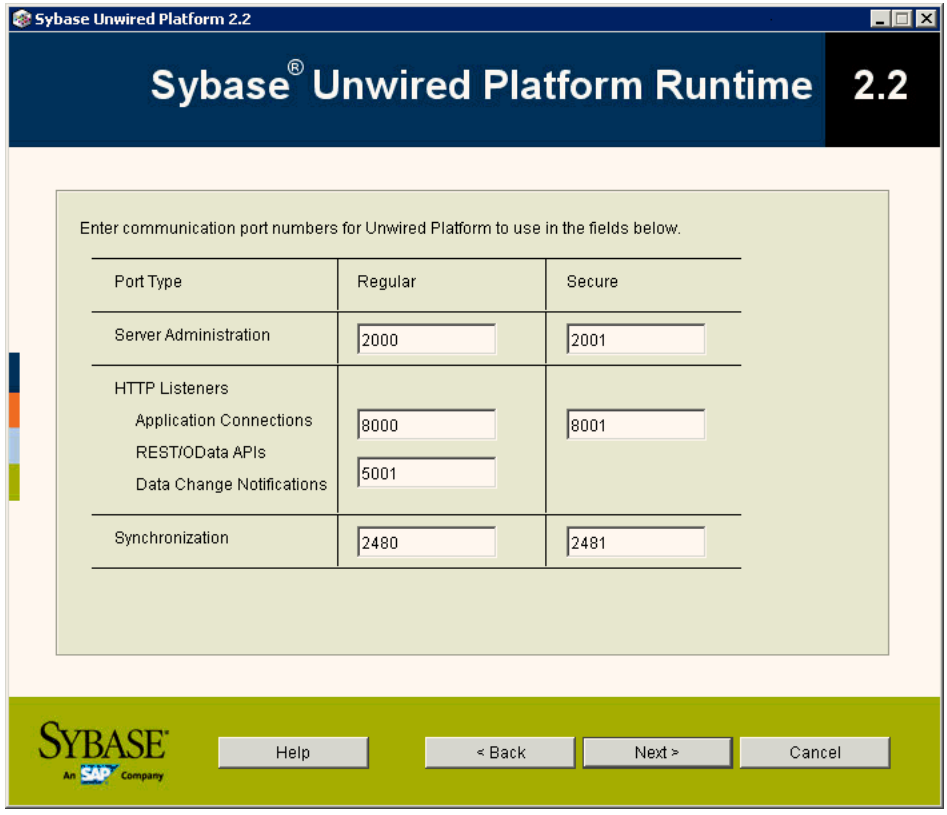
Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

Every Unwired Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each Unwired Server in the cluster.

- Server administration
- HTTP listeners

- Application connections
- REST/OData APIs
- Data change notifications

- **Synchronization**



8. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

   The password must:
   - Be at least 8 characters, and no longer than 32 characters.
   - Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.

3. Click **Finish**.

Verifying the Installation

Check for errors in the installation log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

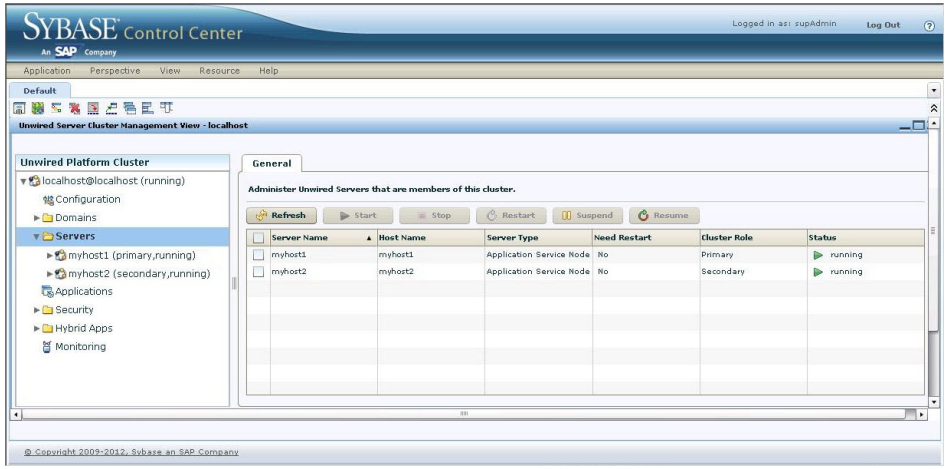
   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Control Center *X.X*
   - Sybase Unwired SampleDB (not present in Enterprise Server Edition)
   - Sybase Unwired Server
3. Verify that you can log in to Sybase Control Center.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the node you just installed is accessible from Sybase Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Verifying the Full Unwired Platform Cluster Installation

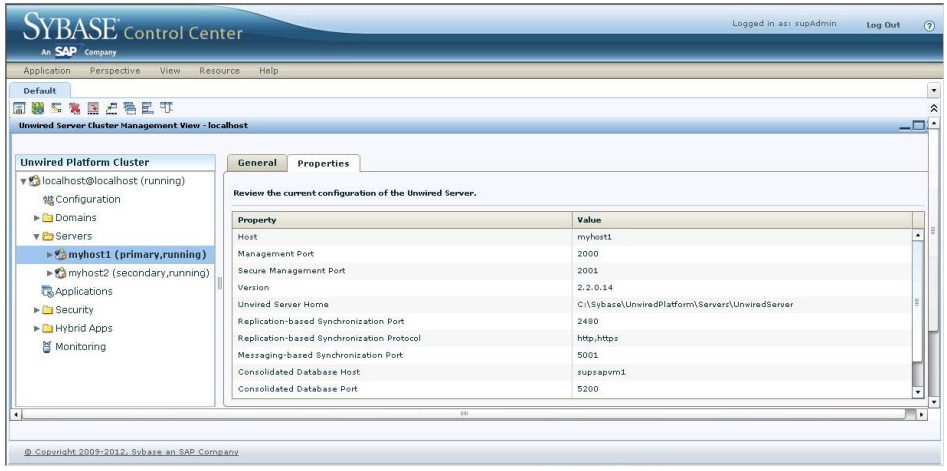
Verify that you can see all Unwired Server nodes in the cluster in Sybase Control Center, and that you can inspect the settings for each.

1. Start Sybase Control Center. From an Unwired Server node that is not a scale-out node, choose **Start > (All) Programs > Sybase > Sybase Control Center**.
2. Make sure you can see both Unwired Server nodes in the cluster.



3. Select each Unwired Server node and inspect the settings.

   All information should be filled in, with no error messages.



Next

Go to the SAP Software Download Center at *https://websmp209.sap-ag.de/swdc* (requires an S-user ID with `SWDOWNLAD Software download` authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of Sybase Unwired Platform you have just installed.

- If a support package is available for this version of Sybase Unwired Platform:
  1. Use the *Readme* for the support package to upgrade your Sybase Unwired Platform installation to the support package version now.

2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

See also

- *Installing the Second Unwired Server Node* on page 105

CHAPTER 7 Adding an Unwired Server Node to an Existing Cluster

After your Unwired Platform cluster installation is completed, you can add another Unwired Server node at any time.

Prerequisites

- Install Unwired Platform version 2.2 in either a simple load-balancing cluster or a Microsoft Failover Cluster.
- Test that the existing cluster and all components are functioning properly.
- Bring all nodes in the existing cluster online, and ensure that the passive data tier in a Microsoft Failover Cluster is in standby mode.

1. *Preparing for Installation*

   Ensure that the host on which you are installing Sybase Unwired Platform is ready for you to begin the installation.
2. *Entering License Information*

   Start the Sybase Unwired Platform Runtime 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. *Upgrading the New Node to Your Current Unwired Platform Version*

   If you have already upgraded the existing cluster nodes to a support package or patch level later than 2.2, you must upgrade the new node to that same support package or patch level.
6. *Verifying the Installation*

   Before proceeding, verify that key services are functioning, you can log in to Sybase Control Center, and from Sybase Control Center you can see the properties of the node you just installed.

Preparing for Installation

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

1. Make sure the new node is appropriately licensed.
2. Confirm that the installation target host meets minimum system requirements for all Unwired Platform components you are installing, as specified in *Supported Hardware and Software*.
3. Verify that you have Administrator privileges on the installation target host.
4. If you want to use the target computer name as the default server name (and cluster name in a single-server installation and for the first Unwired Server node in a cluster), make sure the computer name meets the same requirements that a user-entered server or cluster name have to meet.

   See the *Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name* topic in the *Troubleshooting Installation* section of this Installation Guide.
5. If the JAVA_TOOL_OPTIONS environment variable is set, remove it before you start the installation.

   Check for the JAVA_TOOL_OPTIONS environment variable in both User Variables and System Variables panes of the Environment Variables dialog.

   a) Right-click **My Computer** and select **Properties**.
   b) Select the **Advanced** tab, then click **Environment Variables**.
   c) Select JAVA_TOOL_OPTIONS and click **Delete**.
   d) Click **OK** to exit all dialogs.
6. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   This includes any database servers, Sybase Control Center, and if Sybase SAP® Data Orchestration Engine Connector is present in an upgrade installation, SAP Data Orchestration Engine.

   To verify that services are stopped, open the Services pane from Windows Control Panel.
7. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.
8. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

Entering License Information

Start the Sybase Unwired Platform Runtime installer and enter license information.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. Select your license model and click **Next**.

Evaluation	Allows you to evaluate Unwired Platform for 30 days. A license file is not required.
Unserved (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, select your country, accept the terms of the license agreement and click **Next**.
5. On the license details page, select your license product edition and license type.

   (Enterprise Server Edition only) Enter the number of client licenses.

   Click **Next**.
6. Enter the location of your license file.

- If you selected **Unserved (local) license**, enter the absolute path to the license file on the installation target host, using only ASCII characters.
- If you selected **Served (remote) license**, enter the host name and TCP port of the license server.

Click **Next**.

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.

Selecting Installation Options

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

The installation path you specify below is referred to as *SUP_HOME* in the rest of these installation instructions.

1. Specify the absolute path to the installation location, which must be on a local drive on the target host.

   The total length of the path must be 43 characters or less.

   Directory names in the path can contain only:
   - ASCII alphanumeric characters
   - Underscore (_), hyphen (-), and period (.) characters (two consecutive period characters are not allowed and none of these characters may appear as the first character in a folder name)
   - No characters between "UnwiredPlatform" and the preceding "\" character.
2. Select **Cluster** and click **Next**.
3. Select **Install an additional server node and connect it to the data tier** and 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. By default, this option is selected.

     Set Unwired Platform services to start automatically if you plan to install products that work with Unwired Platform, such as Sybase SAP® Data Orchestration Engine

Connector and Sybase Mobile Sales for SAP CRM. If Unwired Platform services do not start automatically, dependent products will encounter problems.

- **Set Unwired Server name** to enter a name that is unique on the network segment.
- **Install node as scale-out node** to streamline the server node to support high-volume business-to-consumer transactions. (This is available only after you first install Unwired Server in the same cluster. Recommended: Install a second Unwired Server node in the cluster before you install the first scale-out node.)

6. (Optional) If you selected **Set Unwired Server name**, enter a name for this Unwired Server instance. The name must be unique on the network segment.)

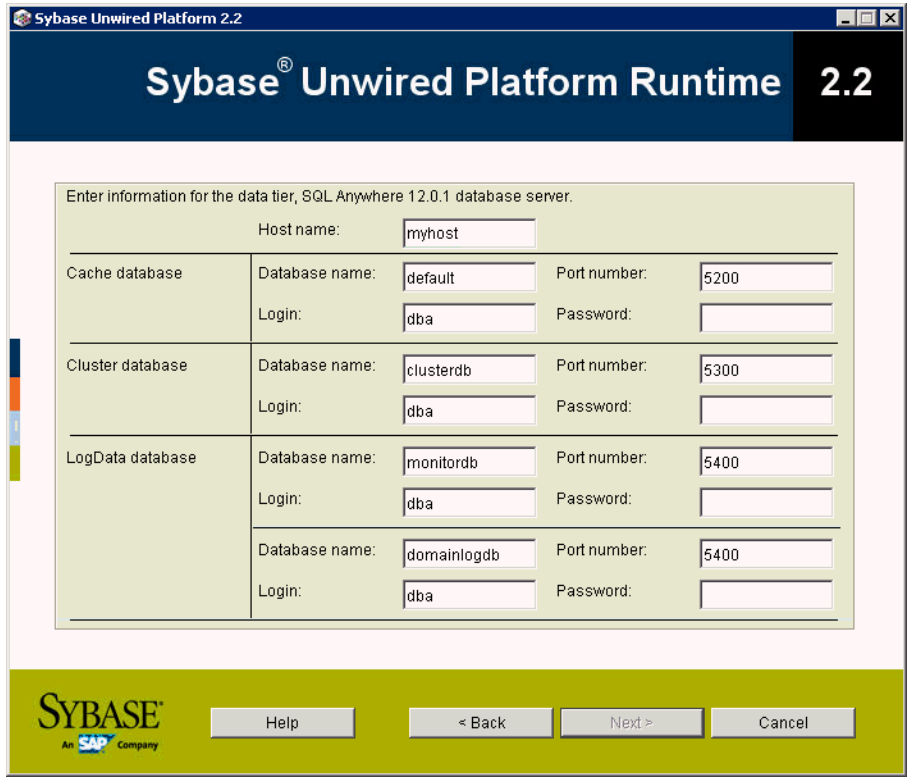
   Each server name must contain only:
   - ASCII alphanumeric characters
   - Underscore ("_"), hyphen ("-"), and period (".") characters
   - An alphanumeric character in the first position

   Length of server names must be 32 characters or less.
7. Enter information that Unwired Server needs to connect to the data tier.
   a) Enter the name of the data tier host.

   Note: For a host name, enter the cluster service name that is assigned to the Microsoft Failover Cluster for Sybase Unwired Platform installation with Microsoft Failover Cluster.

   b) Enter the following for each configurable database listed:
      - Database Name
      - Port Number
      - Login
      - Password

      In a typical new installation, you need not change any prepopulated value, enter `sql` as the default password for each database.



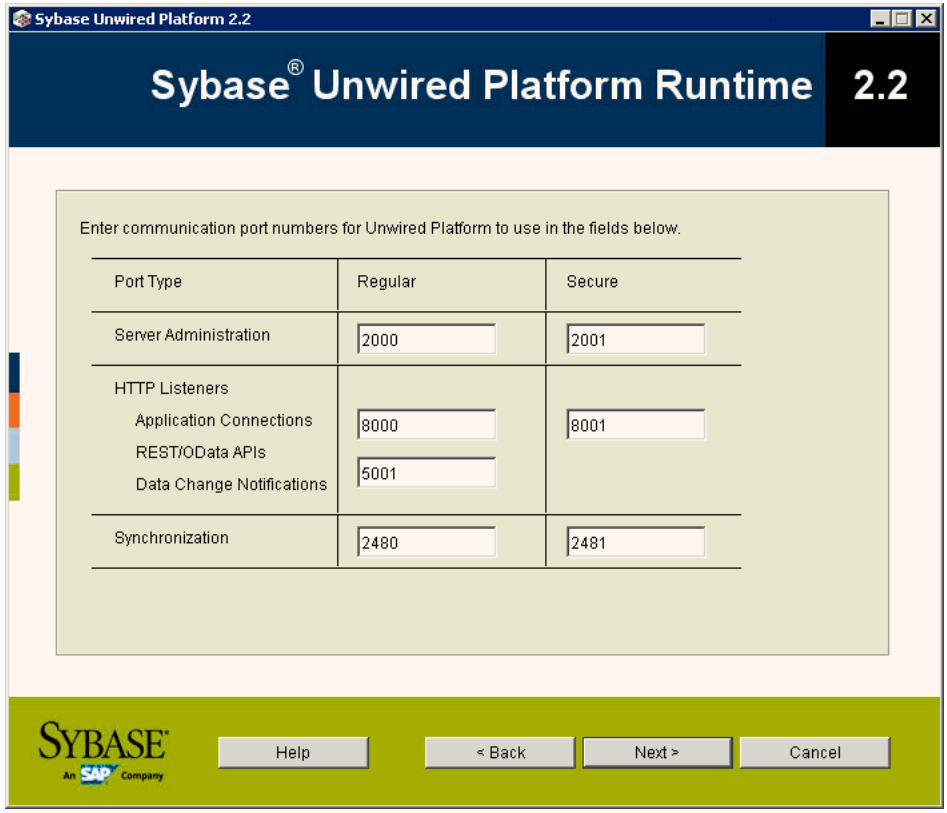
8. (Optional) If you selected **Configure Unwired Platform communication ports**, change the default port numbers as needed.

   Note: For the server administration port, do not specify port numbers outside the range of 1024-32767. For other ports, the allowable range is 1024-65535.

   Every Unwired Server instance in a cluster must use the same communication port numbers. If you change any of the default port numbers, you must make the same change for each Unwired Server in the cluster.

   - Server administration
   - HTTP listeners
     - Application connections
     - REST/OData APIs
     - Data change notifications
   - Synchronization

     Note: Synchronization ports do not appear when you are installing a scale-out node.



9. Enter the password to be used for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

   The password must:
   - Be at least 8 characters, and no longer than 32 characters.
   - Contain only ASCII alphanumeric characters, plus underscore (_), hyphen (-), and period (.).

Completing the Installation

Review the installation summary and launch the installation process.

1. On the summary information page, click **Install**.
2. (Optional) Click **View Release Bulletin** when you see the completion panel.
3. Click **Finish**.

Upgrading the New Node to Your Current Unwired Platform Version

If you have already upgraded the existing cluster nodes to a support package or patch level later than 2.2, you must upgrade the new node to that same support package or patch level.

Note: This step is necessary only if you have upgraded your Unwired Platform version 2.2 cluster to a support package or patch level later than 2.2.

Go to the *Release Bulletin* for the latest 2.2 support package or patch level to which you have upgraded the cluster and follow the instructions there for upgrading the Unwired Server node you just installed to the same version as the rest of the cluster.

Verifying the Installation

Before proceeding, verify that key services are functioning, you can log in to Sybase Control Center, and from Sybase Control Center you can see the properties of the node you just installed.

In the location of the installation log file referenced below, *SUP_HOME* is the installation location you specified (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the installation log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Control Center *X.X*
   - Sybase Unwired SampleDB
   - Sybase Unwired Server
3. Log in to Sybase Control Center. If you are installing a scale-out node, go to one of the systems where you installed Unwired Server as an application server node.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the node you just installed is accessible from Sybase Control Center and that you can see the properties of that node.

CHAPTER 8 Upgrading

The upgrade to Unwired Platform 2.2 is performed in place; this means that the files in the latest version overwrite the files in the earlier version.

Beginning with Sybase Unwired Platform version 2.1.1, the upgrade installer automatically adds Sybase SAP® Data Orchestration Engine Connector (DOE-C) if it does not exist in your earlier version installation, and upgrades DOE-C if it is present.

If you are upgrading to a support package or patch, see the *ReadMe* file for that support package or patch for instructions. This chapter discusses only upgrading to Unwired Platform version 2.2 from Unwired Platform version 2.1.

Note: When upgrading, there is a potential issue with a Windows process holding a lock on one of the 12 Adaptive Server Anywhere (ASA) libraries (DLLs) even though all the ASA processes have shut down. This causes the upgrade to fail because the upgrade cannot overwrite the file. This is specific to a 32-bit Windows Server 2003 SP2.

Workaround:

1. Shut down all Sybase Unwired Platform processes.
2. If services were set to automatic, set the start up for the Sybase Unwired Platform services to manual.
3. Restart the system.
4. Run the upgrade after the system has restarted.
5. If step 2 was performed prior to upgrade, set the startup for the services back to automatic.

Recreating a Removed supAdmin User

If you have removed the supAdmin user, the installer cannot perform the test package deployment that verifies that the upgraded Unwired Server is performing properly. Recreating the supAdmin user before upgrading allows the installer to perform the test..

The Runtime installer requires the supAdmin user to exist in order for an upgrade installation to complete normally. If you removed the supAdmin user, the installer cannot perform the test package deployment that verifies that the upgraded Unwired Server is functioning properly. The installer displays this message:

```
 The Unwired Platform admin login information
       provided were not valid. Upgrade was completed but test
deploying a package to server for
       verification was skipped.
```

Recreate the removed supAdmin user if you want the installer to verify the proper functioning of the Unwired Server upon completion of the upgrade. See *Creating new users* in *SQL*

Anywhere Server - Database Administration, available at *http://infocenter.sybase.com/help/topic/com.sybase.help.sqlanywhere.12.0.0/dbadmin/umannew.html*.

Ensuring That Applications Have Domain Assignments

Before you upgrade servers to Unwired Platform version 2.2, you must ensure that any iOS and BlackBerry applications created in earlier versions have a domain assigned.

In Unwired Platform version 2.2, application push configurations are associated with both applications and domains. When you upgrade version 2.1.x push configurations to version 2.2, the upgrade installer creates push configurations for each domain of an application. If there is no domain assigned to an application, no push configuration is created.

To migrate push configurations, you must assign all domains, or desired domains, to any application that is not directly associated with a domain before you upgrade your servers. This applies to both iOS applications using APNS and BlackBerry applications using BES.

1. Launch then log in to Sybase Control Center.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
2. In the left navigation pane, select **Applications**.
3. In the right pane, select the **Applications** tab.
4. Select the **application ID** to which you want to assign a domain.
5. Click the **Properties** button and add the domain in the Domains and Packages tab.

Removing Introscope from an Existing Installation

Unwired Platform versions before 2.2 did not formally support Introscope, but it was possible to install it with your Unwired Platform installation. If you manually installed Introscope in your 2.1 Unwired Platform installation, it causes upgrade conflicts with the Unwired Platform 2.2 installer.

Remove these instances of Introscope before upgrading, then reconfigure the Introscope software added by the Unwired Platform installer after the upgrade is complete. See *Upgrade: Restoring Introscope Settings* in *Landscape Design and Integration*.

Repeat these steps for each Unwired Server in your Unwired Platform installation.

1. Record any Introscope configuration settings that you will need to restore after you have upgraded.
   a) Open `<Drive>:\usr\sap\ccms\wily\core\config\IntroscopeAgent.profile`.
   b) Record the Introscope Enterprise Manager host and port. Locate the lines below and record the values for *<hostname>* and *<portnumber>*:

```
introscope.agent.enterprisemanager.transport.tcp.host.DEFAULT=<hostname>

introscope.agent.enterprisemanager.transport.tcp.port.DEFAULT=<portnumber>
```

2. Use Sybase Control Center to uninstall the .NET Introscope Agent:
   a) Open the Windows Control Panel feature that removes programs on your version of Windows.
   b) Right-click **CA APM .NET Agent <*version*>** (Publisher, CA Technologies) and select **Uninstall/Change**.
3. Use Sybase Control Center to remove the Introscope Java Agent Configuratio.
   a) From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
   b) In the navigation pane, click **Servers > <*ServerNode*> > Server Configuration**.
   c) In the administration pane, select the **General** tab, then click **Performance Configuration**.
   d) If you do not see the Optional Property list, click the plus sign beside Show optional properties.
   e) Remove this configuration from User Options:

      ```
      -javaagent:<Drive>:\usr\sap\ccms\wily\Agent.jar -Dcom.wily.introscope.agentProfile=<Drive>:\usr\sap\ccms\wily\core\config\IntroscopeAgent.profile -Dcom.wily.introscope.agent.agentName=<Name>
      ```

   f) Click **Save**.
4. To remove Java agents, delete the `<Drive>:\usr\sap\ccms\wily` folder.

Upgrade Paths

Paths available to upgrade Unwired Platform servers from earlier versions to version 2.2.

The installer can directly upgrade your Unwired Platform 2.1.x installation to version 2.2. If you have a version of Unwired Platform earlier than 2.1.x, additional steps are required to upgrade to version 2.2.

Migrate Sybase Mobile SDK customizations at the same time you upgrade Unwired Platform servers. See *Developer Guide: Migrating to Sybase Mobile SDK 2.2*.

Current Unwired Platform Version	Server Upgrade Tasks
1.2	**Server upgrade tasks:** **1.** Upgrade to version 1.5.2 with a new install in a different location. See *Upgrading and Migrating* in the *Sybase Unwired Platform 1.5.2 Installation Guide*. **2.** Upgrade in place to version 2.0. See *Upgrading and Migrating* in the *Sybase Unwired Platform 2.0 Installation Guide*. **3.** Upgrade in place to version 2.1.See *Upgrading and Migrating* in the *Sybase Unwired Platform 2.1Installation Guide for Runtime*. **Server data migration tasks:** Manually copy database files from a version 1.2 installation to a version 1.5.2 installation. See *Migrating Production Unwired Server Runtime Data* in the *Sybase Unwired Platform 1.5.2 Installation Guide*.
1.5.2 1.5.3 1.5.5	**1.** Upgrade in place to version 2.0. See *Upgrading to Sybase Unwired Platform 2.0* in the *Sybase Unwired Platform 2.0 Installation Guide* **2.** Upgrade in place to version 2.1. See *Sybase Unwired Platform 2.1 Installation Guide for Runtime*.
2.0 2.0.1	**1.** Upgrade in place to version 2.1. See *Sybase Unwired Platform 2.1 Installation Guide for Runtime*. **2.** Upgrade in place to version 2.2. See the upgrade instructions for your installation scenario in the *Sybase Unwired Platform 2.2 Installation Guide for Runtime*.
2.1 2.1.1 2.1.2 2.1.3	Upgrade in place to version 2.2. See the upgrade instructions for your installation scenario in the *Sybase Unwired Platform 2.2 Installation Guide for Runtime*.
2.1 Online Data Proxy	**1.** Upgrade in place from version 2.1 Online Data Proxy option to version 2.1 Unwired Platform Runtime option. See *Upgrading Online Data Proxy to Unwired Platform Runtime* in *Sybase Unwired Platform 2.1 Installation Guide for Runtime*. **2.** Upgrade in place to version 2.2. See the upgrade instructions for your installation scenario: • *Upgrading a Single-Server Installation* on page 131 • *Upgrading a Simple Load-Balancing Cluster* on page 135 • *Upgrading a Standard Microsoft Failover Cluster* on page 143 • *Upgrading a Microsoft Failover Cluster with Shared Hosts* on page 155

Native Client Version Compatibility Matrix

Native Client Object API and Unwired Server Version Compatibility

	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2	Unwired Server 2.1 ESD #3	Unwired Server 2.2 SP02
Native Client Object API 2.1	Yes	Yes	Yes	Yes	Yes
Native Client Object API 2.1 ESD #1	No	Yes	Yes	Yes	Yes
Native Client Object API 2.1 ESD #2	No	No	Yes	Yes	Yes
Native Client Object API 2.1 ESD #3	No	No	No	Yes	Yes
Native Client Object API 2.2 SP02	No	No	No	No	Yes

Note:

- Yes – the client application built in this SDK version is supported in the server version (minor adjustments may be necessary to ensure the application runs correctly; see the migration details for the appropriate application type, if any).
- No – the client application built in this SDK version is not supported in the server version.
- Server version – refers to the server version to which an original package is migrated, and not a newly deployed package. For the example of "Native Client Object API 2.1" vs. "SAP Mobile Server 2.3", the application package that runs on "SAP Mobile Server 2.3" may not always be newly created and deployed from MobileSDK2.3; it may have been originally created from MobileSDK2.1 and deployed to 2.1 server, and then migrated to 2.3 server.

Hybrid Web Container Compatibility Matrix

Compatibility between versions of the Hybrid Web Container and server, and Hybrid Web Container and Hybrid App applications.

Hybrid Web Container and Unwired ServerCompatibility

Client/ Hybrid Web Container	Unwired Server 2.1	Unwired Server 2.1 ESD #2	Unwired Server 2.1 ESD #3	Unwired Server 2.2 SP02
Hybrid Web Container 2.1	Yes	Yes	Yes	Yes
Hybrid Web Container 2.1 ESD #2	No	Yes	Yes	Yes
Hybrid Web Container 2.1 ESD #3	No	Yes	Yes	Yes
Hybrid Web Container 2.2 SP02	No	Yes	Yes	Yes

There was no 2.1 ESD #1 Hybrid Web Container; 2.1 ESD #1 shipped with 2.1 Mobile Workflow clients.

Note:

- Yes – the client application built in this SDK version is supported in the server version (minor adjustments may be necessary to ensure the application runs correctly; see the migration details for the appropriate application type, if any).
- No – the client application built in this SDK version is not supported in the server version.
- Server version – refers to the server version to which the original package is migrated, not the newly deployed package.

Hybrid Web Container and Hybrid App Compatibility

Client/ Hybrid Web Container	Hybrid App 2.1	Hybrid App 2.1 ESD #2	Hybrid App 2.1 ESD #3	Hybrid App 2.2 SP02
Hybrid Web Container 2.1	Yes	No	No	No

Client/ Hybrid Web Container	Hybrid App 2.1	Hybrid App 2.1 ESD #2	Hybrid App 2.1 ESD #3	Hybrid App 2.2 SP02
Hybrid Web Container 2.1 ESD #2	Yes	Yes	No	No
Hybrid Web Container 2.1 ESD #3	Yes	Yes	Yes	No
Hybrid Web Container 2.2 SP02	Yes	Yes	Yes	Yes

There was no 2.1 ESD #1 Hybrid Web Container; 2.1 ESD #1 shipped with 2.1 Mobile Workflow clients.

Note:

- Yes – the client application built in this SDK version is supported in the server version (minor adjustments may be necessary to ensure the application runs correctly; see the migration details for the appropriate application type, if any).
- No – the client application built in this SDK version is not supported in the server version.
- Server version – refers to the server version to which the original package is migrated, not the newly deployed package.

OData Client Compatibility Matrix

Compatibility between versions of OData clients and Unwired Server (Unwired Server). Also compatibility between versions of REST SDK clients and Unwired Server (Unwired Server) for 2.2 SP03.

OData SDK Client and Unwired Server Version Compatibility

OData SDK Client	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2	Unwired Server 2.1 ESD #3	Unwired Server 2.2 SP02
OData SDK Client 2.1	Yes	Yes	Yes	Yes	Yes
OData SDK Client 2.1 ESD #1	No	Yes	Yes	Yes	Yes

OData SDK Client	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2	Unwired Server 2.1 ESD #3	Unwired Server 2.2 SP02
OData SDK Client 2.1 ESD #2	No	Yes	Yes	Yes	Yes
OData SDK Client 2.1 ESD #3	No	Yes	Yes	Yes	Yes
OData SDK Client 2.2 SP02	No	Yes	Yes	Yes	Yes

Note:

- Yes – the client application built in this SDK version is supported in the server version (minor adjustments may be necessary to ensure the application runs correctly; see the migration details for the appropriate application type, if any).
- No – the client application built in this SDK version is not supported in the server version.
- Server version – refers to the server version to which the original package is migrated, not the newly deployed package.

REST SDK Client and Unwired Server Version Compatibility

REST SDK Client	Unwired Server 2.1.3	Unwired Server 2.2 SP01	Unwired Server 2.2 SP02	Unwired Server 2.2 SP03
REST Client 2.2 SP03	No	Yes	Yes	Yes

Note:

- Yes – the client application built in this SDK version is supported in the server version (minor adjustments may be necessary to ensure the application runs correctly; see the migration details for the appropriate application type, if any).
- No – the client application built in this SDK version is not supported in the server version.
- Server version – refers to the server version to which the original package is migrated, not the newly deployed package.

Migrating Applications that Use a Custom SAP Result Checker

If you have mobile applications that use a custom SAP result checker, you must upgrade those applications to use JCo version 3, before you upgrade production servers to Sybase Unwired Platform 2.1.

Any package that uses custom SAP result checkers with JCo prior to version 3 is disabled when you upgrade to Unwired Platform 2.1. To reenable a disabled package, see *Enabling and Disabling a Package* in *Sybase Control Center for Sybase Unwired Platform*.

1. Confirm that each mobile application project that uses custom SAP result checkers was upgraded to use JCo version 3.

   See *Upgrading Applications that Use a Custom SAP Result Checker* in *Installation Guide for Sybase Mobile SDK*.

   If you are upgrading a Unwired Server clustyer (Unwired Server cluster, if the version is 2.2 or earlier), perform the following steps on each Unwired Server node (Unwired Server node, if the version is 2.2 or earlier).
2. Shut down the Unwired Server node to be upgraded.
3. Copy the package `lib\jar` file that was upgraded to use JCo version 3 into the identical package deployment `lib` folder, replacing the JCo version 2 file.
4. Run the Sybase Unwired Platform Runtime installer to upgrade the Unwired Server node.

Upgrading a Single-Server Installation

On the system where the single-server installation is installed, shut down all Unwired Platform services and run the installer.

Prerequisites

1. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SUP22_Worksheets.zip*.
2. Back up your existing installation. See *Backup and Recovery of Unwired Platform* in *System Administration*.
3. Make sure all applications on any Unwired Server that you are upgrading have domain assignments. See *Ensuring That Applications Have Domain Assignments* on page 124.

Task

1. *Preparing to Upgrade*

   Ensure that the host on which you are upgrading is ready for you to begin the upgrade.
2. *Accepting the End-User License Agreement*

   Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.
3. *Selecting Upgrade Options*

   Accept the installation directory and enter passwords for databases and the supAdmin user.
4. *Completing the Upgrade*

   Review the installation summary and launch the installation process.
5. *Verifying the Upgrade*

   Check for errors in the upgrade log, and verify that key services are functioning, that you can log into Sybase Control Center, and that you can see the properties of the upgraded Unwired Server.

Preparing to Upgrade

Ensure that the host on which you are upgrading is ready for you to begin the upgrade.

1. If the Sybase Unwired Platform cluster name on the system you are about to upgrade is longer than 16 characters, perform the steps listed in *Unwired Server Upgrade Stalls if Cluster Name is Longer than 16 Characters* in the *Troubleshooting Installation* section of this guide before starting the upgrade.
2. Prevent backups from interfering.

   You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable then.
3. Prevent virus scans from interfering.

   You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
4. Prevent system upgrades from interfering.

   You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
5. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.
6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”

8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

Accepting the End-User License Agreement

Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases and the supAdmin user.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of Unwired Platform in the directory where the existing installation was detected.

   You cannot change the installation directory in an upgrade.

2. Click **Next** on the installer panel that lists components that will be upgraded.

   You cannot make changes in this list.
3. On the database account information panel, enter the password for each database, then click **Next**.

   The default value at installation was "sql" for each of these databases.
4. Enter the current password for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log, and verify that key services are functioning, that you can log into Sybase Control Center, and that you can see the properties of the upgraded Unwired Server.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the upgrade log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Unwired Server
   - Sybase Control Center *X.X*
   - Sybase Unwired CacheDB
   - Sybase Unwired SampleDB
3. Verify that you can log in to Sybase Control Center.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the node you just upgraded is accessible from Sybase Control Center and that you can see the properties of that node.

Next

Go to the SAP Software Download Center at *https://websmp209.sap-ag.de/swdc* (requires an S-user ID with `SWDOWNLAD Software download` authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of Sybase Unwired Platform to which you have just upgraded.

- If a support package is available for this version of Sybase Unwired Platform:
  1. Use the *Readme* for the support package to upgrade your Sybase Unwired Platform installation to the support package version.
  2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

Upgrading a Simple Load-Balancing Cluster

Shut down the Sybase Unwired Platform components in the cluster, then upgrade those nodes in a precise sequence.

Prerequisites

1. Verify that all nodes in your Unwired Platform cluster are at the same version.
2. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SUP22_Worksheets.zip*.
3. Back up your existing installation. See *Backup and Recovery of Unwired Platform* in *System Administration*.
4. Make sure all applications on any Unwired Server that you are upgrading have domain assignments. See *Ensuring That Applications Have Domain Assignments* on page 124.

Task

1. *Upgrading the Data Tier*

   Run the Runtime installer on the system where the data tier to be upgraded is located.
2. *Upgrading Unwired Server*

   Upgrade all of the Unwired Server nodes in your cluster.
3. *Verifying the Upgraded Cluster*

   Verify that you can see all Unwired Server nodes in the cluster in Sybase Control Center, and that you can inspect the settings for each.

Upgrading the Data Tier

Run the Runtime installer on the system where the data tier to be upgraded is located.

1. *Preparing to Upgrade*

   Ensure that the host on which you are upgrading is ready for you to begin the upgrade.

2. *Accepting the End-User License Agreement*

   Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.
3. *Selecting Upgrade Options*

   Accept the installation directory and enter database passwords.
4. *Completing the Upgrade*

   Review the installation summary and launch the installation process.
5. *Verifying the Upgrade*

   Check for errors in the upgrade log and verify that database services are functioning.

See also

- *Upgrading Unwired Server* on page 138

Preparing to Upgrade

Ensure that the host on which you are upgrading is ready for you to begin the upgrade.

1. If the Sybase Unwired Platform cluster name on the system you are about to upgrade is longer than 16 characters, perform the steps listed in *Unwired Server Upgrade Stalls if Cluster Name is Longer than 16 Characters* in the *Troubleshooting Installation* section of this guide before starting the upgrade.
2. Prevent backups from interfering.

   You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable then.
3. Prevent virus scans from interfering.

   You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
4. Prevent system upgrades from interfering.

   You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
5. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.
6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”

8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

Accepting the End-User License Agreement

Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter database passwords.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of Unwired Platform in the directory where the existing installation was detected.

   You cannot change the installation directory in an upgrade.
2. Click **Next** on the installer panel that lists components that will be upgraded.

   You cannot make changes in this list.
3. On the database account information panel, enter the password for each database.

   The default value at installation was "sql" for each of these databases.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log and verify that database services are functioning.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the upgrade log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB

Upgrading Unwired Server

Upgrade all of the Unwired Server nodes in your cluster.

Perform this task on each Unwired Server node in the cluster, in this sequence:

- First, upgrade the primary Unwired Server node.
- Next, upgrade the secondary Unwired Server node. If you have more than one secondary server, you may upgrade them in any order.

Note: Do not begin upgrading the secondary servers until the primary server has completely restarted all its services after being upgraded.

1. *Preparing to Upgrade*

   Ensure that the host on which you are upgrading is ready for you to begin the upgrade.
2. *Accepting the End-User License Agreement*

   Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.
3. *Selecting Upgrade Options*

   Accept the installation directory, and enter user IDs and passwords for databases and the supAdmin user.
4. *Completing the Upgrade*

Review the installation summary and launch the installation process.

5. *Verifying the Upgrade*

   Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

See also

- *Upgrading the Data Tier* on page 135
- *Verifying the Upgraded Cluster* on page 141

Preparing to Upgrade

Ensure that the host on which you are upgrading is ready for you to begin the upgrade.

1. If the Sybase Unwired Platform cluster name on the system you are about to upgrade is longer than 16 characters, perform the steps listed in *Unwired Server Upgrade Stalls if Cluster Name is Longer than 16 Characters* in the *Troubleshooting Installation* section of this guide before starting the upgrade.
2. Prevent backups from interfering.

   You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable then.
3. Prevent virus scans from interfering.

   You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
4. Prevent system upgrades from interfering.

   You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
5. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.
6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”
8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

Accepting the End-User License Agreement

Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory, and enter user IDs and passwords for databases and the supAdmin user.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of Unwired Platform in the directory where the existing installation was detected.

   You cannot change the installation directory in an upgrade.
2. Click **Next** on the installer panel that lists components that will be upgraded.

   You cannot make changes in this list.
3. On the database account information panel, enter the password for each database.

   The default value at installation was "sql" for each of these databases.

4. Enter the current password for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the upgrade log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

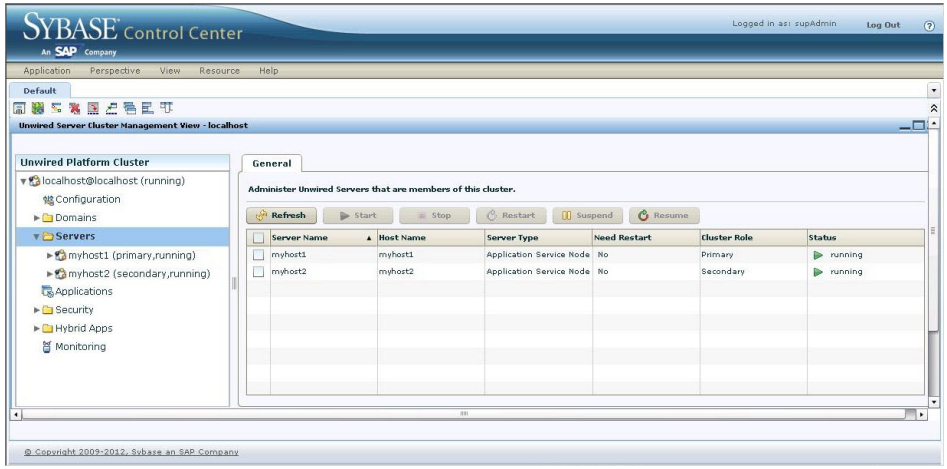
   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Control Center *X.X*
   - Sybase Unwired SampleDB
   - Sybase Unwired Server
3. Verify that you can log in to Sybase Control Center.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the node you just upgraded is accessible from Sybase Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Verifying the Upgraded Cluster

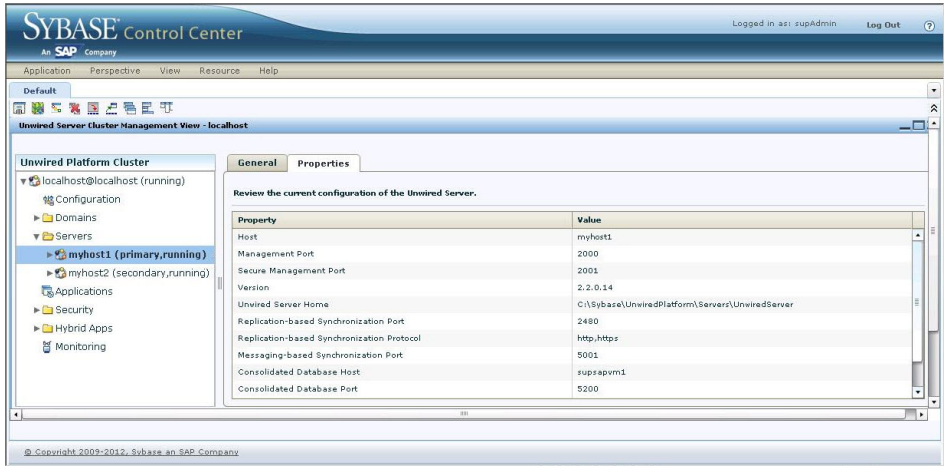
Verify that you can see all Unwired Server nodes in the cluster in Sybase Control Center, and that you can inspect the settings for each.

1. From an Unwired Server node, choose **Start > (All) Programs > Sybase > Sybase Control Center**.
2. Make sure you can see both Unwired Server nodes in the cluster.



3. Select each Unwired Server node and inspect the settings.

   All information should be filled in, with no error messages.



Next

Go to the SAP Software Download Center at *https://websmp209.sap-ag.de/swdc* (requires an S-user ID with `SWDOWNLAD Software download` authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of Sybase Unwired Platform to which you have just upgraded.

- If a support package is available for this version of Sybase Unwired Platform:
  1. Use the *Readme* for the support package to upgrade your Sybase Unwired Platform installation to the support package version.

2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

See also

- *Upgrading Unwired Server* on page 138

Upgrading a Standard Microsoft Failover Cluster

Shut down the Unwired Platform components in the cluster, then upgrade those nodes in a precise sequence.

Prerequisites

1. Verify that all nodes in your Unwired Platform cluster are at the same version.
2. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SUP22_Worksheets.zip*.
3. Back up your existing installation. See *Backup and Recovery of Unwired Platform* in *System Administration*.
4. Make sure all applications on any Unwired Server that you are upgrading have domain assignments. See *Ensuring That Applications Have Domain Assignments* on page 124.

Task

1. *Preparing for the First Data Tier Upgrade*

   Shut down Unwired Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.
2. *Upgrading the First Data Tier*

   Run the Runtime installer on the system where the first data tier to be upgraded is located.
3. *Preparing for the Second Data Tier Upgrade*

   Make the passive node active, go to the desktop of that node, and ensure that cluster resources are offline.
4. *Upgrading the Second Data Tier*

   Run the Runtime installer on the system where the second data tier to be upgraded is located.
5. *Preparing for Unwired Server Upgrades*

   Bring data tier services back online.

6. *Upgrading Unwired Server*

   Upgrade all of the Unwired Server nodes in your cluster.
7. *Verifying the Upgraded Cluster*

   When you have completed upgrading and verifying all the individual cluster nodes, verify the functionality of the full cluster to ensure that the upgrade process has been completely successful.

Preparing for the First Data Tier Upgrade

Shut down Unwired Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.

1. Shut down the Sybase Unwired Server service on each scale-out node.
2. Shut down the secondary Unwired Server – shut down services in this order:
   a. Sybase Unwired Server
   b. Sybase Control Center *X.X*
   c. Sybase Unwired SampleDB (not present in Enterprise Server Edition)
3. Shut down the primary Unwired Server – shut down services in this order:
   a. Sybase Unwired Server
   b. Sybase Control Center *X.X*
   c. Sybase Unwired SampleDB (not present in Enterprise Server Edition)
4. In Failover Cluster Manager or Cluster Adminstrator on the active node, make sure the following Unwired Platform resources are offline:
   - Advantage Database Server® service
   - Afaria Database service (available with Unwired Platform version 1.5.2 or earlier)
   - Sybase Unwired CacheDB service
   - Sybase Unwired ClusterDB service
   - Sybase Unwired LogDataDB service
5. Shut down the data tier server – shut down these services, in any order:
   - Sybase Unwired CacheDB service
   - Sybase Unwired ClusterDB service
   - Sybase Unwired LogDataDB service

Upgrading the First Data Tier

Run the Runtime installer on the system where the first data tier to be upgraded is located.

1. *Preparing to Upgrade*

   Ensure that the host on which you are upgrading is ready for you to begin the upgrade.
2. *Accepting the End-User License Agreement*

Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

3. *Selecting Upgrade Options*

   Accept the installation directory and enter passwords for databases.

4. *Completing the Upgrade*

   Review the installation summary and launch the installation process.

5. *Verifying the Upgrade*

   Check for errors in the upgrade log and verify that database services are functioning.

See also

- *Preparing for the Second Data Tier Upgrade* on page 147

Preparing to Upgrade

Ensure that the host on which you are upgrading is ready for you to begin the upgrade.

1. If the Sybase Unwired Platform cluster name on the system you are about to upgrade is longer than 16 characters, perform the steps listed in *Unwired Server Upgrade Stalls if Cluster Name is Longer than 16 Characters* in the *Troubleshooting Installation* section of this guide before starting the upgrade.
2. Prevent backups from interfering.

   You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable then.

3. Prevent virus scans from interfering.

   You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.

4. Prevent system upgrades from interfering.

   You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.

5. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”

8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

Accepting the End-User License Agreement

Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of Unwired Platform in the directory where the existing installation was detected.

   You cannot change the installation directory in an upgrade.
2. Click **Next** on the installer panel that lists components that will be upgraded.

   You cannot make changes in this list.
3. On the database account information panel, enter the password for each database.

   The default value at installation was "sql" for each of these databases.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log and verify that database services are functioning.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the upgrade log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB

Preparing for the Second Data Tier Upgrade

Make the passive node active, go to the desktop of that node, and ensure that cluster resources are offline.

1. While you are still on the active data tier node that you just upgraded, fail over to the other node make it active.
2. Go to the desktop of the new active node to begin the upgrade process on the second data tier.
3. In Failover Cluster Manager or Cluster Adminstrator on the active node, make sure the following Sybase Unwired Platform/Sybase Unwired Platform resources are offline:
   - Sybase Unwired Server service
   - Sybase Control Center *X.X* service
   - Unwired SampleDB service

See also

- *Upgrading the First Data Tier* on page 144

Upgrading the Second Data Tier

Run the Runtime installer on the system where the second data tier to be upgraded is located.

1. *Preparing to Upgrade*

Ensure that the host on which you are upgrading is ready for you to begin the upgrade.

2. *Accepting the End-User License Agreement*

   Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

3. *Selecting Upgrade Options*

   Accept the installation directory and enter passwords for databases.

4. *Completing the Upgrade*

   Review the installation summary and launch the installation process.

5. *Verifying the Upgrade*

   Check for errors in the upgrade log and verify that database services are functioning.

See also

- *Preparing for Unwired Server Upgrades* on page 150

Preparing to Upgrade

Ensure that the host on which you are upgrading is ready for you to begin the upgrade.

1. If the Sybase Unwired Platform cluster name on the system you are about to upgrade is longer than 16 characters, perform the steps listed in *Unwired Server Upgrade Stalls if Cluster Name is Longer than 16 Characters* in the *Troubleshooting Installation* section of this guide before starting the upgrade.
2. Prevent backups from interfering.

   You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable then.

3. Prevent virus scans from interfering.

   You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.

4. Prevent system upgrades from interfering.

   You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.

5. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”

8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

Accepting the End-User License Agreement

Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of Unwired Platform in the directory where the existing installation was detected.

   You cannot change the installation directory in an upgrade.
2. Click **Next** on the installer panel that lists components that will be upgraded.

You cannot make changes in this list.

3. On the database account information panel, enter the password for each database.
   The default value at installation was "sql" for each of these databases.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log and verify that database services are functioning.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the upgrade log at *SUP_HOME*`\InstallLogs\UPInstall.log`.
   A search for "error" should not find anything.
2. Verify that these services are started:
   - Sybase Unwired CacheDB
   - Sybase Unwired ClusterDB
   - Sybase Unwired LogDataDB

Preparing for Unwired Server Upgrades

Bring data tier services back online.

In Failover Cluster Manager or Cluster Adminstrator, bring the resource group containing the database services back online.

See also

- *Upgrading the Second Data Tier* on page 147

Upgrading Unwired Server

Upgrade all of the Unwired Server nodes in your cluster.

Perform this task on each Unwired Server node in the cluster, in this sequence:

- First, upgrade the primary Unwired Server node.
- Next, upgrade the secondary Unwired Server node. If you have more than one secondary server, you may upgrade them in any order.

Note: Do not begin upgrading the secondary servers until the primary server has completely restarted all its services after being upgraded.

1. *Preparing to Upgrade*

   Ensure that the host on which you are upgrading is ready for you to begin the upgrade.
2. *Accepting the End-User License Agreement*

   Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.
3. *Selecting Upgrade Options*

   Accept the installation directory, and enter user IDs and passwords for databases and the supAdmin user.
4. *Completing the Upgrade*

   Review the installation summary and launch the installation process.
5. *Verifying the Upgrade*

   Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

See also

- *Verifying the Upgraded Cluster* on page 153

Preparing to Upgrade

Ensure that the host on which you are upgrading is ready for you to begin the upgrade.

1. If the Sybase Unwired Platform cluster name on the system you are about to upgrade is longer than 16 characters, perform the steps listed in *Unwired Server Upgrade Stalls if Cluster Name is Longer than 16 Characters* in the *Troubleshooting Installation* section of this guide before starting the upgrade.
2. Prevent backups from interfering.

   You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable then.
3. Prevent virus scans from interfering.

   You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
4. Prevent system upgrades from interfering.

   You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.
5. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.
6. Verify that you have Administrator privileges on the upgrade target host.

7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”
8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

Accepting the End-User License Agreement

Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

1. Start the installer using one of these methods:

   - Insert the Sybase Unwired Platform Runtime 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.

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory, and enter user IDs and passwords for databases and the supAdmin user.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of Unwired Platform in the directory where the existing installation was detected.

You cannot change the installation directory in an upgrade.

2. Click **Next** on the installer panel that lists components that will be upgraded.

   You cannot make changes in this list.
3. On the database account information panel, enter the password for each database.

   The default value at installation was "sql" for each of these databases.
4. Enter the current password for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Check for errors in the upgrade log, and verify that key services are functioning, that you can log in to Sybase Control Center, and that you can see the properties of the Unwired Server and connect to the data tier.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the upgrade log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

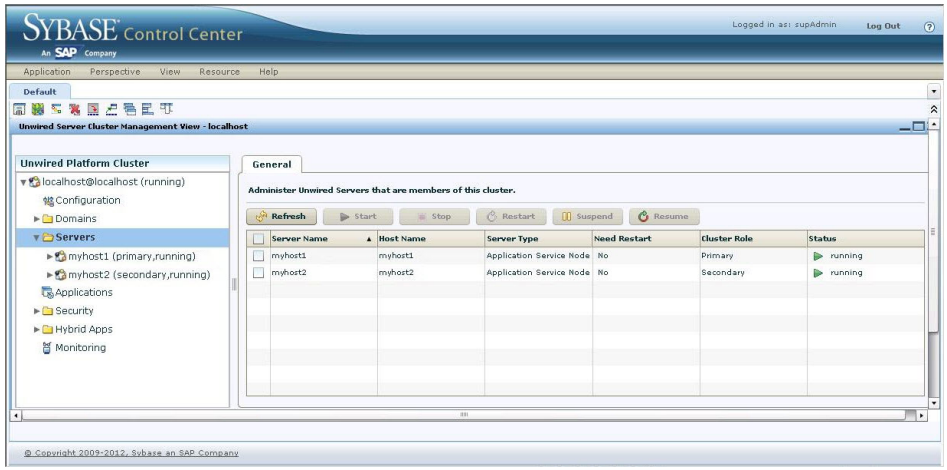
   A search for "error" should not find anything.
2. Verify that these services are started automatically, otherwise, you must start them manually. Open the Services panel from Windows Control Panel and check the start-up state for:
   - Sybase Control Center *X.X*
   - Sybase Unwired SampleDB
   - Sybase Unwired Server
3. Verify that you can log in to Sybase Control Center.

   From Windows, select **Start > (All) Programs > Sybase > Sybase Control Center**.
4. Verify that the node you just upgraded is accessible from Sybase Control Center and that you can see the properties of that node.
5. Verify that you can connect to the data tier.

Verifying the Upgraded Cluster

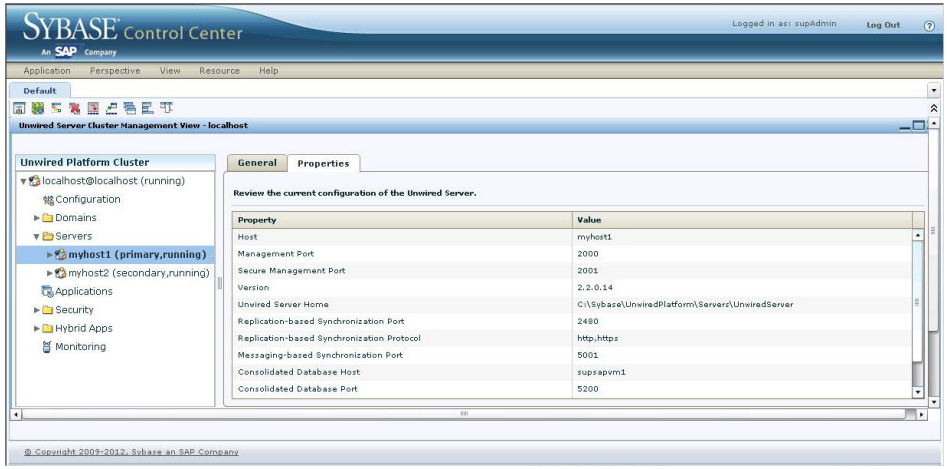
When you have completed upgrading and verifying all the individual cluster nodes, verify the functionality of the full cluster to ensure that the upgrade process has been completely successful.

1. From an Unwired Server node, choose **Start** > **(All) Programs** > **Sybase** > **Sybase Control Center**.
2. Make sure you can see both Unwired Server nodes in the cluster.



3. Select each Unwired Server node and inspect the settings.

   All information should be filled in, with no error messages.



4. Take the resource group with the Unwired Platform database services back online.

Next

Go to the SAP Software Download Center at *https://websmp209.sap-ag.de/swdc* (requires an S-user ID with `SWDOWNLAD Software download` authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of Sybase Unwired Platform to which you have just upgraded.

- If a support package is available for this version of Sybase Unwired Platform:
  1. Use the *Readme* for the support package to upgrade your Sybase Unwired Platform installation to the support package version.
  2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

See also

- *Upgrading Unwired Server* on page 150

Upgrading a Microsoft Failover Cluster with Shared Hosts

Shut down the Unwired Platform components in the cluster, then upgrade those nodes in a precise sequence.

Prerequisites

1. Verify that all nodes in your Unwired Platform cluster are at the same version.
2. Complete the worksheet for your chosen scenario. Obtain the Excel workbook file with the scenario worksheets by clicking: *../misc/SUP22_Worksheets.zip*.
3. Back up your existing installation. See *Backup and Recovery of Unwired Platform* in *System Administration*.
4. Make sure all applications on any Unwired Server that you are upgrading have domain assignments. See *Ensuring That Applications Have Domain Assignments* on page 124.

Task

1. *Preparing for the First Host Upgrade*

   Shut down Unwired Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.
2. *Upgrading the First Host*

   Run the Runtime installer on the system where the first Unwired Server and data tier to be upgraded are located.
3. *Preparing for the Second Host Upgrade*

   Make the active node passive, go to the desktop of that node, and ensure that cluster resources are offline.
4. *Upgrading the Second Host*

Run the Runtime installer on the host where the second data tier and Unwired Server to be upgraded are located.

5. *Verifying the Upgraded Cluster*

   Verify the functionality of the full cluster to ensure that the upgrade process has been completely successful.

Preparing for the First Host Upgrade

Shut down Unwired Platform services on cluster nodes in an exact sequence and take cluster resources offline on the active node.

1. Make sure the active data tier node is on the same host server as the primary Unwired Server node.

   If it is not, use Failover Cluster Manager to move the cluster's File Server service to the other data tier node.
2. Shut down the secondary Unwired Server – shut down services in this order:
   a. Sybase Unwired Server
   b. Sybase Control Center *X.X*
3. Shut down the primary Unwired Server – shut down services in this order:
   a. Sybase Unwired Server
   b. Sybase Control Center *X.X*
4. Go to the desktop of the active node.
5. In Failover Cluster Manager on the active node, make sure the following Unwired Platform resources are offline:
   - Advantage Database Server® service
   - Afaria Database service (available with Unwired Platform version 1.5.2 or earlier)
   - Sybase Unwired CacheDB service
   - Sybase Unwired ClusterDB service
   - Sybase Unwired LogDataDB service
   - Sybase Unwired SampleDB service
6. Proceed with the first host upgrade on the active node.

Upgrading the First Host

Run the Runtime installer on the system where the first Unwired Server and data tier to be upgraded are located.

1. *Preparing to Upgrade*

   Ensure that the host on which you are upgrading is ready for you to begin the upgrade.
2. *Accepting the End-User License Agreement*

Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

3. *Selecting Upgrade Options*

   Accept the installation directory and enter passwords for databases and the supAdmin user.

4. *Completing the Upgrade*

   Review the installation summary and launch the installation process.

5. *Verifying the Upgrade*

   Before proceeding, verify that the upgrade is successful.

See also

- *Preparing for the Second Host Upgrade* on page 159

Preparing to Upgrade

Ensure that the host on which you are upgrading is ready for you to begin the upgrade.

1. If the Sybase Unwired Platform cluster name on the system you are about to upgrade is longer than 16 characters, perform the steps listed in *Unwired Server Upgrade Stalls if Cluster Name is Longer than 16 Characters* in the *Troubleshooting Installation* section of this guide before starting the upgrade.
2. Prevent backups from interfering.

   You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable then.

3. Prevent virus scans from interfering.

   You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.

4. Prevent system upgrades from interfering.

   You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.

5. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.

6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host and all server nodes.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”

8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

Accepting the End-User License Agreement

Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

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

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases and the supAdmin user.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of Unwired Platform in the directory where the existing installation was detected.

   You cannot change the installation directory in an upgrade.
2. Click **Next** on the installer panel that lists components that will be upgraded.

   You cannot make changes in this list.
3. On the database account information panel, enter the password for each database.

   The default value at installation was "sql" for each of these databases.

4. Enter the current password for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Before proceeding, verify that the upgrade is successful.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is `C:\Sybase\UnwiredPlatform`)..

1. Check the upgrade log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started:
   - Sybase Unwired Server
   - Sybase Control Center *X.X*
   - Sybase Unwired CacheDB
   - Sybase Unwired SampleDB
3. Verify that the Unwired Server node you just upgraded is accessible from Sybase Control Center and that you can see the properties of that node.

Preparing for the Second Host Upgrade

Make the active node passive, go to the desktop of that node, and ensure that cluster resources are offline.

1. Stop the Unwired Platform services on the node that you just upgraded.
2. Fail over to the other node to make it active.
3. In Failover Cluster Manager or Cluster Administrator, make sure the following Unwired Platform/Unwired Platform resources are offline:
   - Advantage Database Server® service
   - Afaria Database service (available with Unwired Platform version 1.5.2 or earlier)
   - Sybase Unwired CacheDB service
   - Sybase Unwired ClusterDB service
   - Sybase Unwired LogDataDB service
   - Sybase Unwired SampleDB service (not present in Enterprise Server Edition)
4. Go to the desktop of the new active node to begin the upgrade process on the second host.

See also

- *Upgrading the First Host* on page 156

Upgrading the Second Host

Run the Runtime installer on the host where the second data tier and Unwired Server to be upgraded are located.

1. *Preparing to Upgrade*

   Ensure that the host on which you are upgrading is ready for you to begin the upgrade.
2. *Accepting the End-User License Agreement*

   Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.
3. *Selecting Upgrade Options*

   Accept the installation directory and enter passwords for databases and the supAdmin user.
4. *Completing the Upgrade*

   Review the installation summary and launch the installation process.
5. *Verifying the Upgrade*

   Before proceeding, verify that the upgrade is successful.

See also

- *Verifying the Upgraded Cluster* on page 163

Preparing to Upgrade

Ensure that the host on which you are upgrading is ready for you to begin the upgrade.

1. If the Sybase Unwired Platform cluster name on the system you are about to upgrade is longer than 16 characters, perform the steps listed in *Unwired Server Upgrade Stalls if Cluster Name is Longer than 16 Characters* in the *Troubleshooting Installation* section of this guide before starting the upgrade.
2. Prevent backups from interfering.

   You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable then.
3. Prevent virus scans from interfering.

   You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.
4. Prevent system upgrades from interfering.

   You can either exclude the existing Unwired Platform installation directory from system upgrades or temporarily disable them.

5. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based).

   See *Intrusion Detection and Protection Requirements* in *Landscape Design and Integration*.
6. Verify that you have Administrator privileges on the upgrade target host.
7. Shut down all Sybase and SAP software, Sybase and SAP processes, and associated third-party processes running on the installation target host.

   Use the Services panel from Windows Control Panel to verify that services are stopped. The Sybase Unwired Platform services are: “Sybase Control Center” and all services with names that begin with “Sybase Unwired…”
8. If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart the system for this change to take effect.

Accepting the End-User License Agreement

Start the Sybase Unwired Platform Runtime installer and accept the end user-license agreement.

1. Start the installer using one of these methods:

   - Insert the Sybase Unwired Platform Runtime 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.

     Note: Use a short path, preferably a folder directly below the root directory, such as `C:\temp`. The path can include only ASCII alphanumeric characters, underscore (_), hyphen (-), and period (.) (two consecutive period characters are not allowed).
   - 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:
   - On Windows 7 and Windows Server 2008 R2, right-click the `setup.exe` file and select **Run as Administrator**.
   - On earlier supported versions of Windows, double-click the `setup.exe` file.

   Note: The installer displays an "Initializing wizard..." message while it verifies the integrity of the installation image. It may take a few minutes for the first installer panel to display.
2. On the installer welcome page, click **Next**.
3. On the end-user license agreement page, select your country, accept the terms of the license agreement and click **Next**.

Selecting Upgrade Options

Accept the installation directory and enter passwords for databases and the supAdmin user.

The directory below where the existing installation was detected is referred to as *SUP_HOME* in the rest of these upgrade instructions.

1. Click **Next** to begin the upgrade installation of Unwired Platform in the directory where the existing installation was detected.

   You cannot change the installation directory in an upgrade.
2. Click **Next** on the installer panel that lists components that will be upgraded.

   You cannot make changes in this list.
3. On the database account information panel, enter the password for each database.

   The default value at installation was "sql" for each of these databases.
4. Enter the current password for the supAdmin user in the first field, then enter it again in the second field to confirm, then click **Next**.

Completing the Upgrade

Review the installation summary and launch the installation process.

1. On the summary information page, click **Upgrade**.
2. Click **Finish** on the last installer panel, indicating successful completion.

Verifying the Upgrade

Before proceeding, verify that the upgrade is successful.

In the location of the upgrade log file referenced below, *SUP_HOME* is the location of the earlier installation that you upgraded (default is `C:\Sybase\UnwiredPlatform`)..

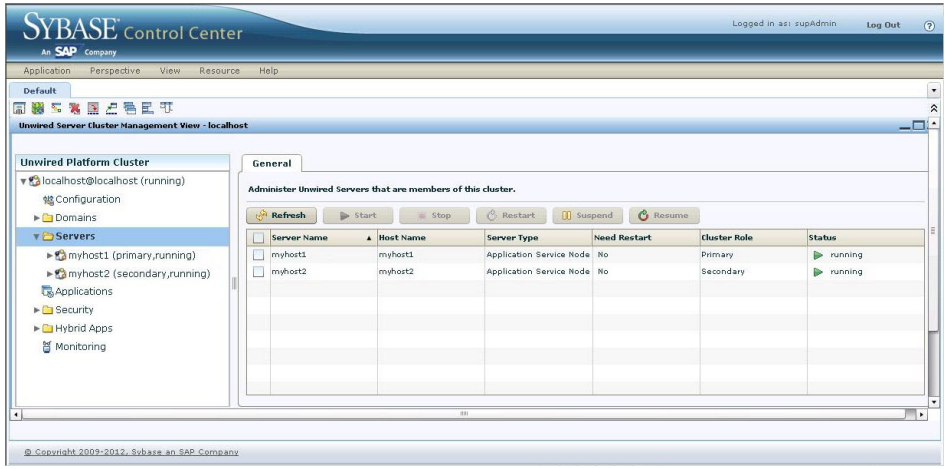
1. Check the upgrade log at *SUP_HOME*`\InstallLogs\UPInstall.log`.

   A search for "error" should not find anything.
2. Verify that these services are started:
   - Sybase Unwired Server
   - Sybase Control Center *X.X*
   - Sybase Unwired CacheDB
   - Sybase Unwired SampleDB
3. Verify that the Unwired Server node you just upgraded is accessible from Sybase Control Center and that you can see the properties of that node.

Verifying the Upgraded Cluster

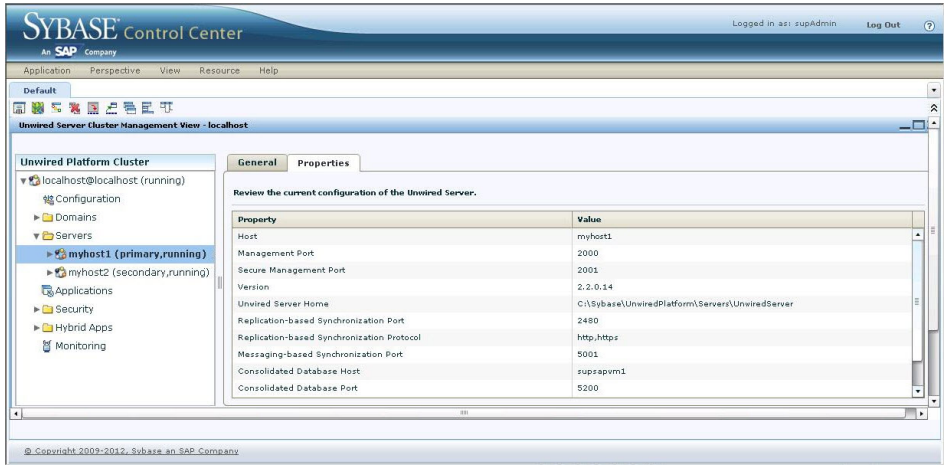
Verify the functionality of the full cluster to ensure that the upgrade process has been completely successful.

1. From an Unwired Server node, choose **Start > (All) Programs > Sybase > Sybase Control Center**.
2. Make sure you can see both Unwired Server nodes in the cluster.



3. Select each Unwired Server node and inspect the settings.

   All information should be filled in, with no error messages.



4. Take the resource group with the Unwired Platform database services back online.

Next

Go to the SAP Software Download Center at *https://websmp209.sap-ag.de/swdc* (requires an S-user ID with `SWDOWNLAD Software download` authorization, provided by the Super Administrator for your SAP products) and locate the *Support Packages and Patches* page for the version of Sybase Unwired Platform to which you have just upgraded.

- If a support package is available for this version of Sybase Unwired Platform:
  1. Use the *Readme* for the support package to upgrade your Sybase Unwired Platform installation to the support package version.
  2. After you have upgraded to the support package version, continue with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.
- If no support package is available, continue now with postinstallation tasks in *Completing New and Upgrade Installations* in *Landscape Design and Integration*.

See also

- *Upgrading the Second Host* on page 160

Upgrading Relay Servers

To upgrade Relay Servers that were installed with the earlier version of Unwired Platform, you must uninstall the Relay Server components on Web server hosts, and replace them with the components supplied on the Unwired Platform Runtime installation media.

When you upgrade an Unwired Platform system from version 2.1 to 2.2, upgrading existing Relay Servers (from version 12.0.1 to 12.0.1.3769) is optional. If you upgrade from version 2.0, upgrading existing Relay Servers (from version 11.x to 12.0.1) is still optional.

1. Shut down the Relay Server.
   a) Shut down the Web server application.
   b) Shut down the Relay Server State Manager service.
2. Save the existing Relay Server configuration file (`rs.config`) for use with the new Relay Server components.
3. Delete all Relay Server components installed on the Web server host.
   - On an IIS host, delete the `wwwroot\ias_relay_server\` directory, including all files and subdirectories.
   - On an Apache host, delete all Relay Server libraries and executables in the `modules\` directory, and all Relay Server components installed elsewhere on the Apache host.

CHAPTER 9 Uninstalling

Uninstall Sybase Unwired Platform server components before reinstalling them.

Uninstall nodes in Unwired Platform clusters in this order:

- First: Unwired Server scale-out nodes, if present
- Second: secondary Unwired Server (installed as application server) node
- Third: primary Unwired Server (installed as application server) node
- Last: data tier nodes (active first, in Microsoft Failover Cluster)

1. *Preparing to Uninstall*

   Ensure that the host on which you are uninstalling Sybase Unwired Platform is ready for you to begin the uninstallation.
2. *Uninstalling Unwired Platform Servers*

   Use the Windows Control Panel to uninstall Unwired Platform Runtime server components.

Preparing to Uninstall

Ensure that the host on which you are uninstalling Sybase Unwired Platform is ready for you to begin the uninstallation.

1. If Sybase SAP® Data Orchestration Engine Connector is present, use the Sybase Control Center console to remove any DOE-C packages.

   See *Deploy* in *Sybase Control Center for Sybase Unwired Platform*.
2. While Unwired Server is running, uninstall any other Sybase products that require Unwired Platform to be installed first.

   This includes products such as:
   - Sybase SAP® Data Orchestration Engine Connector
   - Sybase Mobile Sales for SAP CRM
   - Sybase Mobile Workflow for SAP Business Suite

   See the product-specific *Installation Guide* for instructions.
3. Shut down all Sybase software, Sybase processes, and associated third-party processes running on the host.
   a) For single-server uninstallation:
      1. Shut down Unwired Server.
      2. Ensure that all services with names beginning with "Sybase" are stopped.

3. Ensure that the OpenDS service is stopped, if present.

b) For Cluster uninstallation:

1. For Unwired Server uninstallation:
   a. Shut down Unwired Server.
   b. Ensure that all services with names beginning with "Sybase" are stopped.
   c. Ensure that the OpenDS service is stopped, if present.

      Exception: When uninstalling Unwired Server from a Microsoft Failover Cluster with shared hosts, leave these database services running:
      - Sybase Unwired CacheDB
      - Sybase Unwired ClusterDB
      - Sybase Unwired LogDataDB
2. For data tier uninstallation:
   a. Shut down all database services:
      - Sybase Unwired CacheDB
      - Sybase Unwired ClusterDB
      - Sybase Unwired LogDataDB
   b. Ensure that all services with names beginning with "Sybase" are stopped.

Open the Windows Services panel to confirm services are stopped. You may need to manually stop any Unwired Platform services that are still running.

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

   If you plan to reinstall Unwired Platform, preserve data by backing up the Unwired Platform databases.

   See *Operational Maintenance* in *System Administration*.
5. Prevent backups from interfering.

   You can either exclude the existing Unwired Platform installation directory from backups or temporarily disable then.
6. Prevent virus scans from interfering.

   You can either exclude the existing Unwired Platform installation directory from virus scans or temporarily disable them.

Uninstalling Unwired Platform Servers

Use the Windows Control Panel to uninstall Unwired Platform Runtime server components.

Prerequisites

Confirm all preparation tasks are complete.

Task

1. From the Control Panel, begin removing the program.
   This starts the uninstaller.
2. In the welcome window, click **Next**.
3. Select the components to remove, and click **Next**.
4. Review the list of components to remove, then click **Uninstall**.
5. Click **Finish** when you see:

   ```
   The InstallShield wizard has successfully uninstalled
   Sybase Unwired Platform ...
   ```
6. Restart the system to delete folders and files remaining in the Unwired Platform installation directory.
7. Delete any folders and files remaining in the Unwired Platform installation directory.

   If you cannot delete the Sybase Control Center installation directory (by default, `C:\Sybase\SCC-`*`XX`*), see *Troubleshooting Uninstallation*.

CHAPTER 10 Scripting Silent Installation, Upgrade, or Uninstallation

You can automate installation, upgrading, or uninstallation of Sybase Unwired Platform Runtime server components by specifying settings in a text file, then running a script that silently runs the Sybase Unwired Platform Runtime installer or uninstaller.

Silent Installation or Upgrade

Use the `SilentInstall_Win.bat` script to automate the installation or upgrade process. The Sybase Unwired Platform Runtime installer runs silently, taking input from the `SilentInstall_Win.txt` file.

The silent installation capability allows you to perform any particular type of Sybase Unwired Platform Runtime installation or upgrade, without entering information through the installer interface. There is no difference in the scripting process between a silent installation and a silent upgrade.

- Configure installer settings in a `SilentInstall_Win.txt` file.
- Run the installer from the command prompt, using the `SilentInstall_Win.bat` script.
- Each type of installation requires a `SilentInstall_Win.txt` file, with one or more settings that are required to perform the installation. For example, different settings perform a single-node installation, or one of three types of installation required for a clustered system.
- If User Access Control (UAC) is present in the version of Windows where you are installing, disable it. Restart Windows for the change to take effect.

Note: The Unwired Platform Runtime installer can install only server components. The Sybase Mobile SDK requires a different installer.

1. *Planning a Silent Installation or Upgrade*

   Review the content of the default SilentInstall_Win.txt file and determine what changes you must make for the type of Unwired Platform server installation or upgrade you want to automate.

2. *Modifying Properties in the SilentInstall_Win.txt File*

   Edit a separate copy of the default SilentInstall_Win.txt configuration file for each type of Sybase Unwired Platform Runtime server installation you want to automate.

3. *Running a Silent Installation or Upgrade*

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

Planning a Silent Installation or Upgrade

Review the content of the default `SilentInstall_Win.txt` file and determine what changes you must make for the type of Unwired Platform server installation or upgrade you want to automate.

1. Locate the `SilentInstall_Win.bat` script and `SilentInstall_Win.txt` file in the root directory of the Sybase Unwired Platform Runtime installation media.
2. If you cannot modify those files on the installation media, create a copy of the installer image in a location from which you can run the installer.
3. Use a text editor to open the `SilentInstall_Win.txt` file, and review the current settings.

   Comments preceding each group of settings describe the valid options, 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 non-default port number assignments used in an existing installation.

Modifying Properties in the SilentInstall_Win.txt File

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

1. From the root directory of the installer image, use a text editor to open `SilentInstall_Win.txt`.
2. Make the changes you have determined are necessary.
3. Save your changes.

   If you are preparing to run several types of silent installation, say for different types of cluster nodes, save the configuration file with a unique name, or in a separate folder.

   Note: When you run a silent installation, the configuration file must be named `SilentInstall_Win.txt`, and it must be located in the root directory of the installer image.

Running a Silent Installation or Upgrade

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

Prerequisites

1. Shut down the same processes on the target host as you would if you were running the installer manually. See the chapter in this guide that covers the type of installation you are automating.
2. For upgrades, prevent backups and virus scans from interfering with the upgrade. You can either exclude the Unwired Platform installation directory from backups and virus scans, or temporarily disable them.
3. To accommodate Unwired Platform internal communications, you may need to reconfigure intrusion detection/prevention systems (either hardware- or software-based). See the Unwired Platform *Landscape Design and Integration* guide.
4. Run the installation script as an administrator on Windows 7 and Windows Server 2008 R2.

Task

1. For each type of installation you want to automate, perform a trial run of these instructions using your modified `SilentInstall_Win.txt` configuration files, on a temporary or test server host.

   Confirm that each modified configuration file produces the desired installation outcome, before you proceed with silent installation on an actual target host.
2. Confirm that the root directory of the installer image contains the correct version of the `SilentInstall_Win.txt` configuration file that you modified for a particular installation type.
3. From a command prompt on the installation target host, navigate to the root directory of the installer image and launch the silent installation script:

   ```
   SilentInstall_Win.bat
   ```
4. Check the log files for errors.
   - Errors that cause a silent installation to fail before the installation directories are created are logged in *%SystemDrive%*`\SMPInstall.log`.
   - Errors encountered after the installation destination is created are logged in *SUP_HOME*`\InstallLogs\SMPInstall.log`.
5. Repeat these steps on different servers for each type of installation you are automating.

For cluster installations, install servers in the same sequence you would if you were running the installer manually. See the *Installing Unwired Platform...* chapter in this guide for the cluster installation scenario you are automating.

Silent Uninstallation

Use the `SilentUninstall_Win.bat` script to automate the uninstallation process. The Sybase Unwired Platform Runtime uninstaller runs silently, taking input from the `SilentUninstall_Win.txt` file.

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

- You control which Unwired Platform Runtime components are uninstalled with settings in a `SilentUninstall_Win.txt` file. The default settings remove all Unwired Platform Runtime server components on the target host.
- Run the uninstaller from the command prompt, using the `SilentUninstall_Win.bat` script.
- Each uninstallation that removes a different combination of Unwired Platform Runtime server components requires a separate `SilentUninstall_Win.txt` file.

When you run a silent installation, the `SilentUninstall_Win.bat` script and `SilentUninstall_Win.txt` configuration file are copied to the *`SUP_HOME`*`\Uninstallers\UnwiredPlatform\` directory.

Note:

If you did not run a silent installation, you must:

- Copy those files to the location above from the Sybase Unwired Platform Runtime installation media root directory.

Note: The Unwired Platform Runtime uninstaller can only uninstall server components. The Sybase Mobile SDK requires a different uninstaller.

1. *Planning a Silent Uninstallation*

   Move and modify the SilentUninstall_Win.bat file, then review the content of the default SilentUninstall_Win.txt file and determine what changes you must make to selectively remove Sybase Unwired Platform Runtime components in the uninstallation.
2. *Modifying Properties in the SilentUninstall_Win.txt File*

   Edit a separate copy of the default SilentUninstall_Win.txt configuration file for each type of Unwired Platform server uninstallation you want to automate.
3. *Running 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 run a silent uninstallation, then run the SilentUninstall_Win.bat script from a command prompt.

Planning a Silent Uninstallation

Move and modify the `SilentUninstall_Win.bat` file, then review the content of the default `SilentUninstall_Win.txt` file and determine what changes you must make to selectively remove Sybase Unwired Platform Runtime components in the uninstallation.

1. Move the `SilentUninstall_Win.bat` to a temporary location outside of the Unwired Platform server installation tree.

   For example, `C:\temp`.

   Note: The current location of the `SilentUninstall_Win.bat` file should be the *SUP_HOME*`\Uninstallers\UnwiredPlatform\` directory , where either a silent installation placed it or you copied it earlier.

2. Use a text editor to open the `SilentUninstall_Win.bat` file, and change the line beginning with `cd` as follows.

   Line before change:

   ```
   cd /d %~dp0
   ```

   Line after change:

   ```
   cd /d SUP_HOME\Uninstallers\UnwiredPlatform
   ```

   where *SUP_HOME* is the complete path to the Sybase Unwired Platform Runtime installation directory.

3. Use a text editor to open the `SilentUninstall_Win.txt` file, and review the current settings.

   Comments preceding each group of settings describe the valid options, and any special requirements for the entry. Any component identified with `.activeForUninstall=true` will be uninstalled.

4. Determine the Unwired Platform server 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` configuration file for each type of Unwired Platform server uninstallation you want to automate.

1. From the *SUP_HOME*`\Uninstallers\UnwiredPlatform\` directory on the host where you want to run a silent uninstallation, use a text editor to open the `SilentUninstall_Win.txt` file.

2. Make the changes you have determined are necessary.

   Set property values to `false` for any Unwired Platform server 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
   ```

3. Save your changes.

   If you intend to run several types of silent uninstallations, keeping different combinations of Unwired Platform server components, save the configuration file with a unique name, or in a separate folder.

Note: When you run a silent uninstallation, the configuration file must be named `SilentUninstall_Win.txt`, and it must be located in the *SUP_HOME* `\Uninstallers\UnwiredPlatform\` directory on the host where you want to run a silent uninstallation.

Running 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 run a silent uninstallation, then run the `SilentUninstall_Win.bat` script from a command prompt.

Prerequisites

1. Shut down the same processes on the target host as if you were running the installer manually. See the chapter in this guide that covers the type of installation you are automating.
2. Prevent backups and virus scans from interfering with the uninstallation. You can either exclude the Unwired Platform installation directory from backups and virus scans, or temporarily disable them.
3. Run the uninstallation script as an administrator on Windows 7 and Windows Server 2008 R2.

Task

1. On the host where you want to run a silent uninstallation, confirm that the *SUP_HOME* `\Uninstallers\UnwiredPlatform` directory contains the correct version of the `SilentUninstall_Win.txt` configuration file that you modified for a particular uninstallation type.
2. For each type of uninstallation you want to automate, perform a trial run of these instructions using your modified `SilentUninstall_Win.txt` configuration files, on a temporary or test server host.

Confirm that each modified configuration file produces the desired uninstallation outcome, before you proceed with silent uninstallation on an actual target host.

3. From a command prompt on the installation target host, navigate to the directory to which you moved the `SilentUninstall_Win.bat` file and launch the silent uninstallation script:

   ```
   SilentUninstall_Win.bat
   ```

4. Check for errors in *SUP_HOME*`\InstallLogs\UPUninstall.log`.
5. Delete any folders and files remaining in the Unwired Platform installation directory, if the uninstaller could not remove them.

   If you cannot delete the Sybase Control Center installation directory (`C:\Sybase\SCC-`*X_X* by default), see *Troubleshooting Uninstallation*.
6. Restart the system to delete folders and files remaining in the Unwired Platform installation directory.
7. Repeat these steps on the target 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 Runtime installation process, including SySAM licensing issues.

To contact Sybase Technical Support, see *Reporting Errors* in *Troubleshooting*.

Troubleshooting Installation

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

See the *Troubleshooting* guide for additional information.

Problem	Resolution
Backing up the Sybase Unwired Platform Runtime installation fails because the Sybase Control Center path is too long.	Before backing up the Runtime installation, you must delete the contents of the EmbeddedWebContainer folder in order to complete a clean backup of the installation. **Workaround**: Before backing up the Sybase Unwired Platform Runtime installation, you must delete the contents of *SUP_HOME*`\services\EmbeddedWebContainer\container\Jetty-7.6.2.v20120308\work`. You must delete the contents of this folder from the command prompt, and not from Windows Explorer.

Problem	Resolution
Potential file locked on 32-bit Windows Server 2003 SP2 system may cause upgrade to fail.	When upgrading, there is a potential problem with a Windows process holding a lock on one of the 12 Adaptive Server Anywhere (ASA) libraries (DLLs) even though all the ASA processes have shut down. This causes the upgrade to fail because the upgrade cannot overwrite the file. This is specific to a 32-bit Windows Server 2003 SP2. **Workaround**: **1.** Shut down all Sybase Unwired Platform processes. **2.** If services were set to automatic, set the start up for the Sybase Unwired Platform services to manual. **3.** Restart the system. **4.** If step 2 was performed prior to upgrade, run the upgrade after the system has restarted. **5.** After the upgrade, set the startup for the Sybase Unwired Platform services to automatic.

Problem	Resolution
Visual C++2008 wizard starts when installing Unwired Platform	If Visual C++ 2008 runtime is installed in the root directory of the system where you are installing Unwired Platform server components, the Visual C++ wizard automatically starts after you start the Sybase Unwired Platform Runtime installer. **Workaround**: Verify that the following files have a date stamp of 11/7/2007, then move them to another location: • `VC_RED.MSI` • `VC_RED.CAB` • `eula.1028.txt` • `eula.1031.txt` • `eula.1033.txt` • `eula.1036.txt` • `eula.1040.txt` • `eula.1041.txt` • `eula.1042.txt` • `eula.2052.txt` • `eula.3082.txt` • `globdata.ini` • `install.exe` • `install.ini` • `install.res.1028.dll` • `install.res.1031.dll` • `install.res.1033.dll` • `install.res.1036.dll` • `install.res.1040.dll` • `install.res.1041.dll` • `install.res.1042.dll` • `install.res.2052.dll` • `install.res.3082.dll` • `vcredist.bmp`

Problem	Resolution

Installation or upgrade cannot continue host name of system resolves to local link address	In a new or upgrade installation, the installer displays this error message:
	`The host name of the system resolves to a local link address. This suggests an incorrect binding order of network adapters. The install/upgrade cannot proceed. Once the binding order is corrected, restart the installer. Click OK to exit the installer.`
	The upgrade version of the message displays the "local link address" in parentheses.
	Explanation: If no usable IP addresses are available on the system where you are installing Sybase Unwired Platform, Windows assigns a "local link" IP address in the range 169.254.0.0/16. The installer detects that the system's IP address is only usable locally, and stops.
	Workaround: Execute the commands below from the command prompt, restart the server, and restart the installer.
	`netsh interface ipv6 set prefix ::1/128 50 5`
	`netsh interface ipv6 add prefix ::1/128 50 5`
	`netsh interface ipv6 set prefix ::1/96 40 4`
	`netsh interface ipv6 add prefix ::1/96 40 4`
	`netsh interface ipv6 set prefix ::ffff:0:0/96 30 3`
	`netsh interface ipv6 add prefix ::ffff:0:0/96 30 3`
	`netsh interface ipv6 set prefix ::/0 20 2`
	`netsh interface ipv6 add prefix ::/0 20 2`
	`netsh interface ipv6 set prefix ::ffff:169.254.0.0/112 10 1`
	`netsh interface ipv6 add prefix ::ffff:169.254.0.0/112 10 1`

Problem	Resolution
Silent installation gives Registry error	If Sybase Unwired Platform was previously installed on the target system, and either the installation was canceled before completion or the uninstallation was incomplete, the installer detects Windows Registry keys that must be deleted, and prompts you to confirm the deletion. This aborts a silent installation. **Workaround**: Run the Sybase Unwired Platform Runtime installer interactively, confirm the Registry key deletion, and complete the installation. Then immediately use the Windows Control Panel to uninstall Unwired Platform components. The system is then ready for a silent installation.
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_26 to launch the uninstaller with the following, where <*jdk_installdir*> is similar to `C:\jdk1.6.0_31\bin`: `<jdk_installdir>\java -Dtemp.dir=%TEMP% -jar` *`SUP_HOME`*`\Uninstallers\ UnwiredPlatform\uninstall.jar` When you uninstall—or cancel uninstalling—Unwired Platform, the Program Compatibility Assistant reports `This program might not have uninstalled correctly`. At this point, you can avoid the uninstaller issue by selecting **This program uninstalled correctly** instead of **Uninstall with recommended settings**.
Unwired Servers do not shut down during an uninstallation	Shut down all Sybase products, Sybase processes, and associated third-party products and processes before launching the uninstaller. Shut down the Unwired Servers before shutting down the data tier.
Cannot start an Unwired Platform component	Make sure that all services are started for the installed components. See *System Administration > System Reference > Unwired Platform Windows Services*.
Cannot start Sybase Control Center	Make sure you have installed an appropriate version of Adobe Flash Player. See *Supported Hardware and Software*.

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 Sybase Control Center services.
	2. Obtain the correct host and domain name.
	3. Open a command window and enter:
	`ipconfig /all`
	4. Run:
	`configure-mms.bat <clustername>`
	5. To set the proper domain name in all the Unwired Server configuration files, run:
	`SUP_HOME\Servers\UnwiredServer\bin\configure.bat`
	6. Manually edit `SCC_HOME\SCC-3_2\services\RMI\service-config.xml`, modifying the address property to reflect the new fully qualified host name.
	`<properties>`
	`<set-property property="address" value="supvm.mycompany.com" />`
	`<set-property property="port" value="9999" />`
	`<set-property property="timeout" value="43200" />`
	`</properties>`
	Replace *supvm* with your host name and *mycompany.com* with your domain name.
	7. If the DNS server cannot resolve the fully qualified name and this server is accessed only locally, edit the `c:\Windows\system32\drivers\etc\hosts` file 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 Control Center 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**, then launch Management Console using **Manage** option on the resource.

Problem	Resolution
	13. For Sybase Unwired WorkSpace components only, launch Eclipse and modify the domain name in the connection profile for Unwired Server.
Cannot install Enterprise Developer Edition on virtual machine (VM) with unserved 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. **Workaround**: Generate served licenses and use a license server. Virtual machines (VMs) that are not locally hosted typically require RDC, so also require served licenses. You may be able to install on a VM with an unserved license if you use console 0 to access the VM to perform the installation.
`Unable to open Service` error appears during installation and, after installation, messaging service does not appear in Windows Service list.	The local .NET framework may be corrupted. To check, go to `C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\` and run `installutil`. A configuration error message indicates whether the local .NET framework is corrupted; help information indicates normal function. If the local .NET framework is corrupted, uninstall and reinstall .NET 2.0.

Computer Name Used as Server or Cluster Name Has Same Requirements as User-Entered Name

In a new installation of Unwired Server, if you let the installer use the computer name for the server name and, on the first Unwired Server, as the cluster name, the computer name must meet the same requirements as server and cluster names that you specify.

In a new installation of Unwired Server, if you do not specify a server name, by default the installer uses the computer name for the server name. If it is a single-server installation, or the first Unwired Server node in a cluster, the installer also uses the computer name by default for the cluster name. In these cases, the computer name must meet the same requirements as server and cluster names that you enter.

Each server or cluster name:

- Must contain only:
  - ASCII alphanumeric characters
  - Underscore ("_"), hyphen ("-"), and period (".") characters
- Server names must be 32 characters or less and must begin with an alphanumeric character.
- Cluster names must be 22 characters or less.

If the computer name does not meet these requirements, you have two options for installing Unwired Server on that system:

Workaround 1: Keep the computer name as is:

- In the *Selecting Installation Options* section of the installation task, select the option to **Set Unwired Server name** (**Set Unwired Server name and cluster name** in a single-server installation, or for the first Unwired Server node in a cluster).
- In the next step, specify a server name that meets the requirements listed in that step

Workaround 1: Before running the installer, change the computer name so that it meets the requirements listed in the next step for a user-entered server name. For a single-server installation or for the first Unwired Server node in a cluster, make sure it also meets the requirements for a user-entered cluster name:

- Change the computer name.
- Start the installer.
- When you reach the *Selecting Installation Options* section of the installation task, do not select the option to **Set Unwired Server name** (**Set Unwired Server name and cluster name** in a single-server installation, or for the first Unwired Server node in a cluster).

Exception in Shared Host for Unwired Platform and EAServer Installations

Problem: When upgrading, an unhandled exception `('System.MissingMethodException') occurred in JMSBridge.exe [8320]` is received.

This occurs only if an EAServer installation and an Unwired Platform installation coexist on the same machine. The exception is caused by the presence of different versions of the `com.sybase.iiop.net.dll` file.

Ensure that your environment path includes only the Unwired Platform `com.sybase.iiop.net.dll` assembly. For example, if you have EAServer installed on the same machine as Unwired Platform:

1. Use a **strings** command (using UNIX tools for Windows) to check if `SetTrustAllCertificates` exists on the assembly file that `jmsbridge.exe` loaded.
2. From a command prompt, enter:

   ```
   >strings -a com.sybase.iiop.net.dll | grep
   SetTrustAllCertificates
   ```

   The command reports back with `SetTrustAllCertificates` if it exists within the assembly.
3. Remove the EAServer installed `com.sybase.iiop.net.dll` from the global assembly cache (GAC).

VMWare Fusion Stops Responding when Running Installer on Some MacBook Models

Problem: The accelerated 3D graphics option in VMWare Fusion 5.0.2 conflicts with the Retina display in 2012 MacBook Pro and Air models. The conflict causes VMWare Fusion to stop responding when running the Unwired Platform Runtime installer.

Workaround: Turn off the accelerated 3D graphics option in the Fusion display settings for the VM image.

Learn more: *http://blogs.vmware.com/teamfusion/2012/11/macbook-air-and-macbook-pro-update-2-0-and-vmware-fusion-5.html*

Test Package Deployment Skipped when Upgrading Unwired Server from 2.1.x to 2.2

Problem: If you have removed the supAdmin user, when upgrading Unwired Server from version 2.1.x to 2.2, the upgrade installer cannot deploy the test package to verify the proper functioning of the upgraded server.

The Runtime installer requires the supAdmin user to exist in order for an upgrade installation to complete normally. If you removed the supAdmin user, the installer cannot perform the test package deployment that verifies that the upgraded Unwired Server is functioning properly. The installer displays this message:

```
 The Unwired Platform admin login information
        provided were not valid. Upgrade was completed but test
deploying a package to server for
        verification was skipped.
```

Solution: Ignore the message. You can perform a manual package deployment if you wish to be sure that the upgraded server is function properly. See *Creating new users* in *SQL Anywhere Server - Database Administration*, available at *http://infocenter.sybase.com/help/topic/com.sybase.help.sqlanywhere.12.0.0/dbadmin/umannew.html*.

Workflow Deployment Fails with SoapException

After migration, a workflow deployment may fail with a SoapException error.

Workaround: Update the module version number that appears on the Flow Design page, General tab.

Unwired Server or RSOE Startup Problems

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

Explanation 1: 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 consolidated database (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 start-up 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 ...
```

Workaround 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 exclusion rules; rules may vary depending on the intrusion detection software used.

- Sybase Unwired Platform to CDB – uses a connection through jConnect™ driver. There are two kinds of protocols between Sybase Unwired Platform and CDB:
  - The MobiLink™ and CDB connection uses Command Sequence.
  - The jConnect 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 IIOPS protocol by default.
  - Administration communication (MMS to Mobile Office service) uses IIOPS protocol by default.

Explanation 2: If .NET is present when Unwired Platform is installed, and the .NET installation is corrupt, the Unwired Platform installer does not detect the problem, leaves the corrupt .NET in place and Unwired Server does not start.

Workaround 2: Uninstall both Unwired Platform and .NET, then reinstall Unwired Platform, letting the Unwired Platform installer install .NET.

Cannot Access sampledb

After installation, you cannot access the sample database (`sampledb`).

Explanation 1: The Unwired Platform installer creates the Windows service (Sybase Unwired SampleDB) that runs the sampledb server only when you install Unwired Server with a Personal or Enterprise Development license. If you installed Unwired Server with an Enterprise Server (production) license, you must run a script to create this service.

Solution 1: Use the **sampledb.bat** command line utility to create the Windows service for the sample database. See *Create or Remove the Windows Service for sampledb Server (sampledb) Utility* in *System Administration*.

Explanation 2: You installed Unwired Platform with an Enterprise or Personal Development license.

Solution 2: Make sure the Sybase Unwired SampleDB service is started in the Windows Services panel.

Unwired Server Upgrade Stalls if Cluster Name is Longer than 16 Characters

Problem: If an existing 2.1.X cluster has a cluster name that is longer than 16 characters, when upgrading to version 2.2, the 2.2 installer throws this error: `Upgrade failed. Cannot find the 32 bit ClusterDB DSN registry key.`

Workaround:

1. Make sure all Sybase Unwired Platform services and process are stopped on the server to be upgraded.
2. On 64-bit systems, create the following key (all on one line):
   ```
   HKLM\SOFTWARE\Wow6432Node\ODBC\ODBC.INI\
   clusterdb_cluster_32bit
   ```
3. Create the following `STRING (REG_SZ)` values under the above key
   - `CommLinks`
   - `DatabaseName`
   - `Driver`
   - `ServerName`
   - `UID`, if it exists in
     ```
     HKLM\SOFTWARE\ODBC\ODBC.INI\clusterdb_<clustername>
     ```
   - `PWD`, if it exists in
     ```
     HKLM\SOFTWARE\ODBC\ODBC.INI\clusterdb_<clustername>
     ```
4. Values for `CommLinks`, `DatabaseName`, `UID`, `PWD` and `ServerName` should come from the corresponding `STRING` values in `HKLM\SOFTWARE\ODBC\ODBC.INI \clusterdb_<cluster-name>`.
5. Value for `Driver` should come from the corresponding `STRING` value in `HKLM \SOFTWARE\Wow6432Node\ODBC\ODBC.INI\default-cdb_32bit`.
6. Make a copy of `HKLM\SOFTWARE\ODBC\ODBC.INI \clusterdb_<clustername>` and name it `HKLM\SOFTWARE\ODBC \ODBC.INI\clusterdb_cluster`.
7. Make a backup of `sup.properties` in *`SUP_HOME`*`\Servers\UnwiredServer \Repository\Instance\com\sybase\sup\server\SUPServer`.
8. Use a text editor to open `sup.properties`.
9. Locate the line that begins with `cldb.dsnname=`.
10. Replace the string to the right of the equal sign with `clusterdb_cluster`.
11. Save the file.

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*, and in the *Fast Track to SySAM 2.0* white paper, available at *Fast Track to SySAM 2.0*. 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, click on the first item in the left side navigation area and then click the **Licensing** button in the right window. This opens a window with the licensing information.

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 *SUP_HOME*`\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 *SUP_HOME* `\Servers\UnwiredServer\sysam-2.0\log`, provides information about any license checkout issues.

SySAM Problems and Solutions

If the product does not install or does not function after installation, try the following solutions before contacting Technical Support.

Error	Possible Causes	Solution
Installation warning: cannot find a valid license.	You may not have the required licenses installed, or the licenses may be incorrect for the product or feature you are trying to install.	See *Installing for the First Time* in the *SySAM Users Guide*.
Updating an existing installation.	Make sure your license authorizes you to install the update. See *Installing Product Updates, EBFs, and Support Renewal* in the *SySAM Users Guide*. If your license does not allow you to perform the update, the product may not be usable.	If you are installing an update that is authorized by the license, see the solution for *Product cannot check out a license and starts in grace period*, below, before you proceed with the update.
License server executables and scripts not installed.	When you installed your product, the license server was not installed. Some product installations offer the option to install a license server; however when available, this option, by default, is not selected for installation. You may need to explicitly install a license server. See your product installation guide and release bulletin to determine if the product installer offers this option.	Use one of the following solutions: • If your product offers the option to install a license server, use the instructions in the product installation guide to install the license server. • If your product does not include the option to install a license server, go to *http://www.sybase.com/products/allproductsa-z/sysam/server* and click **Download the SySAM Standalone License Server**.
License server does not start.	See *Possible Causes of a License Server Failure* in the *SySAM Users Guide*.	Go to SAP Service Marketplace (SMP) or Sybase Product Download Center (SPDC), generate a valid served license for your product, and copy it into the `licenses` directory on the machine where the license server is installed. See *Generating Licenses at SMP* or *Generating Licenses at SPDC*.

Error	Possible Causes	Solution
License server does not recognize the license files.	• The license was generated for a different machine or generated using an incorrect host ID. • The license has been altered. You cannot change any information in a generated license. • If the host ID for your platform is based on the network adapter identification, the most common problem occurs when you have used an ID associated with the address of a virtual network adaptor.	• Verify that the host ID recorded in the license file matches the host ID of the actual machine for which the license was issued. If the host IDs do not match, go to SMP or SPDC, check in the license, then regenerate the license with the correct host ID. • If your license is being created by typing from a paper copy, verify whether errors occurred when the license information was entered. You can also download a new copy of the activated license from SMP or SPDC. • If the host ID for your platform is based on a network adapter, verify that the ID you are using is associated with a valid NIC and that the ID is not associated with loopback or virtual adapters. If the ID you are using is associated with a removable network adapter, verify that the adapter is actually attached to the computer.
Linux virtual machine does not appear to be part of the Microsoft Hyper-V host.	`/usr/sbin/dmidecode` in Linux virtual machine cannot read from `/dev/mem`.	Log in to Linux virtual machine as root, then execute **chmod 4555 /usr/sbin/dmidecode**.

Error	Possible Causes	Solution

Product does not start, license checkout error.	• You have not generated and deployed the valid licenses for the product requesting licenses.
	• The required license does not exist and the product does not award a grace period.
	• The product is configured to use the wrong edition or license type.
	• You have the wrong host ID for an unserved license.
	• When multiple product editions include optional features, the features are offered as separately licensed items for each edition. Licensed optional features work only with the licensed base product of the same edition. For example, if you order Adaptive Server Enterprise, you cannot use a Small Business Edition optional feature license with an Enterprise Edition base product.
	• You are using an unserved Standalone Seat (SS) type license on a terminal server.
	• The license is for a different operating system.
	• The license is a Floating License (FL) but is currently in use elsewhere.
		At a command prompt or in a terminal window, execute the following commands, where *feature_name* is the name of the feature for which SySAM failed to check out a license:
		`sysam diag feature_name`
		If the SySAM script is unavailable, enter:
		`lmutil lmdiag -c license_directory_location feature_name`
		Go to SMP or SPDC and generate required licenses for your product. To use a separately licensable optional feature, you must have a license for both the base product and the option. If the product has more than one edition, the edition of the base product and option must be the same.
		If you generated an invalid license, check in the license at SMP or SPDC, and regenerate the license with the correct information.

Error	Possible Causes	Solution
Product cannot check out a license and starts in grace mode.	To help you determine the possible causes when your product cannot check out a license, execute the following command from the `SYSAM-2_0/bin` directory, at a Windows command prompt or in a UNIX system terminal window, where *feature_name* is the name of the feature license that cannot be checked out. `sysam diag feature_name` If the command output says that no licenses are available for checkout, this may be due to one of the reasons below, which are separated into served and unserved license deployment model causes and solutions.	See *Served License Deployment Models* or *Unserved License Deployment Models*, both in the *SySAM Users Guide*.
Product continues to run in grace meriod after fixing a license problem	The license status has not yet been updated. When the product periodically performs license checks, the license status is not immediately updated.	Wait up to 6 hours for server products, and up to 1.5 hours for tool products.
Product cannot find licenses for optional features	You either have not installed the license for the optional feature, or the license exists, but cannot be checked out.	See *Solution for Problem: Product Cannot Find Licenses for Optional Features* in the *SySAM Users Guide*.

Error	Possible Causes	Solution
Product obtains the wrong license	These locations are searched, in the order specified, until a suitable license is found. When a license directory is specified, license files in that directory are loaded in the directory sort order. When a product looks for a license, it looks in: • The locations that represent the values set for the SYBASE_LICENSE_FILE and LM_LICENSE_FILE variables. Sybase does not advocate using environmental variables and recommends that all licenses be located centrally in the expected licenses directory. • All files with a `.lic` extension in the licenses directory. This location is product specific, though typically the directory is `$SYBASE/SYSAM-2_0/licenses`. The first license that matches the feature name, version, edition, and license type filter is used; however, this license may not be the intended license your product requested.	• Configure your product to choose a license for a specific edition and license type. • If you are using served licenses, use the options file to ensure that the correct license is used.

Error	Possible Causes	Solution
lmgrd is not running: Cannot connect to license server system. The license server manager (lmgrd) has not been started yet, the wrong port@host or license file is being used, or the port or host name in the license file has been changed.	One or more of the required executables is not present in the expected location.	If SySAM is running on any OS that requires IPv6 (Windows 2008 Server, for example) make these changes: **1.** Navigate to `C:\SAP\SYSAM-2_0\bin\binIPv6`. **2.** Copy these files: • `installs.exe` • `lmgrd.exe` • `SYBASE.exe` **3.** Paste the copied files into `C:\Sybase\SYSAM-2_0\bind`. **4.** If prompted to replace existing files, back them up first, then complete the replacement. **5.** If you get an error on replacing the files, make sure the SySAM service is not running. **6.** After files have been successfully copied, restart the SySAM service.
License checkout problems with unserved license.	See *Unserved License Deployment Models* in the *SySAM Users Guide*.	
License checkout problems with served license.	See *Served License Deployment Models* in the *SySAM Users Guide*.	

Problems and Solutions for Unwired Platform

Troubleshoot SySAM issues that are specific to Unwired Platform.

Table 3. Troubleshooting SySAM

Problem	Resolution

With a served license, Sybase Unwired Platform Runtime 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 `sybase.log` file in the `SYSAM-2_0\log` directory where the SySAM license server is installed. Locate the line containing "FLEXnet Licensing." Your log file may look similar to this:
	`11:20:27 (lmgrd) FLEXnet Licensing (v11.6.1.0 ...`
	`11:20:27 (lmgrd) Copyright (c) 1988-2008 Acresso ...`
	`11:20:27 (lmgrd) US Patents 5,390,297 and 5,671,412.`
	`11:20:27 (lmgrd) World Wide Web: http://...`
	`11:20:27 (lmgrd) lmdown/lmreread only allowed on ...`
	`11:20:27 (lmgrd) License file(s): .../licenses/...`
	`11:20:27 (lmgrd) lmgrd tcp-port 27000`
	`11:20:27 (lmgrd) Starting vendor daemons ...`
	`11:20:27 (lmgrd) Started SYBASE (internet ...`
	
	About 6 lines below the "FLEXnet Licensing" line is a line containing "lmgrd tcp-port," and just below that should be a line containing "Started SYBASE."
	
	• If you do not see the "Started SYBASE" line, it indicates that the license server started without successfully opening a port for the VENDOR SYBASE daemon. Contact your network security administrator and arrange for a port number to be available, then restart the license server. Check the `sybase.log` file again to be sure that the port was successfully opened.
	• If you see the "Started SYBASE" line, with no error messages, it 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.

Sybase Unwired Platform does not start, and generates a license checkout 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. 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 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 *feature_name* is the SySAM feature name for Sybase Unwired Platform or the optional feature that is in grace mode. The feature name is printed in the Sybase Unwired Platform error log and in the optional e-mail notifications.
	If the **diag** command shows that there are no licenses available 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 or SMP.
	  • 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 or SMP 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 or SMP 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 or SMP.
	• 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 *Installing Product Updates, EBFs, and Support Renewal* in the *SySAM Users Guide*.

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 feature_name`" to ensure that license for the optional feature exists and can be checked out from the machine on which Sybase Unwired Platform is running. If the feature exists, but cannot be checked out from Sybase Unwired Platform, it may be because: • The optional feature is for a different edition. • The active or standby flags do not match for the base server license for Sybase Unwired Platform and the optional feature.
Sybase Unwired Platform does not start with the expected edition or license type.	If the **edition** and **license type** configuration parameters are not set, Sybase Unwired Platform uses the first available base license (`SUP_ENTSRVR`, for Enterprise 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 license depends on many factors, such as license file directory sort order, available licenses on the license server, and so on. The product edition and license type that are granted by SySAM cannot be guaranteed. Sybase recommends that you set the **edition** and **license type** configuration parameters. During installation, you set these parameters on the license details page, following acceptance of 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.

    - *SUP_HOME*\Servers\UnwiredServer\logs\<*server_name*>-server.log
- The bootstrap log file that is created on license expiration, if it exists.
    - *SUP_HOME*\Servers\UnwiredServer\logs\bootstrap<*randomNo*>.log
- If Sybase Unwired Platform does not start, check the server's properties file:
    - *SUP_HOME*\Servers\UnwiredServer\Repository\Instance\com\sybase\sup\server\SUPServer\sup.properties
- The license files (.lic extension) saved in the *SUP_HOME*\Servers\UnwiredServer\licenses directory on the machine running Sybase Unwired Platform.
- Output from **lmutil lmpath -status** command. The lmutil program is located in the *$SYBASE*/SYSAM-2_0/licenses directory on the system where the SySAM license server is installed.
- If you are using a served license model:
    - The license files (.lic extension) saved in the *$SYBASE*/SYSAM-2_0/licenses directory of the license server.
    - The license server log file in the *$SYBASE*/SYSAM-2_0/log directory.

Troubleshooting Uninstallation

See the *Troubleshooting* guide for the most recent troubleshooting information.

Problem	Resolution
Sybase Control Center installation directory, SCC-3_2, cannot be removed.	The Windows uninstaller fails to remove the Sybase Control Center installation directory (by default, C:\Sybase\SCC-3_2). Manual attempt to delete the directory fails saying that the files could not be deleted. To remove the directory: **1.** Find: *SCC_HOME*\services\EmbeddedWebContainer\container\Jetty-6.1.22\work\Jetty_0_0_0_0_8282_help.war__help__.smpe97 **2.** Change the name of Jetty_0_0_0_0_8282_help.war__help__.smpe97 to a single character, such as j. **3.** Retry deleting the Sybase Control Center installation directory.

APPENDIX A System Deployment Reference

Reference information that supports Unwired Platform system deployment tasks.

Port Number Reference

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

Unwired Server Ports

Unwired Server ports, default assignments, and protocols.

Type	Default	Protocol
Administration, Unwired Server	2000 2001 (secure)	IIOP IIOPS
HTTP listeners (used for application connections, REST/OData APIs, and data change notifications)	5001 8000 8001 (secure)	HTTP HTTP HTTPS
Messaging service administration	5100	HTTP
Replication	2480 2481 (secure)	HTTP HTTPS

Data Tier Ports

Data tier server ports, default assignments, and protocols.

Type	Default	Protocol
Cache database (CDB) server, client access	5200	Command sequence on connection to Unwired Server replication engine Tabular Data Stream™ (TDS) on JDBC connection TCP and UDP, when using Windows Filtering Platform (WFP)
Cluster database server, client access	5300	TDS
Monitor DB, client access	5400	TDS
domainlog DB, client access	5400	TDS

Sybase Control Center Ports

Ports used by Sybase Control Center services, default assignments, and protocols.

Type	Default	Protocol
RMI service	9999	TCP/IP
Messaging service	2100	TCP/IP
SCC repository database server	3638	TDS
Web container	8282 8283	HTTP HTTPS

Sybase Control Center Port Assignments

Port assignments for Sybase Control Center services are defined in XML configuration files.

Sybase Control Center service configuration files are named `service-config.xml`, and located in subdirectories under the *`SCC_HOME`*`\SCC-`*`X_X`*`\services\` directory.

SCC Service	Configuration File Location
Messaging service	`...\services\Messaging\`

SCC Service	Configuration File Location
RMI service	`...\services\RMI\`
SCC repository database server	`...\services\SccSADataserver\`
Web container	`...\services\EmbeddedWebContainer\`

To change the port assigned to an Sybase Control Center service, edit the `service-config.xml` file for that service.

Relay Server Ports

By default, Relay Server uses standard, IANA-assigned ports for HTTP (80) and HTTPS (443).

Reserved Ports

Ports reserved for internal use by Unwired Platform components.

Type	Number	Protocol
Reserved	4343	TDS
Reserved	5011	HTTP
Reserved	6001	HTTP for SAP Introscope Agent
Reserved	8002	HTTPS

Do not use these reserved ports.

Other Ports

Significant ports that are not directly associated with an Unwired Platform server component.

SySAM License Server

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

Type	Default	Protocol
SySAM license server	27000	

Sample Database Server

Both Personal Development Server and Enterprise Development Server Editions include a sample database, which is installed on the Unwired Server host, for tutorials and simple testing.

Type	Default	Protocol
Sample database	5500	TDS

The Enterprise Server Edition includes a sample database, but it is not enabled. To enable the sample database installed with Enterprise Server Edition, see *Create or Remove the Windows Service for sampledb Server (sampledb) Utility* in *System Administration*.

Installation Directories

To ensure a successful installation, review the Sybase Unwired Platform server component installation directories.

- The following tables show the high-level directories created in a single-node installation (all Unwired Platform server components installed on a single host).
- In a multi-node or cluster installation, some of these directories are present only on a particular type of host.

By default, Unwired Platform server components are installed in the `C:\Sybase\UnwiredPlatform` directory. In this guide, *`SUP_HOME`* represents the Unwired Platform installation directory, down to the `UnwiredPlatform` folder.

Table 4. Unwired Platform Installation Subdirectories

Directory	Description
`_jvm`	JVM used by the uninstaller.
`sup`*`XX`*`ebflogs`	Log files created each time `installebf.bat` is run. Appears only in EBF installations upgraded from an earlier version of Unwired Platform.
`InstallLogs`	Log files created each time the Unwired Platform Runtime installer is used. Use these logs to troubleshoot installer issues.
`IntroscopeAgent`	Introscope Agent for 64-bit Installations.
`JDK`*`x.x.x_x`*	JDK required by Unwired Platform components.
`sapjco`	SAP Java Connector files.
`scc_cert`	Certificate files for Sybase Control Center.
`Servers`	Unwired Platform server components.

Directory	Description
`Servers\MessagingServer`	SAP messaging server.
`Servers\SQLAnywhere`*xx*	Database server for cache, cluster, and logging databases. Default database file location is the `data\` subdirectory.
`Servers\UnwiredServer`	Unwired Server components.
`Servers\UnwiredServer\doe-c_clu`	Sybase SAP® Data Orchestration Engine Connector (DOE-C) Command Line Utility components. `CLU.bat` in `bin` directory starts the DOE-C console.
`Servers\UnwiredServer\doecSvlet`	Sybase SAP® Data Orchestration Engine Connector (DOE-C) runtime components.
`Servers\UnwiredServer\licenses`	SySAM license files. When an unserved license is updated, copy the new files here.
`sup`*XX*`upgrade`	Appears only in installations upgraded from an earlier version of Unwired Platform.
`ThirdParty`	License terms of third-party components included in Sybase Unwired Platform.
`Uninstallers`	Uninstallers for Unwired Platform Runtime components.
	Unwired Platform Runtime uninstaller.
`Util`	Utilities used by the Unwired Platform Runtime installer.

By default, Sybase Control Center components are installed in the directory.

Note: If you have other Sybase products installed on the same host as Unwired Server, you may have more than one version of Sybase Control Center.

Table 5. Sybase Control Center Installation Subdirectories

Directory	Description
`backup`	Backup files.

Directory	Description
`bin`	Scripts to start or stop Sybase Control Center management framework components.
`common`	Files shared by Sybase Control Center components.
`conf`	Configuration files, including security providers for administration logins.
`ldap`	LDAP-related files.
`log`	Log files used by Sybase Control Center and its console plug-ins to capture only management framework events. No Unwired Platform data is captured here, except administration logins.
`plugins`	Managed resource plug-ins.
`rtlib`	Runtime library files.
`sccRepoPwdChange`	Sybase Control Center repository password update files.
`server`	Class and library files used by the management framework server.
`services`	Class and library files for Sybase Control Center services.
`shared`	Shared class and library files.
`templates`	Sybase Control Center service or plug-in template files.

Service Reference

Services are installed on each Unwired Platform server host to support managing and coordinating component processes.

Unwired Server Services

Services installed on an Unwired Server host.

Note: Some services may not be installed on an Unwired Server host, depending on the Unwired Platform product option, the deployment scenario and system design, and the licensed product edition.

Service	Description
Sybase Unwired Server	Top-level Unwired Server process. Coordinates other processes that handle interactions with EIS services, supports messaging and synchronization service to mobile clients, and provides Unwired Platform system management facilities.
Sybase Control Center *X.X*	Includes processes for managing, monitoring, and controlling distributed Unwired Platform server resources, and a Web app server for remote SCC console access.
Sybase Unwired SampleDB (optional)	Database server for sample database, enabled during installation only with Evaluation license, and with Personal Development Server and Enterprise Development Server licensed product editions. To enable with Enterprise Server Edition after installation, see *Create or Remove the Windows Service for sampledb Server (sampledb) Utility* in *System Administration*.

Data Tier Services

Services installed on a data tier host.

Note: Some services may not be installed on a data tier host, depending on the Unwired Platform product option, the deployment scenario and system design, and the licensed product edition.

Service	Description
Sybase Unwired CacheDB	Database server that manages the cache database, used primarily to support mobile clients that depend on occasional synchronization of local data stores.
Sybase Unwired ClusterDB	Database server that manages the cluster database, which supports Unwired Server runtime management and operational processes.
Sybase Unwired LogDataDB	Database server that manages the Unwired Server logging databases (system logging and domain logging).

When the data tier is installed in a single-node system:

- The Sybase Unwired ClusterDB and Sybase Unwired LogDataDB services are not installed.

- The Sybase Unwired CacheDB service manages the cache database, cluster database, and logging databases.

Starting Required Services

Before beginning development, you must start required Unwired Platform services.

Prerequisites

Ensure the required services are installed on the same host.

Task

By starting required services, you start the servers and dependent services. For a complete list of Unwired Platform services, see *System Administration > System Reference > Unwired Platform Windows Services*.

1. Click the **Start Unwired Platform Services** desktop shortcut to start Unwired Server and the dependent services.
2. Use the Services Control Panel to verify that the Windows service named Sybase Control Center X.X is started. If it has not, start it by selecting the service and clicking **Start**.

Starting and Stopping Unwired Server

You can start and stop Unwired Server in different ways, depending on the use context.

Review this table to understand which method you should use.

Method	Use When	Services Started or Stopped
Sybase Control Center Unwired Server list	Stopping or starting remote Unwired Server nodes	Unwired Server service only
Desktop shortcut	Stopping or starting Unwired Server locally	All runtime services installed on that host
Windows Services panel	Stopping or starting Unwired Server locally	Any combination of individual services that require stopping

Note: You cannot start a Scale-out node from Sybase Control Center. If you stop a Scale-out node, you must start it manually.

Index

B

backing up data
    before uninstalling 165

C

cannot access sampledb
    Enterprise Server (production) license 186
    Personal Development license 186
checkout errors 189
choosing
    correct license 189
cluster name requirements 183
communication ports 199
    data tier 200
    Relay Server 201
    reserved 201
    Sybase Control Center 200
    SySAM license server 201
    Unwired Server 199
compatibility
    Hybrid Web Container and Hybrid Apps 128
    Hybrid Web Container and Unwired Server 128
    Object API and Unwired Server 127
    OData client and Unwired Server 129
    REST SDK client and Unwired Server 129
computer name as default server or cluster name 183
configuration
    SCC services 200
custom SAP result checker
    migrating applications 131

D

data tier
    installation directories 202
    ports reference 200
    services 205
development system
    single-server installation 17

E

error
    license checkout 189

G

generating
    served licenses 10
    unserved licenses 9
grace period
    cannot check out 189
    license continues to run after fixing 189

H

host IDs
    determining 3
    lmutil utility 3
Hybrid Web Container version compatibility matrix 128

I

installation
    data tier 26
    directories 202
    warning, cannot find 189
installation scenarios
    adding an Unwired Server to a cluster 115
    Microsoft Failover Cluster with shared hosts 83
    simple load-balancing cluster 25
    single-server 17
    standard Microsoft Failover Cluster 43
installing data tier
    Microsoft Failover Cluster, first data tier 46, 86
    Microsoft Failover Cluster, second data tier 54, 93
installing Sybase Unwired Platform
    standard Microsoft Failover Cluster, Sybase Unwired Platform scale-out nodes 74
installing Unwired Platform
    Microsoft Failover Cluster with shared hosts scenario 83
    simple load-balancing cluster scenario 25
    single-server scenario 17

standard Microsoft Failover Cluster scenario 43
installing Unwired Server
Microsoft Failover Cluster, first Unwired Server 60, 99
Microsoft Failover Cluster, second Unwired Server 67, 105
simple load-balancing cluster 32
Introscope
removing before upgrading 124
intrusion detection/prevention software 185

L

license deployment models
comparison of 4
recommendations 4
license file
locating information 11
obtaining 3
license server
cannot find licenses for optional features 189
continues to run in grace period 189
license checkout error 189
starts in grace period 189
licenses
checkout errors 189
license files 13
models 3
obtaining 3
optional features 189
recommendations for license models 4
switching served/unserved model 14
switching to new license 15

M

migrating applications 131
migration paths 125
custom SAP result checker 131

N

native client version compatibility matrix 127
network communication
ports 199

O

Object API and Unwired Server compatibility 127
OData client and Unwired Server compatibility 129
optional features
errors 189
license server cannot find 189

P

personal system
single-server installation 17
ports, communication 199
data tier 200
Relay Server 201
reserved 201
Sybase Control Center 200
SySAM license server 13, 201
Unwired Server 199

R

recommendations
license models 4
reference 199
Relay Server
communication ports 201
upgrading 164
reserved ports 201
REST SDK client and Unwired Server compatibility 129
RSOE
start-up problems 185
running in a grace period 189

S

served license
model 3
switching from unserved 14
served licenses 10
server name requirements 183
services
data tier 205
Unwired Server 204
silent installation 169
configuration file 170
planning 170
running 171
silent uninstallation 172
configuration file 173

planning 173
running 174
silent upgrade 169
planning 170
SoapException error 185
software upgrade 123
SPDC
generating served licenses 10
generating unserved licenses 9
start-up problems
RSOE 185
Unwired Server 185, 187
Sybase Control Center
installation directories 202
ports assigned to services 200
services 200
Sybase Software Asset Management (SySAM)
problems when host ID is using virtual network adaptor address 189
Sybase Software Asset Management for licenses 3
SySAM license server 3
communication port 13
communication ports 201

T

Technical Support
calling 197
troubleshooting 177
choosing the correct license 189
installation 177
installing license server components 189
license checkout errors 189
licensing optional features 189
running in a grace period 189
SySAM 188
uninstallation 198
unrecognisable license 189

U

uninstalling 165
preparation 165
silently 172
unserved license
model 3
unserved licenses 9
switching from served 14
Unwired Platform
reserved ports 201
server installation directories 202
upgrade procedure 123
Unwired Platform servers
Microsoft Failover Cluster with shared hosts installation 83
Microsoft Failover Cluster with shared hosts upgrade 155
simple load-balancing cluster 25
simple load-balancing cluster upgrade 135
single-server installation 17
single-server upgrade 131
standard Microsoft Failover Cluster 43
standard Microsoft Failover Cluster upgrade 143
uninstalling 166
Unwired Server
adding to a cluster 115
installation directories 202
Microsoft Failover Cluster with shared hosts upgrade 155
ports 199
services 204
simple load-balancing cluster upgrade 135
single-server upgrade 131
standard Microsoft Failover Cluster upgrade 143
start-up problems 185
upgrade problems 187
upgrade paths 125
upgrade prerequisites
ensuring applications have domain assignments 124
removing Introscope from existing installation 124
upgrade scenarios 123
Microsoft Failover Cluster with shared hosts 155
Relay Server 164
single-server 131
standard Microsoft Failover Cluster 143
upgrading data tier
simple load-balancing cluster 135
standard Microsoft Failover Cluster, first data tier 144
standard Microsoft Failover Cluster, second data tier 147
upgrading scenarios
simple load-balancing cluster 135

upgrading Unwired Platform
    Microsoft Failover Cluster with shared hosts scenario 155
    simple load-balancing cluster scenario 135
    single-server scenario 131
    standard Microsoft Failover Cluster scenario 143
upgrading Unwired Platform host
    Microsoft Failover Cluster with shared hosts, first host 156
    Microsoft Failover Cluster with shared hosts, second host 160
    single-server host 131
upgrading Unwired Server
    in cluster 138, 150

V

verifying Unwired Platform installation
    adding an Unwired Server to a cluster 122
    simple load-balancing cluster 39
    single-server 23
    standard Microsoft Failover Cluster 80
verifying Unwired Platform upgrade
    Microsoft Failover Cluster with shared hosts 163
    simple load-balancing cluster 141
    standard Microsoft Failover Cluster 153
version upgrade 123
virtual network adaptor license problems 189

W

warning, installation, cannot find 189
workflow deployment fails 185