

Symantec™ Ghost Solution Suite 3.3 Installation and Upgrade guide



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Introducing Ghost Solution Suite 3.3

This chapter includes the following topics:

- [About Ghost Solution Suite](#)
- [Components of Ghost Solution Suite](#)
- [Things to know](#)

About Ghost Solution Suite

Symantec Ghost Solution Suite is a deployment, system management, and computer imaging software solution. With Ghost Solution Suite you can migrate software and migrate client systems to the latest operating system. Symantec's Ghost Solution Suite introduces the Deployment Solution 6.9 console and core capabilities to Symantec Ghost Solution Suite.

See “[Components of Ghost Solution Suite](#)” on page 7.

Components of Ghost Solution Suite

You can install all the Ghost Solution Suite components on the same computer or distribute them across multiple computers, depending on the environment. Following are the components of Ghost Solution Suite:

- Ghost Solution Suite Console
- Ghost Solution Suite Server
- Ghost Solution Suite database
- Ghost Solution Suite share

- PXE server
- Installing Ghost Solution Suite agent
- Sysprep

See “[Ghost Solution Suite Server components](#)” on page 22.

See “[Installing Ghost Solution Suite Server](#)” on page 12.

Things to know

The following table lists the important things that you must know when you upgrade to Ghost Solution Suite from previous versions of Ghost Solution Suite:

Table 1-1 Ghost Solution Suite

Item	Particulars
Default logon credentials after Scripted OS Install task	<p>After running the Scripted OS Install task on a computer, the default logon credentials are set as follows:</p> <p>User name: Symantec Password: Symantec</p> <p>Earlier the default logon credentials were set to as follows:</p> <p>User name: Altiris Password: Altiris</p>
Cannot connect to the DAgent.	<p>After booting into the Windows preboot environment, an error stating unable to connect to DAgent is displayed.</p> <p>Workaround:</p> <p>Edit the <code>aclient.inp</code> and add the following parameter value in the file:</p> <p><code>Transportuse=1</code></p>
Scripted OS Install task for Windows XP	<p>For the detailed steps on running the Scripted OS Install task, refer to the following connect article:</p> <p>http://www.symantec.com/connect/articles/</p>

Table 1-1 Ghost Solution Suite (*continued*)

Item	Particulars
<p>Change of IP address of Ghost Solution Suite Server affects PXE functionality and database services.</p>	<p>Change in IP address of Ghost Solution Suite Server affects PXE functionality and database services.</p> <p>For more information on how to change a Ghost Solution Suite server's IP address, refer to the following article:</p> <p>HOWTO80637</p>
<p>Prerequisites for DAgent installation</p>	<p>The prerequisites for installing DAgent are as follows:</p> <ul style="list-style-type: none"> ■ Firewall and antivirus must be turned off. If you must have them ON, ensure that they are configured with the required port as open to install the DAgent. ■ UAC must be turned off on the computers that are installed with Windows Vista and above versions. You can turn on the UAC after installing the DAgent.
<p>Prerequisite for installation of the following:</p> <ul style="list-style-type: none"> ■ Ghost Solution Suite Server ■ iPXE ■ Web Console 	<p>UAC and the firewall must be turned off.</p> <p>You can turn on the UAC and the firewall after installation is complete.</p> <p>To turn off the User Account Control: Run all administrators in Admin Approval Mode policy, follow the following steps:</p> <ul style="list-style-type: none"> ■ In the command prompt, run secpol.msc ■ Navigate to the Local Policies. ■ Select the Security Options. ■ Open the User Account Control: Run all administrators in Admin Approval Mode policy and select the Disable option.

Installing Ghost Solution Suite Server

This chapter includes the following topics:

- [Installing Ghost Solution Suite Server](#)
- [Platform Support for Ghost Solution Suite 3.x](#)
- [System requirements for installing Ghost Solution Suite](#)
- [Installing the Ghost Standard tools from the installer](#)
- [Browsing to the Ghost Recovery kit](#)
- [Ghost Solution Suite Server components](#)
- [Ghost Solution Suite Console](#)
- [Ghost Solution Suite Server](#)
- [Ghost Solution Suite Database](#)
- [Support for multiple database instances](#)
- [Deployment Share or eXpress Share](#)
- [PXE server](#)
- [Simple install for Ghost Solution Suite Server](#)
- [Custom install for Ghost Solution Suite Server](#)
- [Thin client install](#)
- [Component install](#)

- [Installing Ghost Solution Suite Agents](#)
- [Client connectivity and network adapters](#)
- [Installing the Ghost Solution Suite agent](#)
- [Remote agent installer](#)
- [Enter administrator account information](#)
- [Specify install directory](#)
- [Automatically add to a group](#)
- [Select computers on the network](#)
- [Change settings](#)
- [Get server security key](#)
- [Installing Ghost Solution Suite agent for Windows](#)
- [Scripted installation of Ghost Solution Suite agent](#)
- [Using remote agent installer](#)
- [Installing Ghost Solution Suite agent on Linux](#)
- [Installing Ghost Solution Suite agent on Mac computers](#)
- [Installing the automation agent](#)
- [Installation help](#)
- [Installing Ghost Solution Suite Server](#)
- [Ghost Solution Suite Server install](#)
- [Ghost Solution Suite Database install](#)
- [PXE server install](#)
- [Client connection to server](#)
- [Installing components](#)
- [Ghost Solution Suite Database authentication](#)
- [Add components](#)

Installing Ghost Solution Suite Server

Ghost Solution Suite Server is a flexible, scalable computer deployment and management system that can be installed and configured on a single computer, or installed across several computers to distribute processing for large enterprise environments. You can run a Simple install to position all Ghost Solution Suite Server Components on a single computer (most frequently used), or plan and perform a Custom install to distribute installation of components across separate computers in the site.

See [“Ghost Solution Suite Server components”](#) on page 22.

After installing Ghost Solution Suite Server components, you can remotely install Ghost Solution Suite Agents on all types of computer resources across your organization: laptops, servers, and so on. Windows computers and Linux computers can be managed as a unified environment, with each client communicating through its own Ghost Solution Suite agent to update inventory data and react to Ghost Solution Suite Server commands and deployment tasks.

Pre-requisites check

The pre-requisite checks let you view the compliance of the computer for installing Ghost Solution Suite. Following are the pre-requisites that are checked:

■ Check

Checks for installation prerequisites and displays the GSS IRC (Ghost Solution Suite Install Readiness Check) summary.

Server Check Summary

GSS is supported on Server OS only.

GSS requires the logged on user to be part of local administrator group.

GSS requires the UAC to be disabled

DB CHECK SUMMARY

Checks if database is present

GSS Web Console and iPXE Check Summary

The Web Console logged on user should have access to the GSS Database.

Ensure IIS has "ASP.NET Impersonation" and "Windows Authentication" installed.

Ensure IIS has all "ASP.NET" allowed under "ISAPI and CGI Restrictions".

PORT CHECK SUMMARY

Following ports are checked:

- 402,405,406,407,505,3829,4949,4950
- 37,49,53,67,68,69,

■ Summary

Displays the summary of previous installation of Ghost Solution Suite on the computer.

Select one of the following methods for installing a Ghost Solution Suite Server system:

- **Simple install for Ghost Solution Suite Server**
 Install all components on local computer. See [Simple install for Ghost Solution Suite Server](#)
- **Custom install for Ghost Solution Suite Server**
 Installs components on remote or local computers and lets you customize options. See [Custom install for Ghost Solution Suite Server](#)
- **Thin client install**
 Installs GSS Thin client view. See [Thin client install](#)
- **Component install**
 Installs additional Ghost Solution components. See [Component install](#)
- **Ghost Standard Tools**
 Launches the `Symantec Ghost Standard Tools installer` that lets you install the Symantec Ghost Standard Tools.
 See [“Installing the Ghost Standard tools from the installer”](#) on page 19.

To install Ghost Solution Suite Agents on the client computer, refer to the following section:

See [“Installing Ghost Solution Suite Agents”](#) on page 37.

Registering Ghost Solution Suite

You can view the status of the licenses of Ghost Solution Suite and add the license file from the **Symantec Ghost Solution Suite Registration** menu which is present under the **Help > Register**.

Table 2-1 Symantec Ghost Solution Suite Registration

Field	Description
License Summary	Displays the number of Server Nodes and Customer Nodes
License Information	Displays Ghost Solution Suite and the current installed version. Displays the total count of the licenses.
License File	Browse to the location of the SLF license file.

Platform Support for Ghost Solution Suite 3.x

To view the list of supported platforms, refer to the following article:

[Platform Support Matrix](#)

System requirements for installing Ghost Solution Suite

The following list includes the minimum system requirements for installing Ghost Solution Suite:

System requirements for installing Ghost Solution Suite:

- Ghost Solution Suite (GSS) Agent
GSS Agents require network connectivity and around 9 MB disk space. Other system requirements are the same as the host operating system.
- Ghost Solution Suite Server
Symantec recommends running the GSS Server components on a modern, dedicated server with Pentium 4 processor and 2GB of RAM.
- Computers hosting additional PXE servers and file shares should meet the requirements of the operating system hosting these components.
- Automation Requirements
Microsoft recommends 512 MB of memory for computers booting WinPE. At a minimum, you should have 384 MB to avoid boot errors.
- If the SQL Server 2014 Express database is installed from within the Ghost Solution Suite installer, then .NET framework 3.5 must be installed.
For more information on system requirements for installing SQL Server 2014 Express, see the following URL:
microsoft.com

Note: If you face an error while installing SQL Server Express, Symantec recommends checking if all the Windows updates are installed.

- For WinPE 5.1, .NET 4.5 Framework should be installed before importing the Windows ADK 8.1.
For more information, please refer to the following article:
[HOWTO124262](#)
- The Ghost Solution Suite user should be part of the local administrator group on all the computers on which you want to install Ghost Solution Suite.
- Firewall must be disabled on all the computers on which you want to install Ghost Solution Suite.

- User Account Control (UAC) must be disabled on all the computers on which you want to install Ghost Solution Suite.
- Local security policy must be disabled on all the computers on which you want to install Ghost Solution Suite.
 To turn off **User Account Control: Run all administrators in Admin Approval Mode** policy, follow the following steps:
 - In the command prompt, run secpol.msc
 - Navigate to the Local Policies.
 - Select the Security Options.
 - Open the **User Account Control: Run all administrators in Admin Approval Mode policy** and select the **Disable** option.
- The Remote Registry service should be running on the remote computers where you plan to install Ghost Solution Suite Component.

Prerequisites for installing the Web Console.

Following are the prerequisites for installing Ghost Solution Suite Web Console:

- Ghost Solution Suite Server version 3.3 must be installed on the computer on which you want to install the Web Console.
- Supported operating systems:
 - Windows Server 2008 R2
 - Windows Server 2012
 - Windows Server 2012 R2
 - Windows Server 2016
- The install user should be a local administrator on the Ghost Solution Suite Server.
- IIS Server version 7.5 or higher must be installed with the following components and should be in the enabled state:
 - ASP.NET Impersonation
 - Windows Authentication
 - SAPI and CGI Restriction installed and enabled for ASP.NET
 To install IIS and enable components, refer to the following section:
 See [the section called "Installing IIS Server and configuring the components"](#) on page 16.
- .NET framework 4.5.1 must be installed.
- Currently, it is recommended to use Ghost Solution Suite Web Console with the latest version of the following browsers:

- Google Chrome browser
- Microsoft Internet Explorer
- Safari
- Mozilla Firefox

Installing IIS Server and configuring the components

To install the Ghost Solution Suite Web Console, you must install IIS Server 7.5 or above on the Ghost Solution Suite Server.

To install IIS Server, refer to the following URL:

<https://docs.microsoft.com/>

Note: Ensure that **ASP.NET Impersonation**, **Windows Authentication**, and **ISAPI and CGI Restriction** are installed and enabled for ASP.NET while you install the IIS server.

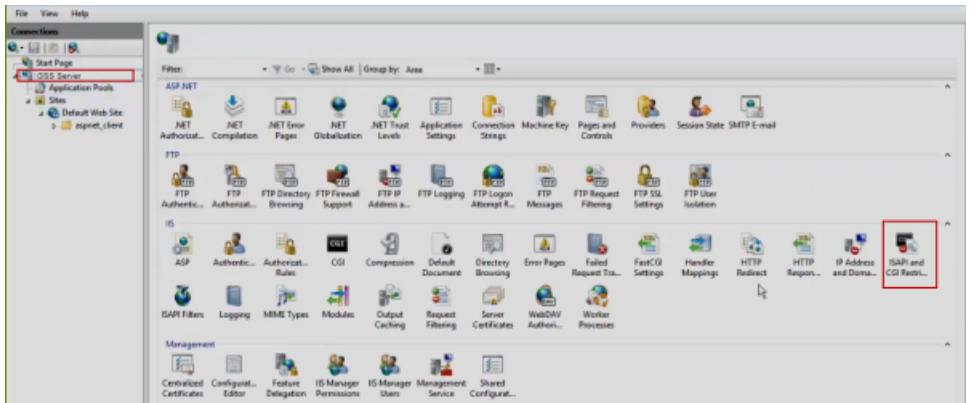
The Ghost Solution Suite Web Console installer enables the IIS components while installing the Web Console. However you can also manually enable the IIS components. Following procedure lists the steps that you must follow to enable the listed IIS components manually:

To enable IIS components for Ghost Solution Suite Web Console

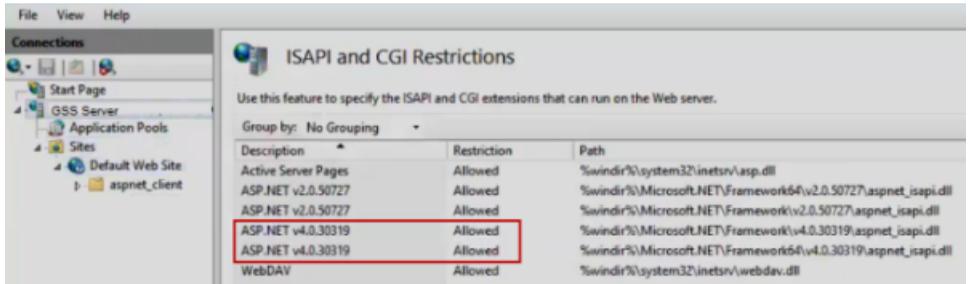
- 1 In the IIS Server, navigate to **Default Web Site > Authentication** and enable the **ASP.Net Impersonation** and **Windows Authentication**.



- 2 At the Ghost Solution Suite Server level, navigate and select **ISAPI and CGI Restrictions**.



- 3 Ensure that the latest version of ASP.net is set to **Allowed**.



Ports and Protocols used in Ghost Solution Suite

The following table lists the ports that are used in Ghost Solution Suite:

Table 2-2 Ports used in Ghost Solution Suite

Component	Service	Port(s)	Protocol	Where is this port connected?	Is this port configurable?
PXE MTFTP	MTFTP	69	UDP	PXE Client	No
		1758 1759	UDP (Multicast)		PXE Client
File Transfer	TFTP	1025 to 5000	UPD/TCP		Yes
PXE Server	PXE Server	67	UDP	PXE Client	No
		68	UDP	PXE Client	No
		4011	UDP	PXE Client	No
iPXE	PXE Server	4433	TCP	PXE Server	No
PXE Manager	PXE Manager	405	TCP	PXEConfig	Yes [Configure by editing RPC.ini file]
		406	TCP	PXECfg Service	Yes [Configure by editing RPC.ini file]
PXECfg Service	PXECfg Service	407	TCP	PXE Server and PXE MTFTP	Yes [Configure by editing RPC.ini file]

Table 2-2 Ports used in Ghost Solution Suite (*continued*)

Component	Service	Port(s)	Protocol	Where is this port connected?	Is this port configurable?
DB Management (mm)	DB Management Service	505	TCP	Win32 console, axengine, pxemanager	Yes
Ghost Solution Suite Server	Axengine	402	TCP/UDP (multicast)	Agents, pxeserver, DataManager, PXEManager	Yes
Linux Agent	ADLagent	415			
AClient	AClient	402			
PCT Real-time Destination Agents		4949			
		3829			
		4950			
		4951			
	4952				

Note: To configure the file transfer port, in the Ghost Solution Suite console to use a specific port, navigate to **Tools > Options > Global tab**. Check the **Client/Server file transfer port** check-box and set the dedicated port that you want to use.

For more information, refer to the following article:

[Ports and Protocols](#)

Installing the Ghost Standard tools from the installer

Ghost Solution Suite lets you install the Ghost Standard tools from the link that is provided in the installer. The Ghost Standard tools include the following:

- Boot Disk Creator.exe

Note: If you run BootWiz.exe for first time after fresh installation of Ghost Solution Suite 3.3, then you must right-click and open the application with **Run As Administrator** option.

- Ghost Explorer x64.exe
- Ghost Explorer x86.exe
- GhostCast Server.exe
- Ghost32.exe
- Ghost64.exe

The Ghost Standard tools are installed at the following location and are accessible from the Start menu:

```
<Install_dir/>/Program Files(x86)/Symantec/Ghost
```

Note: Symantec recommends not to install the Ghost Standard Tools 3.0 or later on the default recommended path of a computer that has Ghost Solution Suite 2.5. Installing on the default path overwrites the Ghost Solution 2.5 tools and conflicts with the Ghost 2.5 Console.

To install Ghost Standard tools

- 1 Start the computer and log on using the administrator account you created for the Ghost Solution Suite Server.
- 2 Launch the appropriate Symantec Ghost Solution Suite installation file and follow the setup steps.
- 3 The **Symantec Packager Self-Extracting Executable Options** dialog appears.
- 4 Select the **Use current temp folder** option to use the current temporary folder to download installation files or the **Extract to a specific folder** option to set a path to an existing folder to download the installation files.
- 5 Click **Extract and Execute App** to extract and execute the application immediately.

The default extraction directory is C:\DSSetup. You may have to wait for some time while Symantec Packager extracts files from this archive.

Note: Click **Extract Only** to only extract the application and execute the application later. You must run the axInstall.exe file to start the installation.

- 6 In the **Ghost Solution Suite Server Install Configuration** dialog, click on **Ghost Standard Tools**.

- 7 In the Symantec Ghost Standard Tools wizard, the default path where the **Ghost Standard Tools** executables are installed is displayed as follows:

```
C:\Program Files (x86)\Symantec\Ghost
```

To change the path where the **Ghost Standard Tools** executables are installed, click on **Change....**

- 8 Click **Next >**.
- 9 Click **Install**.

Browsing to the Ghost Recovery kit

The Ghost Solution Suite lets you browse to the Ghost Recovery Tool kit at the following location:

```
<Install_Dir>:\DSSetup\Ghost_recovery_Kit.zip
```

Symantec Ghost Recovery Kit is a suite of tools designed for original equipment manufacturers (OEMs) and value-added resellers (VARs). It adds tools and functionality to the applications included in Symantec Ghost Solution Suite. Symantec Ghost Recovery Kit includes the following tools:

- **GhostOEM32**
GhostOEM32 is a Win32 version of GhostOEM and is designed to run on Microsoft Windows Preinstallation Environment (WinPE).
- **GhostOEM64**
GhostOEM32 is a Win64 version of GhostOEM and is designed to run on Microsoft Windows Preinstallation Environment (WinPE).
- **PQIDeploy**
PQIDeploy is an OEM version of Symantec ImageCenter that provides restore-only capabilities. It contains the full scripting capabilities that are included in ImageCenter. It does not include any graphical user interface (GUI). All commands are specified in a script command file.
- **PQIDplyD**
- **SRFixMbr**
The System Recovery Fix MBR executable installs the Boot Partition Selector in the Master Boot Record (MBR).
The Boot Partition Selector requests which partition the end user wants to launch when the computer is booted from the primary hard drive. If no response is made within the timeout interval, then the user partition is launched. Alternatively, the end user can launch the recovery partition. The end user can access the recovery partition only through the Boot Partition Selector.

Ghost Solution Suite Server components

The Ghost Solution Suite Server system includes the following components:

- Ghost Solution Suite Console
See [“Ghost Solution Suite Console”](#) on page 22.
- Ghost Solution Suite Server
See [“Ghost Solution Suite Server”](#) on page 23.
- Ghost Solution Suite Database
See [“Ghost Solution Suite Database”](#) on page 24.
- eXpress Share
See [“Deployment Share or eXpress Share ”](#) on page 25.
- PXE server
See [“PXE server”](#) on page 26.
- DHCP Server (not an Symantec product)
- Installing Ghost Solution Suite agents
- Sysprep

You can install all these components on the same server or distribute them across multiple servers, depending on the environment.

Ghost Solution Suite Console

The Ghost Solution Suite Console is the Win32 user interface for Ghost Solution Suite. You can install this Windows console on servers across the network to view and manage resources from different locations. In addition, from this console, you can access the Ghost Solution Suite Database on other Ghost Solution Suite Server systems to manage sites across the enterprise.

See [“Ghost Solution Suite Database”](#) on page 24.

The Ghost Solution Suite Console communicates with the Ghost Solution Suite Database and Deployment services. In a Simple Install for Ghost Solution Suite Server, the Ghost Solution Suite Console is installed on the same computer similar to all other components. In a Custom Install for Ghost Solution Suite Server, you must ensure that a connection is available to these computers and security rights are set. You must have administrative rights on any computer running the Ghost Solution Suite Console.

See [“Simple install for Ghost Solution Suite Server”](#) on page 27.

See [“Custom install for Ghost Solution Suite Server”](#) on page 29.

Ghost Solution Suite Server

Ghost Solution Suite Server controls the flow of the work and information between the managed computers and the other Ghost Solution Suite Server components (Ghost Solution Suite Console, Ghost Solution Suite Database, and the eXpress Share). Managed computers connect and communicate with the Ghost Solution Suite Server to register inventory and configuration information and to run deployment and management tasks. The computer and deployment data for each managed computer is stored in the Ghost Solution Suite Database.

Note: To view, start, or stop Ghost Solution Suite Server, go to the Symantec Server services in your Windows Manager.

Managed computers require access to the Ghost Solution Suite Server at all times, requiring that you have administrative rights on the computer running the Ghost Solution Suite Server.



Create a user account to run the Ghost Solution Suite Server. The service runs as a logged-on user, not as a system account. You must create this account on all Ghost Solution Suite Server computers. The account must have full rights to the eXpress Share. The account must have a non-expiring password.

See ["Deployment Share or eXpress Share"](#) on page 25.



Assign a static IP address to the Ghost Solution Suite Server computer. Other components cannot connect to the Ghost Solution Suite Server if you use DHCP and dynamically change the IP address.



To install the Ghost Solution Suite Server on a remote computer, the default administration shares must be present. Restore any shares that have been removed before you install the Ghost Solution Suite Server.

Note: It is easier to create an administrative account using the same name and password on all computers than to use the existing name and password of each account.

Most packages (Personality Packages, and .MSI files) pass through the Ghost Solution Suite Server. Therefore, if you store these files on the Ghost Solution Suite Server, the deployment of these packages is faster. Image files, however, are sent directly from the eXpress Share to the client computer when you run an imaging task.

See “Ghost Solution Suite Server components” on page 22.

Ghost Solution Suite Database

Refer to the following article for the list of supported SQL versions on which you can install the Ghost Solution Suite Database.

https://support.symantec.com/en_US/article.HOWTO111528.html

Note: In Ghost Solution Suite 3.0 and later, if you have already set up multiple instances of the Microsoft SQL Server, you can identify a specific instance using this format: <database instance>\express. Example: If you have a clustered Microsoft SQL Server named `SQLClusterSvr` to manage multiple Ghost Solution Suite systems on different network segments, you can enter the name `SQLClusterSvr\salesSegment` or `SQLClusterSvr\marketingSegment` during the Ghost Solution Suite Server setup, depending on the previously established database instance. This feature is supported in the silent install `.INI` file and the GUI install executable.

The database maintains the following information about the managed computers:

- Hardware. RAM, asset tag, and serial numbers
- General Information. Computer name and MAC address
- Configuration. TCP/IP, Microsoft networking, and user information
- Applications. The installed applications and information about these applications, such as the name of the application, publisher, and product ID
- Services. Installed Windows services
- Devices. Installed Windows devices, such as network adapter, keyboard, and monitors
- Location information. Contact name, phone, email, department, mail stop, and site

The Ghost Solution Suite Server Database also contains jobs and other data used to manage your computers.

Note: You can install a single Ghost Solution Suite Database in each Ghost Solution Suite Server system-you cannot have two databases storing data for a single computer. If the computer you are installing the database on has an existing Microsoft SQL Server™, the Ghost Solution Suite Database is added to that instance of the database engine.

Support for multiple database instances

In Ghost Solution Suite 3.0 and later, you can identify a named instance of the Microsoft SQL Server when installing Ghost Solution Suite. You can now identify other named instances of Microsoft SQL Servers instead of accessing only the default instance. This feature lets you identify and run multiple databases from one clustered Microsoft SQL Server to manage multiple sites or network segments. This feature is supported in the silent install .INI file and the GUI install executable. Ghost Solution Suite also supports a different name for the Ghost Solution Suite Database instead of the default name, eXpress.

See [“Custom install for Ghost Solution Suite Server”](#) on page 29.

See [“Ghost Solution Suite Server components”](#) on page 22.

Deployment Share or eXpress Share

The eXpress Share is a file server or shared directory where Ghost Solution Suite program files and packages are stored. The eXpress Share can be a shared directory (default Simple install in `Program Files\Altiris\eXpress\Deployment Server`) or another file server (in the Custom install, you can assign a Microsoft Windows or Novell NetWare file server).

eXpress Share is where you store image files, registry files, .MSI packages, Personality Packages, script files, and more. When you are deploying or managing a computer, the Ghost Solution Suite Server stores and retrieves these packages from the eXpress Share as needed.



If you want to install Ghost Solution Suite on a remote file server (not the computer where you are running the install program), create a share (or give Read/Write rights for NetWare) on the file server where you want to install the Ghost Solution Suite Server. This share must allow access to all other components, including managed computers and the user account that runs the Ghost Solution Suite Server.

You must create this share before you begin installing. If you are not installing on a remote computer, you can select the option to create the share during the installation.

Note: You can install only one eXpress Share for each Ghost Solution Suite Server system. However, if the eXpress Share 's hard drive gets full, other computers can be used as additional backup storage points. In some cases, other systems emulating a Microsoft or NetWare environment can be used as the eXpress Share.

See “[Ghost Solution Suite Server components](#)” on page 22.

PXE server

The PXE Server provides service to client computers on a subnet. When the Ghost Solution Suite Server sends a deployment job, the client computer receives a request to boot to automation and the PXE-enabled computers connect to the first PXE Server that they discover, which communicates with the Ghost Solution Suite Server and the client computers.

For list of supported operating system on which you can install a PXE Server, refer to the following article:

https://support.symantec.com/en_US/article.HOWTO111528.html

The PXE Server also functions on the same protocols as a standard DHCP Server, so you can place the PXE Server wherever you would place a DHCP server. You can also install as many PXE Servers as required in your system, but you must also install a DHCP Server.

The PXE Server sends a boot menu option list to the client when the computer performs a PXE boot. The deployment job, which contains at least one automation task, uses the default automation environment or the environment specified by a user who has the permission to create a deployment job. Use the boot menu option to request the PXE Server for the boot menu files and download the boot menu files from the PXE Server to the client computer's RAM storage. The client computer always boots according to the request and reply communications taking place between the Deployment and PXE Servers.

Ghost Solution Suite supports Linux, and Windows PreInstallation Environment (WinPE) as pre-boot environments. These options let you create a single job, but may contain multiple automation tasks. The default automation environment (the first pre-boot operating system files installed during the Ghost Solution Suite installation) is used for Initial Deployment, unless you specify otherwise.

See *Boot Disk Creator Help* and see *PXE Configuration Utility Help*.

DHCP Server

The DHCP (Dynamic Host Configuration Protocol) server is a server set up to assign TCP/IP addresses to the client computers. This server is not a Symantec product, but is required if you want to use the PXE Server.

We recommend that you use DHCP to manage the TCP/IP address in your network, whether you use PXE or not. This greatly reduces the amount of time required to set up and manage your computers.

See “[Ghost Solution Suite Server components](#)” on page 22.

Simple install for Ghost Solution Suite Server

The Simple Install option places all the Ghost Solution Suite Server Components - Ghost Solution Suite Server, Ghost Solution Suite Console, eXpress Share, and Ghost Solution Suite Database - on the same computer.

See “[Ghost Solution Suite Server components](#)” on page 22.

To run a simple install

- 1 Start the server and log on using the administrator account you created for the Ghost Solution Suite Server.

See “[PXE server](#)” on page 26.

- 2 Launch the appropriate Symantec Ghost Solution Suite Server installation file and follow the setup steps.

The **Symantec Packager Self-Extracting Executable Options** dialog appears.

Note: Symantec recommends running the installer with admin rights.

- 3 Select the **Use current temp folder** option to use the current temporary folder to download installation files or the **Extract to a specific folder** option to set a path to an existing folder to download the installation files.

- 4 Click **Extract and Execute App** to extract and execute the application immediately.

The default extraction directory is `C:\DSSetup`. You may have to wait for some time while Symantec Packager extracts files from this archive.

Note: Click **Extract Only** to only extract the application and execute the application later. You must run the `axInstall.exe` file to start the installation.

- 5 Select the **Simple Install** option from the installation types listed in the **Ghost Solution Suite Server Install Configuration** dialog.

- 6 Click **Yes** on the **Software License Agreement** page.

- 7 Enter the following information on the **Ghost Solution Suite Share Information** page:

- In the **File Server path** field, enter or browse to the path to install the Ghost Solution Suite Server program files. The default path is `C:\Program Files(x86)\Altiris\Express\Deployment Server`.
- Select the **Create Ghost Solution Suite Share** option to create a eXpress Share on the computer. The eXpress Share lets you store files on the computer and run Ghost Solution Suite Server system applications.

See “[Deployment Share or eXpress Share](#) ” on page 25.

- Browse and select the licence file.
- You must enter an administrator user name and password for the Ghost Solution Suite Server. This account must already exist on the eXpress Share and the Ghost Solution Suite Server. By default, the name you are currently logged on as appears. If you use a domain account, enter the domain and the user name (Example: Domain1\administrator).

Note: If a previous installation of the Ghost Solution Suite Database is detected, an `axinstall` prompt appears, asking whether you want to preserve or overwrite the existing database. Click **Yes** to preserve the data in your Ghost Solution Suite Database.

- 8 Click **Install** to install the listed components, or click **Back** to modify the settings before starting the installation. The installation process begins and can take several minutes. The **Installation Information Summary** page appears after the installation completes.

Note: If you are upgrading your installation, the message **Do you want to replace the share?** appears. Click **Yes** and continue. If you click **No**, a message appears, stating that the share is already in use and you need to manually set the share to point to the correct directory. Click **OK**.

- 9 (Optional) You can select the following option to install agents.

- **Remotely install Ghost Solution Suite agent (Windows Vista, 2008 or later only).**
Select this option if you want to push the Ghost Solution Suite agent to computers running Windows Vista, Windows 2008, or later operating systems.

10 Click Finish.

You have successfully completed a Simple Install for a Ghost Solution Suite Server system. Click the Ghost Solution Suite Console icon on your desktop to view all the computer resources running Ghost Solution Suite Agents configured for your Ghost Solution Suite Server.

Note: Antivirus applications can delete service .EXE files or can disable services.

Example: When you run the Ghost Solution Suite Server Win32 Console, the "Unable to connect to the Symantec Ghost Solution Suite Server Management Server. Please ensure this service is started and running currently." error appears. This occurs because the service files are deleted by the antivirus application during scanning. To resolve this issue, disable the antivirus software and reinstall the Ghost Solution Suite Server.

See "[Custom install for Ghost Solution Suite Server](#)" on page 29.

Custom install for Ghost Solution Suite Server

The Custom Install option lets you distribute all the Ghost Solution Suite Server Components - Ghost Solution Suite Server, Ghost Solution Suite Console, eXpress Share, and Ghost Solution Suite Database - on different computers. You can install Ghost Solution Suite Server on an existing SQL Server.

See "[Ghost Solution Suite Server components](#)" on page 22.

To run a custom install

- 1 Start the server and log on as the administrator account you created for the Ghost Solution Suite Server.
- 2 Launch the appropriate Symantec Ghost Solution Suite Server installation file and follow the setup steps.

The **Symantec Packager Self-Extracting Executable Options** dialog appears.

- 3 Click the **Use current temp folder** option to use the current temporary folder to download installation files or the **Extract to a specific folder** option to set a path to an existing folder to download the installation files.

- 4 Click **Extract and Execute App** to extract and execute the application immediately.

The default extraction directory is `C:\DSSetup`. You may have to wait for some time while Symantec Packager extracts files from this archive.

Note: (Optional) Click **Extract Only** to only extract the application and execute the application later. You must run the `axInstall.exe` file to start the installation.

- 5 Select the **Custom Install** option from the installation types listed in the **Ghost Solution Suite Server Install Configuration** dialog if any of the following conditions exist:

- You are using the NetWare file server as a eXpress Share.
- You are managing many computers and require a distributed architecture to meet bandwidth restrictions and other design requirements.

- 6 Click **Install**. Click **Yes** on the **Software License Agreement** page.

- 7 Enter the following information on the **Ghost Solution Suite Share Information** page:

- In the **File Server path** field, enter or browse to the path to install the Ghost Solution Suite Server program files. The default path is `C:\Program Files(x86)\Altiris\eXpress\Deployment Server`.
- Select the **Create Ghost Solution Suite Share** option to create a eXpress Share on the computer. The eXpress Share lets you store files on the computer and run Ghost Solution Suite Server system applications. The eXpress Share can exist on a Microsoft Windows server or Novell NetWare server.

Note: You can only create the share if it is on a Microsoft Windows Server; the Novell share should already be set up. See [“Deployment Share or eXpress Share”](#) on page 25.

- Browse and select the (.SLF) license file.

- 8 Enter the following information on the **Ghost Solution Suite Server Information** page:

- Select the computer where you want to install the Ghost Solution Suite Server. You can install the Ghost Solution Suite Server on the local computer or on a remote computer. The IP address and the port information for the selected computer are displayed by default.
- Enter the path where you want to install the Ghost Solution Suite Server.
- You must enter an administrator user name and password for the Ghost Solution Suite Server. This account must already exist on the eXpress Share and the Ghost Solution Suite Server. By default, the name you are currently logged on as appears. If you use

a domain account, enter the domain and the user name (Example: Domain1\administrator).

(See “Installing Ghost Solution Suite Server” on page 12.) Click **Next**.

9 Enter the **Ghost Solution Suite Database** information and click **Next**.

- Specify the Microsoft SQL Server Instance where you want to install the database.

Note: If you have already set up multiple instances of the Microsoft SQL Server, you can identify a specific database instance in this field using the format: <SQL Server Name>\<database instance>.

- Depending upon the selection of the SQL Server instance, the default port at which the selected instance is listening appears in the **SQL Port Number** field. You can edit the port number if you have manually entered the SQL Server name or if the port number does not appear automatically due to some firewall restriction.
- You can enter a name other than eXpress in the **Database Name** field.

10 Select the type of Ghost Solution Suite Database authentication to be used. You must enter the user name and password if you want to use SQL Server authentication.

Note: You cannot use the remote SQL database with NT authentication on a remote computer if you do not have administrative rights on the computer.

Click **Next**.

Note: If a previous installation of the Ghost Solution Suite Database is detected, an `axinstall` prompt appears, asking whether you want to preserve or overwrite the existing database. Click **Yes** to preserve the data in your Ghost Solution Suite Database.

11 Specify how you want to connect your managed computer to the Ghost Solution Suite Server by selecting one of the following options.

- Select the **Connect directly to Ghost Solution Suite Server** option and enter the Ghost Solution Suite Server IP address and port.
- Select the **Discover Ghost Solution Suite Server using TCP/IP multicast** option and provide the Server name.

Note: If you leave the **Server name** field blank, the Ghost Solution Suite agent connects to the first Ghost Solution Suite Server that responds. Click **Next**.

- 12 Click **Install** to install the listed components or click **Back** to modify the settings before starting the installation. The installation process begins and can take several minutes. The **Installation Information Summary** page appears after the installation completes.

Note: If you are upgrading your installation, the message **Do you want to replace the share?** appears. Click **Yes** and continue. If you click **No**, a message appears stating that the share is already in use and you must manually set the share to point to the correct directory. Click **OK**.

- 13 (Optional) You can select one of the following option to install agents on the managed computers.
 - **Remotely Install Ghost Solution Suite agent (Windows Vista, 2008 or later only).**
Select this option if you want to push the Ghost Solution Suite agent to Windows computers directly after the installation. This can be done any time by selecting **Tools > Remote Agent Installer**.

- 14 Click **Finish**.

You have successfully completed a Custom Install for a Ghost Solution Suite Server system. Click the Ghost Solution Suite Console icon on your desktop to view all the computer resources running Ghost Solution Suite Agents configured for your Ghost Solution Suite Server.

See [“Simple install for Ghost Solution Suite Server”](#) on page 27.

Thin client install

The thin client install option lets you install the Thin Client view of the Ghost Solution Suite Console on your computer. You can install Ghost Solution Suite Server with a Microsoft SQL 2014 Express or install it on an existing SQL Server. You need not provide a license file for the Thin Client installation.

To run a thin client install

- 1 Start the server and log on using the administrator account you created for the Ghost Solution Suite Server.
- 2 Launch the appropriate Symantec Ghost Solution Suite Server installation file and follow the setup steps.

Symantec recommends running the installer with admin rights.

The **Symantec Packager Self-Extracting Executable Options** dialog appears.
- 3 Select the **Use current temp folder** option to use the current temporary folder to download installation files or the **Extract to a specific folder** option to set a path to an existing folder to download the installation files.

- 4 Click **Extract and Execute App** to extract and execute the application immediately.
The default extraction directory is `C:\DSSetup`. You may have to wait for some time while Symantec Packager extracts files from this archive.

Note: Click **Extract Only** to only extract the application and execute the application later. You must run the `axInstall.exe` file to start the installation.

- 5 Select the **Thin Client Install** option from the installation types listed in the **Ghost Solution Suite Server Install Configuration** dialog.
- 6 (Optional) Select the **Include PXE Server** option to install the PXE Server. (See “[PXE server](#)” on page 26.) Click **Install**.
- 7 Click **Yes** on the **Software License Agreement** page.
- 8 Enter the following information on the **Ghost Solution Suite Share Information** page:
 - In the **File Server path** field, enter or browse to the path to install the Ghost Solution Suite Server program files. The default path is `C:\Program Files(x86)\Altiris\eXpress\Deployment Server`.
 - Select the **Create Ghost Solution Suite Share** option to create a eXpress Share on the computer. The eXpress Share lets you store files on the computer and run Ghost Solution Suite Server system applications.
See “[Deployment Share or eXpress Share](#)” on page 25.
 - You must enter an administrator user name and password for the Ghost Solution Suite Server system. This account must already exist on the eXpress Share and the Ghost Solution Suite Server. By default, the name you are currently logged on as appears. If you use a domain account, enter the domain and the user name (Example: `Domain1\administrator`). See “[Ghost Solution Suite Server](#)” on page 23.
If a previous installation of the Ghost Solution Suite Database is detected, an **axinstall** prompt appears, asking whether you want to preserve or overwrite the existing database. Click **Yes** to preserve the data in your Ghost Solution Suite Database.
Click **Next**.
- 9 Click **Install** to install the listed components, or click **Back** to modify the settings before starting the installation. The installation process begins and can take several minutes. The **Installation Information Summary** page appears after the installation completes.

Note: If you are upgrading your installation, the message **Do you want to replace the share?** appears. Click **Yes** and continue. If you click **No**, a message appears, stating that the share is already in use and you must manually set the share to point to the correct directory. Click **OK**.

- 10 (Optional) You can select the following option to install agents.
 - **Remotely install Ghost Solution Suite agent (Windows Vista, Windows 2008 or later only).** Select this option if you want to push the Ghost Solution Suite agent to computers running Windows Vista, Windows 2008, and later operating systems.
- 11 Click **Finish**.

You have successfully completed a Thin Client install for a Ghost Solution Suite Server system. Click the **Ghost Solution Suite Console** icon on your desktop to view all the computer resources running Ghost Solution Suite Agents configured for your Ghost Solution Suite Server.

Note: Antivirus applications can delete service .EXE files or can disable services.

Example: When you run the Ghost Solution Suite Server Win32 Console, the "Unable to connect to the Symantec Ghost Solution Suite Server Management Server. Please ensure this service is started and running currently." error appears. This occurs because the service files are deleted by the antivirus application during scanning. To resolve this issue, disable the antivirus software and reinstall the Ghost Solution Suite Server.

Component install

The component install option lets you add selected Ghost Solution Suite Server Components - Ghost Solution Suite Console, PXE Server, and Ghost Solution Suite Agents to the existing eXpress Share. You can also add Microsoft Sysprep files.

See "[Ghost Solution Suite Server components](#)" on page 22.

To run a component install

- 1 Start the server and log on using the administrator account you created for the Ghost Solution Suite Server.
- 2 Launch the appropriate Symantec Ghost Solution Suite Server installation file and follow the setup steps.

Symantec recommends running the installer with admin rights.

The **Symantec Packager Self-Extracting Executable Options** dialog appears.
- 3 Select the **Use current temp folder** option to use the current temporary folder to download installation files or the **Extract to a specific folder** option to set a path to an existing folder to download the installation files.

- 4 Click **Extract and Execute App** to extract and execute the application immediately.

The default extraction directory is `C:\DSSetup`. You may have to wait for some time while Symantec Packager extracts files from this archive.

Note: (Optional) Click **Extract Only** to only extract the application and execute the application later. You must run the `axInstall.exe` file to start the installation.

- 5 Select the **Component Install** option from the installation types listed in the **Ghost Solution Suite Server Install Configuration** dialog and click **Install**.
- 6 Click **Yes** on the **Software License Agreement** page.
- 7 Enter a path for the eXpress Share and click **Next**.
- 8 Select the components you want to install and click **Next**.
 - **Install an additional Ghost Solution Suite Console.** Select this option to install another Ghost Solution Suite Console (a Windows executable) on another computer. You can add as many Ghost Solution Suite Consoles as required to manage from multiple consoles across your system, but you can install only one at a time. The **Ghost Solution Suite Console Information** dialog appears.
 - **Install an additional Symantec PXE Server.**

Select this option to add additional PXE Servers across a network segment to handle boot requests for large environments. The **PXE Server Information** dialog appears.

Master PXE Server. When you add another PXE Server, the PXE Server that you initially installed is designated as the Master PXE Server. The Master PXE Server works concurrently with any additional PXE Server to handle boot requests across the network segment, but it also allocates additional blocks of IP addresses to other PXE Servers in the system.

For all the available options for installing PXE Server, refer to the following section: See “[PXE server](#)” on page 26.
 - **Install additional Ghost Solution Suite Agents.** Select this option to install additional Ghost Solution Suite Agents on client computers, setting up managed computers in the Ghost Solution Suite Server system. The **Remote Agent Install** dialog appears. Enter common administrator credentials for all client computers. See “[Enter administrator account information](#)” on page 39.
 - **Install Ghost Solution Suite Web Console**

Select this option if you want to install the Ghost Solution Suite Web Console. For system requirements and prerequisites, refer to the following: [Ghost Solution Suite Help](#)

9 Configure GSS Server and PXE Server(s) for iPXE

Select this option if you want to use the iPXE feature for Ghost Solution Suite.

This option lets you install the iPXE components on the existing PXE servers.

[Configuring iPXE](#)

10 Select if you want to repair the PXE Manager.

Note: Symantec recommends running the repair PXE Manager option only on the computers on which PXE manager is already installed.

Before you select the option to repair the PXE manager, ensure to comply with the following:

- Uninstall all the PXE components (PXE Server and PXE Manager).
- Restart the computer.
- Relaunch the installer and select the Repair PXE Manager option.
- Select the **Install an additional Symantec PXE server** to install the PXE servers again.

11 Select the computer where you want to install the selected components and click **Next**. The **Installation Information** page appears.

Note: If you select the **On a remote computer** option, you must browse and select the remote computer.

12 Click **Install** to install the listed components or click **Back** to modify settings before starting the installation. The installation process begins and can take several minutes. The **Installation Information Summary** page appears, specifying that the installation was successful.

13 Select the **Install add-ons to provision server hardware** option to install the add-ons for Dell computers. Click **Finish**.

Note: This option is enabled on Dell computers only when add-ons are present in the `oeminstall-addons` section of the `oeminstall.ini` file, which is located in the `eXpress` directory. This is the only option available on the **Installation Information Summary** page when you select **Component Install**.

You have successfully completed a Component Install for a Ghost Solution Suite Server system. Click the **Ghost Solution Suite Console** icon on your desktop to view all the computer resources running Ghost Solution Suite Agents configured for your Ghost Solution Suite Server.

Configuring iPXE

If you plan to use the iPXE feature for Ghost Solution Suite, you must configure the Ghost Solution Suite Server and the PXE Server.

Enter the following details to configure the Ghost Solution Suite Server and the PXE Server:

Table 2-3

Field	Description
GSS Server Details	You must set up the access from IIS to the Database Server.
Username	Enter the user name for GSS Server.
Password	Enter the password to connect to GSS Server.
Confirm Password	Enter the password again.
PXE Server Details	You must configure PXE servers to enable the iPXE feature.
Select a PXE Server	Select a PXE Server from the list. You must configure iPXE for each PXE Server individually.
Username	Enter the username for the PXE Server.
Password	Enter the password for the PXE Server.
Confirm Password	Enter the password again.

Installing Ghost Solution Suite Agents

Each client computer requires the Ghost Solution Suite Agent to run as the Production Agent on a local hard disk, which communicates with the Ghost Solution Suite Server and registers in the Ghost Solution Suite Database. For Windows and Linux client computers, Ghost Solution Suite lets you push agent software to a client computer. See [“Installing the automation agent”](#) on page 48. from a Ghost Solution Suite Console, or you can pull the Ghost Solution Suite Agent to the client computer from the eXpress Share.

- Ghost Solution Suite agent.** Install a Production Agent to a Windows desktop, notebook, or server computer. You can also install this agent on any supported Linux workstation or server.
 See [“Installing Ghost Solution Suite agent for Windows”](#) on page 41.

- **Ghost Solution Suite agent on Linux.** Install on any supported Linux workstation or server.
See [“Installing Ghost Solution Suite agent on Linux”](#) on page 45.
- **Automation Agent.** Install on any Windows desktop, notebook, or server computer.
- **Ghost Solution Suite agent on Vista (Business) and 2008 Server.** Install the Ghost Solution Suite agent on the selected Windows Vista (Business), and Server 2008 computers.

Client connectivity and network adapters

Symantec supports all standard network adapter cards and includes many drivers with the installation of Ghost Solution Suite. However, sometimes outdated drivers (including default drivers that come with the hardware) cause problems when clients are in automation mode. To avoid these problems, you should check the manufacturer's Web site for your network adapter to ensure you use their latest driver in your pre-boot operating system configuration file.

Some common client problems that can be solved by updating drivers are:

- Locking when loading drivers or failing to connect to the server
- Locking when imaging (downloading, uploading, or multicasting)

Microsoft client drivers

The Boot Disk Creator is set up to work with drivers that follow a certain standard. Because not all NIC drivers follow that standard, you may have to move the files to a different location.

Ensure that the following files are in the same directory:

- The sample `protocol.ini` that comes with your driver (`protocol.ini`)
- The OEM setup file that specifies the DOS driver (`oemsetup.inf`)

Example: The OEM setup file may contain lines similar to the following:

```
[netcard]

NGRPCI="NETGEAR FA310TX Fast Ethernet PCI
Adapter", 0, ndis, ethernet, real, NGRPCI, NGRPCI_NIF

[NGRPCI] (This header must be the sixth item listed in the line above)

Device=NGRPCI.DOS (If this line is missing, add it. The syntax is
device=drivername.)
```

If there is no `protocol.ini` file, create a text file that contains the following command:

```
DriverName=drivername.
```

Installing the Ghost Solution Suite agent

For client computers running a Windows operating system, Ghost Solution Suite lets you install agent software using the Remote Agent Installer to "push" the agent to a client computer from a Ghost Solution Suite Console. (See "[Remote agent installer](#)" on page 39.) You can also pull the Ghost Solution Suite agent to the client computer by accessing the Windows share. You must have administrative rights to the client computers and File and Print Sharing must be enabled to install the agent software.



Click Remote Agent Installer on the Ghost Solution Suite Console toolbar, or click **Tool > Remote Agent Installer** to open the utility program. You can also download DAgent.exe from the network share to install a Ghost Solution Suite agent.

Remote agent installer

DAgent replaced AClient as the default agent for the Windows client computers. For the list of supported operating systems, refer to the following article:

[Platform Support Matrix](#)

Windows Vista, 2008 servers, and Windows 7

You must enable file and print sharing in the Windows Firewall.

A domain user from the Domain Admins group can install the agent using the Remote Agent Installer on the client computers if you add the user to the local administrator group. A client computer which is a member of the domain, has the local built-in administrator disabled by default.

Enter administrator account information

Enter common administrator credentials for all client computers, or keep the default credentials to be prompted for each client computer.

Let me specify a username and password for each machine as it's installed. Prompts for an administrative user name password for each computer in the remote install list. This is the default option.

Use this username and password for all clients. Enter credentials for an administrator account that has rights to all the client computers that you add to the remote install list.

Specify install directory

Enter a location to install the Ghost Solution Suite agent.

Install directory. Enter the path to install the Ghost Solution Suite agent on the client computer.

Enable this agent to use SIDgen and/or Microsoft Sysprep. If you plan to use SIDgen or Sysprep to configure this computer the required files can be copied when the agent is installed.

Click **Change Settings** to set the Ghost Solution Suite agent settings.

Automatically add to a group

You can select one of the following options to automatically add new computers to the group that you specify.

Add client(s) to default group. Adds new computers to the All Computers group.

Add client(s) to a specific group. Adds new computers to another group. Use back slashes to separate subgroups.

Select computers on the network

Identify client computers on the network and add them to a list of computers to remotely install the Ghost Solution Suite agent.

Add. Select the computers by the name in the list, or enter a computer name or IP address.

Computer Name. Enter the name of a computer on the network or its IP address.

Properties. Select a computer and view the agent install settings. You can also change Agent settings from the **Agent Properties** dialog.

Import. Import new computers from a file. This file has the following parameters: `-c:[computer]` `-u:[username]` `-p:[password]` `-i:[input file]`. The parameters must be entered in this order. The password parameter is not required if the administrator account does not have one assigned. If you are using the default settings, you do not need to specify an input file name. Each computer entry must be on a separate line.

Export. You can export the listed computers into an export file to use later. The default extension is *.RCI. Remote Agent Installer first looks for an RCI file extension.

When the computers appear in the installer list and the properties are set, click **Finish**. The status of the agent install appears.

After the Ghost Solution Suite agent is installed, it automatically connects to the Ghost Solution Suite Server and appears in the **Computers** pane of the Ghost Solution Suite Console.

Change settings

Click **Change Settings** to modify access, security and other settings on the Ghost Solution Suite agent to be installed.

Get server security key

This page appears only if you select the **Enable key-based authentication to Ghost Solution Suite Server** option in the **Default Agent Settings** dialog.

Enter the security key file path for the Ghost Solution Suite Server or browse and select a file containing the security key file path.

Installing Ghost Solution Suite agent for Windows

Run `dagent.msi` from the eXpress Share (shared folder).

1. On the **Symantec Client Service** dialog, enter a location to install the Ghost Solution Suite agent. Select one of these options, if required, and click **Next**:
 - **Secure modification of server properties.** Select to prohibit users from changing any agent settings.
 - **Enable changing of Security ID.** Select to manage the security IDs to run a SID utility as part of an imaging job.
 - **Advanced.** Click to open the Computer Configuration Properties dialog and enter the settings for the Ghost Solution Suite agent you are installing.
2. If you have enabled the security IDs, a page listing the options for managing the SIDs appears. Select the utilities you want to use and enter the path where the utilities are stored. Click **Next** to install the Ghost Solution Suite agent.
3. (Optional) Select a group in the Ghost Solution Suite Console to add the client to. You can also leave it at the default group.

After the Ghost Solution Suite agent is installed, it connects to the Ghost Solution Suite Server and appears in the Computers pane of the Ghost Solution Suite Console.

See [“Installing Ghost Solution Suite Agents”](#) on page 37.

Scripted installation of Ghost Solution Suite agent

You can run scripted install of Ghost Solution Agent using default agent settings or you can run the scripted install with advanced configurations.

- [Scripted install with default agent settings](#)

- [Scripted install with advanced configuration settings](#)

Scripted install with default agent settings

To run the scripted install of dagent, with default settings follow the following process:

- Copy the dagent.msi from the following location:
`<Install_dir>:\Program Files (x86)\Altiris\Express\Deployment Server\Agents\AClient`
- Run the appropriate command on the client computer:
 - For x86
`Dagent.msi /qn TcpAddr=<server-ip-address> TcpPort=402`
 - For x64
`Dagent_x64.msi /qn TcpAddr=<server-ip-address> TcpPort=402`

Note: For TcpAddr, enter the IP address of the Ghost Solution Suite Server.

Scripted install with advanced configuration settings

Ghost Solution Suite lets you install the Ghost Solution Suite agent with advanced configurations. Use the Aclient.inp file to configure additional settings during dagent install on the client computer. The Aclient.inp file is present in the `C:\Program Files (x86)\Altiris\Express\Deployment` folder.

- [Create or edit the Aclient.inp file.](#)
- [Copy the dagent.msi on the client computers.](#)
- [Run the dagent.msi from the command prompt](#)

Create or edit the Aclient.inp file.

Edit the Aclient.inp file in notepad and enter the configurations that you want to implement on the client computer.

Create the following folder structure on the client computer and copy the Aclient.inp file:

```
C:\Program Files\Altiris\Dagent
```

Following is an example of Aclient.inp file:

```
-----  
; MCastAddr is the multicast group address to be used to find the  
; Deployment Server (optional)  
; MCastPort is the port number to use while multicasting (optional)
```

```

; TTL is the maximum number of hops to multicast through (optional)
; ServerName is the computer name of the server (optional)
;-----
;MCastAddr=225.1.2.3
;MCastPort=402
;TTL=32
;ServerName=GSSSERVER
;-----
; TcpAddr is the IP address of the Deployment Server to connect to (optional)
; TcpPort is the IP port number of the Deployment Server listening for
; requests (optional)
; Note: Specifying these parameters will switch the DAgent to use
; TCP to connect to the server.
;-----
;TcpAddr=SERVER-IP-ADDRESS
;TcpPort=402
;-----
; LogFile field is the full pathname to the log file (optional)
; LogSize is the maximum log file size (optional)
; LogErrors - If this is Yes, then errors will be logged
; LogInformation - If this is Yes, then information items will be
; logged.
; LogDebug - If this is Yes, then detailed debug information will be
; logged.
;-----
;LogFile=c:\Windows\Temp\Dagent.log
;LogSize=4096
;LogErrors=Yes | No
;LogInformation=Yes | No

```

```

;LogDebug=Yes | No
;-----
; PromptExecute parameter is used to prompt the user when tasks are
; being executed (optional)
; PromptReboot parameter is used to prompt the user before
; the computer restarts (optional)
; PromptRemoteControl parameter is used to prompt if someone attempts
; to remote control this computer.
; PromptSeconds is the number of seconds that DAgent will
; wait for a response from the user (optional)
; PromptOverride is the default action to take when the user
; has not responded to the prompts (optional)
;-----
;PromptExecute=Yes | No
;PromptReboot=Yes | No
;PromptRemoteControl=Yes | No
;PromptSeconds=30
;PromptOverride=Abort | Continue
;-----
; EncryptSessions - Specifies whether or not DAgent will attempt to
; make an encrypted session with the server
;
; RequireEncrypt - Specifies whether or not DAgent will fail to
; connect if an encrypted session cannot be
; established.
;-----
; EncryptSessions=Yes | No
; RequireEncrypt=Yes | No

```

Copy the dagent.msi on the client computers.

Copy the dagent.msi on the client computers based on the architecture of the client computers.

The dagaent.msi is present at the following location:

```
<Install_dir>:\Program Files (x86)\Altiris\eXpress\Deployment  
Server\Agents\AClient
```

- For x86- Dagent.msi /qn
- For x64- Dagent_x64.msi /qn

Run the dagent.msi from the command prompt

To run the scripted install of dagent, run the appropriate command on the client computer:

- For x86
Dagent.msi /qn
- For x64
Dagent_x64.msi /qn

Using remote agent installer

You can create a template file when running Remote Agent Installer. After modifying agent properties and adding computers to the **Selecting Clients** window, click **Export** to create a template file to import computers (*.rci) as well as the template file (*.inp).

Example: If you have computers named PC-1 and PC-2 listed in the **Selecting Clients** window and you export these computers using the file name `Export.rci`, the following two template files are created:

```
Export_PC-1.inp
```

```
Export_PC-2.inp
```

Installing Ghost Solution Suite agent on Linux

You can install the Ghost Solution Suite agent on any supported Linux workstation or server by downloading and running the Ghost Solution Suite agent for Linux installation file (a .BIN file) on the client computer. The Ghost Solution Suite agent is updated automatically on Linux computers when you upgrade to a new version of Ghost Solution Suite. The creation date of the Ghost Solution Suite agent is checked and updated when a new agent is available.

Note: Currently, Ghost Solution Suite does not support UEFI-based Linux computers.

Installing the Ghost Solution Suite agent for Linux

- 1 After downloading the `.BIN` file to a local directory, you can install from the command line.
 - Browse to the directory where you saved the `.BIN` file, switch to the root user (`su`) and change the directory to the location of the `.BIN` file by entering `cd < directory>`
 - After changing the directory, you must have the permission to execute the `.BIN` file; to obtain the permission, enter `chmod 544 <filename>`
 - Enter: `./<file name>`
The Ghost Solution Suite agent for Linux is installed in the `/opt/altiris/deployment/adlagent` directory.
- 2 To change the `adlagent` configuration file settings, update the `adlagent.conf` file. This file is located in the `/opt/altiris/deployment/adlagent/conf` directory. You can also change the `adlagent` configuration file settings by executing the `configure` script from the `/opt/altiris/deployment/adlagent/bin` directory.
 - To edit the `configure` file directly, open the `adlagent.conf` file located in the `/opt/altiris/deployment/adlagent/conf` directory and make the required changes.
You can also edit the configuration file to change the functionality or properties.
Example: You can open the `adlagent.conf` file in an editor and scroll to the `[Transport]` section and the `UseMcast` line. Change `UseMcast=true` to `UseMcast=false`. In the `TCPAddr=<IP address>` line, enter the IP address of the specific Ghost Solution Suite Server you want to manage the client computer. You can also identify and edit additional configuration settings in the configuration file.
 - To run the script to change the settings for the `adlagent` configuration file, browse to the `/opt/altiris/deployment/adlagent/bin` directory from the shell and enter `./configure`
You are prompted to select Multicast options to identify a Ghost Solution Suite Server to manage the current client computer, or you can select a specific Ghost Solution Suite Server by setting the Multicast option to false and adding the IP address of the required Ghost Solution Suite Server.
- 3 After editing the configuration file, restart the Ghost Solution Suite agent for Linux.
To start and stop the Ghost Solution Suite agent for Linux, enter the full path or browse to the `/etc/rc.d/init.d` directory (with administrator/root rights). You can use either the `adlagent stop` and `adlagent start` commands, or only the `adlagent restart` command. You can also use the Package Manager installed with Linux to restart the Ghost Solution Suite agent for Linux.
By stopping and starting the Ghost Solution Suite agent for Linux, the service updates the changes made in the `adlagent` configuration file.

You can now view the Linux managed computer from a Ghost Solution Suite Console.

See [“Installing Ghost Solution Suite Agents”](#) on page 37.

Installing Ghost Solution Suite agent on Mac computers

You can install the Ghost Solution Suite agent on any supported Mac workstation by downloading and running the Ghost Solution Suite agent for Mac installation file on the client computer. The Ghost Solution Suite agent is updated automatically on Mac computers when you upgrade to a new version of Ghost Solution Suite. The creation date of the Ghost Solution Suite agent is checked and updated when a new agent is available.

Installing the Ghost Solution Suite agent for Mac using console

- 1 Copy the following files from `<Install_dir>\Program Files (x86)\Altiris\Express\Deployment Server\Agents\ADLAgent\` from GSS server to the Mac clients.
 - `altiris-adlagent-2.6-<buildnumber>.Darwin.zip`
 - `altiris-adlagent-2.6-<buildnumber>.i386.bin`
 - `altiris-adlagent-2.6-<buildnumber>.x86_64.bin`
 - `altiris-tcsdk-adlagent-2.6-<buildnumber>.i686.bin`
- 2 Unzip the `altiris-adlagent-2.6-<buildnumber>.Darwin.zip` file.
- 3 In the extracted folder check if the `altiris-adlagent-2.6-<buildnumber>.Darwin.pkg` is extracted and install it.

Note: To start or stop the adlagent on Mac computers, navigate to `/etc/altiris/deployment/adlagent/` and run the following commands:

```
./adlagent stop  
./adlagent start
```

- 4 Enter the IP address of the Ghost Solution Suite server which you want to register.
- 5 Enter the IP address of Mac client computer on which you want to install the agent.

After the agent installation is complete the agent automatically gets started. The registered Mac Agent can be viewed under All Computers section in Ghost Solution Suite Console.

Installing the Ghost Solution Suite agent for Mac using command line

- 1 Copy the following files from `<Install_dir>\Program Files (x86)\Altiris\Express\Deployment Server\Agents\ADLAgent\` from GSS server to the Mac clients.
 - `altiris-adlagent-2.6-<buildnumber>.Darwin.zip`
 - `altiris-adlagent-2.6-<buildnumber>.i386.bin`
 - `altiris-adlagent-2.6-<buildnumber>.x86_64.bin`
 - `altiris-tcsdk-adlagent-2.6-<buildnumber>.i686.bin`
 - 2 Unzip the `altiris-adlagent-2.6-<buildnumber>.Darwin.zip` file.
 - 3 In the extracted folder check if the `altiris-adlagent-2.6- <buildnumber>.Darwin.pkg` is extracted and run the following command to install it:

```
sudo installer -pkg altiris-adlagent-2.6-<buildnumber>.Darwin.pkg -target/
```
 - 4 After successful installation, go to `<Install Folder>/conf/` folder and edit `adlagent.conf` file and provide IP of the GSS server computer.
 - 5 Then start the adlagent process `/etc/altiris/deployment/adlagent/ adlagent start`.
- You can now view the managed Mac computers from the Ghost Solution Suite Console.
- See [“Installing Ghost Solution Suite Agents”](#) on page 37.

Installing the automation agent

Here are some other ways to create and install an Automation Agent, which is saved in an embedded (recommended) or hidden partition on the client computer's hard disk.

- For Ghost Solution Suite systems running the PXE Server, create boot menu options from the PXE Configuration Utility, using one of the following methods: **Boot Disk Creator**, **Direct from floppy**, or **User Specified**. See *PXE Configuration Utility Help*.

Installation help

The following are the help file topics for the Ghost Solution Suite Server installation program that you can access by clicking **Help** or pressing the F1 key. These topics identify and explain the elements on the dialogs used in the installation process.

Installing Ghost Solution Suite Server

Specify the eXpress Share (shared directory) where you want to store the image files, and other package files. Before installing the Ghost Solution Suite Server, ensure that you have a shared Windows or NetWare directory with free disk space and appropriate security rights.

File server path. Select the drive letter and directory path where you want to install the Ghost Solution Suite Server. The default path is the Program Files directory on the local computer.

Create Ghost Solution Suite Share . If you are installing the Ghost Solution Suite Server on a local Windows computer, select this option to create a shared directory as your eXpress Share. If you are installing on a remote file server or if you select an invalid path, this option is unavailable.

Note: If you are installing the Ghost Solution Suite Server on a remote file server, create a share or grant access rights to the Ghost Solution Suite Server directory on the file server before you start the installation.

See [“Deployment Share or eXpress Share ”](#) on page 25.

Select one of the following options to configure the licensing information:

See [“Ghost Solution Suite Server components”](#) on page 22.

See [“Installing Ghost Solution Suite Server”](#) on page 49.

Installing Ghost Solution Suite Server using component install

Specify the eXpress Share (shared directory) where the image files, and other package files are stored. Ensure that you have a shared Windows or NetWare directory with available disk space and security rights before installing.

See [“Deployment Share or eXpress Share ”](#) on page 25.

Ghost Solution Suite Server install

Install the Ghost Solution Suite Server on a server. The service is identified in the Services section of the Windows Computer Management as **Altiris eXpress Server**.

See [“Ghost Solution Suite Server”](#) on page 23.

To install service on a local server

- 1 Select the **On this computer** option.
- 2 Enter the Ghost Solution Suite Server IP address and port information.

- 3 Enter the path to install the Ghost Solution Suite Server.
- 4 Enter the user name and password of the Ghost Solution Suite Server. For a domain account, enter the domain and user name. Create this account before starting the installation.

To install service on a remote server

- 1 Select the **On a remote computer** option.
- 2 Enter the name of the computer or browse to where you want to install. By default, the destination path and IP address of the computer appear.
- 3 Enter the user name and password of an administrator account for the Ghost Solution Suite Server computer. For domain accounts, include the domain name (Example: orgDomain/admin). The user account must have rights to the eXpress Share. Create the administrator domain account before starting the installation.

See [“Deployment Share or eXpress Share”](#) on page 25.

See [“Ghost Solution Suite Server components”](#) on page 22.

See [“Installing Ghost Solution Suite Server”](#) on page 49.

Ghost Solution Suite Database install

Install the Ghost Solution Suite Database on a local or remote server with or without an existing Microsoft Data Engine (MSDE) or Microsoft SQL Server. To install the database, you must have administration rights to the selected server.

See [“Ghost Solution Suite Database”](#) on page 24.

Note: If you have multiple instances of the Microsoft SQL Server already set up, you can identify a specific instance using this format: <SQL Server Name>\<database instance>. The instance of the database can vary. Example: If you have a clustered Microsoft SQL Server to manage multiple Ghost Solution Suite systems on different network segments, you can enter the name `salesSegment\express` or `marketingSegment\express` depending on the previously established database instance.

Install the Ghost Solution Suite Database using these options:

- Select the Microsoft SQL Server instance where you want to install your Ghost Solution Suite Database.
- You can also change the default SQL Port number.
- You can rename the Ghost Solution Suite Database default name, eXpress, by entering a different name in the **Database Name** field. However, this does not alter the eXpress Share name.

See [“Ghost Solution Suite Server components”](#) on page 22.

PXE server install

See [“PXE server”](#) on page 26.

Note: If you have a Novell NetWare file server, you must set up the PXE Server after installing the Ghost Solution Suite Server. The Universal Network Device Interface (UNDI) default driver is not supported by Novell NetWare.

- **Note:** This option is unavailable for installing the PXE Servers using the Component Install option.
 - Select the **Yes, I want to install PXE Server on this computer** option to install the PXE Server on the local computer.
-

Note: This option is selected by default for the Component Install.

- Select **Yes, I want to install PXE Server on a remote computer** to install the PXE Server on a remote computer. Enter the name of the computer and the path.
- Enter the IP address for the PXE Server and the Ghost Solution Suite Server.
- Enter the path where you want to install the PXE Server.

See [“Installing the automation agent”](#) on page 48.

Client connection to server

Select the protocol your managed computers can use to connect to the Ghost Solution Suite Server.

Connect directly to Ghost Solution Suite Server. Installs the PXE Server using the Intel Pre-boot eXecution Environment (for PXE-compliant computers only). You can use this without PXE for faster access, as it goes directly to the IP address without searching.

If managed computers are on a different segment or if you are using the PXE Server with an UNDI driver, click **Connect directly to Ghost Solution Suite Server** and enter the IP address of the Ghost Solution Suite Server that the managed computers can connect to. Do not change the port number unless the default is already being used.

Note: If you change the port number, you must change the client configurations.

Discover Ghost Solution Suite Server using TCP/IP multicast. Lets the managed computers connect to any Ghost Solution Suite Server. To use multicasting and connect to a specific Ghost Solution Suite Server, enter the name of the Ghost Solution Suite Server computer.

Multicasting cannot be used with the UNDI driver. If you want to use different drivers on the PXE Server, you can create multiple PXE boot files after installing.

Installing components

Click **Install**, or click **Back** to change the settings.

See [“Ghost Solution Suite Server components”](#) on page 22.

Ghost Solution Suite Database authentication

Specify the type of authentication the Ghost Solution Suite Database will use. You can select Windows authentication or SQL Server authentication. If you select SQL authentication, enter the user credentials with administrative rights for the SQL database.

Use Windows NT authentication. Select this option to use the Windows network or Active Directory authentication.

Use SQL Server authentication. Enter the user name and password set for the Microsoft SQL Server. If using MSDE, the default "sa" user name is used and no password is required.

See [“Ghost Solution Suite Server components”](#) on page 22.

See [“Installing Ghost Solution Suite Server”](#) on page 12.

Add components

If you have already installed Ghost Solution Suite Server, you can add components to the existing system. Select the type of component you want to add.

See [“Ghost Solution Suite Server components”](#) on page 22.

Upgrading to Ghost Solution Suite 3.3

This chapter includes the following topics:

- [Supported upgrade paths for Ghost Solution Suite 3.3](#)

Supported upgrade paths for Ghost Solution Suite 3.3

You can install Ghost Solution Suite 3.3 (2121) in any of the following scenarios:

- Fresh installation of Ghost Solution Suite 3.3
- Upgrade to Ghost Solution Suite 3.3 from any of the following paths:
 - Ghost Solution Suite 3.2 RU7
The Ghost Solution Suite agent gets automatically upgraded on the client computers.
 - Ghost Solution Suite 3.1 MP 6
The Ghost Solution Suite agent gets automatically upgraded on the client computers.
 - Ghost Solution Suite 3.0 HF5
The Ghost Solution Suite agent gets automatically upgraded on the client computers.

Note: For troubleshooting issues related to agent upgrade by enabling and disabling security: refer to the following article:

[DOC9697](#)

To get the latest binaries in the preboot images and automation folder environments, Symantec recommends recreating the automation folders and preboot environment images after you upgrade to GSS 3.3.

Nature of installation

Ghost Solution Suite 3.3 supports both attended as well as silent installation. The following list outlines the nature of installation supported for Ghost Solution Suite 3.3:

- Attended installation
[To install Ghost Solution Suite 3.3](#)
- Silent installation
 Ghost Solution Suite lets your run silent install of Ghost Solution Suite Server for the following scenarios:
 - Fresh installation
[To perform Silent Install for fresh installation](#)
 - Upgrade from Ghost Solution Suite 3.2 RU7
[To perform Silent Install when you upgrade from Ghost Solution Suite 3.2 RU7](#)
 - Upgrade from Ghost Solution Suite 3.1 and Ghost Solution 3.1 MP6
[To perform Silent Install when you upgrade from GSS 3.1 MP6](#)
 - Upgrade from Ghost Solution Suite 3.0 HF5
[To perform Silent Install when you upgrade from GSS 3.0 HF5](#)

The following table lists the supported upgrade paths:

Table 3-1 Supported upgrade paths

Upgrade from	Upgrade to
GSS 3.2 RU7	GSS 3.3
GSS 3.1 MP6	GSS 3.3
GSS 3.0 HF5	GSS 3.3

To install Ghost Solution Suite 3.3

- 1 Download and launch the Ghost Solution Suite 3.3 installer.

You can download the GSS 3.3 using either of the following ways:

- <http://fileconnect.symantec.com/>
 Use the Ghost Solution Suite Serial number to download the Ghost Solution Suite 3.3.
- https://www4.symantec.com/Vrt/offer?a_id=32763

Use your Symantec account to download the trialware version of the Ghost Solution Suite 3.3.

- 2 On the Symantec Ghost Solution Suite 3.3 window, check **I accept the terms in the Licence Agreement**.
- 3 Click **Install**.
- 4 Click **Finish**.

To perform Silent Install for fresh installation

- 1 Download and launch the Ghost Solution Suite 3.3 installer.

You can download the GSS 3.3 using either of the following ways:

- <http://fileconnect.symantec.com/>
Use the Ghost Solution Suite Serial number to download the Ghost Solution Suite 3.3.
- https://www4.symantec.com/Vrt/offer?a_id=32763
Use your Symantec account to download the trialware version of the Ghost Solution Suite 3.3.

- 2 Run the command `axinstall.exe -i` in the command window.

This command launches the installer and captures all the values from the different windows and creates a `silent.ini` file.

If you want to launch the simple install, run the command `axinstall.exe -i-S`.

If you want to launch custom install, run the command `axinstall.exe -i-C`.

- 3 Run the `axinstall.exe -t silent.ini` command in the command window to complete the silent installation.

To perform Silent Install when you upgrade from Ghost Solution Suite 3.2 RU7

- 1 Download and launch the Ghost Solution Suite 3.3 installer.

You can download the GSS 3.3 using either of the following ways:

- <http://fileconnect.symantec.com/>
Use the Ghost Solution Suite Serial number to download the Ghost Solution Suite 3.3.
- https://www4.symantec.com/Vrt/offer?a_id=32763
Use your Symantec account to download the trialware version of the Ghost Solution Suite 3.3.

- 2 Stop the following services:

- Altiris Deployment Server Data Manager
- Altiris Deployment Server DB Management
- Altiris eXpress Server

- Altiris PXE Config Helper
 - Altiris PXE Manager
 - Altiris PXE MTFTP Server
 - Altiris PXE Server
- 3 Run the command `axinstall.exe -i` in the command window.
 This command launches the installer and captures all the values from the different windows and creates a `silent.ini` file.
 - 4 Run the `axinstall.exe -t silent.ini` command in the command window to complete the silent installation.

To perform Silent Install when you upgrade from GSS 3.1 MP6

- 1 Download and launch the Ghost Solution Suite 3.3 installer.
 You can download the GSS 3.3 using either of the following ways:
 - <http://fileconnect.symantec.com/>
 Use the Ghost Solution Suite Serial number to download the Ghost Solution Suite 3.3.
 - https://www4.symantec.com/Vrt/offer?a_id=32763
 Use your Symantec account to download the trialware version of the Ghost Solution Suite 3.3.
- 2 Stop the following services:
 - Altiris Deployment Server DB Management
 - Altiris eXpress Server
 - Altiris PXE Config Helper
 - Altiris PXE Manager
 - Altiris PXE MTFTP Server
 - Altiris PXE Server
- 3 Run the command `axinstall.exe -i` in the command window.
 This command launches the installer and captures all the values from the different windows and creates a `silent.ini` file.
- 4 Run the `axinstall.exe -t silent.ini` command in the command window to complete the silent installation.

To perform Silent Install when you upgrade from GSS 3.0 HF5

- 1 Download and launch the Ghost Solution Suite 3.3 installer.
 You can download the GSS 3.3 using either of the following ways:

- <http://fileconnect.symantec.com/>
Use the Ghost Solution Suite Serial number to download the Ghost Solution Suite 3.3.
 - https://www4.symantec.com/Vrt/offer?a_id=32763
Use your Symantec account to download the trialware version of the Ghost Solution Suite 3.3.
- 2 Stop the following services:
 - Altiris Deployment Server DB Management
 - Altiris eXpress Server
 - Altiris PXE Config Helper
 - Altiris PXE Manager
 - Altiris PXE MTFTP Server
 - Altiris PXE Server
 - 3 Run the command `axinstall.exe -i` in the command window.
This command launches the installer and captures all the values from the different windows and creates a `silent.ini` file.
 - 4 Run the `axinstall.exe -t silent.ini` command in the command window to complete the silent installation.

Note: Symantec recommends closing the Ghost Solution Suite Console and any other jobs or tasks that are scheduled before starting the installation of GSS 3.3.

Troubleshooting tips

This appendix includes the following topics:

- [Troubleshooting tips](#)

Troubleshooting tips

To troubleshoot various problems that you might face during installation and upgrade of Ghost Solution Suite, you can collect the following logs to analyze the issues:

- **Deployment Folder**
A set of logs are created under the <Install_Path>\Program Files (x86)\Altiris\Express\Deployment Server
 - dbinstaller.log
 - dbmanager.log
 - PXE.log
If the PXE server is remotely installed, the PXE.log is created on the <Install_dir>:\ of the remote computer.
 - PXEMgr.log
 - dataStor.log
 - logserver.log
 - Console.log
If the console is installed on a remote computer the console logs are created on the remote computer.
- **Temp Folder**
 - GSSupgradeutility.log

The following table lists the troubleshooting tips of Ghost Solution Suite:

Table A-1 Troubleshooting tips

Issue	Description	Workaround
The SEP Network Threat Protection feature blocks PXE server connection.	The SEP Network Threat Protection feature blocks PXE server from connecting to Ghost Solution Suite client computers.	Disable the following: <ul style="list-style-type: none"> ■ Network-related policies ■ Turn off the firewall if you want to install the agent remotely using RAI.
For an environment with SEP 14, provide access to network for Ghost Solution Suite 3.3 executables.	For an environment with SEP 14, you are required to manually provide access to network for various Ghost Solution Suite 3.3 executables such as DBInstaller.exe.	Upgrade to SEP 14.2 version as these issues have been fixed in SEP 14.2 version. You can also provide access to the executables manually. Refer to the Troubleshooting section of the Ghost Solution Suite 3.2 RU7 release notes at the following URL: DOC11049
Installation or Upgrade to Ghost Solution Suite 3.3 fails with the following error: <pre>Failed to perform Database changes before upgrade.</pre>	Installation and upgrade to Ghost Solution Suite 3.3 on a Windows 2012 R2 computer fails.	Before you install or upgrade to Ghost Solution Suite 3.3, you must download and install the Microsoft KB2919355 .
In a distributed setup, unable to access web console remotely using the IP address of the Ghost Solution Suite Server.	In case of a distributed setup with Windows Authentication mode for SQL, you cannot access the web console remotely using the Ghost Solution Suite Server IP address.	In case of remote database setup, configuring the environment by changing the Windows Authentication to SQL Authentication.