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Installation Guide

for use with
Integrated Cisco® Products

Websense Enterprise Installation Guide

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Contents

CHAPTER 1 | Introduction

Thank you for choosing Websense Enterprise®, the leading web filtering system that integrates with Cisco® Adaptive Security Appliance (ASA), Cisco PIX® Firewall, Cisco Content Engine, and Cisco Routers. Using Websense in conjunction with an integrated Cisco product provides you with a highly effective internet filtering service.

Websense gives network administrators in business, education, government, and other enterprises the ability to monitor and control network traffic to internet sites. In the business setting, Websense Enterprise is an invaluable tool for minimizing employee downtime due to internet surfing that is not work related. In addition, Websense helps control the misuse of network resources and the threat of potential legal action due to inappropriate access.

Websense, Inc. strongly recommends that your users be informed of your organization's policies concerning internet access, and that Websense Enterprise has been installed as a tool for monitoring activity and/or enforcing your internet use policies.

About this Guide

All installation procedures in this guide apply equally to Websense Enterprise and Websense Enterprise – Corporate Edition. The same software is installed for these two products, but the Corporate Edition feature set is enabled only if you enter a Corporate Edition subscription key. For information about Corporate Edition features, refer to the Websense Enterprise *Administrator's Guide*.

If you are installing Websense Web Security Suite™, Websense Web Security Suite – Lockdown Edition™, Websense Web Security Suite – Corporate Edition, or Websense Web Security Suite Lockdown – Corporate Edition, read the *Websense Web Security Suite Quick Start Guide* first. The Quick Start Guide contains the installation and setup instructions that are specific to the Web Security Suite products and are not found in any other document. You can download the Quick Start Guide from: http://www.websense.com/global/en/SupportAndKB/ProductDocumentation. If you are installing Web

Security Suite integrated with Cisco Adaptive Security Appliance (ASA), Cisco PIX Firewall, Cisco Content Engine, or Cisco Routers, the installation and setup information provided in this installation guide is required to install the Web Security Suite components of your Websense Web Security Suite product.

Websense Enterprise Components

The following is a list of Websense Enterprise components. For detailed information about each of these components, refer to the Websense Enterprise *Administrator's Guide*:

- **Filtering Service**: interacts with an integrated Cisco product to provide web filtering.
- **Policy Server**: stores all Websense Enterprise configuration information and communicates this data to other Websense services.
- **Websense Manager**: administrative interface that allows you to configure and manage Websense functionality through the Policy Server. Websense Manager is used to define and customize internet access policies, add or remove clients, configure Policy Server, and much more.
- **User Service**: allows you to apply filtering policies based on users, groups, domains, and organizational units.
- **Network Agent**: detects HTTP network activity and instructs the Filtering Service to log this information. You must install the Network Agent and configure it properly to use the Bandwidth Optimizer, Protocol Management, and IM Attachment Manager features, and to log the number of bytes transferred and duration of transfer. Network Agent is also used as the filtering component for a stand-alone (non-integrated) Websense system.
- **Usage Monitor**: tracks users' internet activity and sends alerts when configured threshold values are crossed.
- **DC Agent**: an optional component that transparently identifies users who authenticate through a Windows® directory service. DC Agent enables Websense to filter internet requests according to particular policies assigned to users or groups.
- **RADIUS Agent**: an optional component that works through a RADIUS Server to transparently identify users and groups who access your network using a dial-up, Virtual Private Network (VPN), Digital Subscriber Line (DSL), or other remote connections.

- **eDirectory Agent**: an optional component that works together with Novell eDirectory to transparently identify users so that Websense can filter them according to particular policies assigned to users or groups.
- **Logon Agent**: an optional component that works with a Websense client application (`LogonApp.exe`) to transparently identify users as they log on to a Windows domain via client machines. Logon Agent can be used with a Windows NT-based directory service or with Active Directory, which is LDAP-based. Logon Agent receives its user information from the logon application, `LogonApp.exe`, which must be run by a logon script in your network.
- **Real-Time Analyzer (RTA)**: displays the real-time status of all the traffic filtered by Websense Enterprise. RTA graphically displays bandwidth information and shows requests by category or protocol.
- **Remote Filtering Server**: an optional component that provides web filtering for machines located outside your organization's network firewall or internet gateway. In order to be filtered through the Remote Filtering Server, a remote workstation must be running the Remote Filtering Client. The Remote Filtering Server is enabled only if you subscribe to the remote filtering service.
- **Remote Filtering Client**: an optional component installed on client machines, such as notebook computers, that will be used outside your organization's network firewall or internet gateway. This component connects with a Remote Filtering Server inside the network firewall to enable web filtering of the remote workstation. The Remote Filtering Client is enabled only if you subscribe to the remote filtering service.
- **Websense Master Database**: contains a collection of more than 11 million internet sites, each categorized by content. In addition, the Master Database contains protocols for such things as streaming media, peer-to-peer file sharing, and instant messaging.
- **Websense Enterprise Reporter**: a separate program available free of charge with Websense Enterprise. Its Log Server component records internet activity on your network. Using this log information, Reporter can generate a wide variety of reports and charts depicting your network's internet usage trends. These reports can be used to refine internet filtering strategies, helping to maximize network resources and employee productivity. Refer to the Websense Enterprise Reporter documentation for installation and configuration procedures.
- **Websense Enterprise Explorer**: a web-based reporting application available free of charge with Websense Enterprise. Explorer provides a

customizable view into the Log Database. It displays summary information, as well as specific detail about users' internet activity. Refer to the *Websense Enterprise Explorer Administrator's Guide* for installation and configuration procedures.

- **Websense Enterprise Explorer for Unix**: a web-based reporting application available free of charge with Websense Enterprise. Explorer for Unix provides the same functionality as Websense Enterprise Explorer, but for UNIX-based operating systems. Refer to the *Websense Enterprise Explorer Administrator's Guide* for installation and configuration procedures.

How Websense Works

Websense Enterprise is the engine by which content filtering is enforced. With its flexible, policy-based filtering approach, Websense allows you to apply different filtering policies to different clients (users, groups, domains/ organizational units, workstations, or networks).

When a Cisco integration receives an internet request from a client, it queries Websense Enterprise to find out whether the requested site should be blocked or not. To make this determination, Websense consults the policy assigned to the client. Each policy delineates specific time periods during the week and lists the category sets that are in effect during those time periods. After it determines which categories are blocked, Websense Enterprise consults its comprehensive database of internet addresses (URLs). If the site is assigned to a blocked category, the user receives a block page instead of the requested site. If the site is assigned to a permitted category, Websense Enterprise notifies the Cisco integration that the site is not blocked, and the site is returned to the user.

Websense Enterprise filters network applications that use TCP-based protocols and measures bandwidth usage of UDP-based messages as well. If an initial internet request is made with TCP, and the request is blocked by Websense Enterprise, all subsequent UDP traffic will also be blocked. UDP protocols such as RTSP and RTP are monitored and logged by Websense Enterprise.

The Quota feature is an alternative to full blocking. It gives employees time each day to visit sites in categories you deem appropriate. Quotas can be a powerful tool for internet access management. Quotas help you control how much time your employees spend on personal surfing and the types of sites they are able to access. For more information, refer to your Websense Enterprise *Administrator's Guide*.

With the Protocol Management feature, Websense Enterprise can filter internet protocols other than HTTP. This includes protocols, applications, or other data transfer methods such as those used for instant messaging, streaming media, file sharing, file transfer, internet mail, and various other network or database operations. You must install the Network Agent to use protocol management.

If you have purchased Bandwidth Optimizer and have installed the Network Agent, Websense Enterprise can filter internet sites, protocols, or applications based on available network bandwidth. You can specify filtering settings to limit user access to sites, protocols, or applications based on bandwidth usage.

If you have purchased the Instant Messaging (IM) Attachment Manager, you can configure Websense Enterprise to restrict file attachment sending and file sharing with IM clients. This feature enhances the default IM controls in Websense Enterprise by allowing you to permit certain IM traffic while blocking the transfer of attachments by those IM clients.

Deployment Tasks

The following sequence is recommended for installing Websense Enterprise and configuring it to filter internet traffic with Cisco Adaptive Security Appliance (ASA), Cisco PIX Firewall, Cisco Content Engine, or Cisco Routers.

1. **Plan the Websense deployment**: Websense components can be deployed in various combinations depending upon the size and architecture of your network. Deciding what Websense components to install and where to put them is your first task. The information required to make this decision can be found in the Websense Enterprise *Deployment Guide*. For an overview of basic deployment in a small network (< 500 users), as well as deployment information specific to your integration product, see *Chapter 2: Network Configuration*.
2. **Install Websense**: Once you have decided how to deploy Websense on your network, you must install the selected components and perform initial setup tasks. Refer to *Chapter 4: Installation* for the installation procedures for each operating system.
3. **Configure your integration**: You must direct internet requests through your Cisco integration. This is the last step in the installation and configuration process. See *Chapter 6: Configuring Your Cisco Integration* for instructions.

CHAPTER 2 | Network Configuration

Websense Enterprise components can be installed in a number of possible configurations, depending upon the nature of your network and your filtering requirements. To determine the appropriate deployment for your network, please refer to the Websense Enterprise *Deployment Guide*.

The information in this chapter provides an overview of where Websense Enterprise components can be installed to help you determine the relationship of Websense components and your integration product to one another. System requirements for your integration product are included in this chapter. All other system requirements are listed in the Websense Enterprise *Deployment Guide*.

Websense Enterprise Components

When deciding how to deploy Websense Enterprise components in your network, consider the following installation dependencies:

- **Filtering Service**: typically installed on the same machine as the Policy Server and may be installed on the same machine as the Websense Manager. The Filtering Service can be installed on a different operating system than the Policy Server, as long as they are properly configured to communicate with each other. This is an unusual deployment. The Filtering Service installs on Windows, Solaris, and Linux. You can install a maximum of 10 Filtering Services for each Policy Server if they employ quality network connections. For additional information, refer to the Websense Enterprise *Deployment Guide*.
- **Policy Server**: typically installed on the same machine as the Filtering Service, but may be installed on a separate machine, depending upon the configuration of your network. There must be only one Policy Server installed for each *logical* installation. An example would be a Policy Server that delivers the same policies and categories to each machine in a subnet. The Policy Server installs on Windows, Solaris, and Linux.

- **Websense Manager**: may be installed on the same machine as the Policy Server, and/or on one or more different machines in your network. The Websense Manager machine needs network access to the Policy Server machine, but the two machines do not need to have the same operating system. The Websense Manager installs on Windows and Solaris.
- **User Service**: installed in networks using a directory service for authentication. User Service is unnecessary if you intend to filter and log internet requests based on client workstation IP addresses only. User Service can be installed on the same operating systems supported by the Policy Server and is typically installed on the same machine; however, you may install User Service on a different operating system than the Policy Server. If the Policy Server is installed on Linux, for example, you can install User Service separately on a Windows machine. User Service installs on Windows, Solaris, and Linux.

  IMPORTANT

  You can have only one User Service installation for each Policy Server in your network.

  For systems providing multilingual support, User Service produces correct results for one *locale* only. The locale of the Policy Server determines the language it supports for directory services. Organizations with multilingual support requirements must install the product suite (User Service, Policy Server, and the Filtering Service) for each supported language on machines configured for that language.
- **Network Agent**: can be installed on the Filtering Service machine or separately, depending upon your needs and the configuration of your network. Network Agent installs on Windows, Solaris, and Linux. When planning the deployment of the Network Agent consider the following:
  - The Network Agent must be able to directly *see* 2-way internet traffic from your internal network to filter and log effectively. Make sure your network configuration routes both the internet request *from* the workstation and the response from the internet back *to* the workstation past the Network Agent. For the best performance, install the Network Agent on a dedicated machine, connected to an unmanaged, unswitched hub that is located between an external router and your network. See *Switched Environments*, page 26 if you are installing Network Agent in a network that employs switches.

- For small to medium sized organizations, the Network Agent can be installed on the same server machine as the other Websense Enterprise components, assuming that the server meets the minimum system requirements. For larger organizations, you may want to put the Network Agent on a separate, dedicated server to increase the amount of traffic that can be managed.
- On larger networks, you may need to install multiple Network Agents and assign them to monitor various IP address ranges in your network. Make sure that the IP address ranges for each instance of the Network Agent do not overlap. This will result in double logging. Deploy the Network Agents so that they can filter the entire network. Partial deployment will result in incomplete filtering by protocol and bandwidth, as well as the loss of log data from network segments not watched by the Network Agent. For instructions on defining IP address ranges for multiple Network Agents, refer to the Websense Enterprise *Administrator's Guide*.
- Avoid deploying the Network Agent across different LANs. If you install an instance of Network Agent on 192.x.x.x and configure it to communicate with a Filtering Service on 10.x.x.x through a variety of switches and routers, communication may be slowed enough to prevent the Network Agent from blocking an internet request in time.
- *Do not* install the Network Agent on a machine running any type of firewall. The Network Agent uses a packet capturing utility which may not work properly when installed on a firewall machine.

- **Usage Monitor**: typically installed on the same machine as the Policy Server, but may be installed on a separate machine in your network that has access to the Policy Server machine. The Usage Monitor installs on Windows, Solaris, and Linux.

  IMPORTANT

  You can have only one installation of Usage Monitor for each Policy Server in your network.

- **Real-Time Analyzer (RTA)**: can be installed on the same machine as the Filtering Service or on a separate machine. The Real-Time Analyzer installs on Windows only.

  Real-Time Analyzer (RTA) can be memory and CPU demanding, depending on desired system settings and network load conditions, so it

should not be installed on real-time critical machines. See the Websense Enterprise *Deployment Guide* for more information.

IMPORTANT

You can have only one installation of RTA for each Policy Server in your network.

You must have one of the following web servers installed on the machine where you plan to install RTA:

- Apache Web Server
- Microsoft IIS

NOTE

If you do not have one of the supported web servers on your system, the Websense Enterprise installer will offer you the option of installing the Apache Web Server.

For information about supported versions of these web servers, see the Websense Enterprise *Deployment Guide*.

- **DC Agent**: installed in networks using a Windows directory service (NTLM-based or Active Directory). DC Agent can be installed on any Windows server in the network, either on the same machine as other Websense components, or on a different machine. DC Agent installs on Windows only.
  - For small to medium networks, it is recommended that you install only one DC Agent per domain. If you have a large, distributed network with many domain controllers on the same domain, you can install multiple DC Agents. Installing DC Agent on the domain controller machine is *not* recommended. DC Agent can be installed on any network segment as long as NetBIOS is allowed between the DC Agent and the domain controllers. Setting up the DC Agent in the DMZ is not recommended.
  - You may install DC Agent and the RADIUS Agent together on the same machine or on separate machines in your network.
  - DC Agent and eDirectory Agent can be installed in the same network, but cannot be active at the same time. Websense Enterprise does not support communication with Windows and Novell directory services simultaneously.

- If DC Agent is not identifying all your users as anticipated, you may install Logon Agent as well to improve user authentication in your network. For example, this might be necessary in a network that uses Windows 98 workstations. DC Agent uses workstation *polling* to get user information from workstations as they make internet requests; however, polling cannot retrieve user information from a Windows 98 workstation.
- If you are installing DC Agent, be sure that the machine names of any Windows 9x workstations in your network do not contain any spaces. This situation could prevent DC Agent from receiving a user name when an internet request is made from that workstation.

For configuration information, refer to the *User Identification* chapter in the Websense Enterprise *Administrator's Guide*. For detailed deployment information, refer to the white paper titled *Transparent Identification of Users in Websense Enterprise* found on the Websense website at: http://www.websense.com/global/en/SupportAndKB/ProductDocumentation.

- **RADIUS Agent**: can be installed on the same machine as Websense Enterprise or installed on a separate machine in your network. You may install multiple RADIUS Agents on the same network, each configured to communicate with the Filtering Service. RADIUS Agent can be used in conjunction with either Windows- or LDAP-based directory services. You can install RADIUS Agent and eDirectory Agent on the same machine or on separate machines in your network. The RADIUS Agent installs on Windows, Solaris, and Linux from a **Custom** installation only.

  For configuration information, refer to the *User Identification* chapter in the Websense Enterprise *Administrator's Guide*. For detailed deployment information, refer to the white paper titled *Transparent Identification of Users in Websense Enterprise* found on the Websense website at: http://www.websense.com/global/en/SupportAndKB/ProductDocumentation.

- **eDirectory Agent**: can be installed on the same machine as Websense Enterprise or installed on a separate machine in your network. You can install multiple eDirectory Agents on the same network, each configured to communicate with the Filtering Service.You can install eDirectory and RADIUS Agent on the same machine or on separate machines in your network. The eDirectory Agent can be installed in the same network as DC Agent or Logon Agent, but cannot be active at the same time, since Websense Enterprise does not support communication with Windows and Novell directory services simultaneously. The eDirectory Agent installs on Windows, Solaris, and Linux.

For configuration information, refer to the *User Identification* chapter in the Websense Enterprise *Administrator's Guide*. For detailed deployment information, refer to the white paper titled *Transparent Identification of Users in Websense Enterprise* found on the Websense website at: http://www.websense.com/global/en/SupportAndKB/ProductDocumentation.

- **Logon Agent**: can be installed on the same machine as Websense Enterprise or installed on a separate machine in your network. Logon Agent may be installed together with DC Agent to improve the accuracy of user authentication in your network. The Logon Agent runs on Windows, Linux, or Solaris, and works together with the User Service and Filtering Service. Logon Agent can be used with a Windows NT-based directory service or with Active Directory, which is LDAP-based. `LogonApp.exe`, the client application that passes user logon information to Logon Agent, runs only on Windows client machines. You must create a logon script to run `LogonApp.exe` in your network; refer to *Creating and Running the Script for Logon Agent*, page 192 for instructions. Logon Agent and eDirectory Agent can be installed in the same network, but cannot be active at the same time, since Websense Enterprise does not support communication with Windows and Novell directory services simultaneously.

  For configuration information, refer to the *User Identification* chapter in the Websense Enterprise *Administrator's Guide*. For detailed deployment information, refer to the white paper titled *Transparent Identification of Users in Websense Enterprise* found on the Websense website at: http://www.websense.com/global/en/SupportAndKB/ProductDocumentation.

- **Remote Filtering components**

  The Remote Filtering components are required only if you want to enable web filtering on user workstations located outside your organization's network firewall or internet gateway. They can be installed from a **Custom** installation only.

  NOTE

  To enable the Remote Filtering components, you must subscribe to the remote filtering service.

  - **Remote Filtering Server**: should be installed on a separate, dedicated machine. This machine must be able to communicate with the Filtering Service and with Remote Filtering Clients on user

workstations that may be used both inside and outside the network firewall. The Remote Filtering Server installs on Windows, Linux, and Solaris.

The Remote Filtering Server automatically detects whether clients are inside or outside of the network firewall. If it determines that a client is inside the firewall, the user is filtered just like other internal clients. Remote Filtering is only activated if the client is outside the firewall.

If desired, you can install secondary and tertiary Remote Filtering Servers to provide failover protection for the primary Remote Filtering Server. If a Remote Filtering Client on a remote workstation cannot connect with the primary Remote Filtering Server, it will try to connect with the secondary, then the tertiary, then the primary again, and so on.

- Install only one primary Remote Filtering Server for each Filtering Service in your network.
- Do not install the Remote Filtering Server on the same machine as the Filtering Service or Network Agent.
- The Remote Filtering Server machine does not have to be joined to a domain.

Remote Filtering components are not included in the deployment diagrams provided in this chapter. For deployment information and network diagrams, see the Remote Filtering section in the Websense Enterprise *Deployment Guide*.

- **Remote Filtering Client**: can be installed on user machines that you want to filter outside the network firewall. To deploy this client application, you can use the provided installer, called the **Remote Filtering Client Pack**, and a third-party deployment tool. A Remote Filtering Client must be able to communicate with a Remote Filtering Server inside the network firewall to enable web filtering on the remote workstation. The Remote Filtering Client Pack and the Remote Filtering Client install only on Windows.

  Remote Filtering components are not included in the deployment diagrams provided in this chapter. For detailed deployment information and network diagrams, see the Remote Filtering section in the Websense Enterprise *Deployment Guide*.

IMPORTANT

Do not install the Remote Filtering Client on a Remote Filtering Server machine.

- **Websense Enterprise Reporting components**: installed on a separate machine from the Filtering Service, except when evaluating Websense Enterprise. The Log Server receives and saves information on internet requests filtered by Websense Enterprise. Reporter and Explorer then use this information to create reports on users' internet activity. See the Websense Enterprise Reporting documentation for installation and administrative information.

NOTE

To generate reports properly, you must use the same version of Websense Enterprise and the Websense Enterprise Reporting Tools.

Websense Deployment

Websense Enterprise components can be installed on a dedicated server machine as emphasized in this guide or widely distributed across a network on various operating systems. In some cases, Websense Enterprise can be installed on the same machine as your integration product, if the machine has adequate resources. Wherever you decide to deploy Websense Enterprise, make sure that the installation machine can handle the expected traffic load.

The following network diagrams represent common configurations that are intended for smaller networks and are maximized for efficiency. The network architecture in this guide may not be suitable for your network, particularly if your network contains 500 or more users. For larger, distributed networks, and detailed deployment recommendations, refer to the Websense Enterprise *Deployment Guide*. System requirements for your integration product can be found in *System Requirements*, page 31. All other Websense system requirements are listed in the Websense Enterprise *Deployment Guide*.

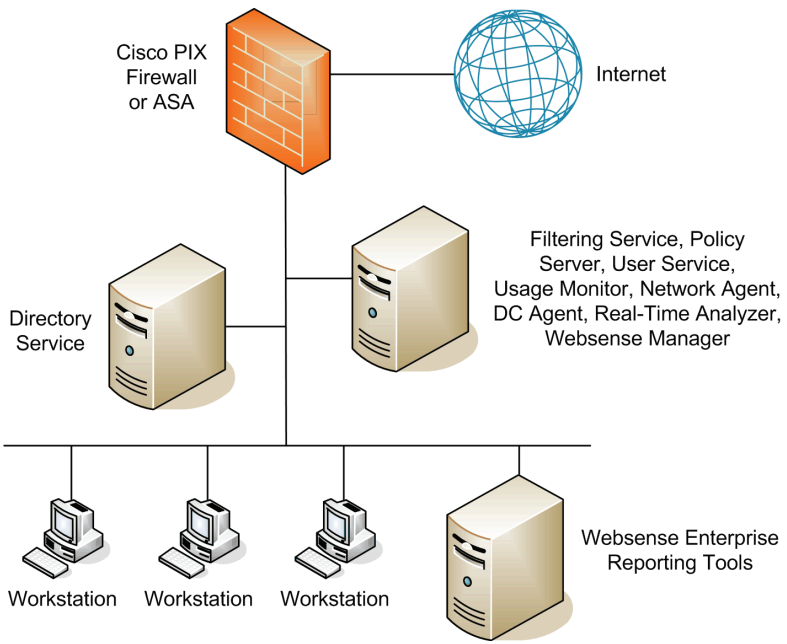
In environments with a large number of workstations, installing multiple instances of Filtering Service for load balancing purposes may be appropriate. Some load balancing configurations, however, permit the same user to be filtered by different Filtering Services, depending on the current load. For instructions on how to configure Websense for multiple Filtering Service installations, refer to the Websense Enterprise *Administrator's Guide.*

Do not install Websense Enterprise and Websense Enterprise Reporting components together on the same machine, or on a machine running a firewall. Filtering and logging functions are CPU intensive and could cause

serious operating system errors. Install Websense Enterprise and Websense Enterprise Reporting components on separate machines inside the network, where they will not have to compete for resources. The exception to this is when Websense Enterprise is being evaluated on a small network or segment of a larger network. For information about how to deploy each of the Websense Enterprise Reporting Tools in your network, see your Websense Enterprise Reporting documentation and the Websense Enterprise *Deployment Guide*.

Cisco PIX Firewall or Cisco Adaptive Security Appliance (ASA)

A simple and common network topology places the Websense Enterprise components on a single machine, communicating with the Cisco PIX Firewall or Cisco Adaptive Security Appliance (ASA) through TCP/IP. For the Network Agent to work properly, the Websense Enterprise machine must be installed so that it can directly see internet traffic on your internal network.

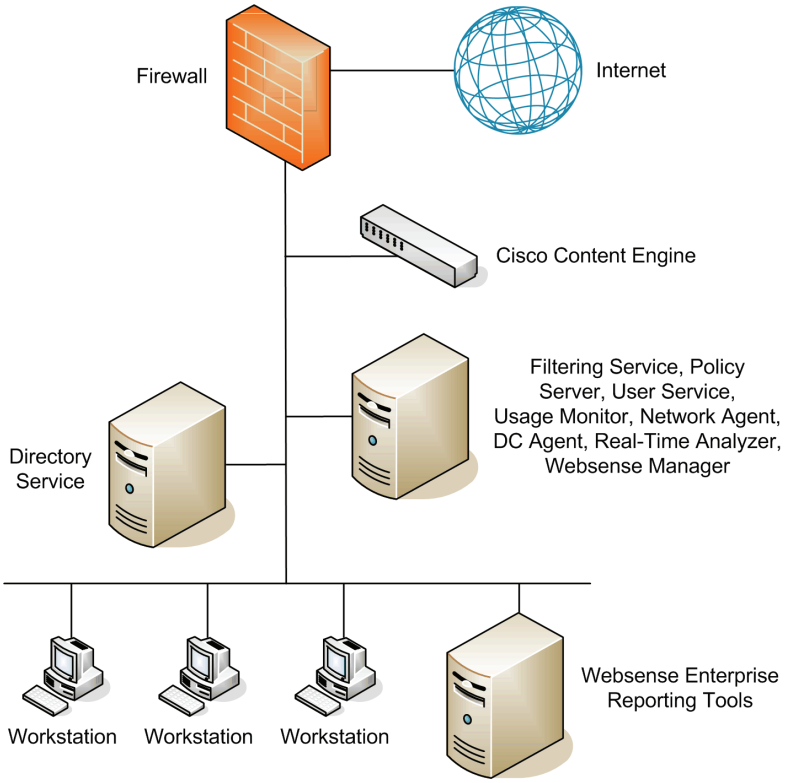


Common Network Configuration for Cisco PIX Firewall or ASA

Other configurations are possible. Consult your Cisco PIX Firewall or ASA documentation and consider the information in this chapter when deciding on the best configuration for your network.

Cisco Content Engine

In this common configuration, the Websense Enterprise components are installed on a single machine, communicating with the Cisco Content Engine through TCP/IP. For the Network Agent to work properly, the Websense Enterprise machine must be installed so that it can directly see internet traffic on your internal network.



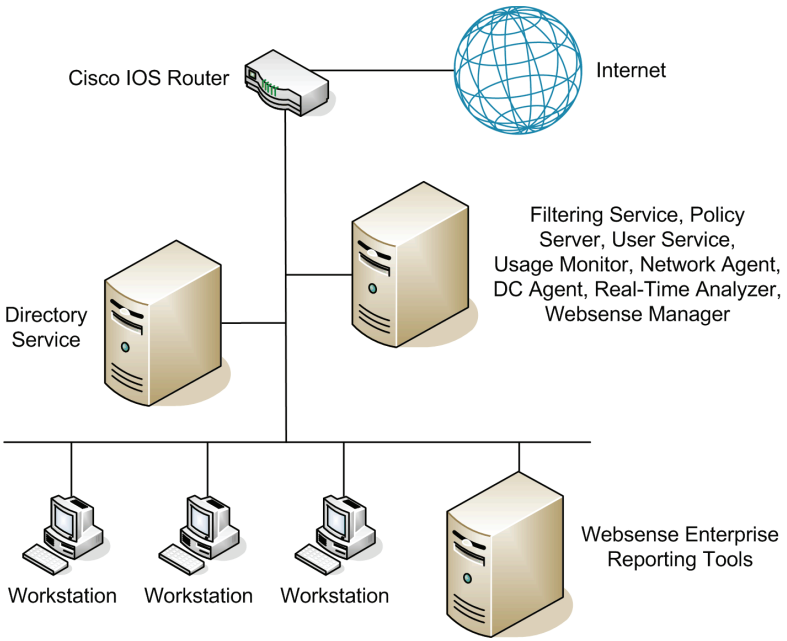
Common Network Configuration for Cisco Content Engine

Other configurations are possible. Consult your Content Engine documentation and consider the information in this chapter when deciding on the best network configuration for your environment.

Cisco IOS Routers

In this common configuration, the Websense Enterprise components are installed on a single machine, communicating with the Cisco IOS Router. For the Network Agent to work properly, the Websense Enterprise machine must be installed so that it can directly see 2-way internet traffic on your internal network.

This router has firewall functionality and can be used with or without an accompanying firewall. If you elect to use the Cisco Router with a firewall, ensure that all internet traffic is configured to pass through the router and is not set to bypass the router and go directly to the firewall. Traffic filtered through the firewall in this type of deployment cannot be filtered by Websense.



Common Network Configuration for Cisco IOS Routers

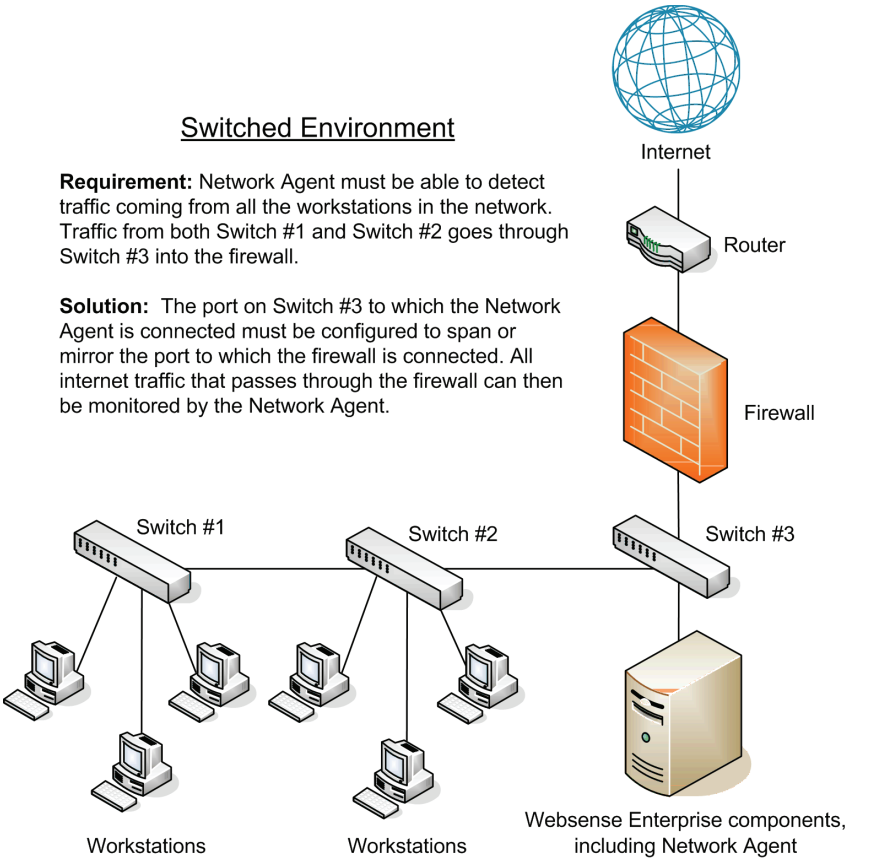
Other configurations are possible. Consult your Cisco Router documentation and consider the information in this chapter when deciding on the best network configuration for your environment.

Switched Environments

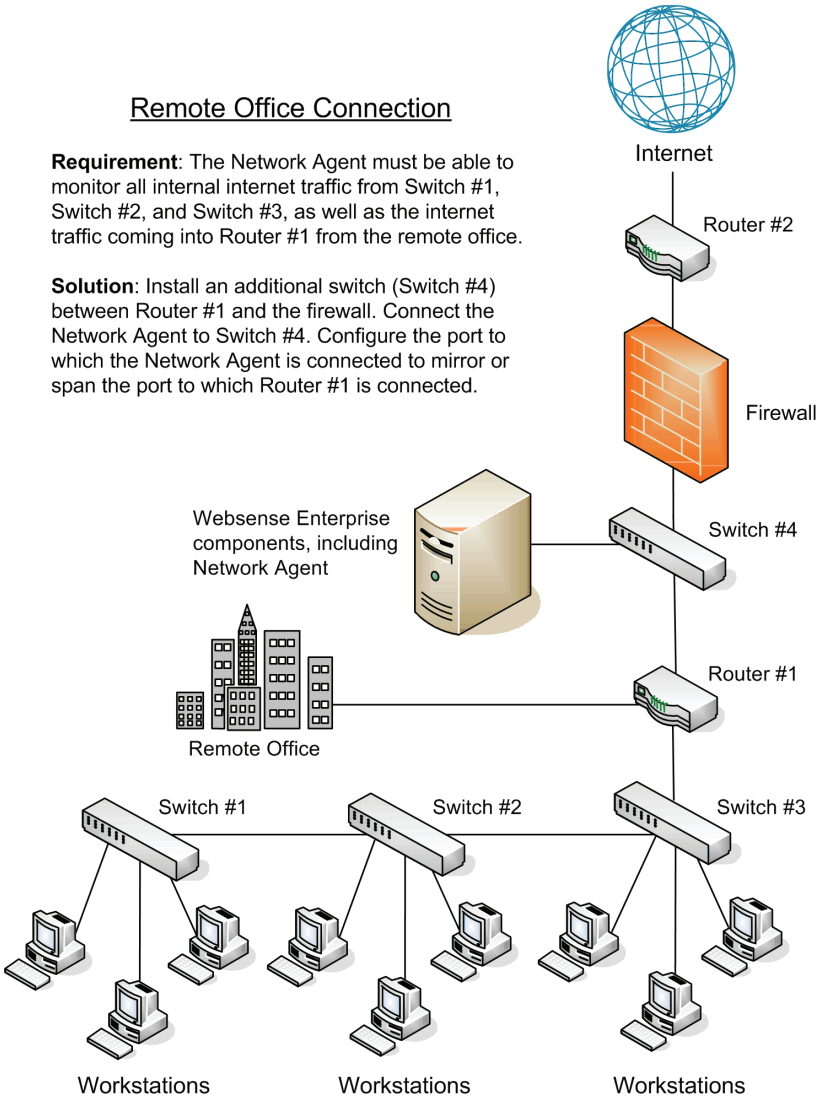
In a switched environment, configure a switch to use *mirroring* or 2-way port spanning, so that the Network Agent can detect internet requests from all the workstations.

> **NOTE**
> Contact your switch vendor to determine if your switch is capable of mirroring or port spanning and to learn how to implement the correct configuration.

The following network diagrams represent the logical relationship of network elements in a switched environment and are not intended to reflect the actual deployment of Websense Enterprise with your Cisco integration product.



Basic Deployment in a Switched Environment

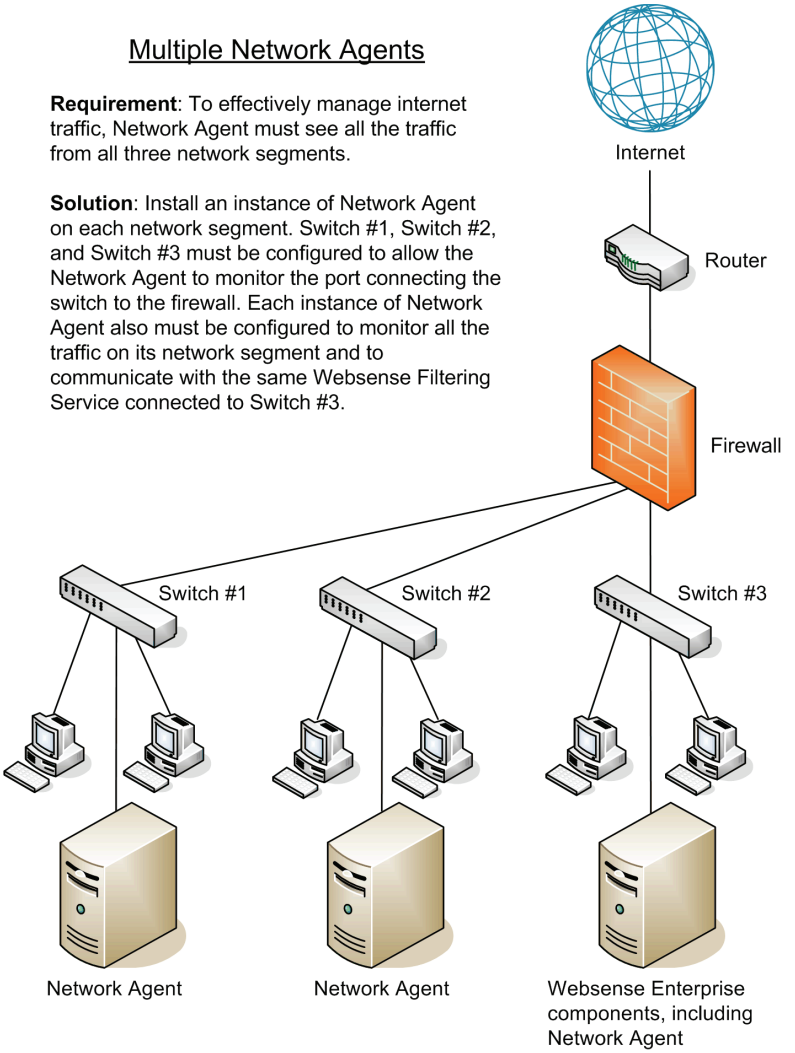


Switched Environment with a Remote Office Connection

On a large network, you may need to install multiple Network Agents and assign them to monitor various IP address ranges in your network. If you install multiple Network Agents, consider the following:

- Do not assign overlapping IP address ranges. If the IP ranges overlap, network bandwidth measurements will not be accurate, and bandwidth-based filtering will not be applied correctly.

- Deploy the Network Agents so that they can filter the entire network. Partial deployment will result in incomplete filtering by protocol and bandwidth, as well as the loss of log data from network segments not watched by the Network Agent.



Multiple Network Agents in a Switched Environment

NAT and Network Agent Deployment

The use of Network Address Translation (NAT) on internal routers can prevent the Network Agent from identifying the source IP addresses of client machines making internet requests. If you are deploying the Network Agent to monitor traffic from multiple subnets *after* it passes through such a router, you must disable NAT, or the Network Agent will see the IP address of the router's external interface as the source of the request. An alternative would be to install the Network Agent on a machine located *between* the NAT router and the clients to be monitored. See the Websense Enterprise *Deployment Guide* for more information.

Directory Services

If your environment includes a directory service, Websense allows you to filter internet requests based on individual policies assigned to directory objects. Directory objects identified in a directory service can be added to Websense and assigned specific policies, using the Websense Manager.

Websense can communicate with the following directory services:

- Windows NTLM-based directories
- Windows Active Directory
- Sun™ Java System Directory Server
- Novell Directory Services/eDirectory

For information about supported versions of these directory services, see the Websense Enterprise *Deployment Guide*. For information about configuring directory service access, see the Websense Enterprise *Administrator's Guide*.

NOTE

Websense Enterprise can communicate with your directory service whether it runs on the same operating system as Websense or on a different system.

Filtering can be based on individual user, group, and domain/organizational unit policies, providing that Websense is able to identify the user making an internet request. The authentication method you configure must allow Filtering Service to obtain directory object information from a Windows or

LDAP directory. For information about accessing LDAP and Windows directories, see the Websense Enterprise *Administrator's Guide*.

If you are using a Cisco security appliance (PIX Firewall or ASA), we recommend that you use a Websense transparent identification agent such as DC Agent for user authentication. Alternatively, if your users are located in a single domain, you can use Cisco Secure Authentication (also called Cisco Secure ACS) on the security appliance. When you use ACS, the Cisco security appliance sends names of authenticated users to Websense without domain information. ACS therefore only functions properly with Websense when all users are located in a single domain.

NOTE

In any environment, Websense can filter based on workstation or network policies. Workstations are identified within Websense by their IP addresses, and networks are identified as IP address ranges.

Internet requests can be filtered based on policies assigned to individual directory objects after the following tasks have been accomplished:

- If you are using the Sun Java System Directory Server or Novell Directory Services/eDirectory:
  1. Enable the appropriate directory service within Websense.
  2. Enable Websense to identify users transparently with Novell by installing and configuring the Websense eDirectory Agent.
  3. Enable Websense manual authentication so that if Websense is unable to identify users transparently, it will prompt users to manually authenticate.

  Detailed instructions for each of these tasks can be found in the User Identification chapter in the Websense Enterprise *Administrator's Guide*.
- If you are using a Windows NTLM-based directory or Active Directory:
  1. Configure the Windows directory service within Websense.
  2. Enable Websense to identify users transparently by installing and configuring the Websense DC Agent and/or Logon Agent.
  3. Enable manual authentication within Websense so that if Websense is unable to identify users transparently, it will prompt users to manually authenticate.

Detailed instructions for each of these tasks can be found in the User Identification chapter in the Websense Enterprise *Administrator's Guide*.

The Websense transparent identification feature allows Websense to filter internet requests from users in a Windows or Novell directory service, without prompting users to manually authenticate. Websense Enterprise can transparently identify users in a Windows domain if the Websense DC Agent and/or Logon Agent is installed. In networks using a Novell directory service, you can transparently identify users by installing the Websense eDirectory Agent.

Once the Websense Filtering Service is configured to communicate with the transparent identification agent (DC Agent, Logon Agent, or eDirectory Agent), the agent obtains user information from the directory service and sends the information to the Filtering Service. When the Filtering Service receives the IP address of a machine making an internet request, the Filtering Service matches the address with the corresponding user name provided by the transparent identification agent. This allows Websense to transparently identify users whenever they open a browser that sends an internet request to your Cisco integration. For information about transparent identification and the Websense DC Agent, Logon Agent, and eDirectory Agent, please see the Websense Enterprise *Administrator's Guide*.

System Requirements

Refer to the Websense Enterprise *Deployment Guide* for a complete list of system requirements for installation of Websense Enterprise components in your network. This section contains system requirements and deployment information specifically related to your integration product.

All Websense Enterprise components, with the exception of the optional remote filtering components, can run on the same Windows machine or can be distributed on separate Windows, Solaris, or Linux machines. Not all Websense Enterprise components are supported on all three operating systems, but components can be installed on machines with the same or different operating systems. For example, Websense Manager is not supported on Linux, but a Websense Manager installed on a Windows or Solaris machine can configure a Policy Server installed on a Windows, Solaris, or Linux machine. See the Websense Enterprise *Deployment Guide* for a list of supported operating systems for each Websense Enterprise component.

Such factors as network size, network configuration, and internet traffic volume can affect the ability of Websense Enterprise to filter internet requests. Refer to the Websense Enterprise *Deployment Guide* for hardware requirements for your network. If you plan to install Websense Enterprise components on a machine that has high CPU demands, make sure that the machine has sufficient resources to accommodate all the software loaded on it.

Supported Cisco Integration Product Versions

Websense Enterprise v6.1 is compatible with the following versions of Cisco PIX Firewalls, Cisco Adaptive Security Appliances (ASA), Cisco Content Engines, and Cisco Routers:

- Cisco PIX Firewall Software v5.3 and higher
- Cisco ASA Software v7.0 and higher
- Cisco Content Engine ACNS v4.1 and higher
- Cisco Routers with Cisco IOS Software Release 12.3 and higher

User Workstations

Websense filtering is based on protocols, not on the operating system of the user workstation being filtered.

To be filtered by Websense, a user workstation must access the internet through the Cisco integration.

If Websense Enterprise is integrated with a Cisco Content Engine or an IOS Router, workstation browsers must be set for proxy-based connections. If a Cisco PIX Firewall or ASA is being used with Websense Enterprise, workstation browsers must be set to use the PIX Firewall or ASA as the default gateway.

External Resources

Websense Enterprise relies on certain external resources to function properly in your network. Make sure that the following network elements can adequately support the filtering efforts of Websense Enterprise.

- **TCP/IP**: Websense Enterprise supports TCP/IP-based networks only. If your network uses both TCP/IP and non-TCP protocols, only those users on the TCP/IP portion of your network will be filtered by Websense Enterprise.

- **DNS server**: If IP addresses are not sent to the Websense Filtering Service together with a URL request, a DNS server can be used to resolve the URL into an IP address. Websense Enterprise or your integration product (where applicable) require efficient DNS performance. Make sure your DNS servers are fast enough to support Websense Enterprise filtering without becoming overloaded.
- **Directory services**: The Websense Filtering Service can be configured with policies based on user and group names. The Filtering Service queries the directory service to identify users and their associated groups as specified in a policy. Although these users and group relationships are cached by Websense, directory service machines must have the resources to rebuild the cache rapidly when the Websense Filtering Service requests user information.
- **Network efficiency**: Connectivity to resources such as DNS and directory services is critical to the Websense Filtering Service. Network latency must be minimized if the Filtering Service is to perform efficiently. Excessive delays under high load circumstances can affect the performance of the Filtering Service and may cause lapses in filtering. Make sure your network is configured for efficient communication between Websense Enterprise and its external resources.

CHAPTER 3 | Upgrading Websense Enterprise

This chapter contains procedures for upgrading a previous version of Websense Enterprise to version 6.1. Before upgrading Websense Enterprise, make sure your system meets the system requirements listed in the Websense Enterprise *Deployment Guide* and in the previous chapter.

The Websense Enterprise installer will upgrade all the Websense Enterprise components detected on the installation machine. Direct upgrades from version 5.2 or higher are supported.

Websense Enterprise version 5.2 or higher refers to the following versions:

- 5.2
- 5.5.x

The installer will configure v6.1 components to use the same network interface cards (NIC) for Websense communications and the Network Agent that are used by the earlier version. The installer will also automatically assign the same port numbers to the v6.1 Websense Enterprise components that the existing Websense Enterprise components use.

You can download the Websense Master Database during the upgrade, or continue without downloading the database. The download can be performed any time after the upgrade by using the Websense Manager.

Versions Supported

Direct upgrades from v5.2 or higher are supported. If you are running Websense Enterprise v5.1, 5.0.1, or 5.0, an upgrade to v6.1 requires two steps. You must upgrade your earlier version to v5.2 first, and then perform a v6.1 upgrade. The v5.2 installer for your operating system is available from:

- **Windows**: http://www.websense.com/download/v5.2/WebsenseEnterprise_5.2.exe
- **Solaris**: http://www.websense.com/download/v5.2/WebsenseEnterprise_5.2_Slr.tar.gz

- **Linux**: http://www.websense.com/download/v5.2/WebsenseEnterprise_5.2_Lnx.tar.gz

If you are running Websense Enterprise v4.4.1 or earlier, you must upgrade to v5.0 first. The v5.0 installer for your operating system is available from:

- **Windows**: http://www.websense.com/download/v5.0/WebsenseEIM_5.0.exe
- **Solaris**: http://www.websense.com/download/v5.0/WebsenseEIM_Slr_5.0.tar.gz
- **Linux**: http://www.websense.com/download/v5.0/WebsenseEIM_Lnx_5.0.tar.gz

Transferring Configuration Data Without Upgrading

The recommended path for upgrading Websense Enterprise is through the normal upgrade process, in which all configuration data from the earlier version is retained. In some cases, however, you may decide that an upgrade of your production system is undesirable. Your network policy may not permit upgrades to the production system, or you may want to move Websense Enterprise to a larger machine to accommodate increased network traffic.

If running a normal upgrade is not an option, you can use either of two procedures that will transfer configuration data from the production system to a freshly installed version of Websense Enterprise. These procedures require a test environment and may involve several cycles of installation and upgrade.

WARNING

Do not attempt to upgrade an earlier version of Websense Enterprise by copying the `config.xml` file into a v6.1 system. Configuration files from earlier versions are not compatible with v6.1.

For detailed instructions on converting to v6.1 without upgrading, refer to the technical paper entitled *Transferring Configuration Settings to a v6.1 System Without Upgrading* located on the Websense documentation site: http://www.websense.com/global/en/SupportAndKB/ProductDocumentation.

Before You Upgrade

- **Backing up files**: Before upgrading to a new version of Websense Enterprise, we recommend that you perform a full system backup as a fallback strategy. This will allow you to restore your current production system with a minimum of downtime should you encounter any problems with the upgrade. At a minimum, you should back up the latest Websense Enterprise configuration file and the initialization files. To back up these files, stop the Policy Server and copy the `config.xml` file, the `websense.ini` file, and the `eimserver.ini` file from the `Websense\bin` folder to a safe location.
- **Non-English language versions**: If you are currently running a non-English language version of Websense Enterprise, upgrading your system will convert it to English. To convert your system back to the previous non-English language version, you must install the v6.1 Language Pack, released separately from Websense Enterprise. Installation instructions are provided with the Language Pack product.
- **Upgrading distributed components**: To upgrade your system, you must run the Websense Enterprise installer on each machine on which a Websense component resides. The installer detects all Websense Enterprise components and upgrades them accordingly.

WARNING

Always run the installer on the Policy Server machine first.

- **Usage Monitor**: When you upgrade a machine that has version 5.2 or 5.5.x of the Policy Server installed, the installer will add the new Usage Monitor component in addition to upgrading the Policy Server to version 6.1. The Usage Monitor tracks users' internet activity and sends alerts when configured threshold values are crossed. Beginning with Websense Enterprise 6.1, the Usage Monitor is included in a **Typical** installation.
- **Reporting**: To properly generate reports, you must use the same version of Websense Enterprise and the Websense Enterprise Reporting Tools.
- **Websense services**: Websense services must be running when the upgrade process begins. Setup will stop and start these services as necessary during the upgrade. If these services have been running uninterrupted for several months, however, Setup may not be able to stop

them before the upgrade process times out. To ensure the success of the upgrade, manually stop and restart all the Websense services before beginning the upgrade.

- **Matching locales**: When upgrading a Websense Enterprise system that is installed on a different machine from Websense Manager, you must upgrade the Filtering Service to v6.1 in the same locale environment (language and character set) as the v5.2 or v5.5.x Websense Manager.
  - When upgrading on Solaris or Linux, log on to the Filtering Service machine with the locale appropriate to the Websense Manager.
  - When upgrading Filtering Service v5.2 or v5.5.x on Windows, open **Control Panel > Regional Options** and change the locale to match that of the Websense Manager machine before beginning the upgrade.

  Once the upgrade is complete, the Websense services can be restarted with any locale setting.

Upgrading on Windows

Before upgrading to a new version of Websense Enterprise, we recommend that you perform a full system backup as a fallback strategy. This will allow you to restore your current production system with a minimum of downtime should you encounter any problems with the upgrade.

At a minimum, be sure you have backed up the following files before proceeding:

- `websense.ini`
- `eimserver.ini`
- `config.xml`

IMPORTANT

If your Websense services have been running uninterrupted for several months, the installer may have difficulty stopping them. To prevent the upgrade process from timing out and failing, stop the services manually and restart them again before beginning the upgrade.

To upgrade your Websense Enterprise v5.2 or v5.5.x system to v6.1:

1. Close all Websense Managers anywhere in the network that connect to the Policy Server you are upgrading.

2. Log on to the installation machine with **domain** and **local** administrator privileges.

   If you are upgrading User Service and DC Agent, this will assure that they have administrator privileges on the domain.

   IMPORTANT

   User Service and DC Agent must have administrator privileges on the network to retrieve user login information from the domain controller. Without this information, Websense Enterprise cannot filter by users and groups. If you cannot install these components with such privileges, you may configure administrator privileges for these services after installation in the **Properties** dialog box for Windows services.

3. Close all open applications on the installation machine, and stop any antivirus software.

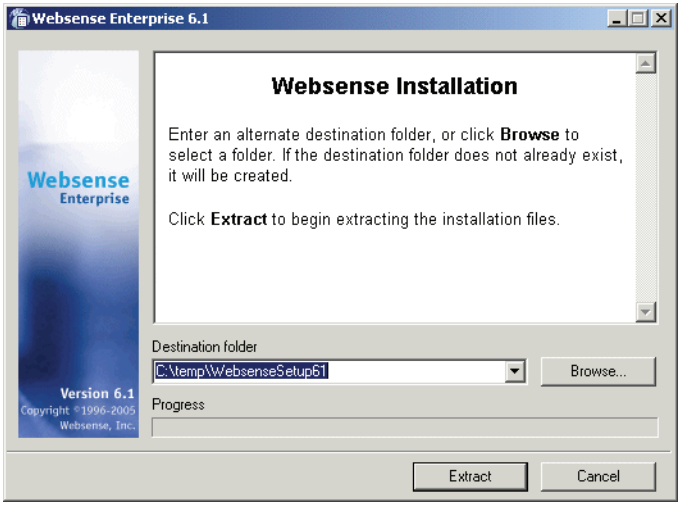
   WARNING

   Be sure to close the Windows Event Viewer, or the upgrade may fail.

4. Run one of the following Websense Enterprise installers:
   - **Web download**: Download one of the following packages from http://www.my.websense.com/download to a folder on the installation machine and double-click to extract the installer files.
     - **Online installer**: The online installer package (`Setup61.exe`) contains only the installer files. The necessary product files are downloaded from the website as needed after product selections have been made.
     - **Offline installer**: The offline installer (`Websense61Setup.exe`) is much larger than the online package and contains all the files needed to upgrade Websense Enterprise components. Use this package only if you experience difficulties upgrading Websense with the online installer.
   - **Product CD**: Run `WebsenseStart.exe` from the Websense Enterprise v6.1 product CD to launch the installer start screen. Select a Websense product installation to extract the installer files.

The file will run automatically if *autorun* is enabled. The product CD contains all the files needed to upgrade Websense Enterprise components.

A screen displays instructions for extracting the setup program.



Installer Download Extraction Screen

a. Click **Browse** to select a destination folder or type in a path.

   If the path you enter does not exist, the installer will create it for you.

IMPORTANT

Do not extract the installer files to a folder on your desktop. This may prevent the Real-Time Analyzer from receiving the IP address of the Policy Server machine. Accept the default location of `C:\temp` or select another appropriate folder.

b. Click **Extract** to begin decompressing the files.

   If Websense Enterprise installation files already exist in that location, you may choose to overwrite the existing files.

   A progress bar shows the status of the extraction, and the view pane scrolls a list of the files as they are decompressed.

   `Setup.exe` runs automatically after the files are decompressed.

5. Follow the on-screen instructions and click **Next** to advance through the welcome screen and the subscription agreement.

   Websense Setup detects the components from your earlier version and asks you how you want to proceed. You can upgrade the current system or exit the installer.

6. Select **Upgrade** and click **Next**.

   A list of currently running Websense services from the earlier version appears. A message explains that the installer must stop these services before the upgrade can proceed.

7. Click **Next** to continue.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, warnings are displayed in separate screens.

   - If the target machine has insufficient disk space, the selected components cannot be installed, and the installer quits.
   - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

8. If you have received a RAM warning, click **Next** to continue with the installation.

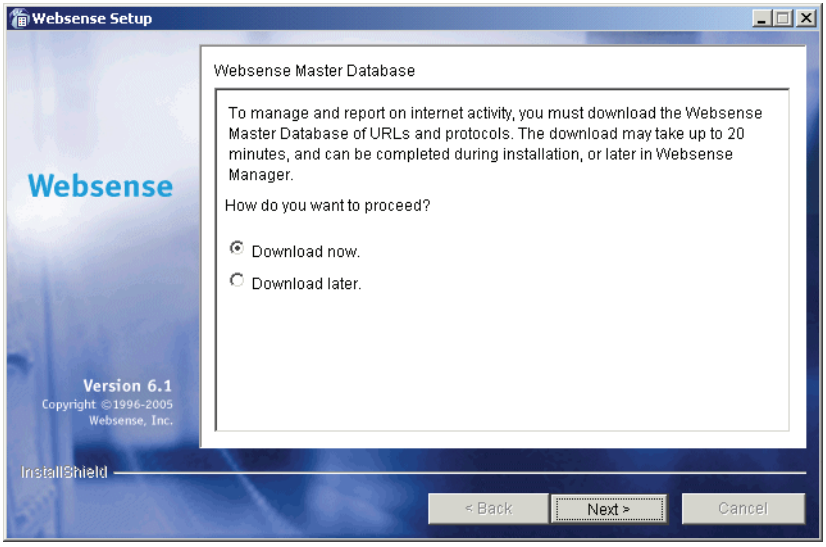
   A summary screen appears, listing the installation path, installation size, and the components that will be installed.

9. Click **Next** to begin the upgrade.

   - If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the upgrade files from Websense. When the download process is complete, Setup stops the Websense services and begins the upgrade.
   - An installation progress bar appears while the installer upgrades your system and restarts the Websense services.

- The Websense Enterprise upgrade converts all non-English language systems to English. When a non-English language system is upgraded, the installer displays a message advising you that the Websense Enterprise Language Pack is available for converting your upgraded system to any of the supported non-English languages. The Language Pack is free and can be downloaded from http://www.my.websense.com/download. Click **Next** to continue.

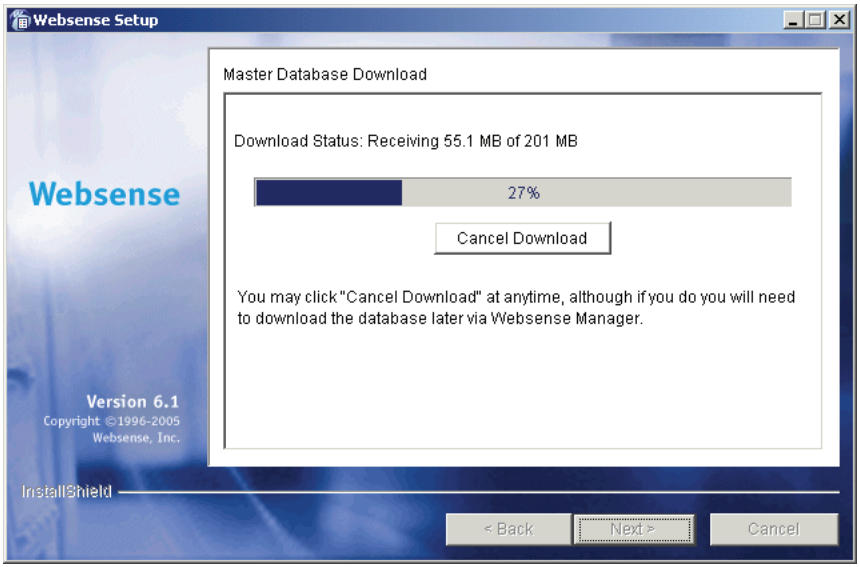
Setup asks if you want to download the Websense Master Database now or at a later time using the Websense Manager.



Master Database Download Selection Screen

10. Select a database download option and click **Next**.

    If you have chosen to download the Master Database now, a progress bar appears. Because of its size, the database can take up to 20 minutes to download and decompress.



Master Database Download Progress

When the database download is complete, a message appears advising you that the database has been successfully downloaded. Click **Next** to continue.

A message announcing the success of the installation is displayed.

11. Click **Next** to continue.
    - If you have upgraded DC Agent, a dialog box appears advising you that the machine must be restarted to complete the installation. Select a restart option and click **Finish** to exit the installer.
    - If DC Agent was not upgraded, but you have upgraded Real-Time Analyzer and/or Websense Manager, the installer displays a screen asking if you want to launch either of those applications. By default, both are selected. Clear the checkbox of the component you do not want to launch and click **Finish**.
    - If neither DC Agent, Real-Time Analyzer, nor Websense Manager were upgraded, no further action is required and you can click **Finish** to exit the installer.
12. If you stopped your antivirus software, be sure to start it again.
13. If Websense Enterprise is integrated with a Cisco security appliance (PIX Firewall or Adaptive Security Appliance), the following configuration updates are recommended, if they have not already been made. Refer to

Cisco PIX Firewall or Adaptive Security Appliance (ASA), page 203 for instructions.

- Increase the size of the security appliance's internal buffer to handle long URL strings.
- Set the URL response block buffer to prevent replies from the web server from being dropped in high traffic situations.

14. If you are using Websense Enterprise Reporting Tools, you must upgrade them to the same version as Websense Enterprise to properly generate reports.

IMPORTANT

Make sure you upgrade any other Websense modules that may have a dependency on the system you just upgraded. This will prevent conflicts caused by incompatible versions.

Upgrading on Solaris or Linux

Before upgrading to a new version of Websense Enterprise, we recommend that you perform a full system backup as a fallback strategy. This will allow you to restore your current production system with a minimum of downtime should you encounter any problems with the upgrade.

At a minimum, be sure you have backed up the following files before proceeding:

- `config.xml`
- `eimserver.ini`
- `websense.ini`

IMPORTANT

If your Websense services have been running uninterrupted for several months, the installer may have difficulty stopping them. To prevent the upgrade process from timing out and failing, stop the services manually and restart them again before beginning the upgrade.

To upgrade Websense Enterprise v5.2 or v5.5.x to v6.1:

1. Close all Websense Managers anywhere in the network that connect to the Policy Server you are upgrading.
2. Log on to the installation machine as the **root** user.
3. Close all open applications on the installation machine, and stop any antivirus software.
4. Create a setup directory for the installer files.

   For example: `/root/Websense_setup`
5. Download the installer file for your operating system from http://www.my.websense.com/download, or copy it from the Websense Enterprise CD and save it to the setup directory.
   - **Solaris**: `Websense61Setup_Slr.tar.gz`
   - **Linux**: `Websense61Setup_Lnx.tar.gz`
6. Enter the following command to unzip the installer file:

   `gunzip <download file name>`

   For example:

   `gunzip Websense61Setup_Slr.tar.gz`
7. Expand the file into its components with the following command:

   `tar xvf <unzipped file name>`

   For example:

   `tar xvf Websense61Setup_Lnx.tar`

   This places the following files into the installation directory:

File	Description
install.sh	Installation program
Setup	Archive file containing related installation files and documents.
Documentation	Release Notes: An HTML file containing release notes and last minute information about Websense. Read this file with any supported browser.

8. Run the installation program from the directory in which it resides:

   `./install.sh`

To run the GUI version of the installer, use the following command:

```
./install.sh -g
```

If you are using a non-English based system, the installer will display an error message advising you that the GUI version is not supported.

9. Follow the upgrade sequence.

   - **Upgrade option**: The installer detects the earlier version of Websense Enterprise and gives you the choice of upgrading the existing installation or exiting the installer. Be sure to close any Websense Managers connected to this Policy Server before continuing. Select **Upgrade** and continue.

IMPORTANT

Be sure to upgrade any other Websense modules that may have a dependency on the system you are about to upgrade. This will prevent conflicts caused by incompatible versions.

   - **Websense services**: A list of currently running Websense services from the earlier version appears. A message explains that the installer must stop these services before the upgrade can proceed.
   - **Protocol block messages**: Setup advises you that you must install the Samba client (v2.2.8a and higher) to display block messages on Windows workstations blocked by Protocol Management. You may continue installing Websense and download the Samba client later. To download the Samba client, go to the Sun freeware website at:

     http://www.sunfreeware.com

NOTE

The Samba client is not required for protocol blocking to occur. This software controls the display of protocol blocking messages only.

   - **Browser location on Solaris**: If the Websense Manager is being upgraded on Solaris, you must provide the installer with the location of Netscape.
   - **System requirements**: The installer compares the system requirements for the installation you have selected with the resources

of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.

- If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
- If the installation machine has less than the recommended amount of memory, the installation will continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

- **Installation summary**: A summary list appears, showing the installation path, installation size, and the components to be upgraded.

10. Press **Enter** to begin the upgrade.

    If you are using the online installer, the Download Manager progress bars are displayed as the installer downloads the upgrade files from Websense. When the download process is complete, the installer stops the Websense services and begins the upgrade.

    An installation progress bar appears while the installer upgrades your system and restarts the Websense services.

    - The Websense Enterprise upgrade converts all non-English language systems to English. When a non-English language system is upgraded, the installer displays a message advising you that the Websense Enterprise Language Pack is available for converting your upgraded system to any of the supported non-English languages. The Language Pack is free and can be downloaded from http://www.websense.com/global/en. Select **Next** to continue.
    - Setup asks if you want to download the Websense Master Database now or at a later time using the Websense Manager. Select a database download option and press **Enter**.

    NOTE

    Because of its size, the database can take up to 20 minutes to download and decompress.

    If you have chosen to download the database now, the database is downloaded and decompressed. When the database download is complete, a message appears advising you of the status of the download. Select **Next** to continue.

A message announcing the success of the installation is displayed.

11. Select **Next** to continue.
    - If you have not upgraded the Websense Manager, you are ready to select **Finish** and exit the installer.
    - If you are upgrading the Websense Manager (Solaris GUI mode only), the installer asks if you want to launch the Websense Manager. By default, the Manager is selected for launch. Select **Finish** when you are ready to exit the installer.
12. If you stopped your antivirus software, be sure to start it again.
13. If Websense Enterprise is integrated with a PIX Firewall or ASA security appliance, the following configuration updates are recommended, if they have not already been made. Refer to *Cisco PIX Firewall or Adaptive Security Appliance (ASA)*, page 203 for instructions.
    - Increase the size of the security appliance's internal buffer to handle long URL strings.
    - Set the URL response block buffer to prevent replies from the web server from being dropped in high traffic situations.
14. If you did not install the Websense Manager on this machine, follow the instructions in *Installing Websense Enterprise Components Separately*, page 95.

NOTE

If you decide to change the location of a Websense Enterprise component, add a feature, or remove a component, run the Websense installer again on the machine you want to modify and select the appropriate option. The installer detects the presence of Websense components and offers you options for modifying your installation.

Converting a Stand-Alone System to an Integrated System

You can convert your Stand-Alone system to a system using an integrated Cisco product without losing any configuration settings. The conversion process preserves such settings as port numbers and IP addresses. Upgrades are available for version 5.2 or higher of Stand-Alone Websense Enterprise systems.

All Components on the Same Machine

To convert Stand-Alone systems to integrated systems with all Websense components installed on the same machine, perform the following tasks:

Task 1: Perform an upgrade of the Websense Enterprise v5.2 or v5.5.x Stand-Alone system to the v6.1 Stand-Alone Edition. This will preserve your configuration data and use the settings from your original system. Follow the procedures in *Upgrading to the Stand-Alone Edition*, page 50.

Task 2: Restart the machine and run the Websense Enterprise installer again to convert the v6.1 Stand-Alone system to an integrated system using a Cisco integration product. Follow the procedures in *Converting to an Integrated System*, page 60.

Task 3: Perform the tasks in *Chapter 5: Initial Setup*.

Task 4: Configure your Cisco integration to work with Websense Enterprise to filter internet traffic. Refer to *Chapter 6: Configuring Your Cisco Integration* for instructions.

Distributed Components

If you want to convert your Stand-Alone system to use a Cisco integration product and distribute some Websense Enterprise components to other machines, perform the following tasks:

Task 1: Perform an upgrade of the Websense Enterprise v5.2 or v5.5.x Stand-Alone system to the Websense v6.1 Stand-Alone Edition. This will preserve your configuration data and use the settings from your original system. Follow the procedures in *Upgrading to the Stand-Alone Edition*, page 50.

Task 2: Restart the machine and run the Websense Enterprise installer again to remove those components that you want to distribute in your network.

WARNING

Removing the Policy Server will delete all existing configuration settings.

Task 3: Run the Websense Enterprise installer a third time to convert the v6.1 Stand-Alone system to an integrated system using a Cisco integration product. Follow the procedures in *Converting to an Integrated System*, page 60.

Task 4: Run the Websense Enterprise installer on each machine in your network on which you want to install a separate component. Select a **Custom** installation when prompted and select the component you want to install. Separate installation procedures can be found in *Installing Websense Enterprise Components Separately*, page 95 for the following components:

- Websense Manager
- DC Agent
- Network Agent
- RADIUS Agent
- eDirectory Agent
- Logon Agent

Task 5: Perform the tasks in *Chapter 5: Initial Setup*.

Task 6: Configure your Cisco integration to work with Websense Enterprise to filter internet traffic. Refer to *Chapter 6: Configuring Your Cisco Integration* for instructions.

Upgrading to the Stand-Alone Edition

Your first task is to upgrade your v5.2 or higher Stand-Alone system to the v6.1 Stand-Alone Edition.

IMPORTANT

Websense services must be running when the upgrade process begins. Setup will stop and start these services as necessary during the upgrade. If these services have run uninterrupted for several months, however, Setup may not be able to stop them before the upgrade process times out. To ensure the success of the upgrade, manually stop and restart all the Websense services before beginning the upgrade. For instructions on stopping and starting Websense services, refer to *Stopping or Starting Websense Services*, page 181.

Windows

The Websense installer can upgrade version 5.2 or higher of Stand-Alone Websense Enterprise systems.

1. Back up the following files before proceeding:
   - `websense.ini`
   - `eimserver.ini`
   - `config.xml`

> **NOTE**
> Before upgrading to a new version of Websense Enterprise, we recommend that you perform a full system backup as a fallback strategy. This will allow you to restore your current production system with a minimum of downtime should you encounter any problems with the upgrade.

2. Close all Websense Managers anywhere in the network that connect to the Policy Server you are upgrading.
3. Log on to the installation machine with **domain** and **local** administrator privileges.

   If you are installing User Service and DC Agent, this will assure that they have administrator privileges on the domain.

> **IMPORTANT**
> User Service and DC Agent must have administrator privileges on the network to retrieve user login information from the domain controller. Without this information, Websense Enterprise cannot filter by users and groups. If you cannot install these components with such privileges, you may configure administrator privileges for these services after installation in the **Properties** dialog box for Windows services.

4. Close all open applications on the installation machine, and stop any antivirus software.

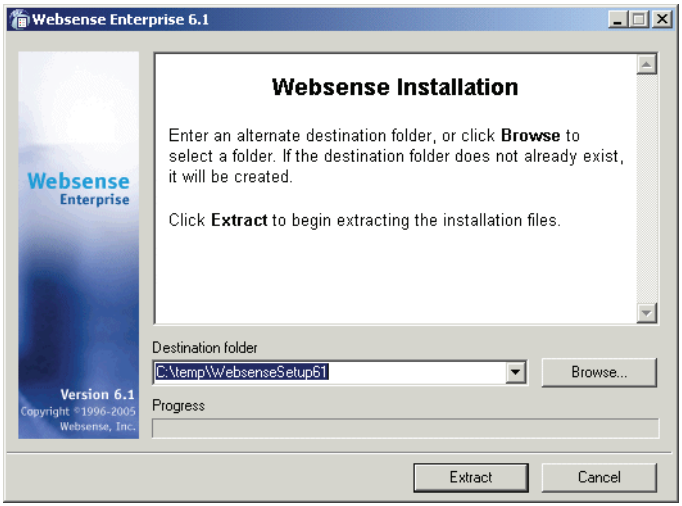
WARNING

Be sure to close the Windows Event Viewer, or the upgrade may fail.

5. Run one of the following Websense Enterprise installers:
   - **Web download**: Download one of the following packages from http://www.my.websense.com/download to a folder on the installation machine and double-click to extract the installer files.
     - **Online installer**: The online installer package (`Setup61.exe`) contains only the installer files. The necessary product files are downloaded from the website as needed after product selections have been made.
     - **Offline installer**: The offline installer (`Websense61Setup.exe`) is much larger than the online package and contains all the files needed to upgrade Websense Enterprise components. Use this package only if you experience difficulties upgrading Websense with the online installer.
   - **Product CD**: Run `WebsenseStart.exe` from the Websense Enterprise v6.1 product CD to launch the installer start screen. Select a Websense product installation to extract the installer files.

     The file will run automatically if *autorun* is enabled. The product CD contains all the files needed to upgrade Websense Enterprise components.

   A screen displays instructions for extracting the setup program.



Installer Download Extraction Screen

a. Click **Browse** to select a destination folder or type in a path.

   If the path you enter does not exist, the installer will create it for you.

> **IMPORTANT**
>
> Do not extract the installer files to a folder on your desktop. This may prevent the Real-Time Analyzer from receiving the IP address of the Policy Server machine. Accept the default location of `C:\temp` or select another appropriate folder.

b. Click **Extract** to begin decompressing the files.

   If Websense Enterprise installation files already exist in that location, you may choose to overwrite the existing files.

   A progress bar shows the status of the extraction, and the view pane scrolls a list of the files as they are decompressed.

   `Setup.exe` runs automatically after the files are decompressed.

6. Follow the on-screen instructions and click **Next** to advance through the welcome screen and the subscription agreement.

Websense Setup detects the Websense components from your earlier version and asks you how you want to proceed. You can upgrade the current system or exit Setup.

7. Select **Upgrade** and click **Next**.

   A list of currently running Websense services from the earlier version appears. A message explains that the installer must stop these services before the installation can proceed.

8. Click **Next** to continue.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
   - If the installation machine has less than the recommended amount of memory, the installation will continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

   A summary screen appears, listing the installation path, installation size, and the components that will be installed.

9. Click **Next** to begin the upgrade.

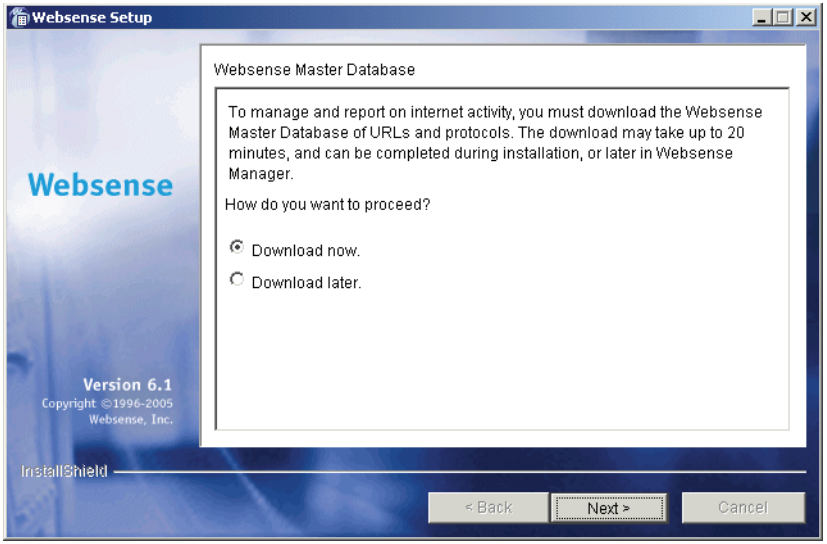
   If you are using the online installer, the Download Manager indicates the progress of the file download from Websense. When the appropriate files have been downloaded, Setup stops the Websense services and begins installation.

   An installation progress bar appears while the installer upgrades your system and restarts the Websense services.

   - If you are using the Apache Web Server, you must restart it before using the Real-Time Analyzer on your upgraded system, Setup asks if you want to restart Apache now or wait until later. Select **Yes** or **No** and click **Next** to continue.
   - The Websense Enterprise upgrade converts all non-English language systems to English. When a non-English language system is upgraded, the installer displays a message advising you that the Websense Enterprise Language Pack is available for converting your upgraded

system to any of the supported non-English languages. The Language Pack is free and can be downloaded from http://www.websense.com/global/en. Click **Next** to continue.

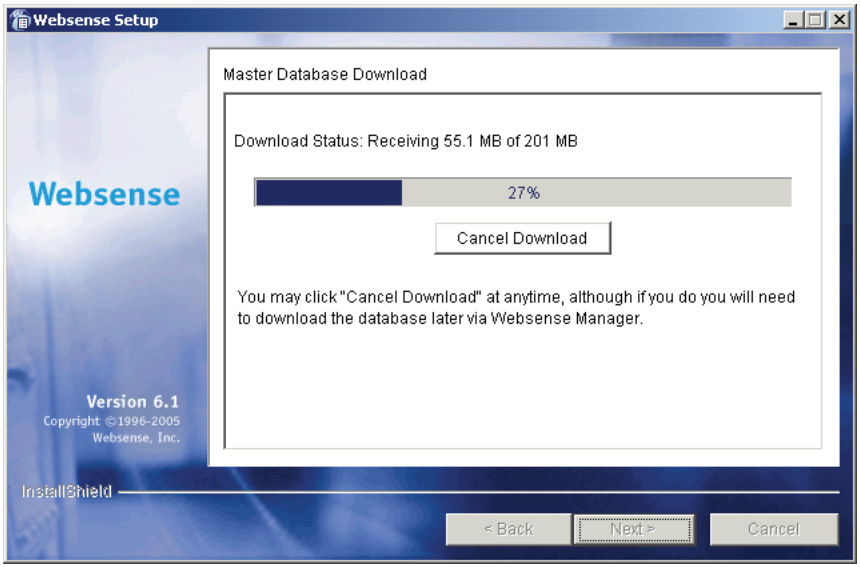
Setup asks if you want to download the Websense Master Database now or at a later time using the Websense Manager.



Master Database Download Selection Screen

10. Select a database download option and click **Next**.

    If you have chosen to download the Master Database now, a progress bar appears. Because of its size, the database can take up to 20 minutes to download and decompress.



Master Database Download Progress

When the database download is complete, a message appears advising you that the database has been successfully downloaded. Click **Next** to continue.

A message announcing the success of the installation is displayed.

11. Click **Next** to continue.
    - If you have upgraded DC Agent, a dialog box appears advising you that the machine must be restarted to complete the installation. Select a restart option and click **Finish** to exit the installer.
    - If DC Agent was not upgraded, but you have upgraded Real-Time Analyzer and/or Websense Manager, the installer displays a screen asking if you want to launch either of those applications. By default, both are selected. Clear the checkbox of the component you do not want to launch and click **Finish**.
    - If neither DC Agent, Real-Time Analyzer, nor Websense Manager were upgraded, no further action is required and you can click **Finish** to exit the installer.
12. If you stopped your antivirus software, be sure to start it again.

Solaris or Linux

The Websense installer can upgrade version 5.2 or higher of Stand-Alone Websense Enterprise systems.

1. Back up the following files before proceeding:
   - `websense.ini`
   - `eimserver.ini`
   - `config.xml`

   NOTE

   Before upgrading to a new version of Websense Enterprise, we recommend that you perform a full system backup as a fallback strategy. This will allow you to restore your current production system with a minimum of downtime should you encounter any problems with the upgrade.

2. Close all Websense Managers anywhere in the network that connect to the Policy Server you are upgrading.
3. Close all open applications on the installation machine, and stop any antivirus software.
4. Log on to the installation machine as the **root** user.
5. Create a setup directory.

   For example: `/root/Websense_setup`
6. Download the appropriate file from http://www.my.websense.com/download to the setup directory or copy the installer file from the Websense Enterprise CD to the installation machine.
   - **Solaris**: `Websense61Setup_Slr.tar.gz`
   - **Linux**: `Websense61Setup_Lnx.tar.gz`
7. Enter the following command to unzip the installer file:

   `gunzip <download file name>`

   For example: `gunzip Websense61Setup_Slr.tar.gz`
8. Expand the file into its components with the following command:

   `tar xvf <unzipped file name>`

   For example: `tar xvf Websense61Setup_Lnx.tar`

This places the following files into the installation directory:

File	Description
install.sh	Installation program
Setup	Archive file containing related installation files and documents.
Documentation	Release Notes: An HTML file containing release notes and last minute information about Websense. Read this file with any supported browser.

9. Run the installation program from the setup directory with the following command:

   ```
   ./install.sh
   ```

   The installer detects the earlier version of the Filtering Service and gives you the choice of upgrading the existing installation or exiting Setup. Be sure to close any Websense Managers connected to this Policy Server before continuing.

10. Select **Upgrade** and press **Enter**.

    The upgrade sequence is as follows:

    - **Websense services**: A list of currently running Websense services from the earlier version appears. A message explains that the installer must stop these services before the upgrade can proceed.
    - **Protocol block messages**: Setup advises you that you must install the Samba client (v2.2.8a and higher) to display block messages on Windows workstations blocked by Protocol Management. You may continue installing Websense and download the Samba client later. To download the Samba client, go to the Sun freeware website at:

      http://www.sunfreeware.com

NOTE

The Samba client is not required for protocol blocking to occur. This software controls the display of protocol blocking messages only.

- **Browser location on Solaris**: If the Websense Manager is being upgraded on Solaris, you must provide the installer with the location of Netscape.
- **System requirements check**: The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.
  - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
  - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.
- **Installation summary**: A summary list appears, showing the installation path, file sizes, and the components to be upgraded.

11. Press **Enter** to begin the upgrade.

    If you are using the online installer, the Download Manager indicates the progress of the file download from Websense. After the files are downloaded, the installer stops all Websense services.

    An installation progress bar appears and the Websense services are restarted.

    - The Websense Enterprise upgrade converts all non-English language systems to English. When a non-English language system is upgraded, the installer displays a message advising you that the Websense Enterprise Language Pack is available for converting your upgraded system to any of the supported non-English languages. The Language Pack is free and can be downloaded from http://www.websense.com/global/en. Select **Next** to continue.
    - Setup asks if you want to download the Websense Master Database now or at a later time using the Websense Manager. Select a database download option and press **Enter**.

NOTE

Because of its size, the database can take up to 20 minutes to download and decompress.

If you have chosen to download the database now, the database is downloaded and decompressed. When the database download is complete, a message appears advising you of the status of the download. Select **Next** to continue.

A message announcing the success of the installation is displayed.

12. Select **Next** to continue.
    - If you have not upgraded the Websense Manager, you are ready to select **Finish** and exit the installer.
    - If you are upgrading the Websense Manager (Solaris GUI mode only), the installer asks if you want to launch the Websense Manager. By default, the Manager is selected for launch. Select **Finish** when you are ready to exit the installer.
13. If you stopped your antivirus software, be sure to start it again.

Converting to an Integrated System

Once you have upgraded your v5.2 or v5.5.x Stand-Alone system to the v6.1 Stand-Alone Edition, you are ready to convert that system to one that integrates with a Cisco integration product.

IMPORTANT

If you are planning to deploy Websense Enterprise components on separate machines, run the installer now to remove components from the Websense machine before performing the conversion. Remember, however, that removing the Policy Server will delete all of your configuration settings.

Windows

To convert a Windows Stand-Alone Edition to a system integrated with a Cisco product:

1. Back up the following files before proceeding:
    - `websense.ini`
    - `eimserver.ini`
    - `config.xml`

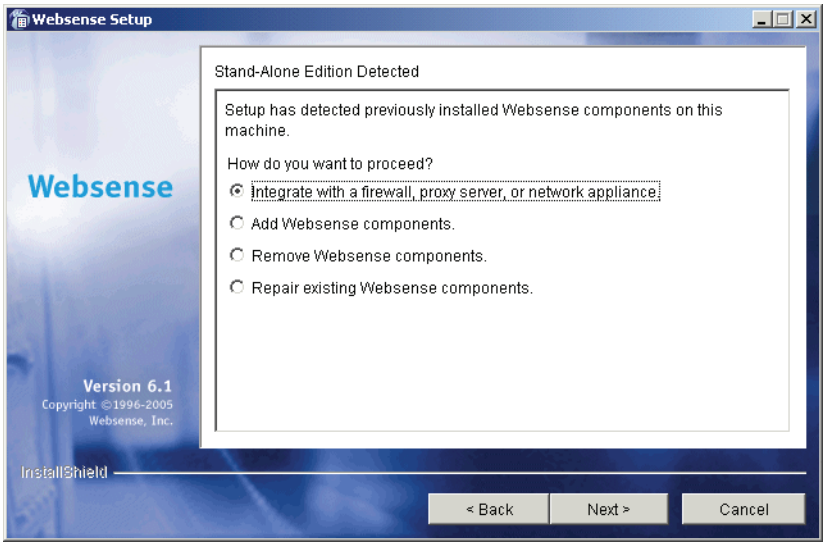
2. Close all Websense Managers anywhere in the network that connect to the Policy Server you are upgrading.
3. Log on to the installation machine with **domain** and **local** administrator privileges.

   If you are installing User Service and DC Agent, this will assure that they have administrator privileges on the domain.

> **IMPORTANT**
>
> User Service and DC Agent must have administrator privileges on the network to retrieve user login information from the domain controller. Without this information, Websense Enterprise cannot filter by users and groups. If you cannot install these components with such privileges, you may configure administrator privileges for these services after installation in the **Properties** dialog box for Windows services.

4. Close all open applications on the installation machine, and stop any antivirus software.
5. Run the Websense Enterprise installer (`Setup.exe`) from your local drive.
6. Follow the onscreen instructions through the welcome screen.

   Websense Setup detects the Stand-Alone Edition and asks how you want to proceed. You can modify the current system (add, remove, or repair components), or convert it to a system that integrates with a Cisco product.



Stand-Alone Edition Installation Options

7. Select **Integrate with a firewall, proxy server, or network appliance** and click **Next**.

   A message explains that the installer must stop the Filtering Service before the upgrade can proceed.

8. Click **Next** to continue.

   A dialog box appears listing the supported integration types.

9. Select **Cisco Adaptive Security Appliances**, **Cisco Content Engine**, **Cisco PIX Firewall**, or **Cisco Routers** and click **Next**.

   A message explains that the installer must stop the Filtering Service before the installation can proceed.

10. Click **Next** to continue.

    The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, warnings are displayed in separate screens.

    - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.

- If the installation machine has less than the recommended amount of memory, the installation will continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

A summary screen appears, listing the installation path, installation size, and the components that will be installed.

11. Click **Next** to begin the upgrade.

    If you are using the online installer, the Download Manager progress bar appears, tracking the progress of the installer download. When the appropriate files have been downloaded, Setup stops the Websense services and begins the upgrade.

    An installation progress bar appears while the installer upgrades your system and restarts the Websense services.

    A message appears advising you that the installation was successful.

12. Click **Next** to continue.
    - If you have upgraded DC Agent, a dialog box appears advising you that the machine must be restarted to complete the installation. Select a restart option and click **Finish** to exit the installer.
    - If DC Agent was not upgraded, but you have upgraded Real-Time Analyzer and/or Websense Manager, the installer displays a screen asking if you want to launch either of those applications. By default, both are selected. Clear the checkbox of the component you do not want to launch and click **Finish**.
    - If neither DC Agent, Real-Time Analyzer, nor Websense Manager were upgraded, no further action is required and you can click **Finish** to exit the installer.
13. If you stopped your antivirus software, be sure to start it again.
14. See *Chapter 5: Initial Setup* to perform post-conversion tasks.

Solaris or Linux

To convert a Solaris or Linux Stand-Alone Edition to a system integrated with a Cisco product:

1. Back up the following files before proceeding:
    - `websense.ini`
    - `eimserver.ini`
    - `config.xml`

2. Close all Websense Managers anywhere in the network that connect to the Policy Server you are upgrading.
3. Log on to the installation machine as the **root** user.
4. Close all open applications on the installation machine, and stop any antivirus software.
5. Run the Websense Enterprise installer from the setup directory with the following command:

   ```
   ./install.sh
   ```

   To run the GUI version of the installer, use the following command:

   ```
   ./install.sh -g
   ```

   If you are using a non-English based system, the installer will display an error message advising you that the GUI version is not supported.
6. Follow the upgrade sequence:
   - **Modifying an installation**: The installer detects the presence of the Websense Enterprise Stand-Alone Edition and gives you the choice of modifying the installation or converting it to an integrated system. Select **Integrate with a firewall, proxy server, or network appliance** and press **Enter** to continue.
   - **Websense Filtering Service**: A message explains that the installer must stop the Filtering Service before the installation can proceed.
   - **Integration selection**: Select **Cisco Adaptive Security Appliances**, **Cisco Content Engine**, **Cisco PIX Firewall**, or **Cisco Routers** from the list of supported integration types.
   - **System requirements check**: The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.
     - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
     - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.
   - **Installation summary**: A summary list appears, showing the installation path, installation size, and the components to be updated.
7. Press **Enter** to begin the installation.

If you are using the online installer, the Download Manager copies the appropriate installer files from Websense. Conversion begins automatically when the necessary files have been downloaded.

The installer displays a message announcing the success of the installation.

8. Select **Next** to continue.
9. If you stopped your antivirus software, be sure to start it again.
10. See *Chapter 5: Initial Setup* to perform post-conversion tasks.

Migrating Between Integrations After an Upgrade

If you plan to change the Cisco integration with which Websense Enterprise interacts (from PIX Firewall to an IOS Router, for example), you may do so after you upgrade to Websense Enterprise v6.1 without losing any of your configuration data.

The following procedure assumes that the Policy Server is installed on the same machine as the Filtering Service. If the Policy Server is installed on a separate machine, no changes need to be made to that component, and there is no need to back up the `config.xml` file.

To migrate between Cisco integration products after upgrading to Websense Enterprise v6.1:

1. Install and configure your new Cisco integration product on your network. Make sure it is deployed so that it can communicate with the Websense Enterprise machine (the machine running Filtering Service and Policy Server). Refer to *Websense Deployment* in *Chapter 2: Network Configuration* and your Cisco documentation for instructions.
2. Make backup copies of the following files (found in `Websense\bin`) and copy them to a location outside the `Websense` folder:
   - `config.xml`
   - `eimserver.ini`
   - `websense.ini`
3. Close all open applications on the Filtering Service machine, and stop any antivirus software.
4. Run the Websense Enterprise installer on the Filtering Service machine.

5. Remove the Filtering Service using the procedures in *Removing Components*, page 170.

   WARNING
   Remove the Filtering Service only. *Do not* remove the Policy Server.

6. Restart the machine.
7. Run the Websense Enterprise installer again.
8. Add the Filtering Service using the procedures in *Adding Components*, page 156.
9. When prompted to select an integration, select the new Cisco product (either **Cisco Adaptive Security Appliances**, **Cisco Content Engine**, **Cisco PIX Firewall**, or **Cisco Routers**).
10. Follow the on-screen instructions to complete the installation.

    The installer adds the new integration data to the `config.xml` file, without overwriting any of the previous configuration data.
11. Restart the machine.
12. Check to be sure that the Filtering Service has started.

    Refer to *Stopping or Starting Websense Services*, page 181 for instructions on starting a service.
13. If you stopped your antivirus software, be sure to start it again.

Changing IP Addresses of Installed Components

Websense Enterprise handles most IP address changes automatically, without any interruption in internet filtering. Changes to the IP address of the machine running the Policy Server result in notification of the change being broadcast to Websense Enterprise components on other machines. In some cases, however, services need to be restarted or configurations updated after changing an IP address. For a full discussion of the IP address change process, refer to the Websense Enterprise *Administrator's Guide*.

CHAPTER 4 | Installation

This chapter contains instructions for a new installation of the Websense Enterprise components. In addition to installation procedures, instructions are provided for modifying an installation, including adding, removing, and repairing installed components.

Before Installing

Please read the following information before installing Websense Enterprise.

- **User authentication**: The Websense Filtering Service must be installed in the same domain (Windows) or the same root context (LDAP) as Cisco Secure ACS for ACS to work properly. If you are using the DC Agent and Manual Authentication, this is not necessary.
- **Non-English language versions**: Websense Enterprise v6.1 installs in English only. Language Packs for converting systems to non-English language versions are released separately from Websense Enterprise. Installation instructions are provided with the Language Pack product.
- **Reporting**: To properly generate reports, you must use the same version of Websense Enterprise and the Websense Enterprise Reporting Tools.
- **Deployment**: You can install the main Websense Enterprise components together on the same machine or distribute them on separate machines, depending upon the available operating systems and the size of your network. If you plan to distribute your Websense Enterprise components on separate machines in your network, run the installer on each machine and select the **Custom** installation option.

  You can install the Filtering Service, Policy Server, User Service, Usage Monitor, and Websense Manager on machines with different operating systems. For example, you can install Websense Manager on a Windows machine and use it to configure a Policy Server running on a Linux machine.

To determine the appropriate deployment of Websense components in your environment, be sure to read the Websense Enterprise *Deployment Guide* before beginning installation.

- **Remote filtering**: If you want to install the optional Remote Filtering components to filter workstations located outside the network firewall, you must run the Websense Enterprise installer and select a **Custom** installation. Refer to *Installing Websense Enterprise Components Separately*, page 95 for information.
- **Network Interface Card (NIC)**: The NIC that you designate for use by Network Agent during installation *must* support *promiscuous* mode. Promiscuous mode allows a NIC to listen to IP addresses other than its own. (Contact the manufacturer of your card to see if it supports promiscuous mode.) If the card supports promiscuous mode, it will be set to that mode by the Websense installer during installation.

NOTE

If you install Network Agent on a machine with multiple NICs, you can configure Network Agent after installation to use more than one NIC. See *Configuring Network Agent to use Multiple NICs*, page 201 for more information.

- **Web server**: To install Real-Time Analyzer (RTA) you must have either Microsoft IIS or Apache Web Server installed. If neither supported web server is detected, the installer gives you the option to install the Apache Web Server or continue the installation without installing RTA.
- **Internet access**: For the Websense Master Database download to occur during installation, the machine running the Websense Filtering Service must have internet access to the download servers at the following URLs:
  - download.websense.com
  - ddsdom.websense.com
  - ddsint.websense.com
  - portal.websense.com
  - my.websense.com

  Make sure that these addresses are permitted by all firewalls, proxy servers, routers, or host files that control the URLs that the Filtering Service can access.
- **Enabling Java interfaces**: If you are installing any Websense Enterprise components on a Windows 2000 Server machine, you must install

DirectX to launch the Java-based GUI installer. If DirectX is not present, you can only install Websense components in the console mode. To enable the console installer in Windows 2000, refer to the procedure in the troubleshooting topic *Websense Enterprise splash screen is displayed, but installer does not launch on Windows 2000*, page 252.

If you have performed a console installation on a Windows 2000 Server machine without DirectX, you must install the Websense Manager on a Solaris machine or on a Windows machine capable of displaying a Java interface.

Installing Websense Enterprise

This section provides separate instructions for installing Websense Enterprise components on each operating system.

Windows

Follow the procedures in this section to install Websense Enterprise on a Windows machine. These procedures are for a **Typical** installation, in which the main Websense Enterprise components are installed on the same machine.

If you plan to distribute the main Websense Enterprise components on separate machines in your network, you must install the Policy Server first. Only the Websense Manager can be installed before the Policy Server has been successfully installed. To install components separately, run the Websense Enterprise installer on each machine and select a **Custom** installation. For instructions on installing Websense components separately, refer to *Installing Websense Enterprise Components Separately*, page 95.

If you decide to change the location of a Websense component, add a component, or remove a component, run the Websense Enterprise installer again on the machine you want to modify and select the appropriate option. The installer detects the presence of Websense components and offers you options for modifying your installation. For information about adding or removing Websense components, refer to *Adding Components*, page 156 and *Removing Components*, page 170.

To install Websense Enterprise on a Windows machine not running your Cisco integration:

1. Log on to the installation machine with **domain** and **local** administrator privileges.

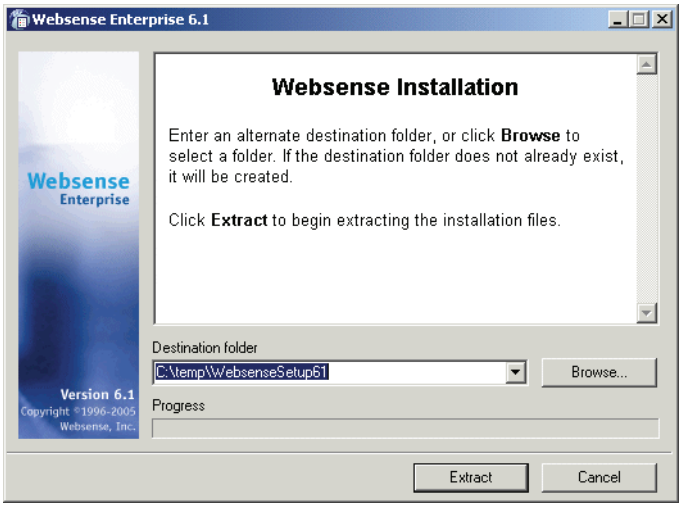
If you are installing User Service and DC Agent, this will assure that they have administrator privileges on the domain.

> **IMPORTANT**
>
> User Service and DC Agent must have administrator privileges on the network to retrieve user login information from the domain controller. Without this information, Websense Enterprise cannot filter by users and groups. If you cannot install these components with such privileges, you may configure administrator privileges for these services after installation in the **Properties** dialog box for Windows services.

2. Close all applications and stop any antivirus software.
3. Run one of the following Websense Enterprise installers:
   - **Web download**: Download one of the following packages from http://www.websense.com/global/en/downloads to a folder on the installation machine and double-click to extract the installer files.
     - **Online installer**: The online installer package (`Setup61.exe`) contains only the installer files. The necessary product files are downloaded from the website as needed after product selections have been made.
     - **Offline installer**: The offline installer (`Websense61Setup.exe`) is much larger than the online package and contains all the files needed to install Websense Enterprise components. Use this package only if you experience difficulties installing Websense with the online installer.
   - **Product CD**: Run `WebsenseStart.exe` from the Websense Enterprise v6.1 product CD (`\WebsenseStart`) to launch the installer start screen. Select a Websense product installation to extract the installer files.

     The file will run automatically if *autorun* is enabled. The product CD contains all the files needed to install Websense Enterprise components.

   A screen displays instructions for extracting the setup program.



Installer Download Extraction Screen

a. Click **Browse** to select a destination folder, or type in a path.

   If the path you enter does not exist, the installer will create it for you.

> **IMPORTANT**
>
> Do not extract the installer files to a folder on your desktop. This may prevent the Real-Time Analyzer from receiving the IP address of the Policy Server machine. Accept the default location of `C:\temp` or select another appropriate folder.

b. Click **Extract** to begin decompressing the files.

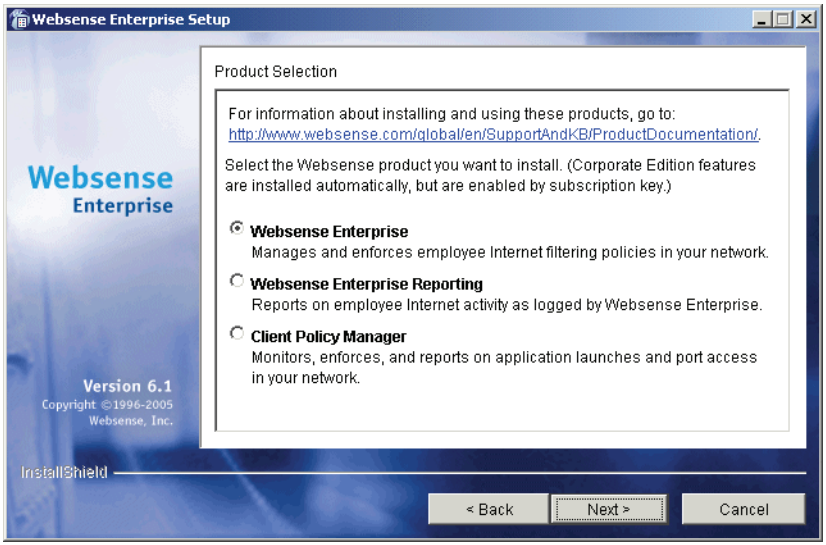
   If Websense Enterprise installation files already exist in that location, you may choose to overwrite the existing files.

   A progress bar shows the status of the extraction, and the view pane scrolls a list of the files as they are decompressed.

   `Setup.exe` runs automatically after the files are decompressed.

4. Click **Next** on the welcome screen and follow the on-screen instructions through the subscription agreement.

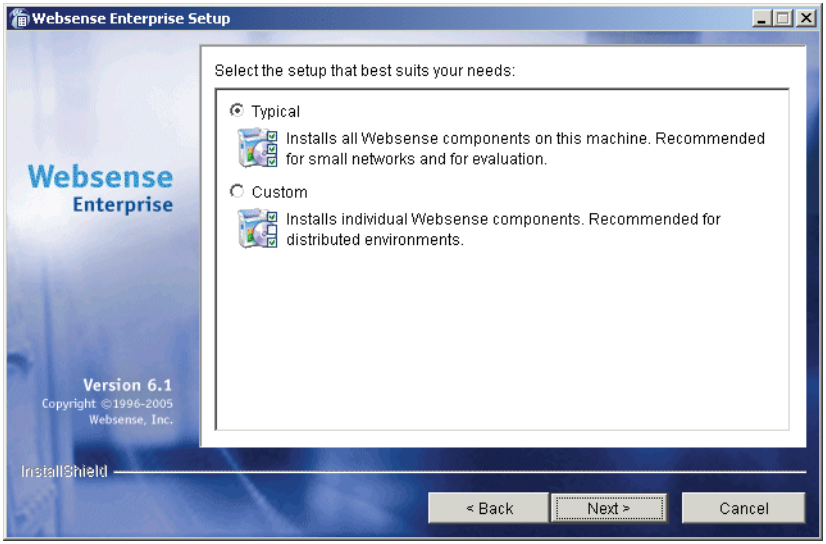
   You are asked to select a Websense product to install.



Websense Product Selection Screen

5. Select **Websense Enterprise** and click **Next**.

   You are offered a choice of two setup types.

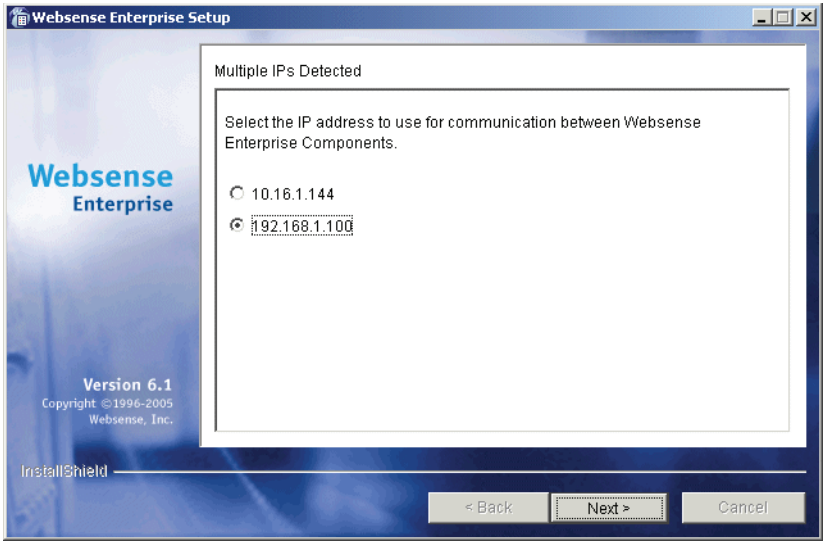


Setup Type Dialog Box

- **Typical**: installs Filtering Service, Policy Server, Websense Manager, User Service, Usage Monitor, and Real-Time Analyzer automatically. The installer asks you if you want to install a transparent identification agent or the Network Agent on the same machine.
- **Custom**: allows you to choose individual Websense Enterprise components to install. Use this option to install Websense components on separate machines in your network. For more information, see *Installing Websense Enterprise Components Separately*, page 95.

6. Select **Typical** and click **Next**.

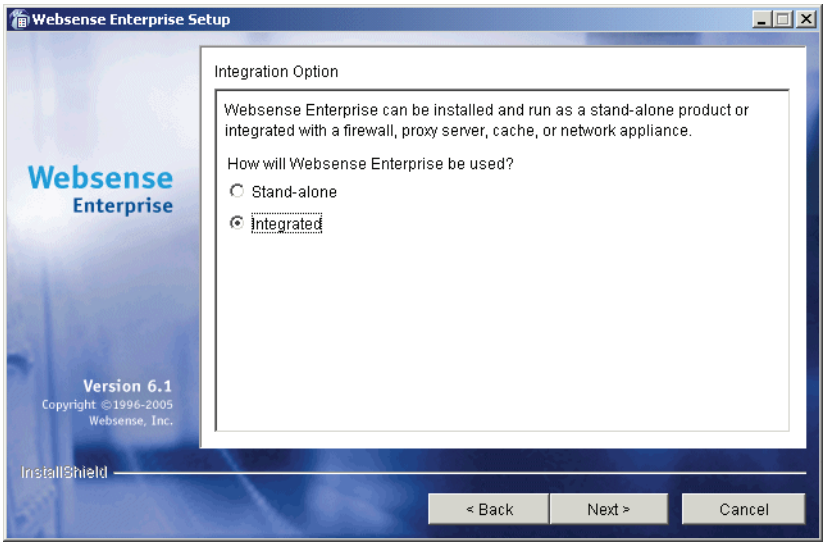
   If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address appear in a list.



Network Interface Card Selection Screen

7. Select the card to use for Websense Enterprise communication and click **Next**.

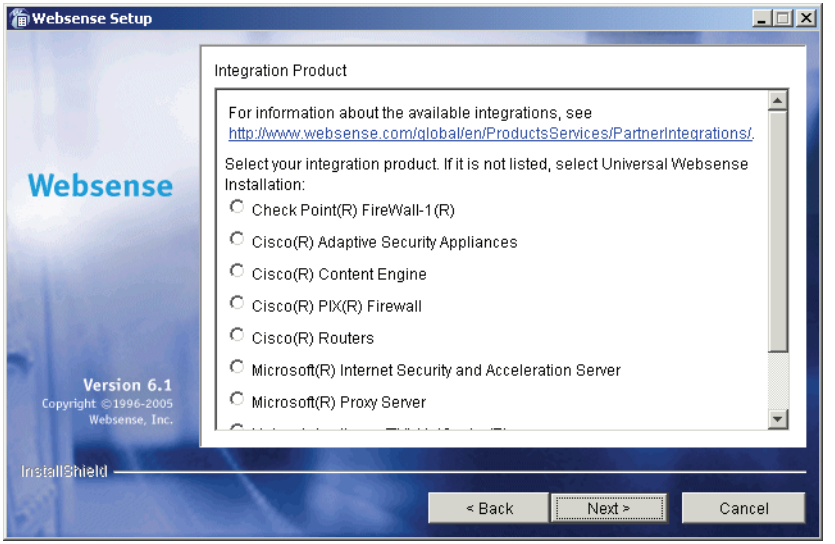
   The installer asks if you want to run Websense Enterprise in the Stand-Alone filtering mode or integrate it with a firewall, proxy server, or network appliance.



Integration Option Screen

8. Select **Integrated** and click **Next**.

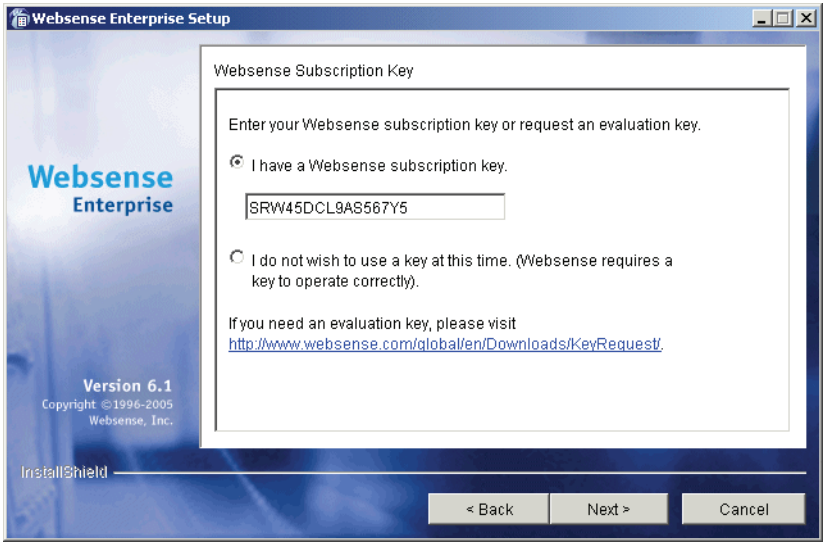
   A dialog box appears listing the supported integration types.



Integration Product Selection Screen

9. Select **Cisco Adaptive Security Appliances**, **Cisco Content Engine**, **Cisco PIX Firewall**, or **Cisco Routers** and click **Next**.

   Setup displays the **Websense Subscription Key** dialog box.



Subscription Key Options

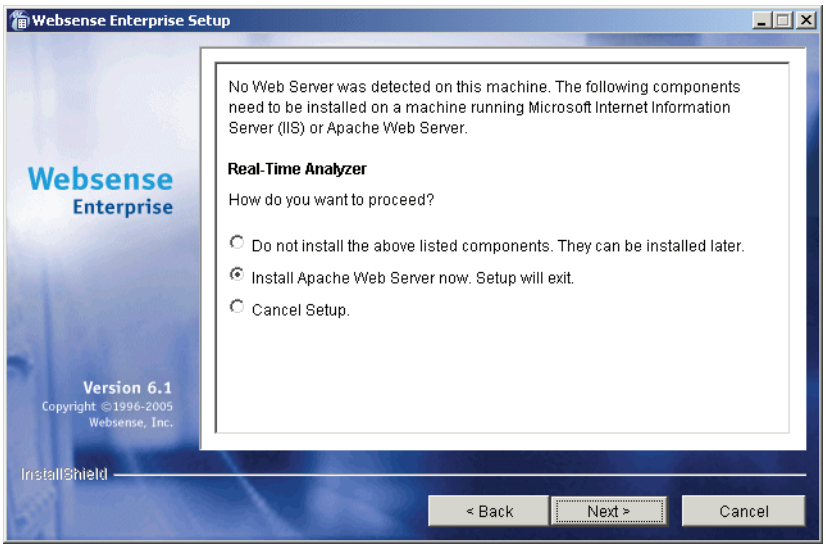
   - **I have a Websense subscription key**: If you have a valid subscription key, select this option and enter your key. You will be given the option to download the Websense Master Database during installation. This will enable Websense Enterprise to begin filtering immediately.
   - **I do not wish to use a key at this time**: Select this option to continue the installation without entering a key. You will not be given the option to download the Websense Master Database during installation. You can download the Master Database after installation by entering a valid key in the Websense Manager. Refer to *Subscription Key and Master Database Download*, page 186 for instructions.

   You can request a 30-day evaluation key at any time by going to: http://www.websense.com/global/en/Downloads/KeyRequest.

10. Click **Next** to continue.

The installer checks your system for a supported web server (Apache Web Server or IIS) for the Real-Time Analyzer and takes the following action:

- If both supported web servers are detected, a dialog box appears asking you to choose one server for the RTA instance.
- If one of the supported servers is detected, the installer continues. No notification appears.
- If neither supported web server is detected, the installer gives you the option to install the Apache Web Server or continue the installation without installing RTA.



RTA Web Server Dialog Box

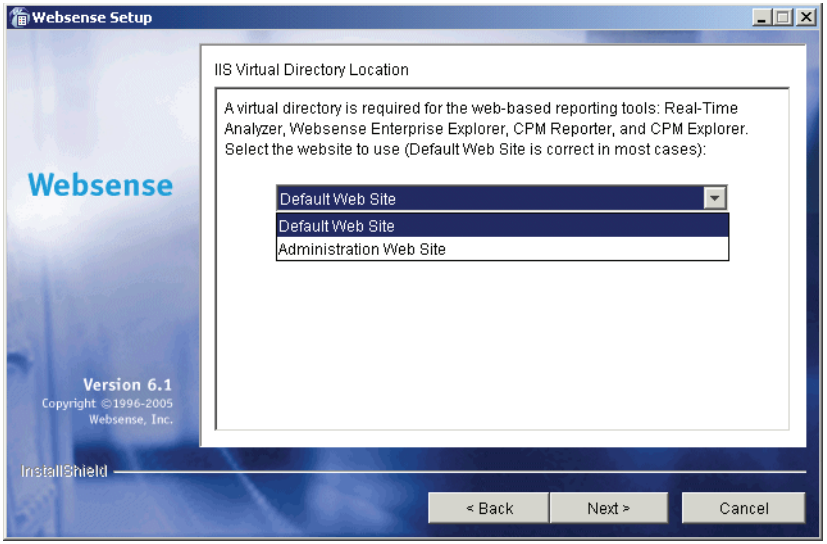
If you select the Apache Web Server installation option, the Websense installer starts the Apache installer and exits without installing any Websense Enterprise components. You must restart your computer after installing the Apache Web Server and run the Websense Enterprise installer again to install Websense.

NOTE

Apache Web Server documentation is installed in HTML format in the `docs/manual/` directory. The latest version can be found at: http://httpd.apache.org/docs-2.0/.

11. Select a web server installation option and click **Next** to continue.

    If you are installing the Real-Time Analyzer and are using IIS as your web server, you are prompted to select the name of the website in the IIS Manager under which the installer should create a virtual directory. The default value is **Default Web Site**, which is correct in most instances.

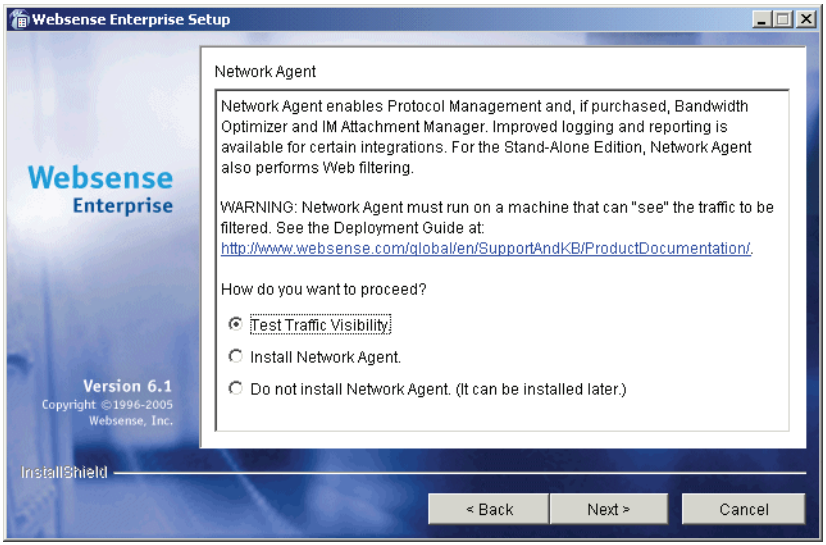


Virtual Directory Selection

12. If you have renamed the default website in the IIS Manager or are using a language version of Windows other than English, select the proper website from the names in the drop-down list, and then click **Next** to continue.

    The installer asks if you want to install the Network Agent and offers you the option of testing your machine's visibility to internet traffic. The machine on which the Network Agent is installed must be able to monitor 2-way employee internet traffic to function correctly.

> **IMPORTANT**
>
> If you install the Network Agent on a machine that cannot monitor targeted internet traffic, some features, such as Dynamic Protocol Management, IM Attachment Manager, and Bandwidth Optimizer, will not perform as expected.



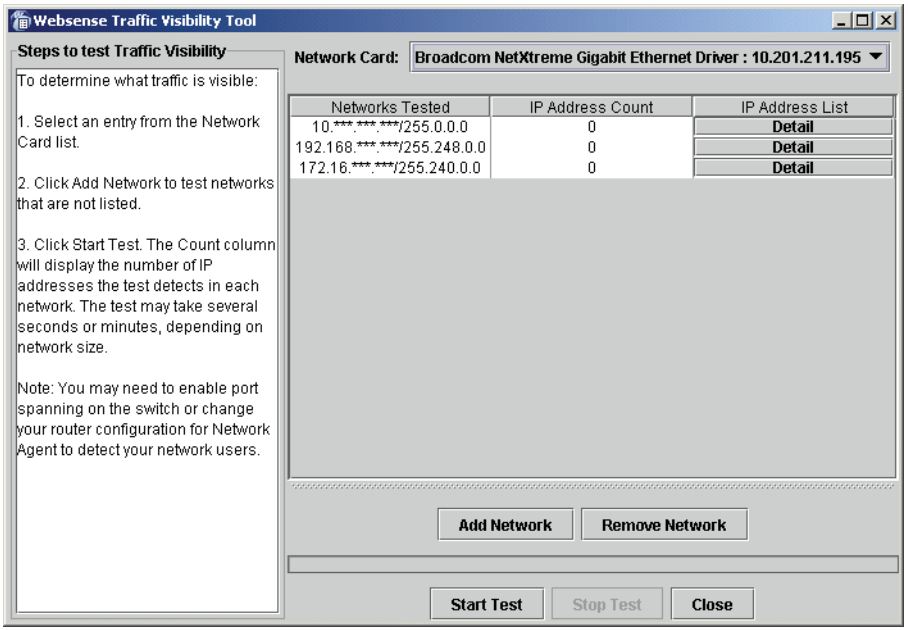
Network Agent Visibility Test Screen

You are given the following three options:

- **Test Traffic Visibility**: This selection launches the utility that tests the visibility of internet traffic from the installation machine.
- **Install Network Agent**: Installs the Network Agent without conducting the traffic visibility test. Use this option if you know that the installation machine has the necessary internet traffic visibility.
- **Do not install Network Agent**: This options allows you to continue the Websense Enterprise installation without installing the Network Agent.

13. Click **Test Traffic Visibility** to check the visibility of internet traffic from the installation machine.

    The **Traffic Visibility Test** utility appears.



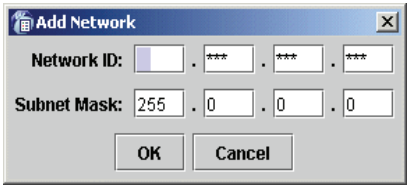
Traffic Visibility Test Tool

Field	Description
Network Card	Name of the network interface card (NIC) to test. Active cards on the installation machine appear in this list. Cards without an IP address will not appear in this list.
Networks Tested	Displays the netmasks that are being tested. You may use the defaults provided or add your own. These netmasks can reside in different network segments depending upon the IP address ranges to be filtered.
IP Address Count	Number of IP addresses for which traffic is detected during the test of a Network.
Detail	Lists all the IP addresses in the network from which internet traffic is being detected.

a. From the **Network Card** drop-down list, select the network interface card (NIC) that you want to use for the Network Agent.

b. If the network you want to test with the NIC does not appear in the default list, click **Add Network**.

   The **Add Network** dialog box appears.



c. Enter a new netmask value in the **Network ID** field.

   The subnet mask defaults to 255.0.0.0 and changes appropriately as the netmask is defined.

d. Click **OK** to return to the **Traffic Visibility Test** dialog box.

   Your new network appears in the list.

e. Click **Start Test** to begin testing the all the networks in the list.

   The counter in the **IP Address Count** column should begin recording internet traffic immediately from the networks listed. The counter increments each time the NIC detects an individual IP address from the target network in a passing packet. The activity bar at the bottom of the dialog box indicates that a test is in progress. If the count for a network remains at zero or is very low, the selected NIC cannot see the traffic it is supposed to monitor.

f. If the Network Agent is unable to see the desired traffic, perform one or both of the following tasks:

   - If the installation machine has multiple NICs, select a different card to test.
   - Resolve network configuration issues to make sure that the NIC can see the desired traffic. This might involve connecting to a different router or configuring for port spanning in a switched environment. See *Chapter 2: Network Configuration* for deployment information. You may continue the installation without installing Network Agent and reconfigure your network later, or make the necessary changes and retest immediately.

g. Click **Stop Test** when you are ready to continue installation.

h. Click **Close** to exit the traffic visibility test screen.

14. Select **Install Network Agent** if you are sure that your NIC is able to monitor all targeted internet traffic. Select **Do not install Network Agent** if you do not plan to install the Network Agent at this time or intend to install it on another machine.

15. Click **Next** to continue.

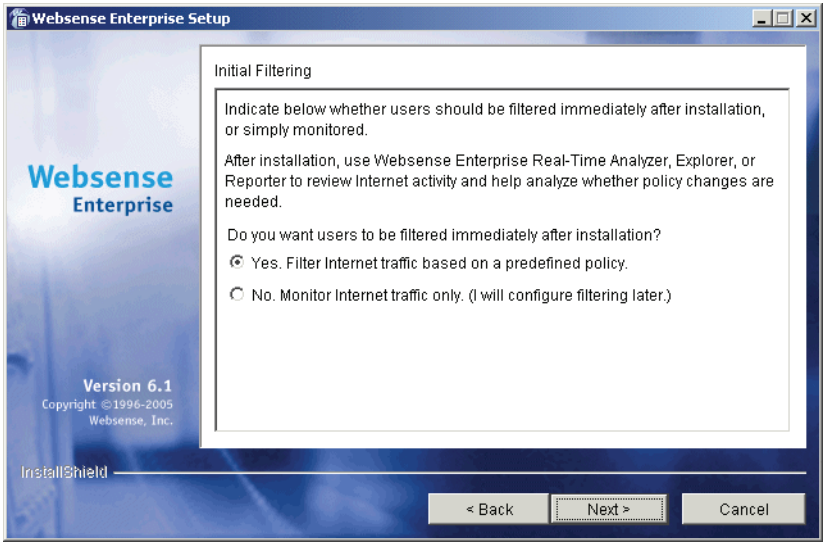
    If you are installing the Network Agent, a screen appears asking you to select the network interface card (NIC) that you want to use for capturing traffic. All network interface cards enabled in the machine appear in a list.

16. If the machine has multiple NICs, select the card to use for Network Agent.

17. Click **Next** to continue.

    Setup asks you to select an initial filtering option.

    - **Yes**: configures Websense Enterprise to filter internet traffic immediately after installation, based on a predefined default policy.
    - **No**: configures Websense Enterprise to monitor internet traffic only, while permitting all internet requests. Select this option and install one or more of the Websense Enterprise Reporting Tools if you want to evaluate your network traffic before applying internet filtering.



Initial Filtering Option Screen

18. Select an initial filtering option and click **Next** to continue.

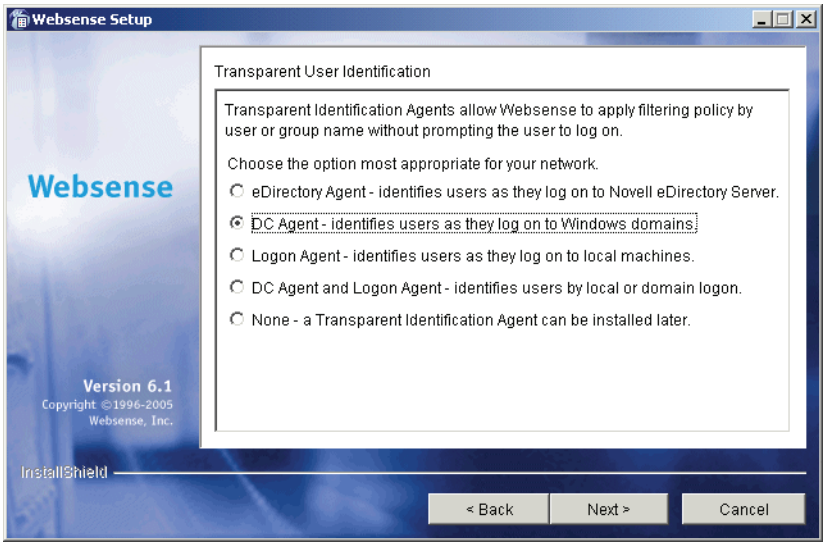
    Setup displays the Transparent User Identification screen, allowing you to select how Websense Enterprise will identify users:

    - **eDirectory Agent**: Select this option to install the eDirectory Agent to authenticate users transparently with Novell eDirectory Service.

- **DC Agent**: Select this option to install DC Agent to authenticate users transparently with a Windows-based directory service.
- **Logon Agent**: Select this option to install the Logon Agent to authenticate users transparently when they log on to the domain. Logon Agent receives its user information from an application called `LogonApp.exe` that must be run by a logon script in your network. Refer to *Creating and Running the Script for Logon Agent*, page 192 for instructions.
- **DC Agent and Logon Agent**: Select this option to install DC Agent and the Logon Agent to authenticate users transparently. This can increase the accuracy of user identification in some networks.
- **None**: This option does not install a Websense transparent identification agent. Select this option if you want to configure authentication of users through **your Cisco integration product**.

NOTE

You can also configure manual authentication in the Websense Manager after installation and initial setup. Refer to your Websense Enterprise *Administrator's Guide* for instructions.



Transparent User Identification Options

19. Select a transparent identification method and click **Next** to continue.

    If you select DC Agent for installation, Setup asks you to provide a user name and a password with administrative privileges on the domain. If you attempt to install DC Agent without providing access to directory information, you will be unable to identify users transparently. Enter the domain and user name, followed by the network password for an account with domain privileges, and click **Next** to continue.

    A dialog box appears, asking you to select an installation folder for the Websense Enterprise components.

20. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

    The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

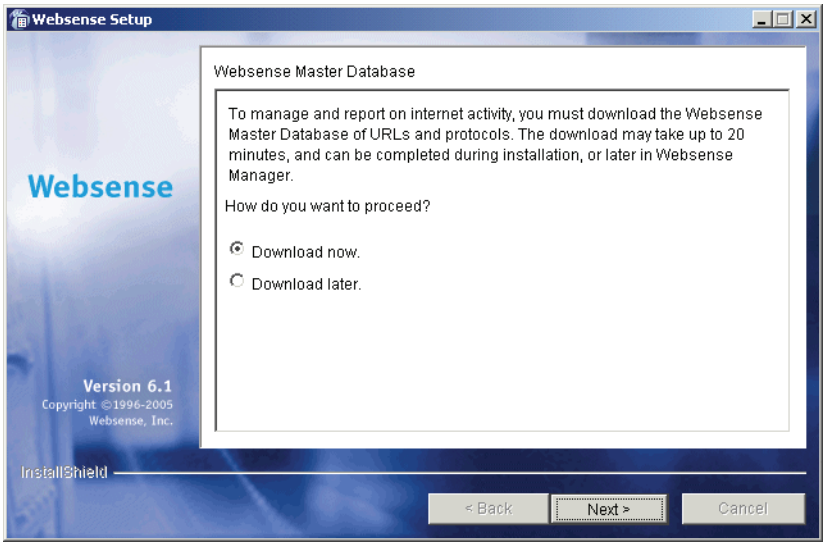
    - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
    - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

    A summary list appears, showing the installation path, installation size, and the components that will be installed.

21. Click **Next** to start the installation.

    - If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.
    - If the Network Agent was not installed, a message reminds you that Protocol Management, IM Attachment Manager, and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Click **Next** to continue.

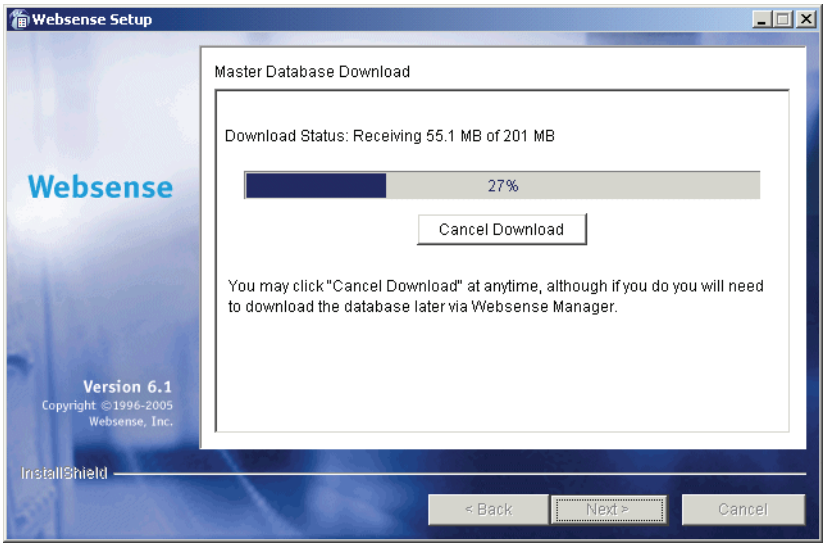
    If you provided the installer with a valid subscription key when prompted, Setup asks if you want to download the Websense Master Database now or at a later time using the Websense Manager.



Master Database Download Selection

22. Select a database download option and click **Next**.

    If you have chosen to download the Master Database now, a progress bar appears. Because of its size, the database can take up to 20 minutes to download and decompress.

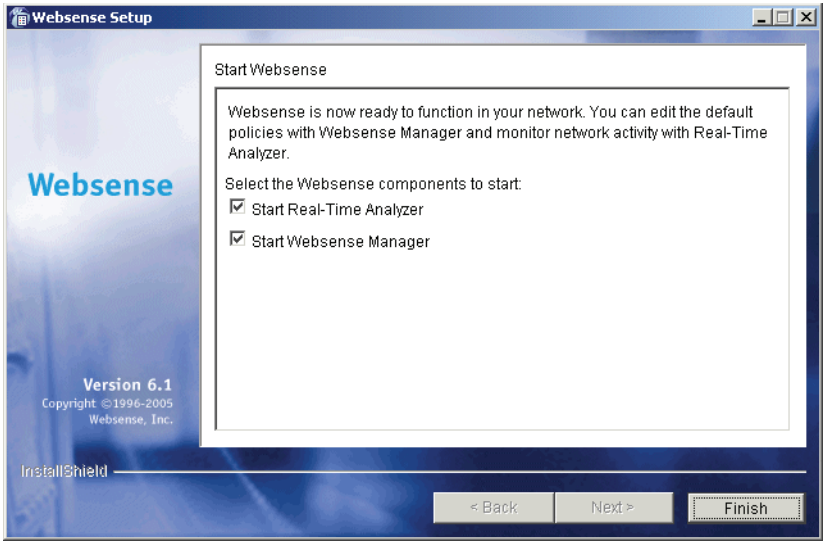


Master Database Download Progress

When the database download is complete, a message appears advising you that the database has been successfully downloaded. Click **Next** to continue.

A message announcing the success of the installation is displayed.

23. Click **Next** to continue.
    - If you have installed DC Agent, a dialog box appears advising you that the machine must be restarted to complete the installation. Select a restart option and click **Finish** to exit the installer.
    - If DC Agent was not installed, but you have installed Real-Time Analyzer and/or Websense Manager, the installer displays a screen asking if you want to launch either of those applications. By default, both are selected. Clear the checkbox of the component you do not want to launch and click **Finish**.
    - If neither DC Agent, Real-Time Analyzer, nor Websense Manager were installed, no further action is required and you can click **Finish** to exit the installer.



Application Launcher

24. If you stopped your antivirus software, be sure to start it again.
25. See *Chapter 5: Initial Setup* to perform post installation tasks.

26. Follow the instructions in *Chapter 6: Configuring Your Cisco Integration* to configure your Cisco security appliance to work with Websense Enterprise.

NOTE

If you decide to change the location of a Websense component, add functionality, or repair a component, run the Websense installer again on the machine you want to modify and select the appropriate option. The installer detects the presence of Websense Enterprise components and offers you options for modifying your installation. For instructions, refer to *Modifying an Installation*, page 156.

Solaris or Linux

Follow the procedures in this section to install Websense Enterprise on a Solaris or Linux machine. These procedures are for a **Typical** installation, in which the main Websense Enterprise components are installed on the same machine.

If you plan to distribute the main Websense Enterprise components on separate machines in your network, you must install the Policy Server first. Only the Websense Manager can be installed before the Policy Server has been successfully installed. To install components separately, run the Websense Enterprise installer on each machine and select a **Custom** installation. For instructions on installing Websense components separately, refer to *Installing Websense Enterprise Components Separately*, page 95.

If you decide to change the location of a Websense component, add a component, or remove a component, run the Websense Enterprise installer again on the machine you want to modify and select the appropriate option. The installer detects the presence of Websense components and offers you options for modifying your installation. For information about adding or removing Websense components, refer to *Adding Components*, page 156 and *Removing Components*, page 170.

You may install the following Websense Enterprise components together on the same machine:

- Filtering Service
- Policy Server

- User Service
- Websense Manager (Solaris only)
- Network Agent
- eDirectory Agent
- Logon Agent
- Usage Monitor

You can install the Websense Manager after you finish installing the main Websense Enterprise components. The Websense Manager is not supported on Linux, and must be installed on either a Windows machine or a Solaris machine. See *Installing Websense Enterprise Components Separately*, page 95 for instructions on installing individual Websense components.

To install Websense Enterprise on a Solaris or Linux machine:

1. Log on to the installation machine as the **root** user.
2. Close all applications and stop any antivirus software.
3. Create a setup directory.

   For example: `/root/Websense_setup`
4. Download the installer file for your operating system from http://www.websense.com/global/en/downloads, or copy it from the Websense Enterprise CD and save it to the setup directory.
   - **Solaris**: `Websense61Setup_Slr.tar.gz`
   - **Linux**: `Websense61Setup_Lnx.tar.gz`
5. Enter the following command to unzip the file:

   `gunzip <download file name>`

   For example: `gunzip Websense61Setup_Slr.tar.gz`
6. Expand the file into its components with the following command:

   `tar xvf <unzipped file name>`

   For example: `tar xvf Websense61Setup_Lnx.tar`

   This places the following files into the installation directory:

File	Description
install.sh	Installation program.
Setup	Archive file containing related installation files and documents.

File	Description
Documentation	Release Notes: An HTML file containing release notes and last minute information about Websense. Read this file with any supported browser.

7. Run the installation program from the setup directory with the following command:

   ```
   ./install.sh
   ```

   To run the GUI version of the installer, use the following command:

   ```
   ./install.sh -g
   ```

   If you are using a non-English based system, the installer will display an error message advising you that the GUI version is not supported.

   The installer sequence is as follows:

   - **Installation type**: You are asked to select an installation type:
     - **Typical**: installs Filtering Service, Policy Server, User Service, and Usage Monitor together on the same machine. The installer gives you the option of installing Network Agent, eDirectory Agent, and the Logon Agent. The Websense Manager is installed automatically on Solaris.
     - **Custom**: allows you to install individual Websense Enterprise components. You can use this option to install components on separate machines in your network. For more information, see *Installing Websense Enterprise Components Separately*, page 95

     Select **Typical** to install the listed Websense components.
   - **Network Interface Card selection**: If the installation machine is multihomed, all enabled network interface cards (NICs) appear in a list. Select the card to use for Websense Enterprise communication.

   IMPORTANT

   Make sure you select a NIC in *normal* mode (cards with an IP address). Interface cards configured for *stealth* mode will appear in this list as well. If you select a stealth mode NIC for Websense communications, Websense services will not work.

   - **Integration option**: Select **Integrated**.

- **Integration product**: Select **Cisco Adaptive Security Appliances**, **Cisco Content Engine**, **Cisco PIX Firewall**, or **Cisco Routers**.
- **Port numbers**: The installer automatically assigns default port numbers to the Policy Server and to the Filtering Service. If either of the default ports is in use, you will be required to select an alternate port. The range of valid port numbers is from 1024 to 65535.

NOTE

Remember the port numbers if you change them from the defaults. You will need them when installing other Websense components.

- **Subscription key**: Setup can download the Websense Master Database during installation if you provide a valid subscription key or evaluation key. This will enable Websense to begin filtering immediately.
  - **I have a Websense subscription key**: If you have a valid subscription key, select this option and enter your key when prompted. You will be given the option to download the Websense Master Database during installation.
  - **I do not wish to use a key at this time**: Select this option if you want to continue the installation without entering a key. You will not be given the option to download the Websense Master Database during installation. You can download the Master Database after installation by entering your key in the Websense Manager. Refer to *Subscription Key and Master Database Download*, page 186 for instructions.

  To request a 30-day evaluation key, go to:

  http://www.websense.com/global/en/Downloads/KeyRequest

- **Network Agent**: Install Network Agent or test the visibility of internet traffic from this machine.

> **IMPORTANT**
> The machine on which the Network Agent is installed must be able to monitor 2-way employee internet traffic for Network Agent to function properly. If you install the Network Agent on a machine that cannot monitor targeted internet traffic, Dynamic Protocol Management, Bandwidth Optimizer, and IM Attachment Manager will not perform as expected.

You are given the following three options:

- **Test Traffic Visibility**: launches the utility that tests the visibility of internet traffic from the installation machine.
- **Install Network Agent**: installs the Network Agent without conducting the traffic visibility test. Use this option if you know that the installation machine has the necessary internet traffic visibility.
- **Do not install Network Agent**: allows you to continue the Websense Enterprise installation without installing the Network Agent.

To check the visibility of internet traffic from the installation machine:

a. Select **Test Traffic Visibility**.

b. Select the network interface card (NIC) that you want to use for the Network Agent and continue to the next pane. Active cards on the installation machine appear in this list, including NICs without IP addresses (stealth mode).

   A default list of networks (netmasks) to test appears. You may use the defaults provided or add your own. These netmasks can reside in different network segments depending upon the IP address ranges to be filtered.

c. If the network you want to test with the NIC does not appear in the default list, select **Add Network**.

   – Enter a new netmask value in the **Network ID** field.

The subnet mask defaults to 255.0.0.0 and changes appropriately as the netmask is defined.

- Select **Redisplay** to return to the options list.

  Your new network appears in the list.

d. Select **Remove a Network** to delete a network from the list.

e. Select **Start Test** to begin testing all the networks in the list.

   The counter in the **IP Address Count** column should begin recording internet traffic immediately from the networks listed. The counter increments each time the NIC detects an individual IP address from the target network in a passing packet. The activity bar at the bottom of the pane indicates that a test is in progress. If the count for a network remains at zero or is very low, the selected NIC cannot see the traffic it needs to monitor.

f. If the Network Agent is unable to see the desired traffic, perform one or both of the following tasks:

   - If the installation machine has multiple NICs, select a different card to test.
   - Resolve network configuration issues to make sure that the NIC can see the desired traffic. This might involve connecting to a different router or configuring for port spanning in a switched environment. See *Chapter 2: Network Configuration* for deployment information. You may continue the installation without installing Network Agent and reconfigure your network later, or make the necessary changes and retest immediately.

g. Select **Exit Tool** when you are ready to continue installation.

h. Select **Install Network Agent** if you are sure that your NIC is able to monitor all targeted internet traffic.

i. Select **Do not install Network Agent** if the visibility test fails or if you have decided to wait to install Network Agent. If Network Agent cannot see the necessary traffic, you must either reposition the machine in the network or select another machine on which to install the Network Agent.

- **Network Interface Card (NIC) selection**: If the installation machine has multiple network interface cards, all enabled cards appear in a list. Select the NIC that you tested successfully for network visibility. Cards configured for stealth mode will appear on this list.

- **Initial filtering options**: Websense Enterprise can be configured to filter internet traffic immediately after installation, based on a predefined default policy, or to monitor internet traffic only. Select **Yes** to filter traffic initially, or **No** if you want to evaluate your network traffic before applying any type of filtering. You must install one or more of the Websense Enterprise Reporting Tools to report on network activity.
- **Transparent user identification**: Select one of the following:
  - **eDirectory Agent**: Select this option to install the eDirectory Agent to authenticate users transparently through Novell eDirectory Server.
  - **Logon Agent**: Select this option to install the Logon Agent to authenticate Windows users transparently when they log on to the domain. Logon Agent receives its user information from an application called `LogonApp.exe` that must be run by a logon script in your network. Refer to *Creating and Running the Script for Logon Agent*, page 192 for instructions.
  - **None**: This option does not install a Websense transparent identification agent. Select this option if you want to configure authentication of users through **your Cisco integration product**.

NOTE

You can configure manual authentication in the Websense Manager after installation and initial setup.

- **Protocol block messages**: Setup advises you that you must install the Samba client (v2.2.8a and higher) to display block messages on Windows workstations blocked by Protocol Management. You may continue installing Websense and download the Samba client later. To download the Samba client, go to the Sun freeware website at:

  http://www.sunfreeware.com

NOTE

The Samba client is not required for protocol blocking to occur. This software controls the display of protocol blocking messages on client machines only.

- **Web browser**: For Solaris installations, you must provide the full path to the web browser you want to use when viewing online help. This information is requested only when you choose a **Typical** installation or are installing Websense Manager separately.
- **Directory path**: This is the path to the installation directory where Websense will create the `/opt/Websense` directory. If this directory does not already exist, the installer will create it automatically.

IMPORTANT

The full installation path must use ASCII characters *only*.

- **System requirements check**: The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.
  - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
  - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.
- **Installation summary**: A summary list appears, showing the installation path, installation size, and the components you have selected.

8. Press **Enter** to begin the installation.

   If you are using the online installer, the Download Manager copies the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   The installer creates the `/opt/Websense` directory, and the `/opt/Websense/Manager` directory if you installed Websense Manager (Solaris only). It also sets up the necessary files, including `/etc/rc3.d/S11WebsenseAdmin`, which enables Filtering Service to start automatically each time the system starts.

- If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Select **Next** to continue.
- **Master Database Download**: If you provided a valid subscription key when prompted, Setup asks if you want to download the Websense Master Database now or at a later time using the Websense Manager. Select a database download option and press **Enter**.

NOTE

Because of its size, the database can take up to 20 minutes to download and decompress.

If you have chosen to download the database now, the database is downloaded and decompressed. When the database download is complete, a message appears advising you of the status of the download. Select **Next** to continue.

A message announcing the success of the installation is displayed.

9. Select **Next** to continue.
   - If you have not installed the Websense Manager, you are ready to select **Finish** and exit the installer.
   - If you are installing the Websense Manager (Solaris GUI mode only), the installer displays a screen asking if you want to launch the Websense Manager. By default, the Manager is selected for launch. Select **Finish** when you are ready to exit the installer.
10. If you stopped your antivirus software, be sure to start it again.
11. If you did not install the Websense Manager on this machine, you must install it on a separate Windows or Solaris machine in your network. Follow the instructions under *Installing Websense Enterprise Components Separately*, page 95.
12. Follow the instructions in *Chapter 6: Configuring Your Cisco Integration* to configure your Cisco security appliance to work with Websense Enterprise.

NOTE

If you decide to change the location of a Websense component, add functionality, or repair a component, run the Websense installer again on the machine you want to modify and select the appropriate option. The installer detects the presence of Websense Enterprise components and offers you options for modifying your installation. For instructions, refer to *Modifying an Installation*, page 156.

Installing Websense Enterprise Components Separately

All Websense Enterprise components can be installed separately using the **Custom** feature of the Websense installer. Your environment may require you to install the Websense Manager and some of the optional components apart from the Websense Filtering Service. You can install these components alone or together on remote machines in your network. This section describes the procedures for installing the following Websense components on separate machines in your network:

NOTE

When installing Websense components, you must always install the Policy Server first. Only the Websense Manager can be installed before the Policy Server has been successfully installed.

- **Websense Manager**: Websense Manager can be installed on Windows and Solaris operating systems and can connect to a Policy Server on the same operating system or on a different operating system. Websense Manager is not supported on Linux.
- **Network Agent**: Network Agent can be installed on Windows, Solaris, and Linux machines and must be able to see all internet traffic, both inbound and outbound.
- **DC Agent**: DC Agent runs on Windows only and is installed in networks using a Windows directory service (NTLM-based or Active Directory). To retrieve user information from the domain controller, DC Agent must be installed with domain administrator privileges on the network.

- **Real-Time Analyzer (RTA)**: RTA installs on Windows only. You can have only one instance of RTA for each Policy Server in your network.
- **Usage Monitor**: Usage Monitor installs on Windows, Solaris, and Linux. You can have only one instance of Usage Monitor for each Policy Server in your network.
- **RADIUS Agent**: RADIUS Agent installs on Windows, Solaris, and Linux. This optional component is only available through a **Custom** installation. RADIUS Agent can be used in conjunction with either Windows- or LDAP-based directory services; it works together with a RADIUS client and RADIUS server to identify users logging on from remote locations.
- **eDirectory Agent**: eDirectory Agent installs on Windows, Solaris, and Linux, and is installed in networks that use Novell eDirectory to identify users.
- **Logon Agent**: Logon Agent installs on Windows, Solaris, and Linux. Logon Agent receives user information at logon from a client application called `LogonApp.exe`, which must be run by a logon script. Instructions for creating and running this logon script in your network can be found in *Creating and Running the Script for Logon Agent*, page 192. `LogonApp.exe` runs only on Windows client machines.

  NOTE

  The installation of these Websense components in the presence of other Websense components requires fewer steps. Setup searches for existing Websense initialization files and automatically uses this configuration information to locate the Policy Server and Filtering Service in the network.

- **Remote Filtering components:**

  The Remote Filtering components—Remote Filtering Server and Remote Filtering Client Pack—are required only if you want to enable web filtering on user workstations located outside your organization's network firewall. These optional components are only available through a **Custom** installation.

  NOTE

  To enable the Remote Filtering components, you must subscribe to the remote filtering service.

- **Remote Filtering Server**: The Remote Filtering Server installs on Windows, Solaris, and Linux. It must be able to communicate with the Websense Filtering Service and with the Remote Filtering Clients installed on user workstations.
- **Remote Filtering Client Pack**: The Remote Filtering Client Pack is an installer used to deploy the **Remote Filtering Client** to Windows workstations that will be used outside the network firewall. The Remote Filtering Client Pack installs on Windows only.

If you want to install the Websense Enterprise core components individually in a distributed environment, refer to the Websense Enterprise *Deployment Guide* for information that will help you decide how to best deploy the components in your environment.

Windows Procedures

The steps in this section are common to all separate installations of Websense Enterprise components on Windows. Start here to download and run the Websense installer, and then refer to the appropriate sections for the component-specific procedures.

To install components separately on Windows:

1. Log on to the installation machine with **local** administrator privileges.

IMPORTANT

If you are installing DC Agent, log on with **domain** administrator privileges. DC Agent must have administrator privileges on the network to retrieve user login information from the domain controller. Without this information, Websense Enterprise cannot filter by users and groups. If you cannot install DC Agent with such privileges, you may configure administrator privileges for it after installation in the **Properties** dialog box for Windows services.

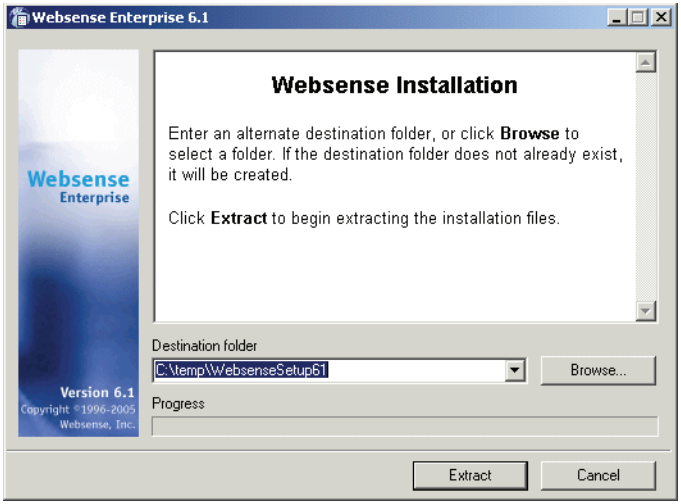
2. Close all applications and stop any antivirus software.
3. Run one of the following Websense Enterprise installers:
   - **Web download**: Download one of the following packages from http://www.websense.com/global/en/downloads to a folder on the installation machine and double-click to extract the installer files.

- **Online installer**: The online installer package (`Setup61.exe`) contains only the installer files. The necessary product files are downloaded from the website as needed after product selections have been made.
- **Offline installer**: The offline installer (`Websense61Setup.exe`) is much larger than the online package and contains all the files needed to install Websense Enterprise components. Use this package only if you experience difficulties installing Websense with the online installer.

- **Product CD**: Run `WebsenseStart.exe` from the Websense Enterprise v6.1 product CD (`\WebsenseStart`) to launch the installer start screen. Select a Websense product installation to extract the installer files.

  The file will run automatically if *autorun* is enabled. The product CD contains all the files needed to install Websense Enterprise components.

A screen displays instructions for extracting the setup program.



Installer Download Extraction Screen

a. Click **Browse** to select a destination folder, or type in a path.

   If the path you enter does not exist, the installer will create it for you.

IMPORTANT

Do not extract the installer files to a folder on your desktop. This may prevent the Real-Time Analyzer from receiving the IP address of the Policy Server machine. Accept the default location of `C:\temp` or select another appropriate folder.

b. Click **Extract** to begin decompressing the files.

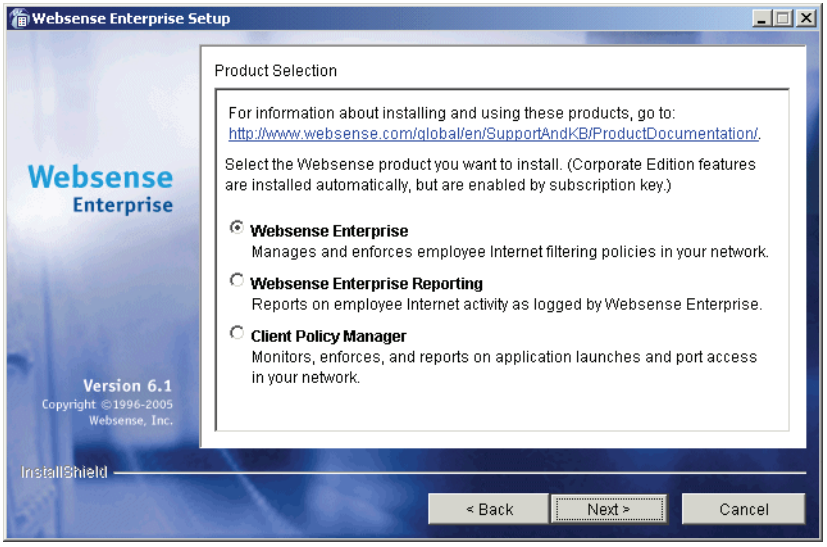
If Websense Enterprise installation files already exist in that location, you may choose to overwrite the existing files.

A progress bar shows the status of the extraction, and the view pane scrolls a list of the files as they are decompressed.

`Setup.exe` runs automatically after the files are decompressed.

4. Click **Next** on the welcome screen and follow the on-screen instructions through the subscription agreement.

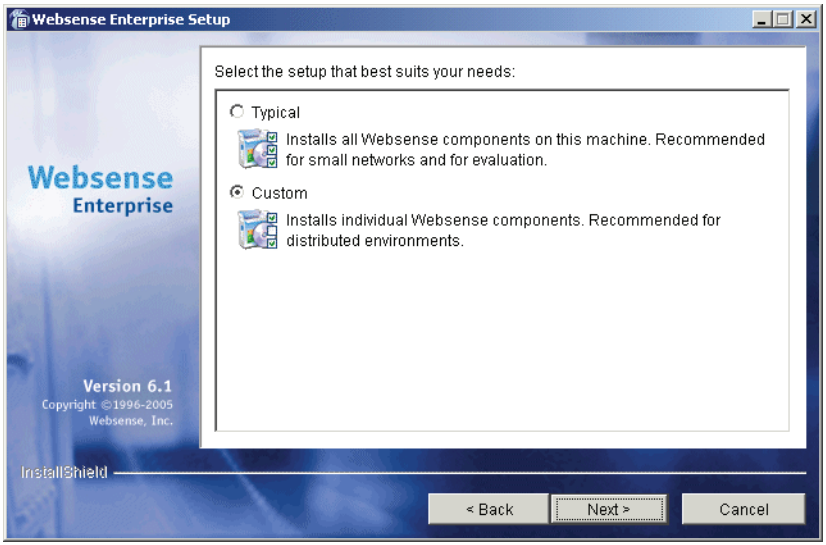
   You are asked to select a Websense product to install.



Websense Product Selection Screen

5. Select **Websense Enterprise** and click **Next**.

   You are offered a choice of two setup types.



Setup Type Dialog Box

6. Select **Custom** and click **Next**.
7. To continue, proceed to the appropriate component section below.

Websense Manager

When you install Websense Enterprise on Linux, you must install the Websense Manager on a separate Windows or Solaris machine in your network. Use the following procedure to install the Websense Manager on a Windows machine.

1. Download and start the Windows installer using the procedure in *Windows Procedures*, page 97.
2. Following the **Custom** installation path brings you to the component selection screen. Select **Websense Manager** and click **Next**.

   A dialog box appears, asking you to select an installation directory for the Websense Manager.
3. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

- If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
- If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

A summary list appears, showing the installation path, installation size, and the components that will be installed.

4. Click **Next** to start the installation.

   If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Click **Next** to continue.

   When the installation is finished, a message appears advising you that the procedure was successful.

5. Click **Next** to continue.

   The installer displays a screen asking if you want to launch the Websense Manager. By default, the Manager is selected for launch.

6. Make a selection, and click **Finish**.
7. If you stopped your antivirus software, remember to start it again after Websense components have been installed.

Network Agent

Network Agent must be able to monitor 2-way internet traffic from the internal network. Install Network Agent on a machine that can see the internet requests *from* the internal network as well as the internet response *to* the requesting workstations.

If this installation is part of a multiple deployment of the Network Agent (for load balancing purposes), you must be sure that the IP address ranges for each instance of the Network Agent do not overlap. This will result in double logging. Deploy the Network Agents so that they can filter the entire network. Partial deployment will result in incomplete filtering by protocol and

bandwidth, as well as the loss of log data from network segments not watched by the Network Agent. For instructions on defining IP address ranges for multiple Network Agents, refer to the Websense Enterprise *Administrator's Guide*. For detailed information about deploying Network Agent, refer to the Websense Enterprise *Deployment Guide*.

Do not install the Network Agent on a machine running any type of firewall. The Network Agent uses a packet capturing utility which may not work properly when installed on a firewall machine.

If you are attempting to install the Network Agent on a machine on which the Filtering Service and Policy Server are already installed, refer to the procedures in *Adding Components*, page 156.

IMPORTANT

The Websense Filtering Service and the Policy Server must be installed and running prior to installing the Network Agent, or installed at the same time as the Network Agent. The installer asks for the IP addresses and port numbers of these components and will not install the Network Agent if the Policy Server and Filtering Service cannot be located.

To install the Network Agent on a Windows machine:

1. Download and start the Windows installer using the procedure in *Windows Procedures*, page 97.
2. Following the **Custom** installation path brings you to the component selection screen. Select **Network Agent** and click **Next**.

   Setup asks you to identify the machine on which the Policy Server is installed.

IMPORTANT

The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

3. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then click **Next**.

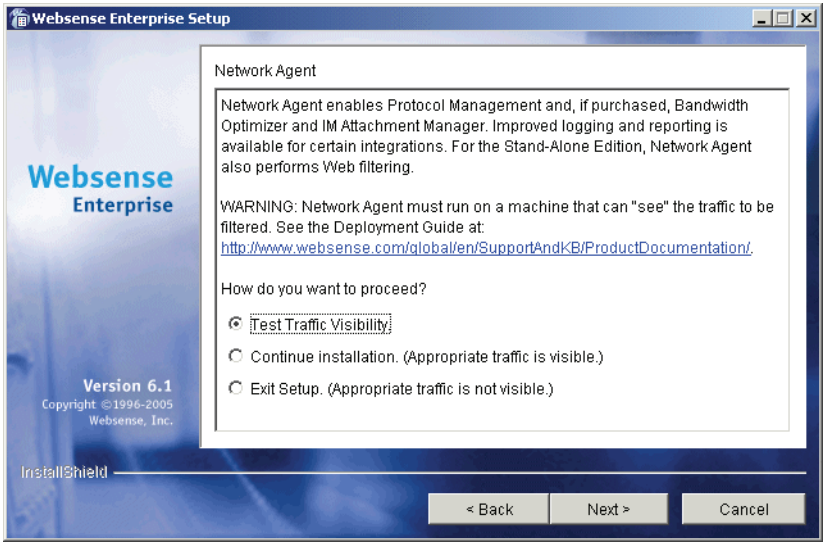
   If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address appear in a list.

4. Select the card you want Network Agent to use to communicate and click **Next**.

   The installer displays the Network Agent installation screen and offers you the option of testing your machine's visibility to internet traffic. The machine on which the Network Agent is installed must be able to monitor 2-way employee internet traffic for Network Agent to function properly.

IMPORTANT

If you install the Network Agent on a machine that cannot monitor targeted internet traffic, some features, such as Dynamic Protocol Management and Bandwidth Optimizer, will not perform as expected.



Network Agent Installation Screen

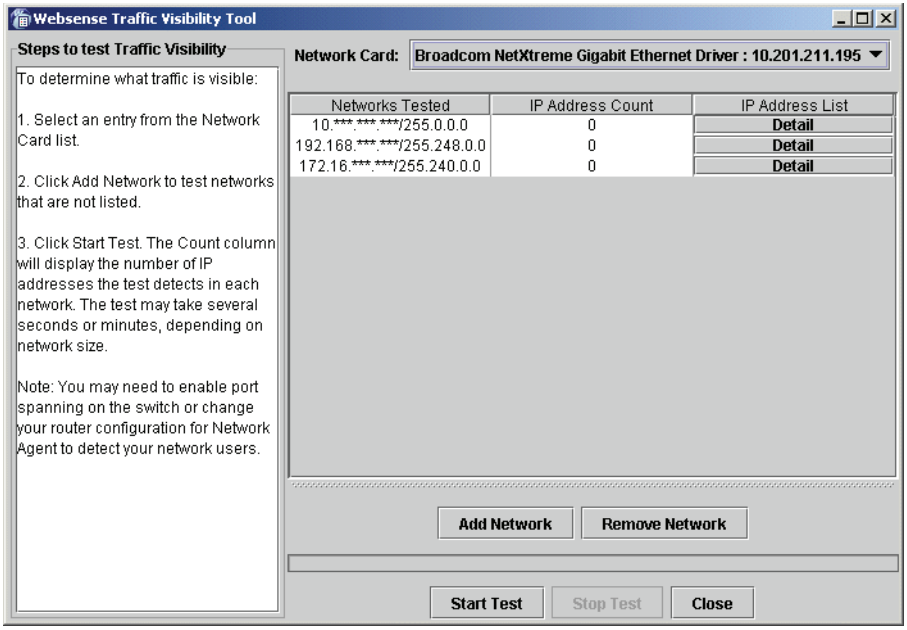
You are given the following three options:

- **Test Traffic Visibility**: This selection launches the utility that tests the visibility of internet traffic from the installation machine.

- **Continue installation**: If you know that the installation machine has the necessary internet traffic visibility, you may select this option and continue the installation without conducting the visibility test.
- **Exit Setup**: If you determine that the installation machine cannot see the appropriate internet traffic, select this option to exit Setup. Select another machine for installation, reposition the current machine in the network, or replace the NIC. Remember that the NIC must have an IP address for Network Agent to function.

5. Click **Test Traffic Visibility** to check the visibility of internet traffic from the installation machine.

   The **Traffic Visibility Test** tool appears.



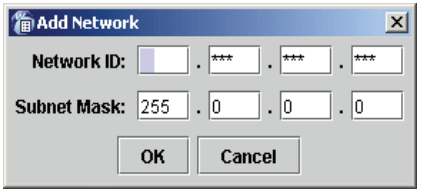
Traffic Visibility Test Tool

Field	Description
Network Card	Name of the network interface card (NIC) to test. Active cards on the installation machine appear in this list. Cards without an IP address will not appear in this list.
Networks Tested	Displays the netmasks that are being tested. You may use the defaults provided or add your own. These netmasks can reside in different network segments depending upon the IP address ranges to be filtered.
IP Address Count	Number of IP addresses for which traffic is detected during the test of a Network.
Detail	Lists all the IP addresses in the network from which internet traffic is being detected.

a. From the **Network Card** drop-down list, select the network interface card (NIC) that you want to use for the Network Agent.

b. If the network you want to test with the NIC does not appear in the default list, click **Add Network**.

The **Add Network** dialog box appears.



c. Enter a new netmask value in the **Network ID** field.

The subnet mask defaults to 255.0.0.0 and changes appropriately as the netmask is defined.

d. Click **OK** to return to the **Traffic Visibility Test** dialog box.

Your new network appears in the list.

e. Click **Start Test** to begin testing all the networks in the list.

The counter in the **IP Address Count** column should begin recording internet traffic immediately from the networks listed. The counter increments each time the NIC detects an individual IP address from the target network in a passing packet. The activity bar at the bottom of the dialog box indicates that a test is in progress.

If the count for a network remains at zero or is very low, the selected NIC cannot see the traffic it is supposed to monitor.

f. If the Network Agent is unable to see the desired traffic, perform one or both of the following tasks:

- If the installation machine has multiple NICs, select a different card to test.
- Resolve network configuration issues to make sure that the NIC can see the desired traffic. This might involve connecting to a different router or configuring for port spanning in a switched environment. See *Chapter 2: Network Configuration* for deployment information.

g. Click **Stop Test** when you are ready to continue installation.

h. Click **Close** to exit the traffic visibility test screen.

6. Continue with the installation or exit Setup.
   - Select **Continue installation** if you are sure that your NIC is able to monitor all targeted internet traffic.
   - Select **Exit Setup** if the visibility test fails. You must either reposition the machine in the network, select another machine on which to install the Network Agent, or install a different NIC.
7. Click **Next** to continue.

   The installer asks you if this machine is running a firewall. Network Agent cannot function properly on a machine running a firewall.
8. Select **Yes** or **No,** and then click **Next** to continue.
   - Select **Yes** if you are attempting to install Network Agent on a firewall machine, and Setup will close. Install the Network Agent on a machine that is not running a firewall.
   - Select **No** if the installation machine is not being used as a firewall. Installation will continue.

   If the installation machine has multiple network interface cards (NICs), a screen appears asking you to select the network interface card (NIC) that you want to use for capturing traffic. All network interface cards enabled in the machine appear in a list.
9. If presented with a list, select the desired card and click **Next** to continue.

Setup asks you to identify the machine on which the Websense Filtering Service is installed.

IMPORTANT

The communication port (15868) in this dialog box is the default port number used by the installer to install the Filtering Service. If you installed the Filtering Service using a different port number, enter that port in this dialog box.

10. Enter the IP address of the Filtering Service machine, and the port number if different from the default, and then click **Next**.

    Setup asks you to select an installation folder for the Websense Enterprise components.

11. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

    The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

    - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
    - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

    A summary list appears, showing the installation path, installation size, and the components that will be installed.

12. Click **Next** to start the installation.

    If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

    When the installer is finished, a message appears advising you that the procedure was successful.

13. Click **Finish** to exit the installer.

14. If you stopped your antivirus software, remember to start it again after Websense components have been installed.
15. Configure Network Agent for use in your network. Refer to the Network Agent chapter of the Websense Enterprise *Administrator's Guide* for instructions.

DC Agent

The Websense DC Agent installs on Windows only and is used in networks that authenticate users with a Windows directory service (NTLM-based or Active Directory). If you installed Websense Enterprise on a Windows machine, you were prompted to install the DC Agent. If you did not install it together with the Filtering Service at that time, and if you need to authenticate through a Windows-based directory service, you can install DC Agent with the following procedure.

If your network is large, you may benefit from installing DC Agent on multiple machines. This way, you will have ample space for DC Agent files that are continually populated with user information. For additional information about how to deploy DC Agent, refer to *Websense Enterprise Components*, page 15.

To install DC Agent on a Windows machine:

1. Download and start the Windows installer using the procedure in *Windows Procedures*, page 97.
2. Following the **Custom** installation path brings you to the component selection screen. Select **DC Agent** and click **Next**.

   If the installation machine is multihomed, all enabled network interface cards appear in a list.
3. Select the card you want DC Agent to use to communicate and click **Next**.

   Setup asks you to identify the machine on which the Policy Server is installed.

IMPORTANT

The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

4. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then click **Next**.

   The installer asks you to provide a user name and a password with administrative privileges on the domain. If you attempt to install DC Agent without providing access to directory information, DC Agent will be unable to identify users transparently.

5. Enter the domain and user name, followed by the network password for an account with domain privileges, and then click **Next**.

   Setup asks you to select an installation folder for the Websense Enterprise components.

6. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
   - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

   A summary list appears, showing the installation path, installation size, and the components that will be installed.

7. Click **Next** to start the installation.

   If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Click **Next** to continue.

   A message appears advising you that the procedure was successful.

8. Click **Next** to continue.

A dialog box appears advising you that the machine must be restarted to complete the installation.

9. Select a restart option and click **Finish** to exit the installer.
10. If you stopped your antivirus software, remember to start it again after Websense components have been installed.
11. Configure User Service to communicate with DC Agent by following the instructions in the User Identification chapter of the Websense Enterprise *Administrator's Guide*.

Real-Time Analyzer (RTA)

RTA graphically displays bandwidth usage information and shows requests by category or protocol. RTA installs on Windows only. You can have only one instance of RTA for each Policy Server in your network.

To install RTA on a Windows machine:

1. Download and start the Windows installer using the procedure in *Windows Procedures*, page 97.
2. Following the **Custom** installation path brings you to the component selection screen. Select **Real-Time Analyzer** and click **Next**.

   If the installation machine is multihomed, all enabled network interface cards appear in a list.
3. Select the card you want RTA to use to communicate and click **Next**.

   Setup asks you to identify the machine on which the Policy Server is installed.

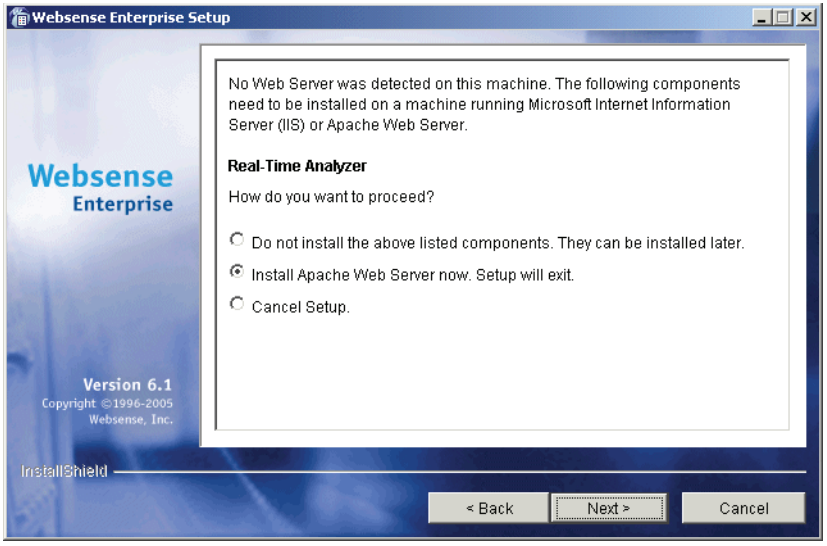
IMPORTANT

The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

4. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then click **Next**.

   The installer checks your system for a supported web server (Apache Web Server or IIS) for the Real-Time Analyzer and takes the following action:

- If both supported web servers are detected, a dialog box appears asking you to choose one server for RTA.
- If one of the supported servers is detected, the installer continues. No notification appears.
- If neither supported web server is detected, the installer gives you the option to install the Apache Web Server or continue the installation without installing RTA.



RTA Web Server Dialog Box

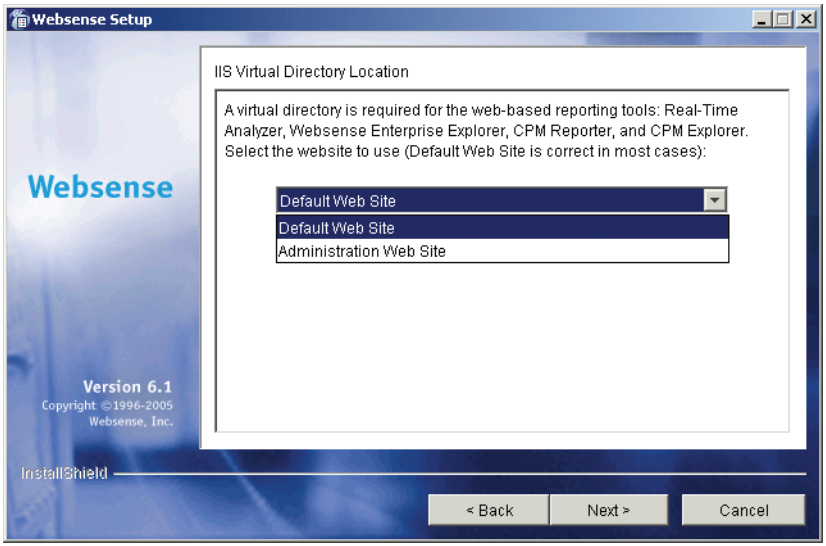
If you select the Apache Web Server installation option, the Websense installer starts the Apache installer and exits without installing any Websense Enterprise components. You must restart your computer after installing the Apache Web Server and run the Websense Enterprise installer again to install Websense.

NOTE

Apache Web Server documentation is installed in HTML format in the `docs/manual/` directory. The latest version can be found at: http://httpd.apache.org/docs-2.0/.

5. Select a web server installation option and click **Next** to continue.

If you are using IIS as your web server, you are prompted to select the name of the website in the IIS Manager under which the installer should create a virtual directory. The default value is **Default Web Site**, which is correct in most instances.



Virtual Directory Selection

6. If you have renamed the default website in the IIS Manager or are using a language version of Windows other than English, select the proper website from the names in the drop-down list, and then click **Next** to continue.

   Setup asks you to select an installation folder for the Websense Enterprise components.

7. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.

- If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

A summary list appears, showing the installation path, installation size, and the components that will be installed.

8. Click **Next** to start the installation.

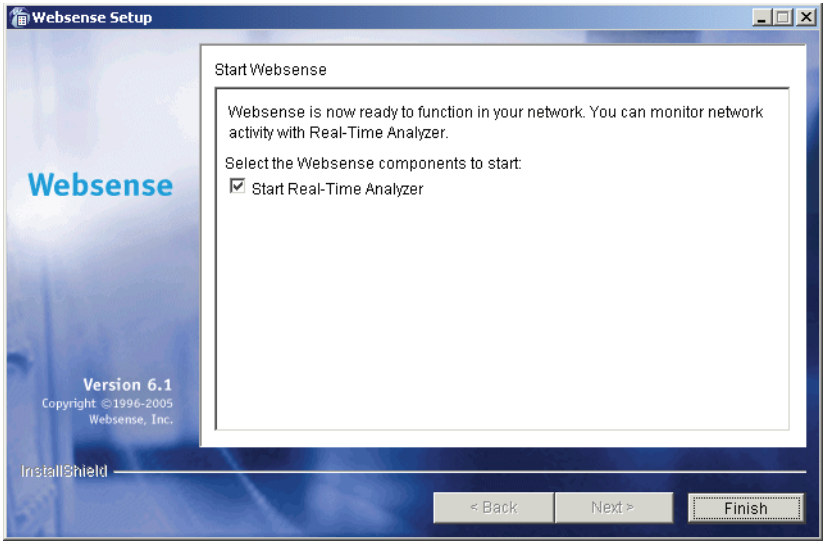
   If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Click **Next** to continue.

   A message appears advising you that the procedure was successful.

9. Click **Next** to continue.

   The application launcher screen appears asking if you want to start the Real-Time Analyzer. By default, Real-Time Analyzer is selected for launch.



Application Launcher

10. Make a selection and click **Finish** to exit the installer.

> **NOTE**
>
> Before you can access Real-Time Analyzer and other Websense Reporting Tools, you must first log on to Websense Manager and configure user permissions. See the Websense Enterprise *Administrator's Guide* for more information.

11. If you stopped your antivirus software, remember to start it again after Websense components have been installed.

Usage Monitor

Usage Monitor tracks users' internet activity and sends alerts when internet activity for particular URL categories or protocols reaches threshold limits you have configured. You can have only one instance of Usage Monitor for each Policy Server in your network.

To install Usage Monitor on a Windows machine:

1. Download and start the Windows installer using the procedure in *Windows Procedures*, page 97.
2. Following the **Custom** installation path brings you to the component selection screen. Select **Usage Monitor** and click **Next**.

   If the installation machine is multihomed, all enabled network interface cards appear in a list.
3. Select the card you want Usage Monitor to use to communicate and click **Next**.

   Setup asks you to identify the machine on which the Policy Server is installed.

> **IMPORTANT**
>
> The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

4. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then click **Next**.

   Setup asks you to select an installation folder for the Websense Enterprise components.

5. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
   - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

   A summary list appears, showing the installation path, installation size, and the components that will be installed.

6. Click **Next** to start the installation.

   If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Click **Next** to continue.

   A message appears advising you that the procedure was successful.

7. Click **Finish** to exit the installer.

8. If you stopped your antivirus software, remember to start it again after Websense components have been installed.

9. In the Websense Manager, configure the Usage Monitor to send Usage Alerts by selecting **Server > Settings > Alerts and Notifications**. See the Websense Enterprise *Administrator's Guide* for details.

RADIUS Agent

The Websense RADIUS Agent allows you to integrate your Websense filtering policies with authentication provided by a RADIUS server. RADIUS Agent enables Websense Enterprise to identify users transparently who access your network using a dial-up, Virtual Private Network (VPN), Digital Subscriber Line (DSL), or other remote connection.

To install the RADIUS Agent on a Windows machine:

1. Download and start the Windows installer using the procedure in *Windows Procedures*, page 97.
2. Following the **Custom** installation path brings you to the component selection screen. Select **RADIUS Agent** and click **Next**.

   Setup asks you to identify the machine on which the Policy Server is installed.

   IMPORTANT

   The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

3. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then click **Next**.

   If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address appear in a list.
4. Select the card you want RADIUS Agent to use to communicate and click **Next**.

   Setup asks you to select an installation folder for the Websense Enterprise components.
5. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

- If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
- If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

A summary list appears, showing the installation path, installation size, and the components that will be installed.

6. Click **Next** to start the installation.

   If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Click **Next** to continue.

   When the installer is finished, a message appears advising you that the procedure was successful.

7. Click **Finish** to exit the installer.
8. If you stopped your antivirus software, remember to start it again after Websense components have been installed.
9. Configure the RADIUS Agent, and configure your environment for RADIUS Agent. See the User Identification chapter in the Websense Enterprise *Administrator's Guide* for instructions.

eDirectory Agent

The Websense eDirectory Agent works together with Novell eDirectory to identify users transparently so that Websense can filter them according to particular policies assigned to users or groups.

To install the eDirectory Agent on a Windows machine:

1. Download and start the Windows installer using the procedure in *Windows Procedures*, page 97.

2. Following the **Custom** installation path brings you to the component selection screen. Select **eDirectory Agent** and click **Next**.

   Setup asks you to identify the machine on which the Policy Server is installed.

   IMPORTANT

   The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

3. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then click **Next**.

   If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address appear in a list.

4. Select the card you want eDirectory Agent to use to communicate and click **Next**.

   Setup asks for the Novell eDirectory name and password.

5. Enter the full *distinguished name* and a valid password, and then click **Next** to continue.

   Setup asks you to select an installation folder for the Websense Enterprise components.

6. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
   - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

A summary list appears, showing the installation path, installation size, and the components that will be installed.

7. Click **Next** to start the installation.

   If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Click **Next** to continue.

   When the installer is finished, a message appears advising you that the procedure was successful.

8. Click **Finish** to exit the installer.
9. If you stopped your antivirus software, remember to start it again after Websense components have been installed.
10. Configure the eDirectory Agent and Novell eDirectory by following the instructions in the User Identification chapter of the Websense Enterprise *Administrator's Guide*.

Logon Agent

The Websense Logon Agent detects users as they log on to Windows domains in your network via client machines. The Logon Agent receives logon information from `LogonApp.exe`, a separate client application that runs only on Windows client machines, and must be run by a logon script. For information about setting up this script in your network, refer to *Creating and Running the Script for Logon Agent*, page 192.

Logon Agent can be run together with DC Agent if some of the users in your network are not being authenticated properly. This might happen if your network uses Windows 98 workstations, which do not permit DC Agent to poll users for their identification when they make an internet request.

To install the Logon Agent on a Windows machine:

1. Download and start the Windows installer using the procedure in *Windows Procedures*, page 97.
2. Following the **Custom** installation path brings you to the component selection screen. Select **Logon Agent** and click **Next**.

Setup asks you to identify the machine on which the Policy Server is installed.

> **IMPORTANT**
> The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

3. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then click **Next**.

   If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address appear in a list.

4. Select the card you want Logon Agent to use to communicate and click **Next**.

   Setup asks you to select an installation folder for the Websense Enterprise components.

5. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
   - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

   A summary list appears, showing the installation path, installation size, and the components that will be installed.

6. Click **Next** to start the installation.

   If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Click **Next** to continue.

When the installer is finished, a message appears advising you that the procedure was successful.

7. Click **Finish** to exit the installer.
8. If you stopped your antivirus software, remember to start it again after Websense components have been installed.
9. Set up the required logon script by following the instructions is *Creating and Running the Script for Logon Agent*, page 192.
10. Configure Logon Agent to communicate with client workstations and the Filtering Service by following the instructions in the User Identification chapter of the Websense Enterprise *Administrator's Guide*.

Remote Filtering Server

The Remote Filtering Server provides web filtering for user workstations located outside the network firewall. In order to be filtered through the Remote Filtering Server, a remote workstation must be running the Remote Filtering Client. (For Remote Filtering Client installation instructions, see *Remote Filtering Client*, page 128.)

NOTE

To enable the Remote Filtering components, you must subscribe to the remote filtering service.

The Remote Filtering Server should be installed on a separate, dedicated machine. This machine must be able to communicate with the Websense Filtering Service and with the remote workstations outside the network firewall. The Remote Filtering Server machine does not have to be joined to a domain.

To provide failover capability for the primary Remote Filtering Server, you can install secondary and tertiary Remote Filtering Servers. Each Remote Filtering Client can be configured to connect with a primary, secondary, and tertiary Remote Filtering Server. If the primary server is unavailable, the

client will attempt to connect with the secondary, then the tertiary, then the primary again, and so on.

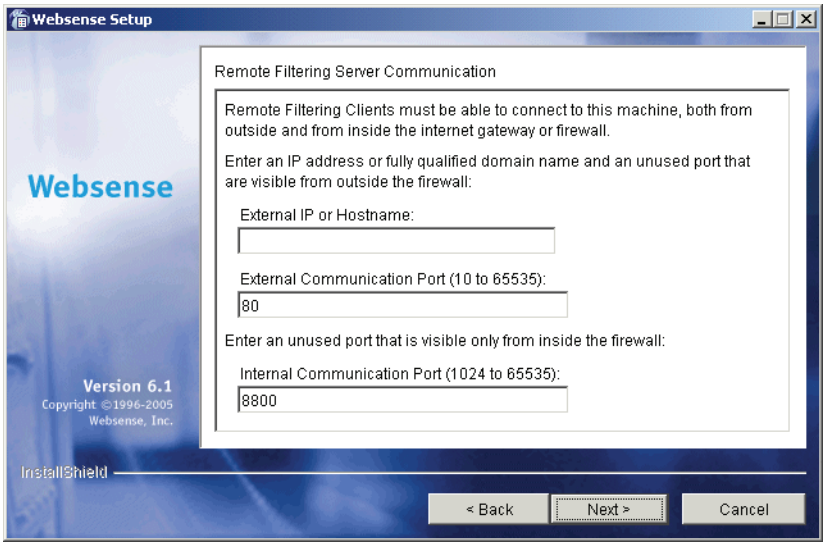
> **IMPORTANT**
> Install only one primary Remote Filtering Server for each Filtering Service in your network. Do not install the Remote Filtering Server on the same machine as the Filtering Service or Network Agent.

To install the Remote Filtering Server on a Windows machine:

1. Download and start the Windows installer using the procedure in *Windows Procedures*, page 97.
2. Following the **Custom** installation path brings you to the component selection screen. Select **Remote Filtering Server** and click **Next**.

   If the installation machine is multihomed, all enabled network interface cards appear in a list.
3. Select the card you want the Remote Filtering Server to use to communicate with other Websense components inside the network firewall, and click **Next**.

   Remote Filtering Clients must be able to connect to the Remote Filtering Server, both from inside and from outside the internet gateway or network firewall. Setup asks you to provide connection information for this machine.



Remote Filtering Server Communication

4. In the **External IP or Hostname** field, enter an IP address or machine name (in the form of a fully qualified domain name) that is visible from *outside* the firewall.
5. In the **External Communication Port** field, enter a port number (from 10 to 65535) that is not in use, and that is accessible from *outside* the network firewall.

IMPORTANT

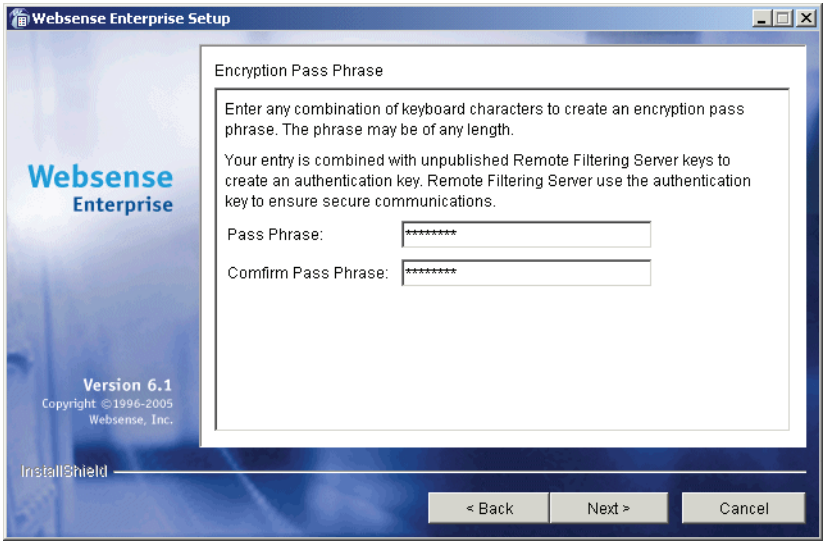
The port entered as the **External Communication Port** must be opened on your network firewall to accept connections from Remote Filtering Clients on workstations located outside the firewall. For more information, see *Firewall Configuration for Remote Filtering*, page 201.

6. In the **Internal Communication Port** field, enter a port number (from 1024 to 65535) that is not in use, and that is accessible only from *inside* the network firewall.

> **IMPORTANT**
>
> Be sure that your network firewall is configured to block connections to the **Internal Communication Port** from workstations located outside the firewall. For more information, see *Firewall Configuration for Remote Filtering*, page 201.

7. Click **Next** to continue.

   Setup asks you to enter a pass phrase of any length for the Remote Filtering Server. This pass phrase will be combined with unpublished keys to create an encrypted authentication key (shared secret) for secure client/server communication.



Encryption Pass Phrase

8. Before selecting a **pass phrase**, consider the following requirements:
   - If Websense Client Policy Manager (CPM) is already installed in your network, you must enter the same pass phrase used when installing CPM.

- If you install Websense Client Policy Manager (CPM) in your network in the future, you must use the pass phrase you enter in this screen.
- If you want this installation of the Remote Filtering Server to function as a backup (secondary or tertiary) server for a primary Remote Filtering Server, you must enter the same pass phrase used when installing the primary Remote Filtering Server.
- The pass phrase must include only ASCII characters.
- You must use the pass phrase you enter in this screen when you install the Remote Filtering Clients that will connect with this server. (See *Remote Filtering Server Connection Information*, page 130.)

9. Enter and confirm your **pass phrase**.

IMPORTANT

Be sure to record your **pass phrase** and keep it in a safe place, as you will not be able to retrieve it from the Websense system later.

10. Click **Next** to continue.

    Setup asks you to identify the machine on which the Websense Filtering Service is installed.

IMPORTANT

The communication port (15868) in this dialog box is the default port number used by the installer to install the Filtering Service. If you installed the Filtering Service using a different port number, enter that port in this dialog box.

11. Enter the IP address of the Filtering Service machine, and the port number if different from the default, and then click **Next**.

    Setup asks you to select an installation folder for the Websense Enterprise components.

12. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

- If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
- If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

A summary list appears, showing the installation path, installation size, and the components that will be installed.

13. Click **Next** to start the installation.

    If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

    Since the Network Agent was not installed on this machine, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Click **Next** to continue.

    A message appears advising you that the procedure was successful.

14. Click **Finish** to exit the installer.
15. If you stopped your antivirus software, remember to start it again after Websense components have been installed.

Remote Filtering Client Pack

The Remote Filtering Client Pack is an installer package that allows you to install the Remote Filtering Client. Once you have this installer package, you can use it to deploy the Remote Filtering Client on Windows workstations (see *Remote Filtering Client*, page 128). The Remote Filtering Client Pack can be installed on Windows machines only.

NOTE

To enable the Remote Filtering components, you must subscribe to the remote filtering service.

To install the Remote Filtering Client Pack on a Windows machine:

1. Download and start the Windows installer using the procedure in *Windows Procedures*, page 97.
2. Following the **Custom** installation path brings you to the component selection screen. Select **Remote Filtering Client Pack** and click **Next**.

   Setup asks you to select an installation folder for the Remote Filtering Client Pack.
3. Accept the default path (`C:\Program Files\Websense`) or click **Browse** to locate another installation folder, and then click **Next** to continue.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed:

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
   - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

   A summary list appears, showing the installation path, installation size, and the components that will be installed.
4. Click **Next** to start the installation.

   If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed on this machine, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Click **Next** to continue.

   A message appears advising you that the procedure was successful.
5. Click **Finish** to exit the installer.
6. If you stopped your antivirus software, remember to start it again after Websense components have been installed.

7. If you accepted the default installation path in Step 3, the Remote Filtering Client Pack can be found in the following location:

   ```
   C:\Program Files\Websense\bin\
   RemoteFilteringAgentPack\NO_MSI\CPMClient.msi
   ```

8. Use the Remote Filtering Client Pack to install the Remote Filtering Client on user workstations that you want to filter when they are outside the network firewall. See *Remote Filtering Client*, page 128 for details.

Remote Filtering Client

The Remote Filtering Client is installed on workstations that will be used outside the network firewall. This component connects with a Remote Filtering Server located inside the network firewall to enable web filtering on the remote workstation. The Remote Filtering Client installs on Windows only.

NOTE

To enable the Remote Filtering components, you must subscribe to the remote filtering service.

The Remote Filtering Client can be installed in two ways:

- **Manual installation**: Use the Remote Filtering Client Pack to manually install the Remote Filtering Client on an individual workstation. See *Manual Installation of Remote Filtering Client*, page 129 for information.
- **Automatic deployment with third-party tool**: Use the Remote Filtering Client Pack and a third-party deployment tool to automatically deploy the Remote Filtering Client to user workstations. See *Deploying Remote Filtering Client with Third-Party Deployment Tool*, page 133 for information.

WARNING

Do not install the Remote Filtering Client on:

- Machines running Windows 2000, Service Pack 2 or earlier. The installation will fail. See the Websense Enterprise *Deployment Guide* for information about system requirements.
- Machines where you installed the Remote Filtering Server. A Remote Filtering Client running on the same machine as the Remote Filtering Server will eventually cause remote filtering to fail.

Manual Installation of Remote Filtering Client

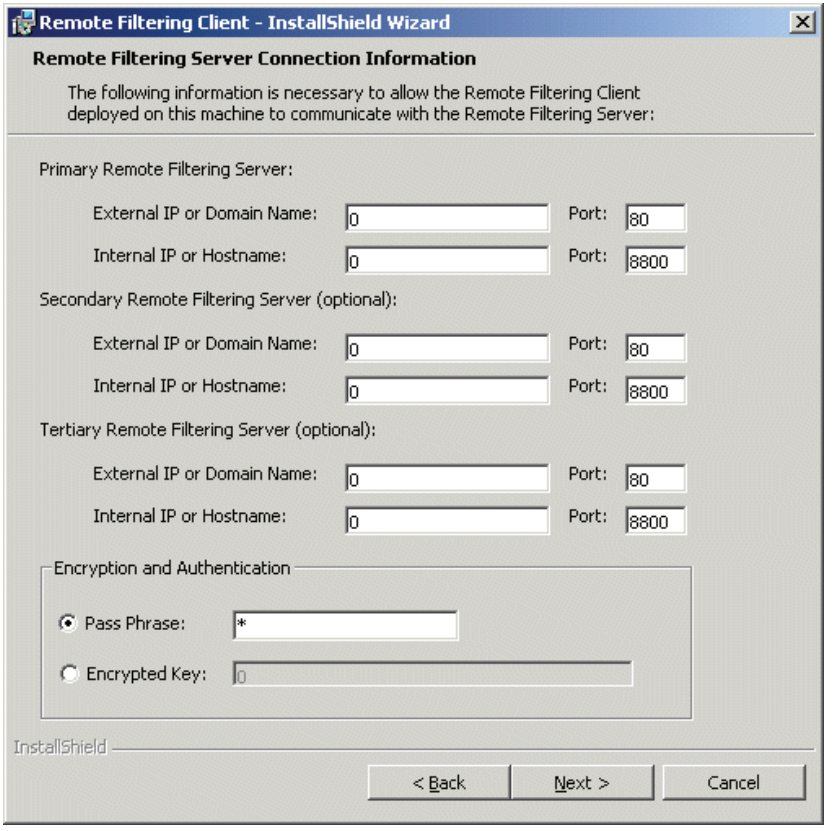
To manually install the Remote Filtering Client on a Windows workstation:

1. Make sure that the Remote Filtering Server with which this client will connect has been installed on a separate machine. See *Remote Filtering Server*, page 121 for Windows installation instructions; see *Remote Filtering Server*, page 152 for Solaris and Linux installation instructions.
2. Install the Remote Filtering Client Pack on the workstation. See *Remote Filtering Client Pack*, page 126 for instructions.
3. Double-click the `CPMClient.msi` file. If you selected the default installation path of `C:\Program Files\Websense`, this file will be located at:

   ```
   C:\Program Files\Websense\bin\
   RemoteFilteringAgentPack\NO_MSI\CPMClient.msi
   ```

   The InstallShield Wizard for Remote Filtering Client will open.
4. Click **Next** to continue.

   Remote Filtering Clients must be able to connect with a Remote Filtering Server from outside your organization's internet gateway or firewall. You are asked to provide connection information for the Remote Filtering Servers that this client will use for web filtering.



Remote Filtering Server Connection Information

The Remote Filtering Client must be configured to connect with a primary Remote Filtering Server. If optional secondary and tertiary Remote Filtering Servers were installed to provide failover capability for the primary server, the Remote Filtering Client must be configured to connect with these as well. The Remote Filtering Client will attempt to connect with the primary Remote Filtering Server first, then the secondary, then the tertiary, then the primary again, and so on.

5. In the **Primary Remote Filtering Server** section of the screen, enter connection information for the Remote Filtering Server that you want this client to attempt to connect with first:

- Enter the externally visible IP address or fully qualified domain name (FQDN) of the primary Remote Filtering Server machine in the **External IP or Domain Name** field.

IMPORTANT

You must use the same external address in **the same address *format***—IP address or FQDN—that you entered when you installed this Remote Filtering Server. That is, if you entered an IP address in the **External IP or Hostname** field when installing the Remote Filtering Server, you must enter the same IP address in this field. If you entered a machine name in the form of a fully qualified domain name (FQDN), you must enter the same FQDN here.

- In the **Port** field to the right of the **External IP or Domain Name** field, enter the port number for the externally visible port used to communicate with the primary Remote Filtering Server from outside the network firewall. This must be the same port entered in the **External Communication Port** field when this Remote Filtering Server was installed.
- Enter the internal IP address or machine name of the primary Remote Filtering Server machine in the **Internal IP or Hostname** field.
- In the **Port** field to the right of the **Internal IP or Hostname** field, enter the port number for the internal communication port on the primary Remote Filtering Server that can only be accessed from inside the network firewall. This must be the same port entered in the **Internal Communication Port** field when this Remote Filtering Server was installed.

NOTE

If the Remote Filtering Client is on a notebook computer that is used both inside and outside the network firewall, this port allows Websense to determine where the machine is located and filter it appropriately. The machine will be filtered in the same way as an internal client when it is used inside the organization's network firewall, and by the Remote Filtering Service when it is used remotely.

6. If you have installed the optional secondary and tertiary Remote Filtering Servers to provide failover protection for the primary Remote Filtering Server, enter connection information for these servers in the **Secondary Remote Filtering Server** and **Tertiary Remote Filtering Server** sections of the screen.
7. In the **Encryption and Authentication** section, do one of the following:
   - Select **Passphrase** and enter the same pass phrase that was entered in the **Pass Phrase** field during installation of the primary Remote Filtering Server. (The secondary and tertiary Remote Filtering Servers must have the same pass phrase as their primary Remote Filtering Server.)

   -OR-

   - Select **Encrypted Key** and enter the encrypted key (shared secret) created from the pass phrase and unpublished Remote Filtering Server keys. The encrypted key can be found in the `WSSEK.dat` file on the Remote Filtering Server machine. If you selected the default installation path, this file will be located at:

     `C:\Program Files\Websense\bin\WSSEK.dat`

     on Windows machines, and

     `/opt/Websense/bin/WSSEK.dat`

     on Solaris and Linux machines.
8. Click **Next** to continue.
9. Click **Install** to begin installation.

   When the installer is finished, a message appears advising you that the procedure was successful.
10. Click **Finish** to exit the installer.

Deploying Remote Filtering Client with Third-Party Deployment Tool

Before deploying the Remote Filtering Client to user workstations, make sure that the Remote Filtering Server with which these clients will connect has been installed on a separate machine. See *Remote Filtering Server*, page 121 for Windows installation instructions; see *Remote Filtering Server*, page 152 for Solaris and Linux installation instructions.

To obtain the installer for the Remote Filtering Client, install the Remote Filtering Client Pack on a Windows machine (see *Remote Filtering Client Pack*, page 126 for instructions). If you selected the default installation path of `C:\Program Files\Websense`, the installer is placed in the following location:

```
C:\Program Files\Websense\bin\
RemoteFilteringAgentPack\NO_MSI\CPMClient.msi
```

To deploy the Remote Filtering Client to Windows workstations, use this installer with a third-party deployment tool, such as Microsoft® Systems Management Server (SMS) or Novell® ZENworks®.

Command Line Parameters for Remote Filtering Client Installation

This section provides the command line parameters required to deploy the Remote Filtering Client using a third-party deployment tool.

Remote Filtering Clients are installed on user workstations or notebook computers that are used outside your organization's internet gateway or firewall. These machines must be able to connect with a Remote Filtering Server that is located inside the internet gateway or firewall.

Each Remote Filtering Client must be configured to connect with a primary Remote Filtering Server. If optional secondary and tertiary Remote Filtering Servers were installed to provide failover capability for the primary server, the Remote Filtering Client must be configured to connect with these as well. The Remote Filtering Client will attempt to connect with the primary Remote Filtering Server first, then the secondary, then the tertiary, then the primary again, and so on.

- The following parameters must be configured to allow the Remote Filtering Client to communicate with the primary Remote Filtering Server:

- **PRIMARY_WISP_ADDRESS=**<*external IP address or FQDN of primary Remote Filtering Server*>

  The externally visible address for the primary Remote Filtering Server machine, as entered in the **External IP or Hostname** field when the primary Remote Filtering Server was installed.

  IMPORTANT

  This must be the same external address in **the same address *format***—IP address or FQDN—that was entered when this Remote Filtering Server was installed. That is, if you entered an IP address in the **External IP or Hostname** field when installing the Remote Filtering Server, you must enter the same IP address here. If you entered a machine name in the form of a fully qualified domain name (FQDN), you must enter the same FQDN here.

- **PRIMARY_WISP_PORT=**<*external port number of primary Remote Filtering Server*>

  The port number for the externally visible port used to communicate with the primary Remote Filtering Server from outside the network firewall. This must be the same port entered in the **External Communication Port** field when this Remote Filtering Server was installed.

- **PRIMARY_INTERNAL_WISP_ADDRESS=**<*internal IP address or FQDN of primary Remote Filtering Server*>

  The internal address, visible from inside the network firewall, for the machine on which the primary Remote Filtering Server is installed.

- **PRIMARY_INTERNAL_WISP_PORT=**<*internal port number of primary Remote Filtering Server*>

  The port number for the internal communication port on the primary Remote Filtering Server that can only be accessed from inside the network firewall. This must be the same port entered in the **Internal Communication Port** field when the Remote Filtering Server was installed.

◆ If secondary and tertiary Remote Filtering Servers have been installed, use the following parameters to configure communication with them:

- **SECONDARY_WISP_ADDRESS=**<*external IP address or FQDN of secondary Remote Filtering Server*>
- **SECONDARY_WISP_PORT=**<*external IP address or FQDN of secondary Remote Filtering Server*>
- **SECONDARY_INTERNAL_WISP_ADDRESS=**<*internal IP address or FQDN of secondary Remote Filtering Server*>
- **SECONDARY_INTERNAL_WISP_PORT=**<*internal IP address or FQDN of secondary Remote Filtering Server*>
- **TERTIARY_WISP_ADDRESS=**<*external IP address or FQDN of tertiary Remote Filtering Server*>
- **TERTIARY_WISP_PORT=**<*external IP address or FQDN of tertiary Remote Filtering Server*>
- **TERTIARY_INTERNAL_WISP_ADDRESS=**<*internal IP address or FQDN of tertiary Remote Filtering Server*>
- **TERTIARY_INTERNAL_WISP_PORT=**<*internal IP address or FQDN of tertiary Remote Filtering Server*>

These addresses and port numbers must match those entered during installation of the Remote Filtering Servers, as noted above for the primary Remote Filtering Server.

- **PATH=**<*installation path*>

  Directory where the Remote Filtering Client will be installed on each client workstation. If this parameter is not specified, the default installation path is `C:\PROGRAM FILES\Websense\WDC`, and the `WDC` directory is hidden by default.

- **PASSPHRASE=**<*pass phrase for Remote Filtering Server*>

  The **Pass Phrase** entered when the primary Remote Filtering Server was installed. Note that all Remote Filtering Servers in the same failover group (primary, secondary, and tertiary) must have the same pass phrase.

- **REBOOT=YES** | **NO** | **PROMPT** | **IF_NEEDED_PROMPT**

  This parameter defines whether the client workstation is automatically restarted after the Remote Filtering Client is installed (or uninstalled). Values for this parameter are:

  - **YES**: Machines are restarted; users are not prompted to restart.

- **NO**: Machines are not restarted, and users are not prompted to restart.
- **PROMPT**: Users are prompted to restart their machines.
- **IF_NEEDED_PROMPT**: Users are prompted to restart their machines only if it is required. (Default.)

IMPORTANT

You must restart the workstation after installing the Remote Filtering Client if:

- The workstation's operating system is Windows 2000.
- Check Point® VPN-1® is running on the workstation.

You must *always* restart the workstation after uninstalling the Remote Filtering Client.

- **/qn**

  Switch for quiet installation mode. When you use this option, Remote Filtering Client will install without displaying any information to the user at the workstation. If you do not use **/qn**, the installer launches in interactive mode and installation dialog boxes display to the user during installation. Most organizations choose the quiet mode, as interactive deployment has little value.

Syntax

The following is an example of the command line syntax used to install the Remote Filtering Client with a third-party deployment tool. Replace the variables in angle brackets with appropriate values for your network.

```
msiexec /i cpmclient.msi PASSPHRASE=<pass phrase
for Remote Filtering Server>
PRIMARY_WISP_ADDRESS=<external IP Address or FQDN
of primary Remote Filtering Server>
PRIMARY_WISP_PORT=<external port number of
primary Remote Filtering Server>
PRIMARY_INTERNAL_WISP_ADDRESS=<internal IP
address or host name of primary Remote Filtering
Server> PRIMARY_INTERNAL_WISP_PORT=<internal port
number of primary Remote Filtering Server>
REBOOT=<reboot parameter> /qn
```

For example, the installation command might look like this:

```
msiexec /i cpmclient.msi PASSPHRASE=2gbatfm
PRIMARY_WISP_ADDRESS=63.16.200.232
PRIMARY_WISP_PORT=80
PRIMARY_INTERNAL_WISP_ADDRESS=10.218.5.60
PRIMARY_INTERNAL_WISP_PORT=9000 REBOOT=NO /qn
```

The following is the actual command that can be used to uninstall the Remote Filtering Client:

```
msiexec.exe /x - {14D74337-01C2-4F8F-B44B-
67FC613E5B1F} /qn
```

Solaris and Linux Procedures

The steps in this section are common to all separate installations of Websense Enterprise components on Solaris or Linux. Start here to download and run the Websense installer, and then refer to the appropriate sections for the component-specific procedures.

To install components separately on Solaris or Linux:

1. Log on to the installation machine as the **root** user.
2. Close all applications and stop any antivirus software.
3. Create a setup directory for the installer files.

   For example: `/root/Websense_setup`
4. Download the installer file from http://www.websense.com/global/en/downloads, or copy it from the Websense Enterprise CD and save it to the setup directory.
   - **Solaris**: `Websense61Setup_Slr.tar.gz`
   - **Linux**: `Websense61Setup_Lnx.tar.gz`
5. Enter the following command to unzip the installer file:

   `gunzip <download file name>`

   For example: `gunzip Websense61Setup_Slr.tar.gz`
6. Expand the file into its components with the following command:

   `tar xvf <unzipped file name>`

   For example: `tar xvf Websense61Setup_Lnx.tar`

This places the following files into the setup directory:

File	Description
install.sh	Installation program
Setup	Archive file containing related installation files and documents.
Documentation	Release Notes: An HTML file containing release notes and last minute information about Websense. Read this file with any supported browser.

7. Run the installation program from the setup directory with the following command:

   ```
   ./install.sh
   ```

   To run the GUI version of the installer, use the following command:

   ```
   ./install.sh -g
   ```

   If you are using a non-English based system, the installer will display an error message advising you that the GUI version is not supported.
8. Select **Custom** when asked what type of installation you want.
9. To continue, proceed to the appropriate component section.

Websense Manager

When you install Websense Enterprise on Linux, you must install the Websense Manager on a separate Windows or Solaris machine in your network. Use the following procedure to install the Websense Manager on a Solaris machine.

1. Download and start the Solaris installer using the procedure in *Solaris and Linux Procedures*, page 137.
2. Following the **Custom** installation path brings you to a list of components to install. Select **Websense Manager** and press **Enter**.

   Setup asks you for the location of your web browser.
3. Provide the full path to the web browser to use when viewing online help.

   The installer asks you to provide a path to the installation directory where Websense Enterprise will create the Websense directory.
4. Provide a path to the installation directory, or accept the default installation directory (`/opt/Websense`).

If this directory does not already exist, the installer creates it automatically.

> **IMPORTANT**
> The full installation path must use only ASCII characters.

The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.

- If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
- If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

A summary list appears, showing the installation path, installation size, and the component (Websense Manager) you have selected.

5. Press **Enter** to begin installing the Websense Manager.

   If you are using the online installer, the Download Manager copies the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic. Press **Enter** to continue.

   A message appears advising you that the installation has been successful.

6. Press **Enter** to continue.

   If you are installing in GUI mode, the installer displays a screen asking if you want to launch the Websense Manager. By default, the Manager is selected for launch.

7. Make a selection, and select **Finish** to exit the installer.
8. If you stopped your antivirus software, remember to start it again after Websense components have been installed.

Network Agent

You can install Network Agent on a Solaris or Linux machine separate from the Filtering Service. Network Agent must be able to monitor 2-way internet traffic from the internal network. Install Network Agent on a machine that can see the internet requests *from* the internal network as well as the internet response *to* the requesting workstations.

If this installation is part of a multiple deployment of the Network Agent (for load balancing purposes), you must be sure that the IP address ranges for each instance of the Network Agent do not overlap. This will result in double logging. Deploy the Network Agents so that they can filter the entire network. Partial deployment will result in incomplete filtering by protocol and bandwidth, as well as the loss of log data from network segments not watched by the Network Agent. For instructions on defining IP address ranges for multiple Network Agents, refer to the Websense Enterprise *Administrator's Guide*. For detailed information about deploying Network Agent, refer to the Websense Enterprise *Deployment Guide*.

Do not install the Network Agent on a machine running any type of firewall. The Network Agent uses a packet capturing utility which may not work properly when installed on a firewall machine.

If you are attempting to install the Network Agent on a machine on which the Filtering Service and Policy Server are already installed, refer to the procedures in *Adding Components*, page 156.

IMPORTANT

The Websense Filtering Service and the Policy Server must be installed and running prior to installing the Network Agent, or installed at the same time as the Network Agent. The installer asks for the IP addresses and port numbers of these components and will not install the Network Agent if the Policy Server and Filtering Service cannot be located.

1. Download and start the installer using the procedure in *Solaris and Linux Procedures*, page 137.
2. Following the **Custom** installation path brings you to a list of components to install. Select **Network Agent** and press **Enter**.

If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address are displayed.

3. Select the card you want Network Agent to use to communicate and press **Enter**.

   Setup asks you to identify the machine on which the Policy Server is installed.

> **IMPORTANT**
> The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

4. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then press **Enter**.

   The installer gives you the opportunity to test your machine's visibility to internet traffic with the Traffic Visibility Test Tool. The machine on which the Network Agent is installed must be able to monitor 2-way employee internet traffic for Network Agent to function properly.

> **IMPORTANT**
> If you install the Network Agent on a machine that cannot monitor targeted internet traffic, some features, such as Dynamic Protocol Management and Bandwidth Optimizer, will not perform as expected.

You are given the following three options:

- **Test Traffic Visibility**: This selection launches the utility that tests the visibility of internet traffic from the installation machine.
- **Continue installation**: If you know that the installation machine has the necessary internet traffic visibility, you may select this option and continue the installation without testing the visibility of the interfaces.
- **Exit Setup**: If you determine that the installation machine cannot see the appropriate internet traffic, select this option to exit Setup. Select another machine for installation, reposition the current machine in the network, or replace the NIC. Remember that the NIC must have an IP address for Network Agent to function.

5. Select **Test Traffic Visibility** to check the visibility of internet traffic from the installation machine.
    a. Select the network interface card (NIC) that you want to use for the Network Agent and continue to the next pane. Active cards on the installation machine appear in this list, including NICs without IP addresses (stealth mode).

       A default list of networks (netmasks) to test appears. You may use the defaults provided or add your own. These netmasks can reside in different network segments depending upon the IP address ranges to be filtered.
    b. If the network you want to test with the NIC does not appear in the default list, select **Add Network**.
        – Enter a new netmask value in the **Network ID** field.

          The subnet mask defaults to 255.0.0.0 and changes appropriately as the netmask is defined.
        – Select **Redisplay** to return to the options list.

          Your new network appears in the list.
    c. Select **Remove a Network** to delete a network from the list.
    d. Select **Start Test** to begin testing all the networks in the list.

       The counter in the **IP Address Count** column should begin recording internet traffic immediately from the networks listed. The counter increments each time the NIC detects an individual IP address from the target network in a passing packet. The activity bar at the bottom of the pane indicates that a test is in progress. If the count for a network remains at zero or is very low, the selected NIC cannot see the traffic it needs to monitor.
    e. If the Network Agent is unable to see the desired traffic, perform one or both of the following tasks:
        – If the installation machine has multiple NICs, select a different card to test.
        – Resolve network configuration issues to make sure that the NIC can see the desired traffic. This might involve connecting to a different router or configuring for port spanning in a switched environment. See *Chapter 2: Network Configuration* for deployment information. You may continue the installation

without installing Network Agent and reconfigure your network later, or make the necessary changes and retest immediately.

f. Select **Exit Tool** when you are ready to continue installation.

g. Select **Continue installation** if you are sure that your NIC is able to monitor all targeted internet traffic.

h. Select **Exit Setup** if the appropriate traffic is not visible. If Network Agent cannot see the necessary traffic, you must either reposition the machine in the network or select another machine on which to install the Network Agent.

Setup asks if Network Agent is being installed on a machine that is being used as a firewall.

6. Make sure that the installation machine is not being used as a firewall before continuing.

IMPORTANT

Network Agent cannot function properly on a machine running a firewall.

- Select **No** if the installation machine is not being used as a firewall. Installation will continue.
- Select **Yes** if you are attempting to install Network Agent on a firewall machine, and Setup will exit. Install the Network Agent on a machine that is not running a firewall.

If the installation machine has multiple network interface cards (NICs), all enabled cards are displayed in a list.

7. Select the NIC that you tested successfully for network visibility.

Setup asks you for the IP address and filter port number for the machine on which the Filtering Service is installed.

IMPORTANT

The filter port (15868) in this dialog box is the default port number used by the installer to install the Filtering Service. If you installed the Filtering Service using a different port number, enter that port in this dialog box.

8. Enter the IP address of the Websense Filtering Service.

   Setup displays the path it will create to the Websense installation directory. For example, `/opt/Websense`.

9. Accept this default or create another directory.

   IMPORTANT
   The full installation path must use only ASCII characters.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
   - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

   A summary of all the components that will be installed appears.

10. Press **Enter** to accept this installation configuration and to begin installing Websense Enterprise.

    If you are using the online installer, the Download Manager copies the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

11. Exit the installer when the success message appears.
12. If you stopped your antivirus software, remember to start it again after Websense components have been installed.
13. Configure Network Agent for use in your network. Refer to the Network Agent chapter of the Websense Enterprise *Administrator's Guide* for instructions.

Usage Monitor

Usage Monitor tracks users' internet activity and sends alerts when internet activity for particular URL categories or protocols reaches threshold limits you have configured. You can have only one instance of Usage Monitor for each Policy Server in your network.

To install Usage Monitor on Solaris or Linux:

1. Download and start the installer using the procedure in *Solaris and Linux Procedures*, page 137.
2. Following the **Custom** installation path brings you to a list of components to install. Select **Usage Monitor** and press **Enter**.

   If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address are displayed.
3. Select the card you want Usage Monitor to use to communicate and press **Enter**.

   Setup asks you to identify the machine on which the Policy Server is installed.

   IMPORTANT

   The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

4. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then press **Enter**.

   Setup displays the path it will create to the Websense installation directory. For example, `/opt/Websense`.
5. Accept this default or create another directory.

   IMPORTANT

   The full installation path must use only ASCII characters.

The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.

- If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
- If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

A summary of all the components that will be installed appears.

6. Press **Enter** to begin installation.

   If you are using the online installer, the Download Manager copies the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic.

7. Exit the installer when the success message appears.
8. If you stopped your antivirus software, remember to start it again after Websense components have been installed.
9. In the Websense Manager, configure the Usage Monitor to send Usage Alerts by selecting **Server > Settings > Alerts and Notifications**. See the Websense Enterprise *Administrator's Guide* for details.

RADIUS Agent

The Websense RADIUS Agent allows you to integrate your Websense filtering policies with authentication provided by a RADIUS server. The RADIUS Agent enables Websense Enterprise to identify users transparently who access your network using a dial-up, Virtual Private Network (VPN), Digital Subscriber Line (DSL), or other remote connection.

To install the RADIUS Agent on Solaris or Linux:

1. Download and start the installer using the procedure in *Solaris and Linux Procedures*, page 137.

2. Following the **Custom** installation path brings you to a list of components to install. Select **RADIUS Agent** and press **Enter**.

   If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address are displayed.

3. Select the card you want RADIUS Agent to use to communicate and press **Enter**.

   Setup asks you to identify the machine on which the Policy Server is installed.

> **IMPORTANT**
> The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

4. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then press **Enter**.

   Setup displays the path it will create to the Websense installation directory. For example, `/opt/Websense`.

5. Accept this default or create another directory.

> **IMPORTANT**
> The full installation path must use only ASCII characters.

The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.

- If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
- If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

A summary of all the components that will be installed appears.

6. Press **Enter** to begin installation.

   If you are using the online installer, the Download Manager copies the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic.

7. Exit the installer when the success message appears.
8. If you stopped your antivirus software, remember to start it again after Websense components have been installed.
9. Configure the RADIUS Agent, and configure your environment for RADIUS Agent. See the User Identification chapter in the Websense Enterprise *Administrator's Guide* for instructions.

eDirectory Agent

The Websense eDirectory Agent works together with Novell eDirectory to identify users transparently so that Websense can filter requests according to particular policies assigned to users or groups.

To install the eDirectory Agent on Solaris or Linux:

1. Download and start the installer using the procedure in *Solaris and Linux Procedures*, page 137.
2. Following the **Custom** installation path brings you to a list of components to install. Select **eDirectory Agent** and press **Enter**.

   Setup asks you to identify the machine on which the Policy Server is installed.

   IMPORTANT

   The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

3. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then press **Enter**.

If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address are displayed.

4. Select the card you want eDirectory Agent to use to communicate and press **Enter**.

   Setup asks for the Novell eDirectory name and password.

5. Enter the full *distinguished name* and a valid password, and then press **Enter** to continue.

   Setup displays the path it will create to the Websense installation directory. For example, `/opt/Websense`.

6. Accept this default or create another directory.

   IMPORTANT
   The full installation path must use only ASCII characters.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
   - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

   A summary of all the components that will be installed appears.

7. Press **Enter** to begin installation.

   If you are using the online installer, the Download Manager copies the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic.

8. Exit the installer when the success message appears.

9. If you stopped your antivirus software, remember to start it again after Websense components have been installed.
10. Configure the eDirectory Agent and Novell eDirectory by following the instructions in the User Identification chapter of the Websense Enterprise *Administrator's Guide*.

Logon Agent

The Websense Logon Agent detects users as they log on to Windows domains in your network via client machines. The Logon Agent receives logon information from `LogonApp.exe`, a separate client application that runs only on Windows client machines, and must be run by a logon script. For information about setting up this script in your network, refer to *Creating and Running the Script for Logon Agent*, page 192.

Logon Agent can be run together with DC Agent if some of the users in your network are not being authenticated properly. This might happen if your network uses Windows 98 workstations, which do not permit DC Agent to poll users for their identification when they make an internet request.

To install the Logon Agent on a Solaris or Linux system:

NOTE

`LogonApp.exe`, the client application that passes user logon information to Logon Agent, runs only on Windows client machines.

1. Download and start the installer using the procedure in *Solaris and Linux Procedures*, page 137.
2. Following the **Custom** installation path brings you to the component selection screen. Select **Logon Agent** and press **Enter**.

   Setup asks you to identify the machine on which the Policy Server is installed.

IMPORTANT

The configuration port (55806) in this dialog box is the default port number used by the installer to install the Policy Server. If you installed the Policy Server using a different port number, enter that port in this dialog box.

3. Enter the IP address of the Policy Server machine, and the port number if different from the default, and then press **Enter**.

   If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address appear in a list.

4. Select the card you want Logon Agent to use to communicate and click **Next**.

   Setup displays the path it will create to the Websense installation directory. For example, `/opt/Websense`.

5. Accept this default or create another directory.

   IMPORTANT
   The full installation path must use only ASCII characters.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
   - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

   A summary of all the components that will be installed appears.

6. Press **Enter** to begin installation.

   If you are using the online installer, the Download Manager copies the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic.

7. Exit the installer when the success message appears.

8. If you stopped your antivirus software, remember to start it again after Websense components have been installed.

9. Set up the required logon script by following the instructions is *Creating and Running the Script for Logon Agent*, page 192.
10. Configure Logon Agent to communicate with client workstations and the Filtering Service by following the instructions in the User Identification chapter of the Websense Enterprise *Administrator's Guide*.

Remote Filtering Server

The Remote Filtering Server provides web filtering for user workstations located outside the network firewall. In order to be filtered through the Remote Filtering Server, a remote workstation must be running the Remote Filtering Client. (For Remote Filtering Client installation instructions, see *Remote Filtering Client*, page 128.)

NOTE

To enable the Remote Filtering components, you must subscribe to the remote filtering service.

The Remote Filtering Server should be installed on a separate, dedicated machine. This machine must be able to communicate with the Websense Filtering Service and with the remote workstations outside the network firewall. The Remote Filtering Server machine does not have to be joined to a domain.

To provide failover capability for the primary Remote Filtering Server, you can install secondary and tertiary Remote Filtering Servers. Each Remote Filtering Client can be configured to connect with a primary, secondary, and tertiary Remote Filtering Server. If the primary server is unavailable, the client will attempt to connect with the secondary, then the tertiary, then the primary again, and so on.

IMPORTANT

Install only one primary Remote Filtering Server for each Filtering Service in your network. Do not install the Remote Filtering Server on the same machine as the Filtering Service or Network Agent.

To install the Remote Filtering Server on Solaris or Linux:

1. Download and start the installer using the procedure in *Solaris and Linux Procedures*, page 137.
2. Following the **Custom** installation path brings you to a list of components to install. Select **Remote Filtering Server** and press **Enter**.

   If the installation machine is multihomed, all enabled network interface cards (NICs) with an IP address are displayed.
3. Select the card you want the Remote Filtering Server to use to communicate with other Websense components inside the network firewall, and press **Enter**.

   Remote Filtering Clients must be able to connect to the Remote Filtering Server, both from inside and from outside the internet gateway or network firewall. Setup asks you to provide connection information for this machine.
4. In the **External IP or Hostname** field, enter an IP address or machine name (in the form of a fully qualified domain name) that is visible from *outside* the firewall.
5. In the **External Communication Port** field, enter a port number (from 10 to 65535) that is not in use, and that is accessible from *outside* the network firewall.

IMPORTANT

The port entered as the **External Communication Port** must be opened on your network firewall to accept connections from Remote Filtering Clients on workstations located outside the firewall. For more information, see *Firewall Configuration for Remote Filtering*, page 201.

6. In the **Internal Communication Port** field, enter a port number (from 1024 to 65535) that is not in use, and that is accessible only from *inside* the network firewall.

   IMPORTANT

   Be sure that your network firewall is configured to block connections to the **Internal Communication Port** from workstations located outside the firewall. For more information, see *Firewall Configuration for Remote Filtering*, page 201.

7. Press **Enter** to continue.

   Setup asks you to enter a pass phrase of any length for the Remote Filtering Server. This pass phrase will be combined with unpublished keys to create an encrypted authentication key (shared secret) for secure client/server communication.

8. Before selecting a **pass phrase**, consider the following requirements:
   - If Websense Client Policy Manager (CPM) is already installed in your network, you must enter the same pass phrase used when installing CPM.
   - If you install Websense Client Policy Manager (CPM) in your network in the future, you must use the pass phrase you enter in this screen.
   - If you want this installation of the Remote Filtering Server to function as a backup (secondary or tertiary) server for a primary Remote Filtering Server, you must enter the same pass phrase used when installing the primary Remote Filtering Server.
   - The pass phrase must include only ASCII characters.
   - You must use the pass phrase you enter in this screen when you install the Remote Filtering Clients that will connect with this server. (See *Remote Filtering Server Connection Information*, page 130.)

9. Enter and confirm your **pass phrase**.

   IMPORTANT

   Be sure to record your **pass phrase** and keep it in a safe place, as you will not be able to retrieve it from the Websense system later.

10. Press **Enter** to continue.

    Setup asks you to identify the machine on which the Websense Filtering Service is installed.

    IMPORTANT

    The communication port (15868) in this dialog box is the default port number used by the installer to install the Filtering Service. If you installed the Filtering Service using a different port number, enter that port in this dialog box.

11. Enter the IP address of the Filtering Service machine, and the port number if different from the default, and then press **Enter**.

    Setup displays the path it will create to the Websense installation directory: `/opt/Websense`.

12. Accept this default or create another directory.

    IMPORTANT

    The full installation path must use only ASCII characters.

    The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.

    - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
    - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

    A summary of all the components that will be installed appears.

13. Press **Enter** to begin installation.

    If you are using the online installer, the Download Manager copies the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

Since the Network Agent was not installed on this machine, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic.

14. Exit the installer when the success message appears.
15. If you stopped your antivirus software, remember to start it again after Websense components have been installed.

Modifying an Installation

If you decide to change the location of a Websense Enterprise component or modify your Websense Enterprise installation, run the installer again on the machine you want to modify and select the appropriate option. The installer detects the presence of Websense components and offers you the following installation options:

- Add Websense components.
- Remove Websense components.
- Repair existing Websense components.

Adding Components

After installing Websense Enterprise, you may want to add components to change the configuration of Websense in your network. The following procedures assume that the Filtering Service, Policy Server, Websense Manager (Solaris and Windows only), and User Service are already installed, and that the remaining components, supported on your operating system, are going to be added. If you are adding remote components, the installer will ask you for the location of the Policy Server.

Windows

To add Websense Enterprise components in a Windows environment:

NOTE

Before adding new components, we recommend that you perform a full system backup as a fallback strategy. This will allow you to restore your current system with a minimum of downtime, should you decide to do so.

1. Log on to the installation machine with **local** administrator privileges.

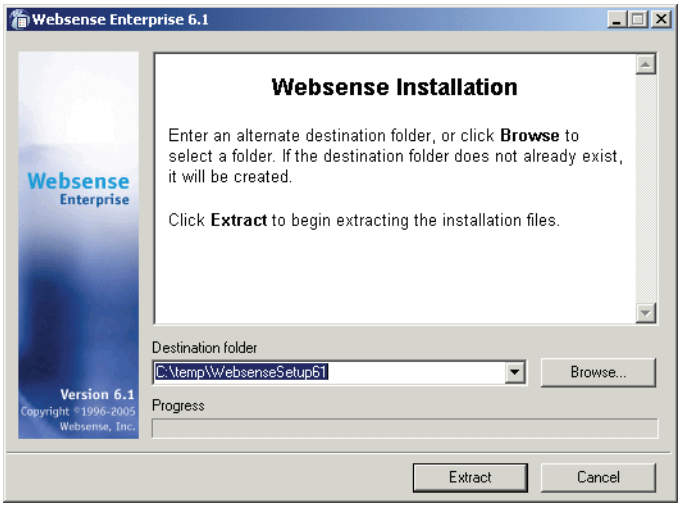
IMPORTANT

If you are installing DC Agent, log on with **domain** administrator privileges. DC Agent must have administrator privileges on the network to retrieve user login information from the domain controller. Without this information, Websense Enterprise cannot filter by users and groups. If you cannot install these components with such privileges, you may configure administrator privileges for these services after installation in the **Properties** dialog box for Windows services.

2. Close all applications and stop any antivirus software.
3. Run one of the following Websense Enterprise installers:
   - **Web download**: Download one of the following packages from http://www.websense.com/global/en/downloads to a folder on the installation machine and double-click to extract the installer files.
     - **Online installer**: The online installer package (`Setup61.exe`) contains only the installer files. The necessary product files are downloaded from the website as needed after product selections have been made.
     - **Offline installer**: The offline installer (`Websense61Setup.exe`) is much larger than the online package and contains all the files needed to install Websense Enterprise components. Use this package only if you experience difficulties installing Websense with the online installer.
   - **Product CD**: Run `WebsenseStart.exe` from the Websense Enterprise v6.1 product CD (`\WebsenseStart`) to launch the installer start screen. Select a Websense product installation to extract the installer files.

     The file will run automatically if *autorun* is enabled. The product CD contains all the files needed to install Websense Enterprise components.

   A screen displays instructions for extracting the setup program.



Installer Download Extraction Screen

a. Click **Browse** to select a destination folder, or type in a path.

   If the path you enter does not exist, the installer will create it for you.

> **IMPORTANT**
> Do not extract the installer files to a folder on your desktop. This may prevent the Real-Time Analyzer from receiving the IP address of the Policy Server machine. Accept the default location of `C:\temp` or select another appropriate folder.

b. Click **Extract** to begin decompressing the files.

   If Websense Enterprise installation files already exist in that location, you may choose to overwrite the existing files.

   A progress bar shows the status of the extraction, and the view pane scrolls a list of the files as they are decompressed.

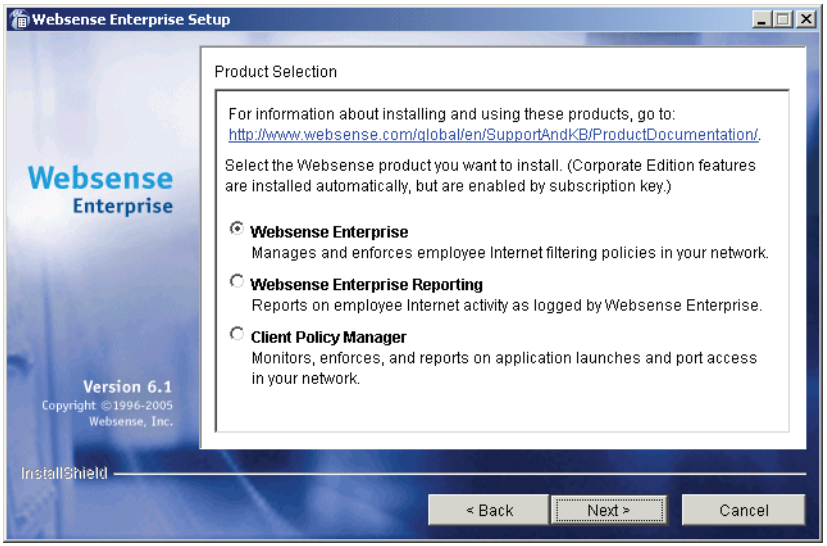
   `Setup.exe` runs automatically after the files are decompressed.

4. Click **Next** on the welcome screen.

   A dialog box appears asking you what action you want to take with the Websense components the installer has detected on the machine.

5. Select **Add Websense components** and click **Next**.

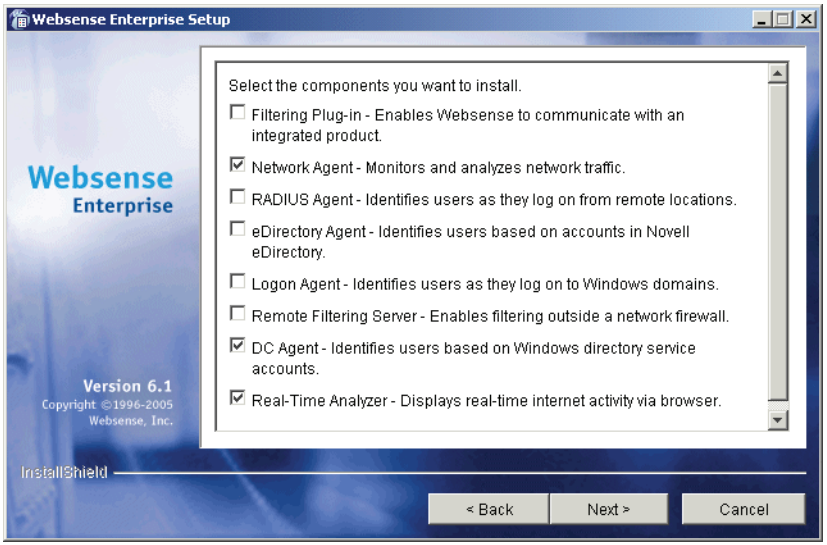
Setup displays a product selection screen.



Websense Product Selection Screen

6. Select **Websense Enterprise** and click **Next** to continue.

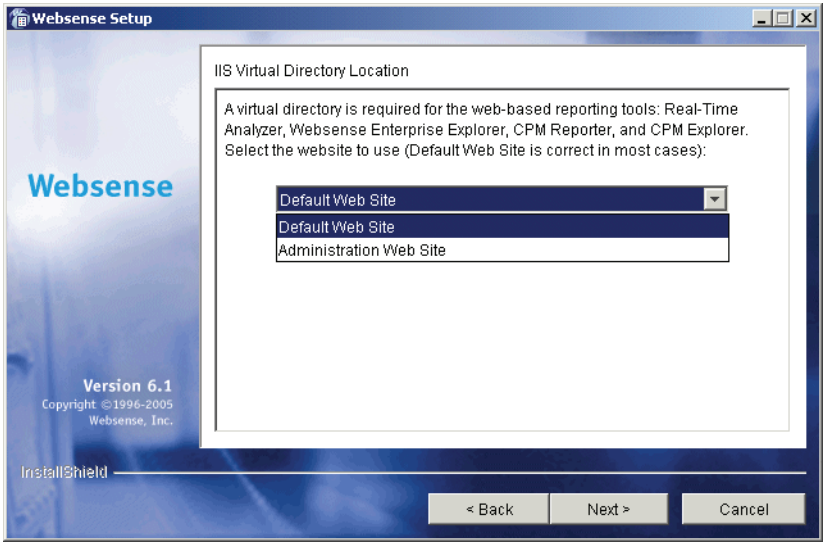
   The installer displays a list of components not currently installed on the installation machine.



Component Selection Screen

7. Select the components you want to install and click **Next**.

   If you are installing the Real-Time Analyzer and are using IIS as your web server, you are prompted to select the name of the website in the IIS Manager under which the installer should create a *virtual directory*. The default value is **Default Web Site**, which is correct in most instances.

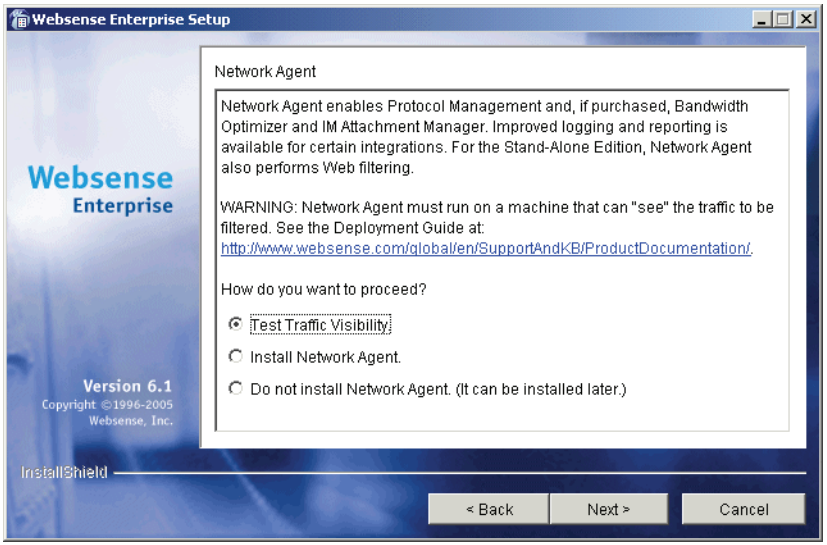


Virtual Directory Selection

8. If you have renamed the default website in the IIS Manager or are using a language version of Windows other than English, select the proper website from the names in the drop-down list, and then click **Next** to continue.

   If you are installing Network Agent, the installer displays a screen describing the features enabled by the Network Agent and offers you the option of testing your machine's visibility to internet traffic. The machine on which the Network Agent is installed must be able to monitor 2-way employee internet traffic for Network Agent to function properly.

> **IMPORTANT**
>
> If you install the Network Agent on a machine that cannot monitor targeted internet traffic, some features, such as Dynamic Protocol Management and Bandwidth Optimizer, will not perform as expected.



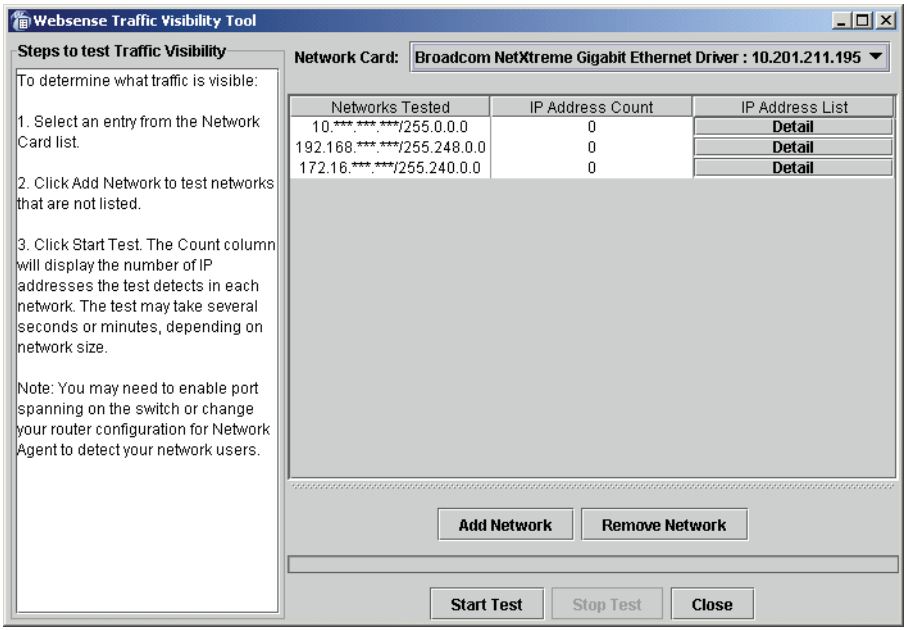
Network Agent Visibility Test Screen

You are given the following three options:

- **Test Traffic Visibility**: This selection launches the utility that tests the visibility of internet traffic from the installation machine.
- **Install Network Agent**: installs the Network Agent without conducting the traffic visibility test. Use this option if you know that the installation machine has the necessary internet traffic visibility.
- **Do not install Network Agent**: allows you to continue the Websense Enterprise installation without installing the Network Agent.

9. Click **Test Traffic Visibility** to check the visibility of internet traffic from the installation machine.

   The **Traffic Visibility Test** utility appears.



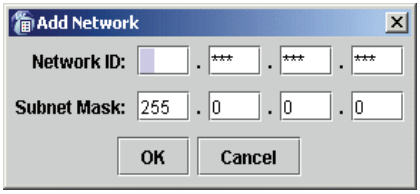
Traffic Visibility Test Tool

Field	Description
Network Card	Name of the network interface card (NIC) to test. Active cards on the installation machine appear in this list. Cards without an IP address will not appear in this list.
Networks Tested	Displays the netmasks that are being tested. You may use the defaults provided or add your own. These netmasks can reside in different network segments depending upon the IP address ranges to be filtered.
IP Address Count	Number of IP addresses for which traffic is detected during the test of a Network.
Detail	Lists all the IP addresses in the network from which internet traffic is being detected.

a. From the **Network Card** drop-down list, select the network interface card (NIC) that you want to use for the Network Agent.

b. If the network you want to test with the NIC does not appear in the default list, click **Add Network**.

   The **Add Network** dialog box appears.



c. Enter a new netmask value in the **Network ID** field.

   The subnet mask defaults to 255.0.0.0 and changes appropriately as the netmask is defined.

d. Click **OK** to return to the **Traffic Visibility Test** dialog box.

   Your new network appears in the list.

e. Click **Start Test** to begin testing all the networks in the list.

   The counter in the **IP Address Count** column should begin recording internet traffic immediately from the networks listed. The counter increments each time the NIC detects an individual IP address from the target network in a passing packet. The activity bar at the bottom of the dialog box indicates that a test is in progress.

   If the count for a network remains at zero or is very low, the selected NIC cannot see the traffic it is supposed to monitor.

f. If the Network Agent is unable to see the desired traffic, perform one or both of the following tasks:

   - If the installation machine has multiple NICs, select a different card to test.
   - Resolve network configuration issues to make sure that the NIC can see the desired traffic. This might involve connecting to a different router or configuring for port spanning in a switched environment. See the Websense Enterprise *Deployment Guide* for detailed deployment information. You may continue the installation without installing Network Agent and reconfigure your network later, or make the necessary changes and retest immediately.

g. Click **Stop Test** when you are ready to continue installation.

h. Click **Close** to exit the traffic visibility test screen.

10. Continue with the installation.

    ■ Select **Install Network Agent** if you are sure that your NIC is able to monitor all targeted internet traffic. This will install the Network Agent.

- Select **Do not install Network Agent** to continue the Websense Enterprise installation without installing the Network Agent.

11. Click **Install Network Agent** to continue.

    The installer asks you if this machine is running a firewall. Network Agent cannot function properly on a machine running a firewall.

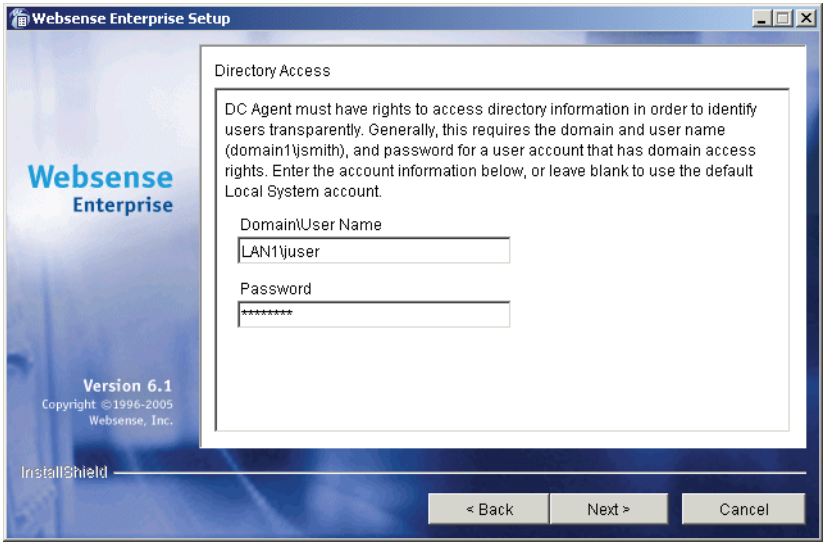
12. Select **Yes** or **No** and click **Next** to continue.

    - Select **No** if the installation machine is not being used as a firewall. Installation will continue.
    - Select **Yes** if you are attempting to install Network Agent on a firewall machine, and Setup will exit. Install the Network Agent on a machine that is not running a firewall.

    If the installation machine has multiple network interface cards (NICs), Setup asks you to select the NIC that you want to use for capturing traffic. All network interface cards enabled in the machine appear in a list.

13. Select the desired card and click **Next** to continue.

    If you are installing DC Agent, the installer asks you to provide a user name and a password with administrative privileges on the domain. If you attempt to install DC Agent without providing access to directory information, you will be unable to identify users transparently.



Directory Access for DC Agent

14. Enter the domain and user name, followed by the network password for an account with domain privileges, and click **Next** to continue.

    The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.

    - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
    - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

    A summary screen appears, listing the installation path, the installation size, and the components that will be installed.

15. Click **Next** to begin installation.

    If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

    If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic.

    A message appears advising you that the installation was successful.

16. Click **Next** to continue.

    - If you have installed DC Agent, a dialog box appears advising you that the machine must be restarted to complete the installation. Select a restart option and click **Finish** to exit the installer.
    - If DC Agent was not installed, but you have installed Real-Time Analyzer and/or Websense Manager, the installer displays a screen asking if you want to launch either of those applications. By default, both are selected. Clear the checkbox of the component you do not want to launch and click **Finish**.

> **NOTE**
>
> Before you can access Real-Time Analyzer and other Websense Reporting Tools, you must first log on to Websense Manager and configure user permissions. See the Websense Enterprise *Administrator's Guide* for more information.

- If neither DC Agent, Real-Time Analyzer, nor Websense Manager were installed, no further action is required and you can click **Finish** to exit the installer.

17. If you stopped your antivirus software, be sure to start it again.

Solaris or Linux

To add Websense Enterprise components in a Solaris or Linux environment:

> **NOTE**
>
> Before adding new components, we recommend that you perform a full system backup as a fallback strategy. This will allow you to restore your current system with a minimum of downtime, should you decide to do so.

1. Log on to the installation machine as the **root** user.
2. Close all applications and turn off any antivirus software.
3. Run the installation program for your operating system from the directory where it resides using the following command:

   ```
   ./install.sh
   ```

   Run the GUI version of the installer with the following command:

   ```
   ./install.sh -g
   ```

   If you are using a non-English based system, the installer will display an error message advising you that the GUI version is not supported.

   The installer detects the currently installed Websense Enterprise components and asks you what action you want to take.

4. Select **Add Websense components**.

   The installer displays a list of components not currently installed on the installation machine.

5. Select the components you want to install.

   If you have selected Network Agent to install, you are given the opportunity to test your machine's visibility to internet traffic. The machine on which the Network Agent is installed must be able to monitor 2-way employee internet traffic for Network Agent to function properly.

   IMPORTANT
   If you install the Network Agent on a machine that cannot monitor targeted internet traffic, Dynamic Protocol Management and Bandwidth Optimizer, will not perform as expected.

   You are given the following three options:

   - **Test Traffic Visibility**: This selection launches the utility that tests the visibility of internet traffic from the installation machine.
   - **Install Network Agent**: This option installs Network Agent without conducting the traffic visibility test. Use this option if you know that the installation machine has the necessary internet traffic visibility.
   - **Do not install Network Agent**: Continue the Websense Enterprise installation without installing the Network Agent.

6. Select **Test Traffic Visibility** to check the visibility of internet traffic from the installation machine.

   a. Select the network interface card (NIC) that you want to use for the Network Agent and continue to the next pane. Active cards on the installation machine appear in this list, including NICs without IP addresses (stealth mode).

      A default list of networks (netmasks) to test appears. You may use the defaults provided or add your own. These netmasks can reside in different network segments depending upon the IP address ranges to be filtered.

   b. If the network you want to test with the NIC does not appear in the default list, select **Add Network**.

      - Enter a new netmask value in the **Network ID** field.
      - The subnet mask defaults to 255.0.0.0 and changes appropriately as the netmask is defined.
      - Select **Redisplay** to return to the options list.

        Your new network appears in the list.

c. Select **Remove a Network** to delete a network from the list.

d. Select **Start Test** to begin testing all the networks in the list.

The counter in the **IP Address Count** column should begin recording internet traffic immediately from the networks listed. The counter increments each time the NIC detects an individual IP address from the target network in a passing packet. The activity bar at the bottom of the pane indicates that a test is in progress. If the count for a network remains at zero or is very low, the selected NIC cannot see the traffic it needs to monitor.

e. If the Network Agent is unable to see the desired traffic, perform one or both of the following tasks:

- If the installation machine has multiple NICs, select a different card to test.
- Resolve network configuration issues to make sure that the NIC can see the desired traffic. This might involve connecting to a different router or configuring for port spanning in a switched environment. See *Chapter 2: Network Configuration* for deployment information. You may continue the installation without installing Network Agent and reconfigure your network later, or make the necessary changes and retest immediately.

f. Select **Exit Tool** when you are ready to continue installation.

g. Select **Continue installation** if you are sure that your NIC is able to monitor all targeted internet traffic.

h. Select **Exit Setup** if the appropriate traffic is not visible. If Network Agent cannot see the necessary traffic, you must either reposition the machine in the network or select another machine on which to install the Network Agent.

7. Select a Network Agent installation option and press **Enter** to continue with the Websense Enterprise installation.

- **Firewall installation warning**: Network Agent cannot function properly on a machine running a firewall. Select **Yes** or **No** when asked if Network Agent is being installed on a machine that is being used as a firewall.
  - Select **No** if the installation machine is not being used as a firewall. Installation will continue.

- Select **Yes** if you are attempting to install Network Agent on a firewall machine, and Setup will exit. Install the Network Agent on a machine that is not running a firewall.

- **Network Interface Card (NIC) selection**: If the installation machine has multiple network interface cards, Setup displays a list of all enabled cards. Select the NIC that you tested successfully for network visibility. Cards without an IP address will not appear in this list.
- **Installation directory**: Setup displays the path to the directory where the existing Websense components are installed. The default is `/opt/Websense`. Accept this default or create another directory.

IMPORTANT

The full installation path must use only ASCII characters.

- **System requirements check**: The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.
  - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
  - If the installation machine has less than the recommended amount of memory, the installation can continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.
- **Installation summary**: A summary list appears, showing the installation path, installation size, and the components you have selected.

8. Press **Enter** to accept this installation configuration and to begin installing the displayed Websense Enterprise components.

   If you are using the online installer, the Download Manager copies the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   If the Network Agent was not installed, a message reminds you that Protocol Management and Bandwidth Optimizer cannot be used unless Network Agent is installed on a machine with direct access to internet traffic.
9. Exit the installer when the success message appears.
10. If you stopped your antivirus software, be sure to start it again.

Removing Components

After installing Websense Enterprise or any of its components, you may want to remove installed components to change the configuration of Websense in your network.

IMPORTANT

The Policy Server service must be running to uninstall any Websense Enterprise components. To remove the Policy Server, you must also remove all the other components installed on the machine.

Windows

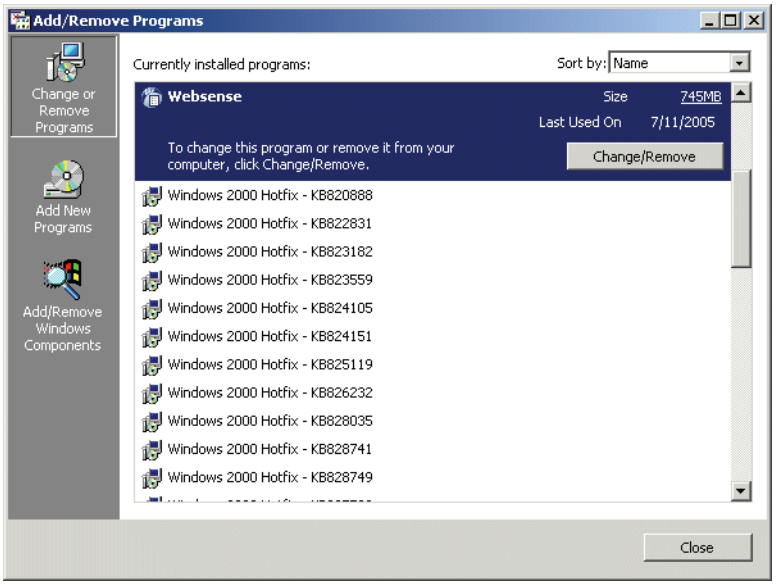
If you have run the Websense installer recently and have not restarted the machine, you must do so before attempting to remove any components.

NOTE

Before removing components, we recommend that you perform a full system backup as a fallback strategy.

To remove installed Websense Enterprise components in a Windows environment:

1. Log on to the installation machine with **local** administrator privileges.
2. Close all applications and stop any antivirus software.
3. Go to the Windows Add or Remove Programs dialog box:
   - *Windows 2003*: Select **Start** > **Control Panel** > **Add or Remove Programs**.
   - *Windows 2000*: Select **Start** > **Settings** > **Control Panel**, and then double-click **Add/Remove Programs**.
4. Select **Websense** from the list of installed applications.

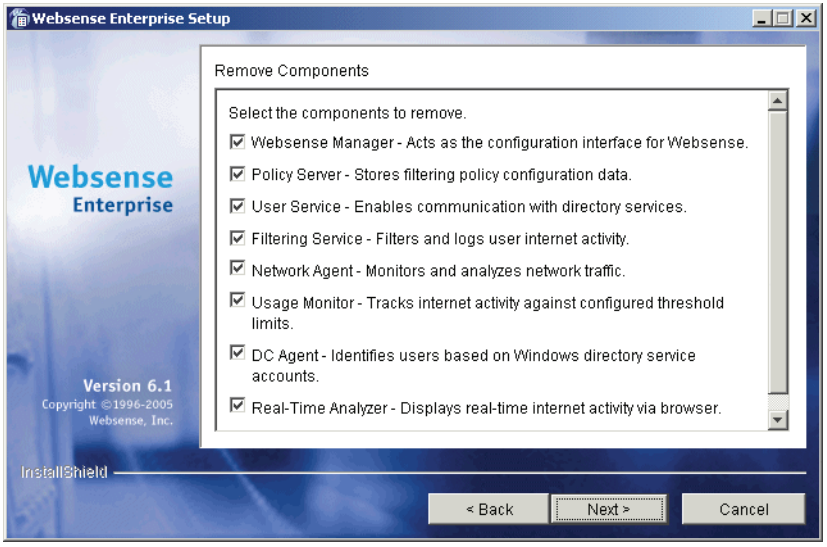


Add/Remove Programs Control Panel, Windows 2000

5. Click **Change/Remove** to launch the Websense uninstaller.

   There may be a delay of several seconds while the Websense uninstaller starts.

   A list of installed components appears.



Remove Components Screen

By default, all components are checked for removal.

6. If you want to keep a component, remove the check mark from the box next to it. When all of the components you want to uninstall are checked, click **Next** to continue.

   If the Policy Server is not running, a dialog box appears advising you that removing Websense Enterprise components may require communication with the Policy Server. You may exit the installer to restart the Policy Server or continue uninstalling the selected components.

   IMPORTANT

   If the Policy Server is not running, the files for the selected components will be removed, but not the information about the components recorded in the `config.xml` file. This could cause problems if you decide to add these components again at a later date.

   A summary list of the components you have selected to remove appears.

7. Click **Next** to begin uninstalling the components.

   If you are uninstalling Network Agent on a remote machine after removing the Policy Server, expect the process to take several minutes. Network Agent will be successfully uninstalled, although no progress notification will be displayed.

   A completion messages advises you when the procedure is finished.

8. Click **Next** to continue.

   A dialog box appears advising you that the machine must be restarted to complete the uninstall process.

9. Select a restart option and click **Finish** to exit the installer.

10. If you stopped your antivirus software, be sure to start it again.

Solaris or Linux

To remove installed components on a Solaris or Linux machine:

> **NOTE**
> Before removing components, we recommend that you perform a full system backup as a fallback strategy.

1. Log on to the installation machine as the **root** user.
2. Close all applications and stop any antivirus software.
3. Run the following program from the Websense directory (`/opt/Websense`):

   ```
   ./uninstall.sh
   ```

   Run the GUI version of the installer with the following command:

   ```
   ./uninstall.sh -g
   ```

   If you are using a non-English based system, the installer will display an error message advising you that the GUI version is not supported.

   The installer detects the currently installed Websense Enterprise components and displays a list of installed components.
4. Make sure that only the components you want to remove are selected for removal.
5. Press **Enter** to remove the selected components.
   - **Policy Server status**: If the Policy Server is not running, a dialog box appears advising you that removing Websense Enterprise components may require communication with the Policy Server. You may exit the installer to restart the Policy Server or continue uninstalling the selected components.

     The files for the selected components will be removed, but not the information about the components recorded in the `config.xml` file. This could cause problems if you decide to add these components again at a later date.

WARNING

Do not uninstall the Policy Server without uninstalling all of the Websense components. Removing the Policy Server will sever communication with the remaining Websense components and will require the reinstallation of those components.

- **Summary list**: A summary list of the components you have selected to remove appears.
- **Network Agent**: If you are uninstalling Network Agent on a remote machine after removing the Policy Server, expect the process to take several minutes. Network Agent will be successfully uninstalled, although no progress notification will be displayed.
- **Completion**: A completion message advises you when the procedure is finished.

6. Exit the installer.
7. If you stopped your antivirus software, be sure to start it again.

Repairing an Installation

If a component fails to install properly, or is not performing normally, you can run the installer again and *repair* the installation. This procedure does not troubleshoot components, but merely replaces missing files.

NOTE

If you want to repair (reinstall) a Policy Server in a distributed environment, see *Repairing the Policy Server*, page 178 for instructions.

Windows

To repair your Websense Enterprise installation in a Windows environment:

NOTE

Before repairing components, we recommend that you perform a full system backup as a fallback strategy.

1. Log on to the installation machine with **domain** and **local** administrator privileges.

   If you are repairing User Service and DC Agent, this will assure that they have administrator privileges on the domain.

   IMPORTANT

   User Service and DC Agent must have administrator privileges on the network to retrieve user login information from the domain controller. Without this information, Websense Enterprise cannot filter by users and groups. If you cannot install these components with such privileges, you may configure administrator privileges for these services after installation in the **Properties** dialog box for Windows services.

2. Back up the following files to a safe location:
   - `config.xml`
   - `websense.ini`
   - `eimserver.ini`
3. Close all applications and stop any antivirus software.

   WARNING

   Be sure to close the Windows Event Viewer, or the repair may fail.

4. Run the Websense Enterprise installer.
5. Click **Next** on the welcome screen.

   The installer detects the current Websense Enterprise installation and asks you if you want to add, remove, or repair components.
6. Select **Repair existing Websense components** and click **Next**.

   Setup advises you that it will repair the current installation by reinstalling the existing Websense components and asks if you want to continue.
7. Select **Yes** and click **Next**.

   A list of currently running Websense services appears. The message explains that the installer will stop these services before installation.

8. Click **Next** to begin installation.

   A progress message appears while the installer shuts down Websense services.

   The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, warnings are displayed in separate screens.

   - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.
   - If the installation machine has less than the recommended amount of memory, the installation will continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

   If you are using the online installer, the Download Manager progress bars are displayed as Setup downloads the appropriate installer files from Websense. Installation begins automatically when the necessary files have been downloaded.

   A message appears, advising you that the installation has been successful.

9. Click **Next** to continue.

   - If you have repaired DC Agent, a dialog box appears advising you that the machine must be restarted to complete the installation. Select a restart option and click **Finish** to exit the installer.
   - If DC Agent was not repaired, but you have repaired Real-Time Analyzer and/or Websense Manager, the installer displays a screen asking if you want to launch either of those applications. By default, both are selected. Clear the checkbox of the component you do not want to launch and click **Finish**.
   - If neither DC Agent, Real-Time Analyzer, nor Websense Manager were repaired, no further action is required and you can click **Finish** to exit the installer.

10. If you stopped your antivirus software, be sure to start it again.

Solaris or Linux

To repair Websense Enterprise components on a Solaris or Linux system:

> **NOTE**
> Before repairing components, we recommend that you perform a full system backup as a fallback strategy.

1. Log on to the installation machine as the **root** user.
2. Close all applications and stop any antivirus software.
3. Run the installation program from the directory where it resides:

   ```
   ./install.sh
   ```

   Run the GUI version of the installer with the following command:

   ```
   ./install.sh -g
   ```

   If you are using a non-English based system, the installer will display an error message advising you that the GUI version is not supported.

   The installer detects the currently installed Websense Enterprise components and asks you what action you want to take.
4. Select **Repair existing Websense components** and press **Enter** to advance through the procedure.
   - **Repair feature**: The installer advises you that it will repair the current installation by reinstalling the existing Websense components.
   - **Websense services**: A list of currently running Websense services appears. The message explains that the installer will stop these services before continuing with the installation.
   - **Browser location**: If you are repairing the Websense Manager on Solaris, Setup prompts you for the location of the browser.
   - **System requirements**: The installer compares the system requirements for the installation you have selected with the resources of the installation machine. If the machine has inadequate disk space or memory, separate warnings are displayed.
     - If the installation machine has insufficient disk space, the selected components cannot be installed, and the installer will quit.

- If the installation machine has less than the recommended amount of memory, the installation will continue. To ensure the best performance of the components you are installing, you should upgrade your machine's memory to the recommended amount.

- **Services restarted**: The Websense services are restarted after the files are reinstalled.

A completion messages advises you when the procedure is finished.

5. Exit the installer.
   - If you have not repaired the Websense Manager, you are ready to select **Finish** and exit the installer.
   - If you have repaired the Websense Manager (Solaris GUI mode only), the installer displays a screen asking if you want to launch the Websense Manager. By default, the Manager is selected for launch. Select **Finish** when you are ready to exit the installer.
6. If you stopped your antivirus software, be sure to start it again.

Repairing the Policy Server

It may become necessary to repair (reinstall) the Policy Server in a distributed environment. Unless this is done correctly, communication with components installed on separate machines will be broken.

To repair the Policy Server and preserve the connection between distributed components:

NOTE

Before repairing components, we recommend that you perform a full system backup as a fallback strategy.

1. Stop the Policy Server. Refer to *Stopping or Starting Websense Services*, page 181 for instructions.

2. Make a backup copy of the `config.xml` file and put it in a safe location.

> **NOTE**
> If you cannot make a backup copy of the current configuration file due to a system crash or other hardware problems, you can use the most recent backup copy of the file saved to a shared network drive to restore the system.

3. Restart the Policy Server.
4. Stop the services of the distributed Websense Enterprise components on the individual machines. Refer to *Stopping or Starting Websense Services*, page 181 for instructions.
5. Close all open applications on the Policy Server machine, and stop any antivirus software.
6. Run the Websense Enterprise installer on the Policy Server machine.

   The installer detects Websense Enterprise and asks you what action you want to take with the installed components.
7. Select **Repair existing Websense components** when prompted.

   For specific instructions, refer to *Repairing an Installation*, page 174.
8. When the installer is finished repairing the system, exit the installer and stop the newly installed Policy Server.
9. Replace the `config.xml` file created by the repair procedure with your backup copy.
10. Restart the Policy Server.
11. If you stopped your antivirus software, be sure to start it again.
12. Restart the services of the remote Websense Enterprise components.
13. Reload the Websense Master Database, which was removed during the repair process.

Migrating between Integrations After Installation

If you plan to change the Cisco integration with which Websense Enterprise interacts (from PIX Firewall to an IOS Router, for example), you may do so after you install Websense Enterprise v6.1 without losing any of your configuration data.

The following procedure assumes that the Policy Server is installed on the same machine as the Filtering Service. If the Policy Server is installed on a separate machine, no changes need to be made to that component, and there is no need to back up the `config.xml` file.

To migrate between Cisco integration products after installing Websense Enterprise v6.1:

1. Install and configure your new Cisco integration product on your network. Make sure it is deployed so that it can communicate with the Websense Enterprise machine (the machine running Filtering Service and Policy Server). Refer to *Websense Deployment* in *Chapter 2: Network Configuration* and your Cisco documentation for instructions.
2. Make backup copies of the following files (found in `Websense\bin`) and copy them to a location outside the `Websense` folder:
   - `config.xml`
   - `eimserver.ini`
   - `websense.ini`
3. Close all open applications on the Filtering Service machine, and stop any antivirus software.
4. Run the Websense Enterprise installer on the Filtering Service machine.
5. Remove the Filtering Service using the procedures in *Removing Components*, page 170.

WARNING

Remove the Filtering Service only. *Do not* remove the Policy Server.

6. Restart the machine (Windows only).
7. Run the Websense Enterprise installer again.

8. Add the Filtering Service using the procedures in *Adding Components*, page 156.
9. When prompted to select an integration, select the new Cisco product (either **Cisco Adaptive Security Appliances**, **Cisco Content Engine**, **Cisco PIX Firewall**, or **Cisco Routers**).
10. Follow the on-screen instructions to complete the installation.

    The installer adds the new integration data to the `config.xml` file, without overwriting any of the previous configuration data.
11. Restart the machine (Windows only).
12. Check to be sure that the Filtering Service has started.

    Refer to *Stopping or Starting Websense Services*, page 181 for instructions on starting a service.
13. If you stopped your antivirus software, be sure to start it again.

Stopping or Starting Websense Services

By default, Websense services are configured to start automatically when the computer is started.

Occasionally you may need to stop or start a Websense service. For example, you must stop the Filtering Service whenever you edit the `websense.ini` file, and after customizing default block messages.

NOTE

When the Filtering Service is started, CPU usage can be 90% or more for several minutes while the Websense Master Database is loaded into local memory.

Manually Stopping Services

Certain Websense Enterprise components must be stopped and started in a prescribed order. Optional components may be stopped and started in any order.

Optional Components

You can manually start or stop these Websense services in any order.

- eDirectory
- RADIUS Agent
- DC Agent
- Real-Time Analyzer
- Logon Agent
- Usage Monitor
- Remote Filtering Server

Principal Components

You must stop the following components in the order indicated. Always start or stop optional components before stopping any of the components on this list.

1. Network Agent
2. Filtering Service
3. User Service
4. Policy Server

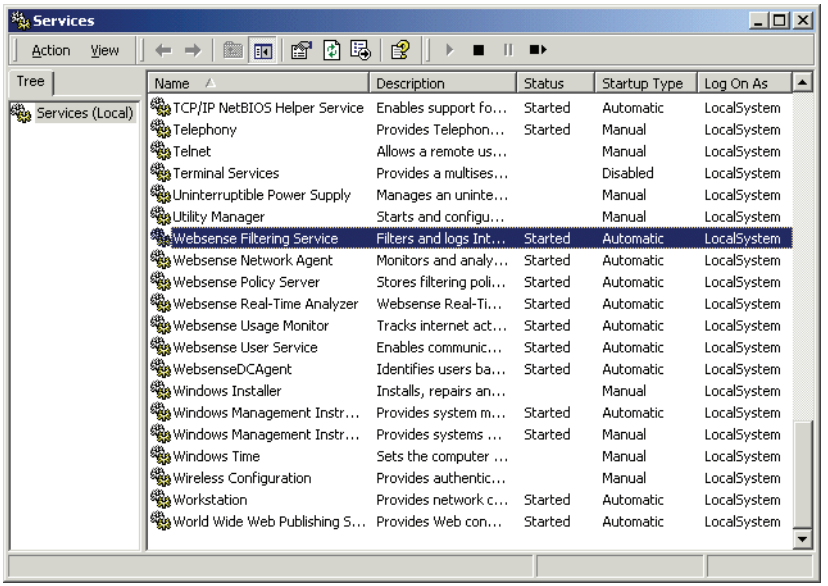
When restarting Websense services, reverse the order, starting with the Policy Server first.

Windows

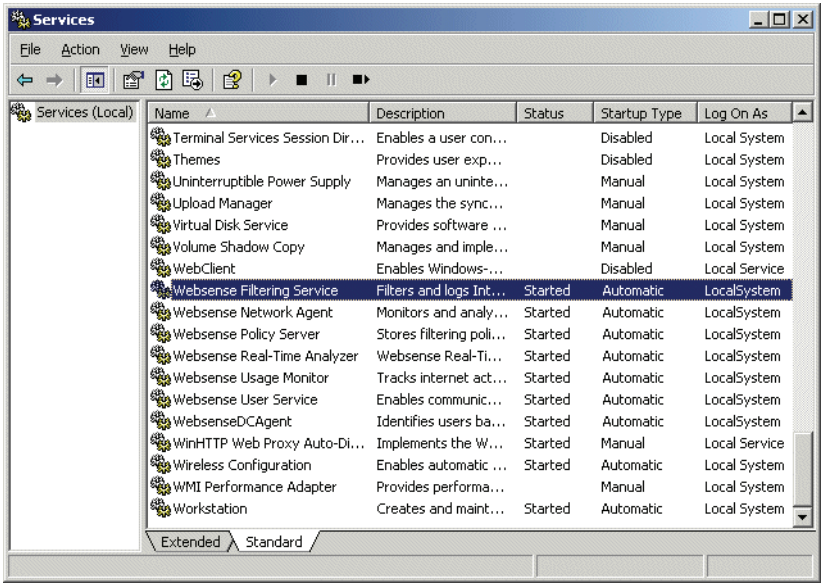
Stop, start, or restart a Websense service by using the **Services** dialog box. Restarting stops the service, then restarts it again immediately from a single command.

To stop or start Websense services on a Windows 2000 or 2003 machine:

1. From the Control Panel, select **Administrative Tools > Services**.
2. Scroll down the list of available services and select a Websense service.



Windows 2000 Services List



Windows 2003 Services List

3. From the **Action** menu, select **Start**, **Stop**, or **Restart** or click one of the control buttons in the toolbar (**Stop** ■, **Start** ▶, or **Restart** ■ ▶). **Restart** stops the service, then restarts it again immediately from a single command.

WARNING

DO NOT use the `taskkill` command to stop Websense services. This procedure may corrupt the services.

Solaris and Linux

You can stop, start, or restart Websense services from a command line on a Solaris or Linux machine. Restarting stops the services, then restarts them again immediately from a single command.

1. Go to the `/Websense` directory.
2. Use the following commands to stop, start, or restart all Websense services in the correct order:
   - `./WebsenseAdmin stop`
   - `./WebsenseAdmin start`
   - `./WebsenseAdmin restart`
3. View the running status of all Websense services with the following command:

   ```
   ./WebsenseAdmin status
   ```

WARNING

DO NOT use the `kill -9` command to stop Websense services. This procedure may corrupt the services.

CHAPTER 5 | Initial Setup

This chapter provides initial setup and configuration procedures for preparing Websense Enterprise to communicate with your Cisco integration.

After installing Websense Enterprise, you must perform the following tasks to complete the setup process.

- If you did not download the Websense Master Database during installation, you must use the Websense Manager and your Websense subscription key to download the database. See *Subscription Key and Master Database Download*, page 186 for instructions.
- If the Filtering Service is installed on a multihomed machine, identify the Filtering Service by its IP address in your network so that Websense block messages can be sent to users. See *Identifying the Filtering Service for the Block Page URL*, page 190 for instructions.
- All workstations being filtered must have the Messenger Service enabled to receive protocol block messages. See *Displaying Protocol Block Messages*, page 191 for instructions.
- If the Logon Agent was installed, you must create a logon script for your users that will identify them transparently as they log on to a Windows domain. See *Creating and Running the Script for Logon Agent*, page 192 for instructions.
- If the Network Agent was installed, the IP addresses of all proxy servers through which workstations route their internet requests must be defined. See *Identifying the Proxy Server for the Network Agent*, page 198 for instructions.
- If the Network Agent was installed on a machine with multiple Network Interface Cards (NICs), you can configure Network Agent to use more than one NIC. See *Configuring Network Agent to use Multiple NICs*, page 201.
- If the optional Remote Filtering components were installed, some additional firewall configuration is required to ensure that remote users are filtered correctly. See *Firewall Configuration for Remote Filtering*, page 201 for instructions.

For additional configuration information, refer to the Websense Enterprise *Administrator's Guide*.

Subscription Key and Master Database Download

The Websense Master Database is the basis for filtering and is updated daily by default. It is downloaded from a remote database server so that your version is the most current.

For the database download to occur, the machine running the Websense Filtering Service must have internet access to the download servers at the following URLs:

- download.websense.com
- ddsdom.websense.com
- ddsint.websense.com
- portal.websense.com
- my.websense.com

Make sure that these addresses are permitted by all firewalls, proxy servers, routers, or host files that control the URLs that the Filtering Service can access.

If you did not enter a subscription key to download the Master Database during installation, follow the instructions below to enter your key and download the Master Database now.

NOTE

If you have just upgraded Websense Enterprise, your subscription key was retained by the installer and these steps are not necessary.

To download the Master Database:

1. Open Websense Manager on any machine where it is installed.
   - **Windows**: Select **Start > Programs > Websense > Websense Manager**.
   - **Solaris**: Go to the `Websense/Manager` directory and enter:

     ```
     ./start_manager
     ```

2. For a first-time installation, if Policy Server was not installed with Websense Manager, the **Add Policy Server** dialog box appears the first time you open Websense Manager.
   a. Enter the IP address or machine name of the machine on which you installed the Policy Server, and the configuration port established during installation (default is 55806).
   b. Click **OK**. The Policy Server machine's IP address or machine name appears beside a server icon in the Manager's navigation pane.
3. Double-click the icon of the Policy Server in the navigation pane.

   For a first-time installation, the **Set Websense Password** dialog box appears.
4. Set a password (between 4 and 25 characters) for the Policy Server.

NOTE

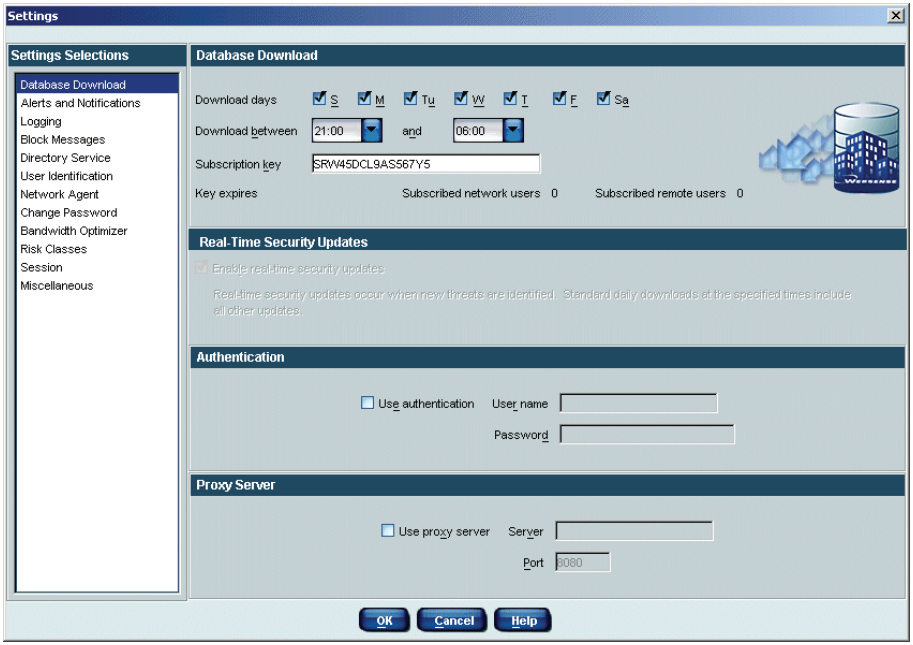
Retain this password. It must be entered when you connect to this Policy Server from this or any other Websense Manager, or after the Policy Server is stopped and restarted.

5. Click **OK**.

   The **Settings** dialog box appears.

NOTE

If you have entered a subscription key previously, you must select **Server > Settings** to display the **Settings** dialog box with **Database Download** selected.



Settings Dialog Box

6. Enter your alphanumeric key in the **Subscription key** field.

> **NOTE**
>
> The **Subscribed network users** and **Subscribed remote users** fields show a value of **0** until the database is successfully downloaded.

7. If your network requires authentication to an upstream proxy server or firewall to reach the internet and download the Websense Master Database, perform the following procedure:
   a. Check **Use authentication**.
   b. Be sure to configure the upstream proxy server or firewall to accept clear text or basic authentication (for Websense to download the Master Database).
   c. Enter the **User name** required by the upstream proxy server or firewall to download the Master Database.
   d. Enter the **Password** required by the upstream proxy server or firewall.

8. If your network requires that browsers use an upstream proxy server to reach the internet, the same proxy settings used by the browser must be used for downloading the Websense Master Database. Establish the proxy settings for the database download as follows:
   a. Check **Use proxy server**.
   b. Identify the upstream proxy server or firewall by entering the machine's IP address or machine name in the **Server** field.

      Supported machine name formats are as follows:

      - **Windows**: 7-bit ASCII and UTF-8 characters. The DNS server must be able to recognize UTF-8 characters and resolve the name into an IP address. Do NOT use a machine name that has extended ASCII or double-byte characters.
      - **Solaris or Linux**: 7-bit ASCII only.

      NOTE

      If Websense Enterprise is installed on a proxy server machine in your network, *do not* enter that IP address in your proxy settings. Use **`localhost`** instead.

   c. Enter the **Port** of the upstream proxy server or firewall (default is 8080).
9. Click **OK**.
10. Click **Done** in the **Saving Data** dialog box.

    Websense automatically contacts the Websense database server and begins downloading the Master Database. The status of the download is displayed in the **Database Download** dialog box.

    The first time the subscription key is entered, the following website appears:

    http://www.my.websense.com

    The my.websense.com site provides access to technical assistance customized for your particular version of Websense Enterprise, your operating system, and your integration product.

11. Click **Close** in the **Database Download** dialog box when the download is complete.

> **NOTE**
> After downloading the Master Database or updates to the Master Database, and when the Filtering Service is started, CPU usage can be 90% or more while the database is loaded into local memory.

Identifying the Filtering Service for the Block Page URL

When Websense blocks an internet request, the browser is redirected by default to a block message page hosted by the Filtering Service. The format of the block page URL typically takes the form:

http://<*WebsenseServerIPAddress*>**:**<*MessagePort*>**/cgi-bin/blockpage.cgi?ws-session=**#########

If the Filtering Service is installed on a multihomed machine (with two or more network interface cards), you must identify the Filtering Service by its IP address in your network so that Websense Enterprise block messages can be sent to users. If the Filtering Service machine name, rather than the IP address, is contained in the block page URL, the users could see a blank page instead of the block message.

Use one of the following methods to identify the Filtering Service by IP address:

- If you have an internal DNS server, associate the machine name of the Filtering Service machine with its correct (typically internal) IP address by entering the IP address as a resource record in your DNS server. See your DNS server documentation for instructions.
- If you do not have internal DNS, add an entry to the `eimserver.ini` file by following these instructions:
  1. Go to the `Websense\bin` folder on the Filtering Service machine.
  2. Open the `eimserver.ini` file in a text editor.
  3. In the `[WebsenseServer]` area, enter the following command on a blank line:

     `BlockMsgServerName=<IP address>`

where *<IP address>* is the correct (typically internal) IP address of the machine running Filtering Service.

IMPORTANT

Do not use the loopback address 127.0.0.1.

4. Save the file.
5. Stop and then restart the Filtering Service (see *Stopping or Starting Websense Services*, page 181).

Displaying Protocol Block Messages

Websense Enterprise will filter protocol requests normally whether or not protocol block messages are configured to display on user workstations.

Protocol block messages cannot be displayed on the following workstation operating systems:

- Solaris
- Linux
- Macintosh

IMPORTANT

Windows XP Service Pack 2 will only display protocol block messages under the following conditions:

- The firewall function must be disabled.
- The Windows Messenger service must be started.

For users to view protocol block messages in Windows NT, Windows 2000, and Windows 2003:

- Make sure that the User Service has administrator privileges. Refer to your operating system documentation for instructions on changing privileges for Windows Services.
- Make sure the Messenger Service is enabled on *each* client workstation that is being filtered. If you have activated protocol management in Websense Enterprise, check the Windows **Services** dialog box to see if the Messenger Service is running. If your company policy requires the

Messenger Service to be disabled, you should advise your users that certain protocols will be blocked without notification.

To view protocol block messages on a Windows 98 machine, you must start `winpopup.exe`, found in the Windows directory of your local drive. You can start this application from a command prompt or configure it to start automatically by copying it into the Startup folder. For instructions on how to do this, refer to your operating system documentation.

Creating and Running the Script for Logon Agent

If you have installed Websense Enterprise Logon Agent, you must create a logon script for your users that will identify them transparently as they log on to a Windows domain. Identification is accomplished by the Websense `LogonApp.exe` application which provides a user name to the Logon Agent each time a Windows client machine connects to an Active Directory or a Windows NTLM directory service.

Prerequisites for Running the Logon Script

Make the following network preparations so that the Websense logon script can execute properly on user Windows workstations:

- Be sure that all workstations can connect to the shared drive on the domain controller where the script and `LogonApp.exe` will be placed. To determine if a workstation has access to the domain controller, run the following command from a Windows command prompt:

  `net view /domain:<domain name>`
- NetBIOS for TCP/IP must be enabled. In Windows 98, TCP/IP NetBIOS is enabled by default.
- The TCP/IP NetBIOS Helper service must be running on each client machine that will be identified by Logon Agent. This service runs on Windows 2000, Windows XP, Windows 2003, and Windows NT.

File Location

All relevant files are located in the `\Websense\bin` folder on the Logon Agent machine:

- `LogonApp.exe`: the Websense executable
- `Logon.bat`: batch file containing sample logon scripts

- `LogonApp_ReadMe.txt`: a summary of the procedures for creating and running the Websense logon script

Deployment Tasks

To deploy `LogonApp.exe` with a logon script, perform the following tasks:

Task 1: Prepare the logon script: Edit the parameters in the sample script file (`Logon.bat`) to suit your needs. This file contains two sample scripts: a logon script and a logout script. If you plan to use both types of scripts, you will need two separate `.bat` files with different names.

Task 2: Configure the script to run: You can run your logon script from Active Directory or Windows NTLM directory services using group policies. This requires you to move the Websense executable and logon batch file to a shared drive on the domain controller that is visible to all user workstations.

Preparing the Logon Script

A batch file, called `Logon.bat`, is installed with Logon Agent in the `\Websense\bin` folder. This file contains some instructions for using the scripting parameters, and two sample scripts: a logon script that will run `LogonApp.exe`; and a logout script that will remove user information from the Websense user map when the user logs out.

Script Parameters

Using the samples provided, construct a script for your users that employs the parameters in the following table. The required portion of the script is:

```
LogonApp.exe http://<server>:15880
```

This command will run `LogonApp.exe` in *persistent* mode (the default), which will send user information to the Logon Agent at predefined intervals.

NOTE

You can edit the sample, or create a new batch file containing a single command.

Parameter	Description
<*server*>	IP address or name of the machine running the Logon Agent.
Port number	The port number used by Logon Agent defaults to 15880 but may be edited if a different port is in use.
/COPY	Copies the `LogonApp.exe` application to the users' machines, where it is run by the logon script from local memory. By default, the application is copied into the `%USERPROFILE%\Local Settings\Temp` folder. `Copy` can be used only in the *persistent* mode.
/NOPERSIST	Sends information to the Logon Agent only at logon. No updates are sent during the user's session. If this parameter is not present, `LogonApp.exe` will operate in the *persistent* mode. In this mode, `LogonApp.exe` will reside in memory where it will update the Logon Agent at predefined intervals (defaults to 15 minutes). PERSIST is the default behavior for the logon script. Refer to the Websense Enterprise *Administrator's Guide* for details on configuring the Logon Agent via the Websense Manager.
/VERBOSE	Debugging parameter that must be used only at the direction of Technical Support.
/LOGOUT	Removes the logon information from the Websense user map when the user logs off. Use of this parameter requires a second script.

Websense User Map and the Persistent Mode

User identification provided at logon by `LogonApp.exe` is stored in the Websense user map. This information is updated periodically if `LogonApp.exe` is run in persistent mode. The update time interval for the persistent mode and the interval at which the user map is cleared of logon information are configured in the **Logon Agent** tab of the **Settings** dialog box in the Websense Manager. In Active Directory, if you decide to clear the logon information from the Websense user map before the interval defined in the Manager, you can create an accompanying logout script. You cannot configure a logout script with Windows NTLM.

In the non-persistent mode, information in the user map is created at logon and is not updated. The use of the non-persistent mode creates less traffic

between Websense and the workstations in your network than does the persistent mode.

For detailed information on configuring Logon Agent in the Websense Manager, refer to the Websense Enterprise *Administrator's Guide*.

Examples

The following are examples of commands for a logon script and the accompanying logout script that might be run in Active Directory. The logout script must be run from a separate batch file.

- **Logon script**: The following script sends user information to the Logon Agent at logon only. User information is not updated during the user's session.

  ```
  LogonApp.exe http://10.2.2.95:15880 /NOPERSIST
  ```

- **Logout script**: The accompanying logout script would be written as:

  ```
  LogonApp.exe http://10.2.2.95:15880 /NOPERSIST
  /LOGOUT
  ```

Configuring the Logon Script to Run

You can configure your logon script to run with a group policy on Active Directory or on a Windows NTLM directory service.

NOTE

The following procedures are specific to Microsoft operating systems and are provided here as a courtesy. Websense cannot be responsible for changes to these procedures or to the operating systems that employ them. For more information, refer to the links provided.

Active Directory

If your network uses Windows 98 client machines, refer to: http://www.microsoft.com/windows2000/server/evaluation/news/bulletins/adextension.asp for assistance.

To configure a logon script using Active Directory:

1. Make sure your environment meets the conditions described in *Prerequisites for Running the Logon Script*, page 192.

2. From the **Start** menu on the Active Directory machine, select **Settings > Control Panel > Administrative Tools > Active Directory Users and Computers**.
3. Right-click the domain and select **Properties**.

   The domain **Properties** dialog box appears.
4. Select the **Group Policy** tab.
5. Click **New** and create a policy called **Websense Logon Script**.
6. Double-click your new policy or click **Edit** to edit the policy.

   The **Group Policy Object Editor** dialog box appears.
7. In the tree structure displayed, expand **User Configuration**.
8. Expand the **Windows Settings** structure.
9. Select **Scripts (Logon/Logoff)**.
10. In the right pane, double-click **Logon**.
11. In the **Logon Properties** dialog box displayed, click **Show Files** to open the logon script folder for this policy.

    The folder opens in a Windows Explorer window.
12. Copy the logon script you edited (`logon.bat`) and `LogonApp.exe` into this folder.
13. Close the Explorer window and click **Add** in the **Logon Properties** dialog box.

    The **Add a Script** dialog box appears.
14. Enter the file name of the script (`logon.bat`) in the **Script Name** field or browse for the file.

    Leave the **Script Parameters** field empty.
15. Click **OK** twice to accept the changes.
16. Close the **Group Policy Object Editor** dialog box.
17. Click **OK** in the domain **Properties** dialog box to apply the script.

18. Repeat this procedure on each domain controller in your network as needed.

> **NOTE**
> You can determine if your script is running as intended by configuring Websense Enterprise for manual authentication. If transparent authentication with Logon Agent fails for any reason, users will be prompted for a user name and password. Advise your users to notify you if this occurs. For instructions on enabling manual authentication, refer to the Websense Enterprise *Administrator's Guide*.

For additional information about deploying logon and logout scripts to users and groups in Active Directory, please refer to:

http://www.microsoft.com/resources/documentation/WindowsServ/2003/standard/proddocs/en-us/Default.asp?url=/resources/documentation/WindowsServ/2003/standard/proddocs/en-us/sag_assign_LScripts_user_AD.asp

Windows NTLM

To configure the Websense logon script in Windows NTLM:

1. Make sure your environment meets the conditions described in *Prerequisites for Running the Logon Script*, page 192.
2. Copy the `Logon.bat` and `LogonApp.exe` files from the `\Websense\bin` folder on the Logon Agent machine to the netlogon share directory on the domain controller machine.

   ```
   C:\WINNT\system32\Repl\Import\Scripts
   ```

   Depending upon your configuration, you may need to copy these files to other domain controllers in the network to run the script for all your users.
3. In the Control Panel of the domain controller, select **Administrative Tools > User Manager for Domains**.
4. Select the users for whom the script must be run and double-click to edit the user properties.

   The **User Properties** dialog box appears.

5. Click **Profile**.

   The **User Environment Profile** dialog box appears.
6. Enter the path to the script in the **User Profile Path** field (from Step 2).
7. Enter the name of the logon script (`logon.bat`) in the **Logon Script Name** field.
8. Click **OK**.
9. Repeat this procedure on each domain controller in your network as needed.

NOTE

You can determine if your script is running as intended by configuring Websense Enterprise for manual authentication. If transparent authentication with Logon Agent fails for any reason, users will be prompted for a user name and password. Advise your users to notify you if this occurs. For instructions on enabling manual authentication, refer to the Websense Enterprise *Administrator's Guide*.

For additional information about creating and deploying logon scripts to users in Windows NTLM, please refer to:

http://windows.about.com/library/weekly/aa031200a.htm

Identifying the Proxy Server for the Network Agent

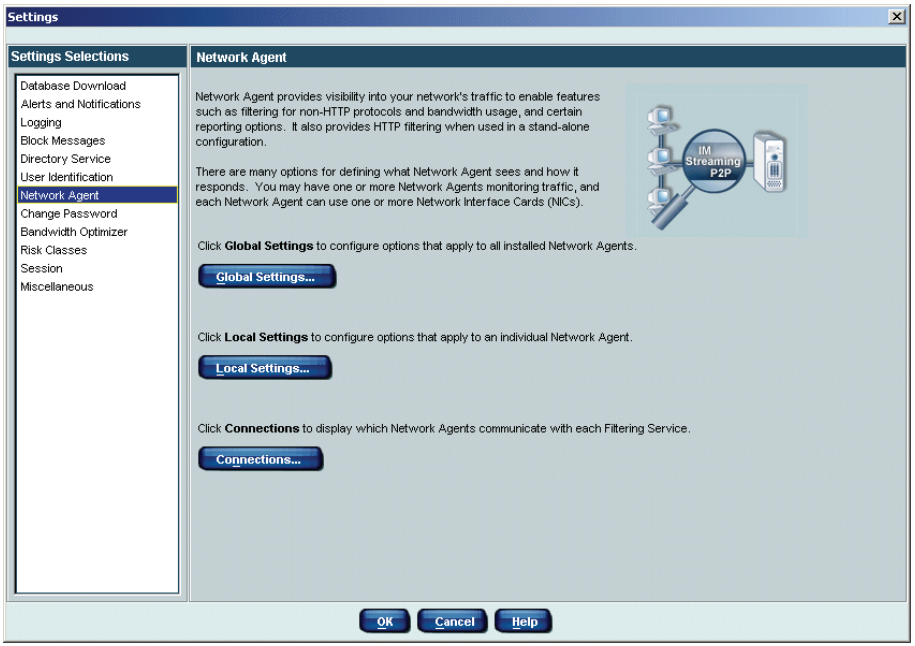
If you have installed Network Agent, you must provide the IP addresses of all Cisco Content Engines through which internet requests from the workstations monitored by Network Agent are routed. Without this address, the Network Agent cannot filter or log requests properly.

To define proxy server IP addresses:

1. Open the Websense Manager and connect to the Policy Server.
2. Select **Server > Settings**.

   The **Settings** dialog box appears.
3. Select **Network Agent** from the **Settings Selections** pane.

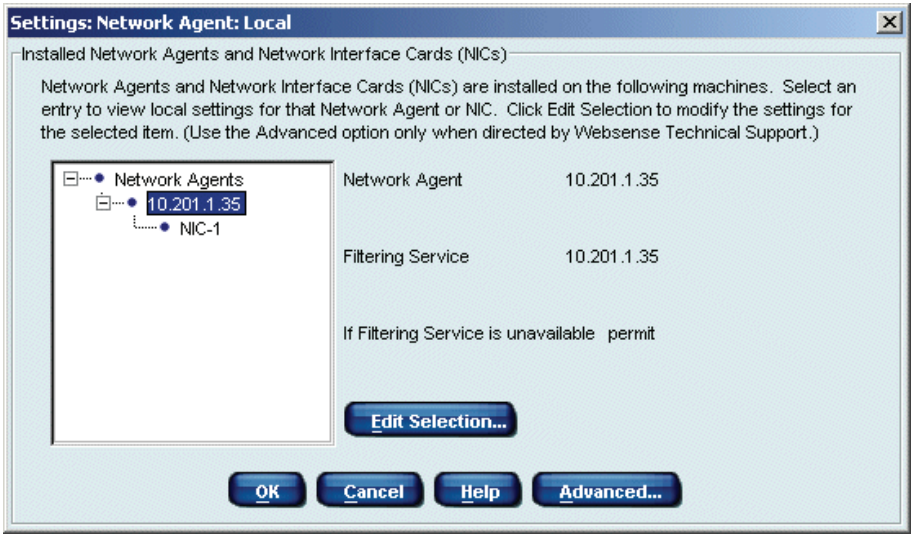
   The **Network Agent** main settings page is displayed.



Network Agent Selection Screen

4. Click **Local Settings**.

   The local Network Agent settings dialog box appears, showing the IP address and interface of the Network Agent.



Network Agent Local Settings

5. Select the IP address of the Network Agent from the tree structure and click **Edit Selection**.

   A Filtering Service connection dialog box appears.

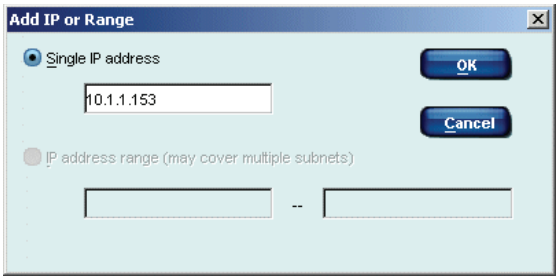
6. Click **Next**.

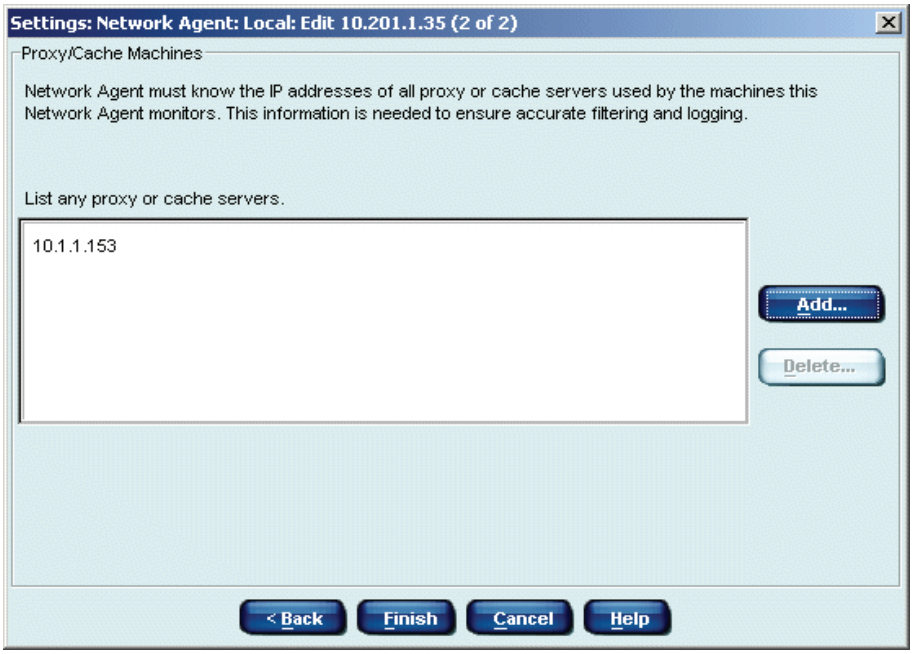
   A blank proxy/cache server list appears.

7. Click **Add**.

   A dialog box appears allowing you to define an IP address or a range of addresses.

8. Enter an IP address and click **OK** to add the IP address to the list of proxy or cache servers.





Proxy/Cache Server List

9. Repeat Step 7 and Step 8 for each proxy server in your network.
10. Click **Finish**.

For additional information about configuring Network Agent, see the Network Agent chapter in the Websense Enterprise *Administrator's Guide*.

Configuring Network Agent to use Multiple NICs

Each Network Agent instance must use at least one designated NIC. However, Network Agent is capable of using multiple NICs. If you installed Network Agent on a machine with multiple NICs, you can configure it to use different NICs for different purposes. For example, you can configure Network Agent to use one NIC for monitoring traffic, and another to send blocking information to Filtering Service.

For instructions on configuring Network Agent to use additional NICs, refer to the Network Agent chapter in the Websense Enterprise *Administrator's Guide*.

Firewall Configuration for Remote Filtering

Remote Filtering is an optional Websense service that allows you to filter user workstations located outside your organization's network firewall. If you installed the Remote Filtering components, some firewall configuration is necessary to enable web filtering on remote workstations.

The network firewall and any additional firewalls located between the Remote Filtering Server machine and the remote workstations should be configured as follows:

- Open the Remote Filtering Server's **External Communication Port** on these firewalls to accept connections from Remote Filtering Clients on workstations located outside the network firewall.
- Block connections to the Remote Filtering Server's **Internal Communication Port** from workstations located outside the network firewall.

Refer to the documentation for your firewall product for configuration information.

Virtual Private Network (VPN) Connections

If your organization allows remote users to connect through a network-based Virtual Private Network (VPN), additional firewall configuration is required to ensure that these users are always filtered.

Remote users who connect through the VPN and access the internet via the network gateway or firewall are filtered through the Filtering Service in the same way as internal users. However, VPN connections can allow remote users to access the internet via alternate gateways, a procedure commonly known as Split Tunnelling. To ensure that VPN users who access the internet via alternate gateways will be filtered by the Remote Filtering Server, you must set up a rule on your organization's network firewall. This rule will block communication between the Remote Filtering Client on the remote workstation and the Internal Communication Port on the Remote Filtering Server. To set up this rule:

- Determine the IP address range assigned to users accessing your network through the VPN.
- Apply a rule to block communication from that IP address range to the Remote Filtering Server's **Internal Communication Port**.

Refer to the documentation for your firewall product for details about setting up a rule on that type of firewall.

CHAPTER 6 Configuring Your Cisco Integration

When you have successfully installed Websense, you must configure your Cisco integration to work with Websense to filter internet traffic.

This chapter contains instructions for configuring each type of Cisco integration product: Cisco PIX Firewall and Cisco Adaptive Security Appliance (ASA); Cisco Content Engine; and Cisco IOS Routers.

Cisco PIX Firewall or Adaptive Security Appliance (ASA)

This section describes how to configure your Cisco PIX Firewall or Cisco Adaptive Security Appliance (ASA) to work with Websense. These devices will be referred to by the general term “security appliances” throughout this section.

Websense works as a filtering engine for the Cisco security appliance (PIX Firewall or ASA), allowing you to enforce your organization’s internet access policies. The Cisco security appliance passes internet requests to Websense, which then analyzes the requests and determines whether to block access to the sites, permit access to the sites, or limit access by using quotas, according to the Websense policies you have defined.

Once Websense is installed on your network, you must configure the Cisco security appliance to send internet requests to Websense. This can be done through a console or TELNET session by following the instructions in this section. Configuration may also be done through one of the Cisco management GUIs: the PIX Firewall Manager, PIX Device Manager, or Adaptive Security Device Manager, depending on the version of software running on your PIX Firewall or ASA security appliance. For information about configuring your security appliance using one of these management GUIs, refer to the Cisco documentation for that GUI, available at www.cisco.com.

Console or TELNET Session

To configure your Cisco security appliance (PIX Firewall or ASA) using a console or TELNET session:

1. Access the security appliance either from the console or by using TELNET to access it from a remote terminal.
2. Enter your login password.
3. Put the security appliance into *enabled* mode by entering **`enable`**, followed by your enable password.
4. Activate *configure* mode by entering:

   `configure terminal`

   The commands you will enter in *configure* mode are described using the following conventions:

   - **`Boldface`** indicates commands and keywords that are entered literally as shown.
   - Angle brackets (< >) containing text in *italics* indicate arguments for which you supply values.
   - Square brackets ([ ]) indicate optional elements.
   - Braces ({ }) indicate a required choice.
   - Vertical bars (|) separate alternative, mutually exclusive elements.

   NOTE

   For help with individual commands, enter **`help`** followed by the command. For example, **`help filter`** shows the complete syntax for the **`filter`** command and explains each of the options.

5. Use the **`url-server`** command to enable URL filtering by Websense.

   `url-server (`*`<if_name>`***`) host`** *`<ip_address>`*
   [**`timeout`** *`<seconds>`*] [**`protocol`** {**`TCP`** | **`UDP`**}
   `<version>` [**`connections`** *`<num_conns>`*]]

The elements of the **url-server** command are defined as follows:

Parameter	Definition
(<*if_name*>**)**	Network interface where the Websense Filtering Service resides. In v7.0 of the Cisco security appliance software, a value for this parameter must be entered. In v6.3 and earlier, <*if_name*> defaults to **inside** if not specified. Note that you must type in the brackets **( )** when you enter a value for this parameter.
<*ip_address*>	IP address of the machine running the Websense Filtering Service.
timeout <*seconds*>	The amount of time, in seconds, that the security appliance will wait for a response before switching to the next Filtering Service you defined as a **url-server**, or, if specified, going into *allow* mode and permitting all requests. If a timeout interval is not specified, this parameter defaults to 30 seconds in v7.0(1), and 5 seconds in earlier versions. v7.0(1): Range: 10 - 120; Default: 30. v6.3: Range: 1 - 30; Default: 5.
protocol {**TCP** | **UDP**} <*version*>	Defines whether the Cisco security appliance should use TCP or UDP protocol to communicate with the Websense Filtering Service, and which version of the protocol to use. **TCP** is the recommended setting, and is also the default if a protocol is not specified. The recommended protocol version is **4**, but if the version is not specified, it defaults to 1. If you want to use URL caching in the Cisco security appliance, you *must* set the version to 4. Version 1 is not supported for the UDP protocol.
connections <*num_conns*>	Limits the maximum number of TCP connections permitted between the Cisco security appliance and the Websense Filtering Service. If this parameter is not specified, it defaults to 5, which is the recommended setting. Note that if you select the UDP protocol, this option is not available. Range: 1 - 100. Default: 5.

An example of the **url-server** command might be:

```
url-server (inside) host 10.255.40.164
timeout 30 protocol TCP version 4
```

The **url-server** command communicates the location of the Websense Filtering Service to the Cisco security appliance. More than one **url-server** command can be entered. This allows redirection to another Websense Filtering Service after the specified timeout period, if the first server becomes unavailable.

6. Configure the security appliance to filter HTTP requests with the **filter url** command, as shown below. You can view the current URL server rules by entering **show url-server**. To review all the filter rules, enter **show filter**.

   To configure HTTP request filtering, use the following command:

   ```
   filter url http <port>[-<port>] <local_ip>
   <local_mask> <foreign_ip> <foreign_mask>
   [allow] [cgi-truncate] [longurl-truncate |
   longurl-deny] [proxy-block]
   ```

   The elements of the **filter url** command are defined as follows:

Parameter	Definition
http <*port*>[-<*port*>]	Defines which port number or range of port numbers the security appliance will watch for HTTP requests. If you do not specify a port number, it defaults to port 80. The option to set a custom web port or port range is only available in v5.2 and later of the Cisco software. NOTE: In v5.2 to 6.3, it is not mandatory to enter **http** before the port number; you can either enter **http** (to use port 80), or you can enter a port number. In v7.0, you must always enter **http**.
<*local_ip*>	IP address requesting access. You can set this address to 0.0.0.0 (or in shortened form, 0) to specify all internal clients. This is the source for all connections to be filtered.
<*local_mask*>	Network mask of the *local_ip* address (the IP address requesting access). You can use 0.0.0.0 (or in shortened form, 0) to specify all hosts within the local network.

Parameter	Definition
<*foreign_ip*>	IP address to which access is requested. You can use 0.0.0.0 (or in shortened form, 0) to specify all external destinations.
<*foreign_mask*>	Network mask of the *foreign _ip* address (the IP address to which access is requested). Always specify a mask value. You can use 0.0.0.0 (or in shortened form, 0) to specify all hosts within the external network.
[**allow**]	Enter this parameter to let outbound connections pass through the security appliance without filtering when the Websense Filtering Service is unavailable. If you omit this option, and the Filtering Service goes offline, the security appliance stops all outbound HTTP traffic until the Filtering Service is back online.
[**cgi-truncate**]	Enter this parameter to send CGI scripts to the Websense Filtering Service as regular URLs. Specifically, when a URL has a parameter list starting with a question mark (?), such as a CGI script, this will truncate the URL by removing all characters after and including the question mark before sending the URL to the Websense Filtering Service.
[**longurl-truncate** | **longurl-deny**]	Specifies how to handle URLs that are longer than the URL buffer size limit. Enter **longurl-truncate** to send only the host name or IP address to the Websense Filtering Service. Enter **longurl-deny** to deny the request without sending it to Websense.
[**proxy-block**]	Enter this parameter to prevent users from connecting to an HTTP proxy server.

Multiple **filter url** commands may be entered to achieve your filtering needs. The following table provides some examples.

Command	Action
filter url http 0 0 0 0	Filters every HTTP request to all destinations. Filtering is applied to traffic on port 80.
filter url http 10.5.0.0 255.255.0.0 0 0	Filters the 10.5 Class B network going to any destination. Filtering is applied to traffic on port 80.
filter url http 10.5.0.69 255.255.255.255 132.239.29.189 255.255.255.255	Filters the 10.5.0.69 host going to the 132.239.29.189 destination. Filtering is applied to traffic on port 80.

Using zeroes for the last two entries, <*foreign_ip*> and <*foreign_mask*>, allows access via Websense from the specified local IP address to all websites.

You can enter multiple **filter url** commands to set up different portions of the network for filtering. Set up the smaller groups first, followed by the larger groups, to assure that all groups are filtered properly. It is recommended that you use a general **filter url** command for all workstations to be filtered, and then use Websense Manager to apply filtering policies to individual clients (users, groups, domains/organizational units, workstations, or networks).

7. Configure the Cisco security appliance to filter HTTPS requests with the **filter https** command, as shown below. You can view the current URL server rules by entering **show url-server**. To review all the filter rules, enter **show filter**.

NOTE

The **filter https** command is supported in v6.3 and higher of the Cisco PIX Firewall/ASA software.

To configure HTTPS request filtering, use the following command:

filter https <*port*> <*local_ip*> <*local_mask*> <*foreign_ip*> <*foreign_mask*> [**allow**]

The elements of the **filter https** command are defined as follows:

Parameter	Definition
<*port*>	Defines which port number the security appliance will watch for HTTPS requests. You can either enter the standard HTTPS port, **443**, or a custom port number.
<*local_ip*>	IP address requesting access. You can set this address to 0.0.0.0 (or in shortened form, 0) to specify all internal clients. This is the source for all connections to be filtered.
<*local_mask*>	Network mask of the *local_ip* address (the IP address requesting access). You can use 0.0.0.0 (or in shortened form, 0) to specify all hosts within the local network.
<*foreign_ip*>	IP address to which access is requested. You can use 0.0.0.0 (or in shortened form, 0) to specify all external destinations.
<*foreign_mask*>	Network mask of the *foreign_ip* address (the IP address to which access is requested). Always specify a mask value. You can use 0.0.0.0 (or in shortened form, 0) to specify all hosts within the external network.
[**allow**]	Enter this parameter to let outbound connections pass through the security appliance without filtering when the Websense Filtering Service is unavailable. If you omit this option, and if the Filtering Service goes offline, the security appliance stops outbound HTTPS traffic until the Filtering Service is back online.

Multiple **filter https** commands may be entered to achieve your filtering needs. The following table provides some examples.

Command	Action
filter https 443 0 0 0 0	Filters every request to all destinations. Filtering is applied to traffic on port 443.
filter https 443 10.5.0.0 255.255.0.0 0 0	Filters the 10.5 Class B network going to any destination. Filtering is applied to traffic on port 443.
filter https 443 10.5.0.69 255.255.255.255 132.239.29.189 255.255.255.255	Filters the 10.5.0.69 host going to the 132.239.29.189 destination. Filtering is applied to traffic on port 443.

Using zeroes for the last two entries, <*foreign_ip*> and <*foreign_mask*>, allows access via Websense from the specified local IP address to all websites.

You can enter multiple **filter https** commands to set up different portions of the network for filtering. Set up the smaller groups first, followed by the larger groups, to assure that all groups are filtered properly. It is recommended that you use a general **filter https** command for all workstations to be filtered, and then use Websense Manager to apply filtering policies to individual clients (users, groups, domains/organizational units, workstations, or networks).

8. Configure the Cisco security appliance to filter FTP requests with the **filter ftp** command, as shown below. You can view the current URL server rules by entering **show url-server**. To review all the filter rules, enter **show filter**.

NOTE

The **filter ftp** command is supported in v6.3 and higher of the Cisco PIX Firewall/ASA software.

To configure FTP request filtering, use the following command:

filter ftp <*port*> <*local_ip*> <*local_mask*> <*foreign_ip*> <*foreign_mask*> [**allow**] [**interact-block**]

The elements of the **filter ftp** command are defined as follows:

Parameter	Definition
<*port*>	Defines which port number the security appliance will watch for FTP requests. You can either enter the standard FTP port number, **21**, or a custom port number.
<*local_ip*>	IP address requesting access. You can set this address to 0.0.0.0 (or in shortened form, 0) to specify all internal clients. This is the source for all connections to be filtered.
<*local_mask*>	Network mask of the *local_ip* address (the IP address requesting access). You can use 0.0.0.0 (or in shortened form, 0) to specify all hosts within the local network.

Parameter	Definition
<*foreign_ip*>	IP address to which access is requested. You can use 0.0.0.0 (or in shortened form, 0) to specify all external destinations.
<*foreign_mask*>	Network mask of the *foreign_ip* address (the IP address to which access is requested). Always specify a mask value. You can use 0.0.0.0 (or in shortened form, 0) to specify all hosts within the external network.
[**allow**]	Enter this parameter to let outbound connections pass through the security appliance without filtering when the Websense Filtering Service is unavailable. If you omit this option, and the Filtering Service goes offline, the security appliance stops outbound FTP traffic until the Filtering Service is back online.
[**interact-block**]	Enter this parameter to prevent users from connecting to the FTP server through an interactive FTP client. An interactive FTP client allows users to change directories without entering the complete directory path, so the Websense Filtering Service cannot tell if the user is requesting something that should be blocked.

Multiple **`filter ftp`** commands may be entered to achieve your filtering needs. The following table provides some examples.

Command	Action
`filter ftp 21 0 0 0 0`	Filters every FTP request to all destinations. Filtering is applied to traffic on port 21.
`filter ftp 21 10.5.0.0 255.255.0.0 0 0`	Filters the 10.5 Class B network going to any destination. Filtering is applied to traffic on port 21.
`filter ftp 21 10.5.0.69 255.255.255.255 132.239.29.189 255.255.255.255`	Filters the 10.5.0.69 host going to the 132.239.29.189 destination. Filtering is applied to traffic on port 21.

Using zeroes for the last two entries, <*foreign_ip*> and <*foreign_mask*>, allows access via Websense from the specified local IP address to all websites.

You can enter multiple **filter ftp** commands to set up different portions of the network for filtering. Set up the smaller groups first, followed by the larger groups, to assure that all groups are filtered properly. It is recommended that you use a general **filter ftp** command for all workstations to be filtered, and then use Websense Manager to apply filtering policies to individual clients (users, groups, domains/organizational units, workstations, or networks).

9. After entering commands to define filtering for HTTP, HTTPS, and FTP requests, you can define any required exceptions to these filtering rules by adding the **except** parameter to the **filter** command:

   filter {**url** | **https** | **ftp**} **except** <*local_ip*> <*local_mask*> <*foreign_ip*> <*foreign_mask*>

   This command allows you to bypass Websense Enterprise for traffic coming from or going to a specified IP address or addresses.

   For example, if the following filter command was entered to cause all HTTP requests to be forwarded to the Websense Filtering Service

   filter url http 0 0 0 0

   you could enter

   filter url except 10.1.1.1 255.255.255.255 0 0

   to allow any outbound HTTP traffic from the IP address 10.1.1.1 to go out unfiltered.

10. If desired, you can enable the URL caching feature and set the cache size. When URL caching is enabled, filtering responses from Websense are cached, and cached websites are prevented from being sent to Websense for evaluation or logging. This can improve web filtering response time and may be appropriate in large organizations with a high volume of internet traffic.

    NOTE

    To use URL caching, you must set the protocol version to 4 in the `url-server` command.

    You can use the **show url-cache statistics** and the **show perfmon** commands to view current information on the cache size and utilization.

To enable caching and set the cache size, use the command:

url-cache dst | **src_dst** <*size*>

where <*size*> is the size of the cache in KB. Range: 1 to 128.

dst | **src_dst** specifies either destination caching (**dst**), or source-destination caching (**src_dst**). Use the **dst** option only if Websense is configured to use the same policy for all clients making requests.

Destination caching stores the Websense response for each destination website, regardless of the requesting client's IP address.

Source-destination caching is where the Cisco security appliance checks its cache for both the client's IP address and the destination website's IP address to determine whether the destination website should be permitted or blocked.

For example, you could enter the following command to enable source-destination caching by the Cisco security appliance, with a cache size of 128 KB:

url-cache src_dst 128

See *Cisco Security Appliance Enhanced Caching*, page 215 and your Cisco security appliance documentation for more information about URL caching.

11. Configure the security appliance to handle long URLs using the **url-block url-mempool** and **url-block url-size** commands:

> **NOTE**
> The **url-block** commands are supported in v6.2 and higher of the Cisco PIX Firewall/ASA software.

a. Increase the size of the security appliance's internal buffer to handle long URL strings. If the URL buffer size is set too low, some web pages may not display. To specify the amount of memory assigned to the URL buffer, add the following line to the configuration:

url-block url-mempool <*memory_pool_size*>

where <*memory_pool_size*> is the size of the buffer in KB. You can enter a value from 2 to 10240 for a maximum memory allocation of 2 KB to 10.24 MB. The recommended value is 1500.

b. Increase the maximum permitted size of a single URL by adding the following line to the configuration:

url-block url-size *<long_url_size>*

where *<long_url_size>* is the maximum URL size. You can enter a value from 2 to 4 for a maximum URL size of 2 KB to 4 KB. The recommended value is 4.

12. Configure the URL response block buffer using the **url-block block** command to prevent replies from the web server from being dropped in high traffic situations.

NOTE

The **url-block** commands are supported in v6.2 and higher of the Cisco PIX Firewall/ASA software.

On busy networks, the lookup response from the Websense Filtering Service may not reach the security appliance before the response arrives from the web server. The HTTP response buffer in the security appliance must be large enough to store web server responses while waiting for a filtering decision from the Filtering Service.

To configure the block buffer limit, use the following command:

url-block block *<block_buffer_limit>*

where *<block_buffer_limit>* is the number of 1550-byte blocks to be buffered. You can enter a value from 1 to 128.

You can use the **show url-block** command to view the current configuration for all three **url-block** commands described in this step and the previous step. To view statistics that show how the current buffer configuration is functioning, including number of pending packets held and number dropped, enter the **show url-block block statistics** command.

13. If you need to discontinue filtering, enter the exact parameters in the original **filter** command, preceded by the word **no**. For example, if

filter url http 10.0.0.0 255.0.0.0 0 0

was entered to enable filtering, then enter

no filter url http 10.0.0.0 255.0.0.0 0 0

to disable filtering.

14. Type **`exit`** to exit `configure` mode.
15. Save the changes by entering:

    `write memory`

Once the Websense Master Database has been downloaded, and Websense Enterprise has been activated within the Cisco security appliance, Websense is ready to filter internet requests. Refer to the Websense Enterprise *Administrator's Guide* for information on configuring Websense for filtering.

Cisco Security Appliance Enhanced Caching

Cisco security appliances (PIX Firewall and ASA) provide an enhanced caching feature that decreases internet filtering response time. When caching is enabled within the security appliance, Websense sends the security appliance permission to cache an IP address if every site hosted at the address is in a category that is permitted at all times, for every user. Caching works when the Websense Filtering Service adds this "OK to cache" information to responses to certain URL lookup requests sent to the Filtering Service. Depending on Websense configuration settings, this "OK to cache" information may be returned with responses, without the Websense Administrator having to configure anything within Websense related to enhanced caching.

The Cisco security appliance sends the first request for a site to Websense. When Websense responds to the request with permission to cache the IP address of the requested site, the security appliance saves the IP address (not the web page itself), and a time-to-live value. The next time the same site is requested (or any site at that IP address), the security appliance uses the cached information, rather than sending a new request to Websense, thereby decreasing response time.

NOTE

Internet requests involving cached IP addresses are not passed to Websense and are not logged. As a result, this activity does not appear in the Real-Time Analyzer or in any reports.

The number of responses the security appliance can cache depends on how customized your filtering policies are. When more clients are filtered with the same policy, more responses can be cached.

If caching is disabled within the security appliance, every HTTP request that the security appliance receives is sent to Websense for filtering. In very large networks or organizations with a high volume of internet access requests, this can increase the time required to return a site to the user, which could decrease overall performance.

To enable caching in a Cisco security appliance, use the **`url-cache`** command. See Step 10, page 212 for information about command syntax and recommended parameters.

NOTE

To use enhanced caching on the Cisco security appliance, you must set the protocol version to 4 in the `url-server` command.

Cisco Secure ACS Authentication

Do not use Cisco Secure ACS authentication with Websense Enterprise in a multiple domain environment. ACS cannot provide domain information about users to Websense Enterprise, and authentication fails. To identify users in a multiple domain environment, use one of the Websense transparent identification agents, such as DC Agent, or use Websense manual authentication.

For information on installing DC Agent, refer to *DC Agent*, page 108. For information about configuring for manual authentication, or for configuring DC Agent to identify users transparently, refer to the Websense Enterprise *Administrator's Guide*.

Cisco Content Engine

Websense Enterprise works as a filtering engine for the Cisco Content Engine, allowing you to enforce your organization's internet access policies. Once Websense is installed on your network, you must activate it within the Content Engine. This can be done through the Cisco Web-based interface or through a console or TELNET session, by following the instructions in either of the next two sections.

NOTE

If load bypass or authentication bypass is enabled in the Content Engine, internet requests that are rerouted are filtered by Websense. See your Content Engine documentation for more information.

Cisco Web-based Interface

To configure Cisco Content Engine using the Web-based interface:

1. Open a web browser and connect to the Cisco Content Engine at:
   - **`https://`**`<ip-address>`**`:8003`** (for ACNS 5.1 and higher)
   - **`http://`**`<ip-address>`**`:8001`** (for versions prior to ACNS 5.1)

   where `<ip-address>` is the IP address of the Content Engine machine. The default port is 8003 for ACNS 5.1 and higher.

   The **Enter Network Password** dialog box appears.
2. Enter a valid user name and password that allows access to the initial management page.
3. Select **Caching > URL Filtering**.
4. Select the filtering option appropriate to your ACNS version.
   - For ACNS version 5 and higher, select either **Websense Filtering (Remote)** or **Websense Filtering (Local)**.
   - For ACNS versions prior to version 5, select **Websense Filtering**.

5. Enter the following information in the appropriate fields:

Field	Description
Websense Filtering Service or Websense Server	Hostname or IP address of the machine running the Websense Filtering Service.
Port	Port on which Websense will communicate with the Content Engine. This is the Filtering Service port you entered during Websense installation (default is 15868).
Timeout	Amount of time (between 1 and 120 seconds) that the Content Engine should wait for a response from Websense before permitting a site. The default is 60.

6. If Websense Enterprise is filtering on a cluster of Content Engines, configure the following on each Content Engine in the cluster with the following commands to ensure that all traffic is filtered:

   url-filter http websense server *<ip-address>*
   port *<port-number>*
   url-filter http websense allowmode enable

   For Websense installed on the Content Engine, use the following command:

   url-filter http websense "local"

Console or TELNET Session

To configure Cisco Content Engine using a console or TELNET session:

1. Access the Cisco Content Engine, either from a console connection or a TELNET session from a remote terminal.
2. Enter the global configuration mode with the **configure** command. You must be in global configuration mode to enter global configuration commands.

   ```
   Console# configure
   Console(config)#
   ```

3. To enable Websense URL filtering, use the **url-filter** global configuration command.

```
url-filter http websense server <ip-address>
port <port-number> timeout <seconds>
```

Variable	Description
<ip-address>	Host name or IP address of the machine running the Websense Filtering Service.
<port-number>	Port on which the Websense Filtering Service will communicate with the Content Engine.
<seconds>	Amount of time in seconds (between 1 and 120) that the Content Engine will wait for a response from the Websense Filtering Service before permitting a site. The Content Engine only permits sites after the timeout if it has been configured to do so. See Step 4 below for more information.

4. The **`url-filter http websense allowmode enable`** command configures the Content Engine to permit requests after a Websense Filtering Service timeout.
5. Type the **`exit`** command to exit the global configuration mode.
6. Save the configuration changes to memory with the **`write memory`** command.
7. If Websense Enterprise is filtering on a cluster of Content Engines, configure the following on each Content Engine in the cluster with the following commands to ensure that all traffic is filtered:

   ```
   url-filter http websense server <ip-address>
   port <port-number>
   url-filter http websense allowmode enable
   ```

   For Websense installed on the Content Engine, use the following command:

   ```
   url-filter http websense "local"
   ```

Once the Websense Master Database has been downloaded, and Websense has been activated within Cisco Content Engine, Websense is ready to filter internet requests. Refer to the Websense Enterprise *Administrator's Guide* for information about configuring Websense for filtering.

Settings within the Content Engine Environment

Consider the information in the next three sections if your environment includes Content Engines.

Configuring Firewalls or Routers

To prevent users from circumventing Websense filtering when Websense is integrated with Cisco Content Engine, your firewall or internet router should be configured to allow outbound HTTP, HTTPS, and FTP requests only from the Content Engine.

Those users with Web Cache Communication Protocol (WCCP) on their routers will see internet requests handled transparently by the Content Engine and Websense.

NOTE

If Websense is set to pass through a proxy server or firewall that requires authentication for any HTTP traffic, the proxy server or firewall must be configured to accept clear text or basic authentication in order for Websense to download the Websense Master Database.

Browser Access to the Internet

Cisco Content Engine can regulate internet activity either transparently or nontransparently. In transparent mode, the firewall or internet router is configured to send internet requests to the Cisco Content Engine, which queries Websense. All configuration changes can be performed through the Content Engine and any connected firewalls or routers, with no special configuration required on client workstations. In order to run transparently, you must enable WCCP on both the Content Engine and the firewall or router.

When regulating internet activity non-transparently, web browsers on all client workstations are configured to send internet requests to the Content Engine. Please see your Cisco Content Engine documentation for instructions.

To prevent users from circumventing Websense filtering, your firewall or internet router should be configured to allow outbound HTTP and FTP requests only from the Cisco Content Engine.

Clusters

If you have several Content Engines running in a cluster, you must configure each to use the Websense Filtering Service as an HTTP, HTTPS, and FTP filter. Several Content Engines can utilize the same Websense Filtering Service. See your Content Engine documentation for details on setting up a cluster.

Cisco IOS Routers

Cisco IOS Routers can be configured to send HTTP requests to the Websense Filtering Service. Websense Enterprise analyzes the requests and determines whether to block access to the sites, permit access to the sites, or limit access by using quotas, according to the policies you have defined. The action taken on an HTTP request is cached in the Cisco Router, which can enforce the policy the next time the site is requested without having to communicate with the Filtering Service.

Once Websense Enterprise is installed on your network, you must configure the router to send internet requests to Websense. This can be done through a console or TELNET session. Refer to your Cisco Router documentation for instructions on opening a configuration session.

Startup Configuration

Before Websense can filter internet requests, the Cisco IOS Router must be configured to use Websense as a URL filter.

1. Access the Cisco Routers software, either from a console or from a remote terminal, using TELNET.
2. Enter your login password.
3. Put Cisco Router into *enabled* mode by entering **enable** and your enable password.
4. Put Cisco Router into *configure* mode by entering **`configure terminal`**.
5. Identify the Websense Filtering Service that will be filtering HTTP requests by entering the following configuration command:

```
ip urlfilter server vendor websense
<ip-address> [port <port-number>]
[timeout <seconds>] [retransmit <number>]
```

Variable	Description
<ip-address>	IP address of the Websense Filtering Service.
<port-number>	Port number on which the Websense Filtering Service listens. The default is 15868.
<seconds>	How long Router should wait for a response from the Websense Filtering Service. The default timeout is 5 seconds.
<number>	How many times Cisco Router should retransmit an HTTP request when there is no response from the Websense Filtering Service. The default is 2.

An example of this command is:

```
ip urlfilter server vendor websense
12.203.9.116 timeout 8 retransmit 6
```

To define an additional Websense Filtering Service as a back up, repeat the command for the IP address of the second server. The configuration settings you create in the following steps will always be applied to the *primary* server—that is, the first server with which the Cisco Router can establish communications.

6. Enable the logging of system messages to the Websense Filtering Service by entering the following command:

   ```
   ip urlfilter urlf-server-log
   ```

   This is enabled by default. When logging is enabled, Cisco Router sends a log request immediately after the URL lookup request. If the destination IP address is found in the cache, Cisco Router does not send a URL lookup request but still sends a log request to the Websense Filtering Service.

7. Tell the Cisco Router how to filter URL requests by using the following commands in sequence:

   ```
   ip inspect name <inspection-name> http urlfilter
   interface <type> <slot/port>
   ip inspect <inspection-name> {in | out}
   ```

Examples of these commands are:

```
ip inspect name fw_url http urlfilter
interface FastEthernet 0/0
ip inspect fw_url in
```

For this sequence to function properly, you must create an inspection rule entitled *fw_url* and apply it to the inbound interface of the router. For instructions on creating and applying inspection rules, refer to your Cisco documentation.

8. To save your changes, first leave the *configure* mode by entering **`exit`** twice, then enter **`write memory`**.

   Unless you store your configuration settings in the startup configuration of the Cisco Router, the settings will be lost if the router is shut down for any reason or loses power.

9. Use the following commands to view various aspects of your installations:

Command	Action
`show ip inspect name` *<inspection-name>*	Displays a specific inspection rule.
`show ip inspect all`	Displays all available inspection information.
`show ip urlfilter config`	Displays all URL filtering information.
<command> **`?`**	Displays help on individual commands. For example, **ip inspect ?** displays the complete syntax for the *inspect* command and explains each argument.

10. To discontinue filtering for any reason or to change a Websense Filtering Service, enter the following command to remove a server configured in Step 5.

    ```
    no ip urlfilter server vendor websense
    <ip-address>
    ```

Configuration Commands

These commands are used to configure the Cisco IOS Router to filter HTTP requests through Websense. These configuration settings can be saved into the startup configuration. See Step 8 in the preceding procedure for instructions on saving your settings.

Straight brackets ([ ]) indicate an optional value. Curly brackets ({ }) contain the possible values that can be selected. A forward slash (/) separates each value within the curly brackets. Angle brackets (< >) surround variables that must be replaced with actual values in the command syntax.

NOTE

Add the value **no** before the command if you want to turn **off** the feature or service.

ip inspect name <*inspection-name*> **http urlfilter** [**java-list** <*access-list*>] [**alert** {**on/off**}] [**timeout** <*seconds*>] [**audit-trail** {**on/off**}]

This is a global command to turn on HTTP filtering. The *urlfilter* value associates URL filtering with HTTP inspection rules. You may configure two or more inspections in a router, but the URL filtering feature will only work with those inspections in which the urlfilter field is enabled. This setup command is required.

ip urlfilter server vendor websense <*IP address*> [**port** <*num*>] [**timeout** <*secs*>] [**retrans** <*num*>]

This is a required setup command that identifies the Websense Filtering Service to the Cisco Router and configures additional values. When using this command, the Cisco Router checks for a primary server—one that is active and being sent URL lookup requests. If a primary server is configured, the system marks the server you are adding as a secondary server.

Parameter	Description
port <*num*>	Specifies the port number on which the Websense Filtering Service listens. The default port number is 15868.

Parameter	Description
timeout <*secs*>	Specifies how long the Cisco Router should wait for a response from the Websense Filtering Service. The default timeout value is 5 seconds.
retrans <*secs*>	Specifies how many times the router should retransmit the request when the response doesn't arrive for a request. The default value is 2.

ip urlfilter alert

This is an optional setting that controls the system alert. By default, the system alert is enabled. The following messages can be display when alerts are enabled:

- %URLF-3-SERVER_DOWN: Connection to the URL filter server <*IP address*> is down—level three LOG_ERR type message that appears when a configured Websense Filtering Service goes down. When this occurs, the Cisco Router marks the offline server as a secondary server and attempts to bring up the secondary server you have defined as the primary server. If the router cannot find another Websense Filtering Service, the URLF-3-ALLOW_MODE message is displayed.
- %URLF-3-ALLOW_MODE: Connection to all URL filter servers are down and ALLOW MODE is off.—message that appears when the Cisco Router cannot find a defined Websense Filtering Service. When the ALLOW MODE is off, all HTTP requests are blocked.
- %URLF-5-SERVER_UP: connection to an URL filter server <IP address> is made, the system is returning from ALLOW MODE—a LOG_NOTICE type message displayed when a Websense Filtering Service is detected as being up and the system returns from ALLOW MODE.
- %URLF-4-URL_TO_LONG: URL too long (more than 3072 bytes), possibly a fake packet—a LOG_WARNING type message displayed when the URL in a GET request is too long.
- %URLF-4-MAX_REQ: The number of pending requests exceeds the maximum limit <*num*>—a LOG_NOTICE type message displayed when the number of pending requests in the system exceeds the maximum limit defined and subsequent requests are dropped.

ip urlfilter audit-trail

This command controls the logging of messages into the syslog server and is disabled by default. The messages logged are:

- %URLF-6-SITE_ALLOWED: Client <*IP address:port number*> accessed server <*IP address:port number*>—a LOG_INFO type message logged for each request whose destination IP address is found in the cache. This message includes source IP address/port number and destination IP address/port number.
- %URLF-6-URL_ALLOWED: Access allowed for URL http://www.websense.com; client <*IP address:port number*> server <*IP address:port number*>—message that is logged for each URL requested that is allowed by Websense. This message includes the allowed URL, the source IP address/port number, and the destination IP address/port number. Long URLs (>1000 bytes) are not logged under this category.
- %URLF-6-URL_BLOCKED: Access denied URL http://www.google.com; client <*IP address:port number*> server <*IP address:port number*>—message that is logged for each URL requested that is blocked by Websense. This message includes the blocked URL, the source IP address/port number, and the destination IP address/port number. Long URLs (>1000 bytes) are not logged under this category.

ip urlfilter urlf-server-log

This command is used to control the logging of system messages to the Websense Filtering Service and is DISABLED by default. To allow logging (and consequently reporting) of internet activity on your system, you must enable this feature.

When logging is enabled, the Cisco Router sends a log request immediately after the URL lookup request. If the destination IP address is found in the cache, the router does not send a URL lookup request but does send a log request to the Websense Filtering Service. The log message contains information such as the URL, host name, source IP address, and destination IP address.

ip urlfilter exclusive-domain <*domain-name*>

This optional command is used to add a domain to or remove a domain from the exclusive domain list. Cisco Router URL filtering provides a way to specify a list of domain names for which the router need not send lookup requests to the Websense Filtering Service.

For example, if www.yahoo.com is added to the exclusive domain list, all the HTTP traffic whose URLs are part of this domain (such as www.yahoo.com/mail/index.html, www.yahoo.com/news, and www.yahoo.com/sports) are permitted without sending a lookup request to the Websense Filtering Service.

You may also specify a partial domain name. For example, you can enter **.cisco.com** instead of the complete domain name. In this case, all the URLs whose domain name ends with this partial name (such as www.cisco.com/products, www.cisco.com/eng, people-india.cisco.com/index.html, and directory.cisco.com) are permitted without having to send a lookup request to Websense Filtering Service. When using partial domain names, always start the name with a period, as in **`ip urlfilter exclv-domain .sdsu.edu`**.

ip urlfilter cache <*number*> [timeout <*hours*>]

Use this optional command to configure cache parameters. The number field specifies the maximum number of destination IP addresses that can be stored in the cache table. The optional timeout field specifies the time interval in which the cache table is cleared out completely. Cached IP addresses are deleted periodically to keep entries synchronized with the Websense policy database. The default value for the maximum number of cache entries is 5000, and the default value for cache timeout is 12 hours.

ip urlfilter allowmode {on/off}

This command controls the default filtering policy if the Websense Filtering Service is down. If the ALLOW MODE is *on*, and the Cisco Router cannot find a Websense Filtering Service, all HTTP requests are permitted. If the ALLOW MODE is *off* when the Websense Filtering Service goes down, all HTTP requests are blocked. The default of the ALLOW MODE is *off*.

ip urlfilter packet-buffer <*number*>

Use this optional command to configure the maximum number of HTTP responses that the Cisco Router can store in its packet buffer. The default value is 200.

ip urlfilter maxrequest <*number*>

Use this optional command to set the maximum number of outstanding requests that can exist at a given time. When this number is exceeded, subsequent requests are dropped. The ALLOW MODE flag is not considered in this case because it is only used when the Websense Filtering Service is down. The default value for *maxrequest* is 1000.

Executable Commands

These Cisco IOS Router commands allow you to view configuration data and filtering information, and to control caching. These settings cannot be saved into the startup configuration.

clear ip urlfilter cache {<*IP address*>/**all**}

This command clears the cache table of destination IP addresses. You can specify if you want to flush the entire cache table or only a specific IP address. This is a good command to use when you have made changes to the filtering policy and want to clear the cache to implement the new policy.

show ip urlfilter cache

This command displays:

- Maximum number of entries that can be cached
- Number of entries in the cache table
- List of IP addresses that are cached

show ip urlfilter config

This command shows configuration information such as number of maximum requests, ALLOW MODE state, and the list of configured Websense Filtering Service. This is the kind of information that technical support typically requests when trying to solve a problem.

show ip urlfilter statistics

This command shows statistics of the URL filtering feature. Following is some of the information displayed:

- Number of requests sent to Websense
- Number of responses received from Websense
- Number of requests pending in the system

- Number of requests failed
- Number of URLs blocked

debug ip urlfilter {function-trace/detailed/events}

This command enables the display of debugging information from the URL filter subsystem. The possible command values are:

Parameter	Description
`function-trace`	Enables the system to print sequence of important functions that get called in this feature.
`detailed`	Enables the system to print detailed information about various activities that happen in this feature.
`events`	Enables the system to print various events such as queue events, timer events, and socket events.

APPENDIX A Configuring Windows NTLM for User Authentication

Proxy authentication through use of a Windows NT Lan Manager (NTLM) proxy server is used to validate client (user) credentials to minimize database queries and improve the performance on the Content Engine and authentication database. The Microsoft Internet Explorer browser can be set to automatically store the user's credentials for a default time period of 480 minutes (eight hours) or a timeout period to suit your needs, so that subsequent requests can be validated against the domain controller.

Configuring the Browser for Promptless Authentication

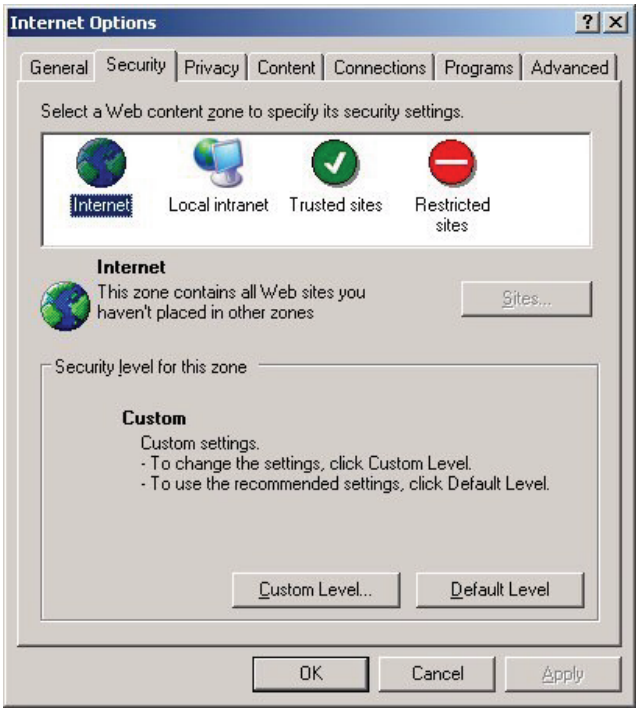
Promptless NTLM can be used by customers requiring a single logon or by those looking to transparently log the domain\username in the transaction logs. The NTLM protocol is proprietary and, therefore, only accepted by Microsoft Internet Explorer browsers. If the Content Engine challenges a Netscape browser with NTLM, the Netscape browser will ask for a user name and password.

By default, the Microsoft Internet Explorer browser is not configured to automatically respond to a user's credentials without prompting for a user name and password. To enable promptless authentication, the browser must be configured to automatically log on with current user name and password.

To configure the Microsoft Internet Explorer browser for promptless authentication:

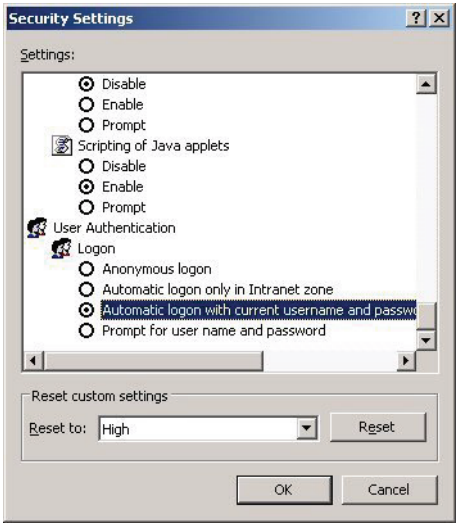
1. For Windows 2003, go to **Start** > **Settings > Control Panel > Internet Options**.

   The **Internet Options** dialog box appears (Internet Explorer version 6).



Internet Options

2. Select the **Security** tab.
3. Click **Custom Level** to change the **User Authentication** logon security setting.
4. Scroll to the end of the Options to find and change the security settings for **User Authentication**.
5. Select **Automatic logon with current username and password** to set the automatic logon for promptless user authentication.



Configuring the Content Engine

The Content Engine must be configured with the primary (and secondary if appropriate) domain controller's host name or IP address and the name of the domain.

> **NOTE**
> The Content Engine *cannot* be configured with more than one domain. If your network has multiple domains, the configured domain must *trust* all other domains with valid user accounts.
>
> Domains should not include overlapping users and groups, because the Content Engine authenticates the user regardless of the user name and password.

- Enter the domain controller's name or IP address *and* the name of the domain.

  For example:

```
ntlm server host 10.1.1.11 primary
ntlm server domain allcisco
```

> **IMPORTANT**
> The Content Engine requires that the domain controller reside in the Domain Name Server (DNS) for both forward and reverse pointer record resolution.
>
> Additionally, the Windows Internet Naming Server (WINS), which determines the IP address associated with a particular network computer, should match the DNS name. The Content Engine checks that the name is supported properly in DNS when the command is entered. If it is not entered properly, an error message is displayed.

Configuration and Corresponding Parameters

The configuration and corresponding parameters are as follows:

```
ntlm server host 10.1.1.11 primary
ntlm server domain allcisco
ntlm server enable

ce507#sho ntlm
NTLM parameters:
         Primary :           10.1.1.11
         Secondary:          <none>
         State:              Enabled
         Domain name:        allcisco
ce507#
```

The configured settings for authentication may be verified, using the following ‘show’ commands.

```
ce507# (config) #http authentication ?
   cache    Configure parameters related to
   Authentication Cache
   header    Specify which type of
   authentication header    CE should use
   realm     Configure realm string for HTTP
   Basic request authentication
ce507#


ce507#show http authentication
HTTP Authentication:
   Header:                Based on URL syntax
   Realm:                "Cisco Content Engine"
   Cache Timeout:         480 (minutes)
   Cache Maximum entries: 4000
ce507#
```

Managing the HTTP Proxy Authentication Cache

To minimize the impact on the Content Engine and the authentication database, the Content Engine uses an authentication cache. The authentication cache is separately maintained, independent of other caches on the Content Engine. When a new user logs on to the Content Engine, it collects the user information and verifies it against the authentication database. Once the user's credentials are validated, an entry is created in the authentication cache with the following information and is stored in the authentication cache for a default time period of 480 minutes (an eight-hour work day).

- User name
- Password
- IP address
- Time of last access
- When the user was authenticated.

For example:

```
ce507#show http-authcache


   AuthCache
= = = = = = = = = = = = = = = =
hash 266: uid: ALLCISCO\JIM nBkt: (nil) nLRU:
(nil) pLRU: (nil)
   lacc: 5 ipAddr: 10.1.1.7 keyType: IP Address
   Based filterTp: 0 auth
Used: 4
ce507#
```

The next time the user logs on, the Content Engine resets the 480-minute countdown timer. If 480 minutes passes without a request from the user, the Content Engine removes the user from the authentication cache. The next time the user logs on and there is no entry in the authentication cache, the logon request is challenged by the Content Engine.

Query Individual Users for More Information

The administrator may query the individual user for more information. For example:

- Domain\user name
- Client IP address
- Time since the Content Engine last saw a request from the user
- That the Content Engine is using IP Address Based mode (rather than doing a full credential verification)

For example:

```
ce507#show user username ALLCISCO\JIM
   Username :              ALLCISCO\JIM
   Password:               *****
   IP address:             10.1.1.6
   Time since last access: 141 seconds ago
   Authenticated in:       IP Address Based
   mode
c3507#
```

Guarantee Re-authentication Next Day

The Content Engine HTTP authentication cache may be cleared with the following command, which is sometimes scripted to run overnight, guaranteeing that all clients are required to re-authenticate the next morning.

```
ce507#clear users request-authenticated
ce507#show http-authcache
The authcache is empty
ce507#
```

NOTE

In the event the user's credentials do not match a user in the Primary Domain Controller (PDC), or if the user resides in a group that is denied access to the internet, the Content Engine posts the following error message:

Connection: Close WWW authentication failed or is missing

NTLM User/Group Access Lists

The Content Engine may be configured to allow or disallow web access, based on specific NTLM groups using access lists in the 300 range.

To configure the Content Engine to allow or disallow web access, refer to the following commands:

- `access-lists 300 deny|permit groupname (name)`
- `access-lists enable`
- `no access-lists enable`

In the following example, an access-list configuration was implemented to deny Web-restricted users and permit Web-unrestricted users.

```
ce507#show access-lists 300
Access Control List Configuration
- - - - - - - - - - - - - - - - - - -
   Access Control List is enabled



   Groupname-based List (300)
   1. access-lists 300 deny        groupname
   web-restricted
   2. access-lists 300 permit      groupname
   web-unrestricted
   3. access-lists 300 deny        groupname
   any
ce507#
```

The authentication cache was cleared to make sure the user logon is challenged in the authentication process. For example:

```
ce507#clear users request-authenticated


ce507#sho http-authcache
The authcache is empty
ce507#
```

In the following example, Jim could successfully get to the internet but Brian could not. With the debug application enabled, the Content Engine log fails

authentication attempts with the statistics of the number of requests permitted or denied.

```
ce507#debug http-authcache ?
   all          Authcache all module debug
   application  Application module debug
   cli          CLI module debug
   daemon       Daemon client module debug


Jul 28 23:31:00 ce507 http_authmod: %CE-
AUTHMOD-3-540047: ***NTLM: query_smb: Invalid
Password; Samba failed to authenticate user
BRIAN domain ALLCISCO


Jul 28 23:42:36 ce507 cache: doHTTPauth: Hit
AUTHENTICATED_NODE - allow


ce507#show statistics access-lists 300
   Access Control Lists Statistics
   - - - - - - - - - - - - - - - - - - - - -
   Groupname and username-based List (300)
   Number of requests: 16
   Number of deny responses: 11
   Number of permit responses: 5

cd507#
```

Transaction Reporting

The Content Engine appends transaction log entries to the /local1/working.log file in the configured format. The default log format is *squid*.

If the username is to be included in the log, the Content Engine must be configured for extended squid. If the domain name is also to be included, the Content Engine must be configured with logo-windows-domain.

The following are some log examples:

```
transaction-logs enable
transaction-logs log-windows-domain
transaction-logs export enable
transaction-logs export interval every-week on
Sun at 00:01
transaction-logs export ftp-server 10.1.1.11
anonymous **** /
transaction-logs format extended-squid


ce507#show transaction-logging
Transaction log configuration:
- - - - - - - - - - - - - - - - - - - - - - - -
Logging is enabled.
End user identity is visible.
File markers are disabled.
Archive internal: every-day every 1 hour
Maximum size of archive file: 2000000 KB
Log File format is extended-squid.
Windows domain is logged with the authenticated
username if available.


Exporting files to ftp servers is enabled.
File compression is disabled.
Export interval: every-week on Sun at 00:01
local time


server    type    username    directory
```

```
10.1.1.11 ftp     anonymous    /


HTTP Caching Proxy Transaction Log File Info
   Working Log file - size: 22427
                      age:  1944
   Archive Log file -
   celog_10.1.1.2_20030723_180000.txt size:
   1586
   Archive Log file -
   celog_10.1.1.2_20030723_190000.txt size:
   8763


1059454286.418 60 10.1.1.6 TCP_MISS/200 1542
GET http://www.google.com/ ALLCISCO\JIM
DIRECT/www.google.com -

1059454286.478 20 10.1.1.6 TCP_HIT/200 8788
GET http://www.google.com/images/logo.gif
ALLCISCO\JIM NONE/ - -
```

APPENDIX B | Stealth Mode

In some cases, it might be desirable to configure the Network Agent to inspect all packets with a network interface card (NIC) that has been configured for *stealth mode*. A NIC in stealth mode has no IP address and cannot be used for communication. The advantages for this type of configuration are security and network performance. Removing the IP address prevents connections to the interface from outside and stops unwanted broadcasts.

Configuring for Stealth Mode

If the Network Agent is configured for a stealth mode NIC, the installation machine must be multihomed. In remote installations of Network Agent, a second, TCP/IP-capable interface must be configured to communicate with Websense Enterprise for filtering and logging purposes.

Stealth mode NICs display normally during Network Agent installation. You may test a stealth mode NIC for traffic visibility and select it for Network Agent to use to monitor internet traffic. When installing on Windows, stealth mode interfaces do not display as a choice for Websense Enterprise communications.

IMPORTANT

In Solaris and Linux, stealth mode NICs appear together with TCP/IP-capable interfaces and must not be selected for communication.

Make sure you know the configuration of all the interfaces in the machine before attempting an installation.

Windows

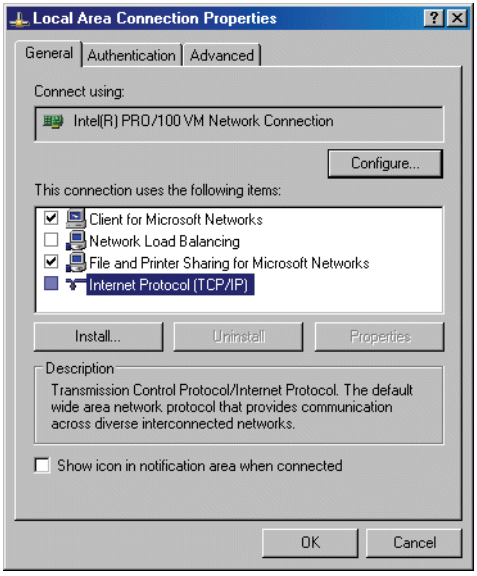
Stealth mode for the Network Agent interface is supported for Windows 2000 and 2003.

To configure a NIC for stealth mode:

1. From the Start menu, select **Settings > Network and Dial-up Connection**.

   A list of all the interfaces active in the machine is displayed.
2. Select the interface you want to configure.
3. Select **File > Properties** or right-click and select **Properties** from the pop-up menu.

   A dialog box displays the connections properties of the interface you have chosen.



Interface Connections Properties

4. Clear the **Internet Protocol (TCP/IP)** checkbox.
5. Click **OK**.

Solaris or Linux

To configure a NIC for stealth mode in Solaris or Linux, you must disable the Address Resolution Protocol (ARP), which severs the link between the IP address and the MAC address of the interface.

Solaris

- To configure a NIC for stealth mode, run the following from a command prompt:

  ```
  ifconfig <interface> plumb -arp up
  ```

- To return the NIC to a normal mode, run the following from a command prompt:

  ```
  ifconfig <interface> plumb arp up
  ```

Linux

- To configure a NIC for stealth mode, run the following from a command prompt:

  ```
  ifconfig <interface> -arp up
  ```

- To return the NIC to a normal mode, run the following from a command prompt:

  ```
  ifconfig <interface> arp up
  ```

IMPORTANT

The Network Agent can work with a stealth mode NIC only if the interface retains its old IP address in the Solaris or Linux system configuration file.

APPENDIX C | Troubleshooting

You may encounter a situation while installing Websense Enterprise and configuring your Cisco integration that is not addressed in the previous chapters. This appendix troubleshoots installation and integration configuration issues that have been called in to Websense Technical Support. Please check this chapter for information about the problem you are having before you contact Technical Support. For issues not related to installation or communication between Websense Enterprise and your integration, refer to your Websense Enterprise *Administrator's Guide*.

If you still need to contact Technical Support, please see *Appendix D: Technical Support* for contact information. The situations addressed in this chapter are as follows:

- I made a mistake during installation.
- I forgot my Websense Policy Server password.
- Where can I find download and error messages?
- The Master Database does not download.
- Policy Server fails to install.
- I upgraded Websense, and configured users no longer appear under Directory Objects in Websense Manager.
- Network Agent fails to start on Linux with stealth mode NIC.
- Network Agent is not filtering or logging accurately.
- Windows 9x workstations are not being filtered as expected.
- Some users are receiving the Websense Global policy.
- Websense Enterprise splash screen is displayed, but installer does not launch on Windows 2000.
- Network Agent cannot communicate with Filtering Service after it has been reinstalled.
- I upgraded my Cisco PIX Firewall software to version 7.0, and web filtering stopped working.

I made a mistake during installation

Run the installation program again. Setup will detect the current installation and allow you to **Add**, **Remove**, or **Repair** Websense Enterprise components. The **Repair** option does not troubleshoot the installation, but merely reinstalls the files it detects.

> **NOTE**
> On Windows, you may need to restart the machine before running Setup again.

Refer to *Modifying an Installation*, page 156 for instructions.

I forgot my Websense Policy Server password

Contact Websense Technical Support for assistance. You can find contact information in *Appendix D: Technical Support*.

Where can I find download and error messages?

Windows 2000 and 2003

Check the Windows Application Event log or `Websense.log` (`Websense\bin`) for any listings about the database download as well as other error or status messages. Access the Application Event log by choosing **Start > Settings > Control Panel > Administrative Tools > Event Viewer**. Expand the **Event Viewer** tree and click **Application Log**.

Solaris and Linux

Websense creates `Websense.log` (located in `Websense/bin`) when there are errors to record. This log file records error messages and messages pertaining to database downloads. `Websense.log` is located on the Policy Server machine only.

The Master Database does not download

There are several reasons why you might have difficulty receiving Websense Master Database downloads.

Subscription Key

Verify that the subscription key is entered correctly and has not expired. Open the **Settings** dialog box, and go to the **Database Download** screen.

- Compare the key you received via email or in the Websense Enterprise package to the key in the **Subscription key** field (the key is not case sensitive) and correct any errors. You must click **OK** to close the **Settings** dialog box before the key takes effect and enables the database download.
- Check the date shown in the **Key expires** field. If this date has passed, contact Websense, Inc. to renew your subscription.

Internet Access

The machine running the Filtering Service must have access to the internet via HTTP, and must be able to receive incoming transmissions.

To verify internet access on the Websense Filtering Service machine:

1. Determine whether Websense is accessing the internet through a proxy server by checking the **Database Download** screen of the **Settings** dialog box in Websense Manager.
2. If a proxy server is being used, open a web browser (either Internet Explorer or Netscape).
3. Configure the browser to access the internet with the same proxy settings as those shown in the **Settings** dialog box.
4. Request one of the following addresses:

   http://download.websense.com

   http://asia.download.websense.com

   http://europe.download.websense.com

   - If you reach the site, the Websense logo appears, along with a message indicating that it will redirect you to the Websense home page. This means that the Filtering Service's proxy settings are correct, and the Filtering Service should have appropriate HTTP access for downloading.

- If you are not able to reach the download site, and the system requires proxy information, the Filtering Service proxy settings must be corrected.
- If no proxy information is required, use the **nslookup** command (at the command prompt) with the address of your download site to make sure the Filtering Service machine is able to resolve the download location to an IP address. For example:

  nslookup asia.download.websense.com

  If this does not return an IP address, you must set up the machine running Filtering Service to access a DNS server.

If you need assistance, contact Websense Technical Support (see *Appendix D: Technical Support* for information).

5. If Websense must access the internet through an upstream firewall or proxy server that requires authentication, check the following:
   - The correct user name and password must be entered in the **Database Download** screen of the **Settings** dialog box. Verify spelling and capitalization.
   - The firewall or proxy server must be configured to accept clear text or basic authentication.

Restriction Applications

Some restriction applications, such as virus scanners or size-limiting applications, can interfere with database downloads. Disable the restrictions relating to the Filtering Service machine and the Websense download location.

Policy Server fails to install

If you attempt to install Websense Enterprise on a machine with insufficient resources (RAM or processor speed), the Policy Server may fail to install. Certain applications (such as print services) can bind up the resources that Setup needs to install the Policy Server. If the Policy Server fails to install, Setup must quit. If you receive the error message: *Could not install current service: Policy Server*, during installation, take one of the following actions:

- Install Websense Enterprise on a different machine. See *System Requirements*, page 31 for minimum installation requirements.
- Stop all memory-intensive services running on the machine before attempting another Websense Enterprise installation.

I upgraded Websense, and configured users no longer appear under Directory Objects in Websense Manager

If you are using Active Directory as your Directory Service, you may find that user names disappear from the list of directory objects in Websense Manager when you upgrade Websense. This will happen if your user names include characters that are not part of the UTF-8 character set.

To support LDAP 3.0, the Websense installer changes the character set from MBCS to UTF-8 during upgrade, so if your user names include non-UTF-8 characters, those characters will not be properly recognized. To fix this problem, try changing the character set back to MBCS.

1. In Websense Manager, go to **Server** > **Settings** > **Directory Service**.

   A**ctive Directory (Native Mode)** will be selected in the **Directories** pane if you are using Active Directory.
2. Click the **Advanced Settings** button.
3. Click **MBCS** under **Character Set** to change the character set from UTF-8 to MBCS.

Network Agent fails to start with stealth mode NIC

IP address removed from Linux configuration file

The Network Agent can work with a stealth mode NIC only if the interface retains its old IP address in the Linux system configuration file. If you have bound the Network Agent to a network interface card configured for stealth mode, and then removed the IP address of the NIC from the Linux configuration file (`/etc/sysconfig/network-scripts/ifcfg-<adapter name>`), the Network Agent will not start.

An interface without an IP address will not appear in the list of adapters displayed in the installer or in Websense Manager and will be unavailable for use. To reconnect Network Agent to the NIC, restore the IP address in the configuration file.

Stealth mode NIC selected for Websense communications in Solaris and Linux

Network interface cards configured for stealth mode in Solaris and Linux are displayed in the Websense Enterprise installer as choices for Websense communication. If you have inadvertently selected a stealth mode NIC for communications, the Network Agent will not start, and Websense Enterprise services will not work.

To correct this problem, open the `websense.ini` file in `/Websense/bin` and change the IP address to that of a NIC in normal mode. Start the Websense services.

Network Agent is not filtering or logging accurately

If you have configured your Cisco Content Engine to act as a proxy for internet traffic, you must define the IP address of the proxy server machine in the Websense Manager. Without this address, the Network Agent cannot filter or log requests accurately. Network Agent will log the address of the proxy server as the source IP address of all permitted requests and will not log blocked requests at all. Refer to *Identifying the Proxy Server for the Network Agent*, page 198 for instructions.

Windows 9x workstations are not being filtered as expected

If you are running DC Agent for user identification, your Windows 9x workstation machine names must not contain any spaces. This situation could prevent DC Agent from receiving a user name when an internet request is made from that workstation. Check the machine names of any Window 9x workstations experiencing filtering problems and remove any spaces you find.

Some users are receiving the Websense Global policy

A number of reasons exist as to why users are not being filtered as expected; however, if your network uses Logon Agent to identify users, and if some of those users are receiving the Websense Global policy instead of their usual user or group policies, a network problem may exist.

If the Logon Agent logon script fails to execute properly on a workstation, Websense cannot identify the user to apply the proper policy. Websense will then apply the Global policy as a default.

The first step is to determine if the settings for the Windows Group Policy Objects (GPO) are being applied correctly to these workstations. If not, then this is a network connectivity problem and not a Websense Enterprise configuration issue.

Proceed with the following network checks:

- Check the user machine's visibility to the domain controller from which the logon script is being run.
- Make sure that NetBIOS is enabled on the machine.
- Make sure the user profile is not blocking the execution of the logon script.

Domain Controller Visibility

To determine is the domain controller is visible to the workstation:

- Attempt to map a drive on the client workstation to the domain controller's root shared drive. This is the drive from which the logon script is normally run, and on which `LogonApp.exe` resides.
- Run the following command from a Windows command prompt on the workstation that is not being identified:

  ```
  net view /domain:<domain name>
  ```

If either of these tests fails, refer to your Windows operating system documentation for possible solutions. This is a network connectivity problem and not a Websense Enterprise issue.

NetBIOS

Make sure that NetBIOS for TCP/IP is enabled and that the TCP/IP NetBIOS Helper service is running on the client machine. If either of these is not running, the Websense logon script will not execute on the user machine.

The TCP/IP NetBIOS Helper service runs on Windows 2000, Windows XP, Windows 2003, and Windows NT. In Windows 98, TCP/IP NetBIOS is enabled by default.

If your network uses Active Directory, and if you have Windows 98 client machines, refer to the following website for assistance: http://www.microsoft.com/windows2000/server/evaluation/news/bulletins/adextension.asp.

User Profile Issues

If the user profile on the local workstation is corrupt, it can prevent the Websense logon script (as well as the Windows GPO settings) from running. To eliminate this as a cause:

1. Log on to the workstation as a local administrator.
2. Delete the following directory that contains the user profile:

   `C:\Documents & Settings\<user name>`
3. Restart the machine.
4. Log on as the normal user.

   The user profile will be created automatically.
5. Check to make sure the user is being filtered as expected.

Websense Enterprise splash screen is displayed, but installer does not launch on Windows 2000

This is a software issue with the installation machine which prevents it from displaying the Java-based Websense installer interface. This problem also prevents the Websense Manager from launching on this machine.

There are two possible solutions for this problem.

- **Install DirectX on the installation machine**. DirectX is a Windows suite of application programming interfaces (APIs) that developers use to write

applications for the Windows operating system. The Java based Websense installer uses these APIs to display its interface, as does the Websense Manager. If DirectX is not present, neither the Websense installer interface nor the Websense Manager interface can be displayed.

- **Run the installer in console mode**. You can configure **Setup.exe** to start in a Windows command prompt, which will allow you to install Websense Enterprise in the console mode.

To install Websense Enterprise in console mode:

1. Open the **launch.ini** file using any text editor.

   This file is located on the same level as **Setup.exe** in the folder where you unzipped your Websense Enterprise installer.

2. Add the following line to the file:

   ```
   ARGS=-console -is:javaconsole
   ```

3. Save the file and exit.
4. Double-click **Setup.exe** or run the application from the command line.

   The installer starts in the Windows command prompt.

5. Follow the on-screen instructions to install Websense Enterprise.

   NOTE

   The installation sequence for the console mode is identical to that of the GUI mode.

6. Install the Websense Manager on a Solaris machine or a Windows machine capable of displaying the Java interface.

Network Agent cannot communicate with Filtering Service after it has been reinstalled

When the Filtering Service has been uninstalled and reinstalled, the Network Agent does not automatically update the internal identifier (UID) for the Filtering Service. After the new installation of the Filtering Service is complete, the Websense Manager still attempts to query the Filtering Service using the old UID, which no longer exists.

To re-establish connection to the Filtering Service:

1. Open the Websense Manager.

   An error message is displayed stating **Network Agent <*IP address*> is unable to connect with Filtering Service**.
2. Clear the message and select **Server > Settings**.

   The same error message is displayed.
3. Clear the message again and select **Network Agent** from the **Settings Selections** list.
4. Click **Local Settings**.
5. Select the IP address listed above the NIC for the Network Agent.
6. Click **Edit Selection**.

   The **Filtering Service Connection** dialog box appears.
7. Select the IP address of the Filtering Service machine from the **Server IP Address** drop-down list.
8. Click **Finish**.
9. Click **OK** in the **Local Settings** dialog box.
10. Click **OK** in the **Settings** dialog box to save the changes.

I upgraded my Cisco PIX Firewall software to version 7.0, and web filtering stopped working

In version 7.0(1) of the Cisco PIX Firewall software, the **`url-server`** command was changed: the minimum value for the **`timeout`** parameter was increased to 10 seconds. In previous versions (v6.3 or earlier), the minimum value for this parameter was 1 second, and the default value was 5 seconds. If you had **`timeout`** set to a value less than 10 seconds when you upgraded your software, the **`url-server`** command was deleted.

To resolve this issue, simply re-enter the **`url-server`** command. For more information, see *Cisco PIX Firewall or Adaptive Security Appliance (ASA)*, page 203.

APPENDIX D | Technical Support

Websense, Inc. is committed to providing excellent service worldwide. Our goal is to provide professional assistance in the use of our software wherever you are located.

Websense Technical Services Support Center

Technical information about Websense products is available 24 hours a day on the internet at:

http://www.websense.com/global/en/SupportAndKB

You will find here the latest release information, Frequently Asked Questions (FAQs), a Knowledge Base, product documentation, and other information.

Premium Support

Websense offers two premium fee-based support options: Priority One 24x7 Support and Platinum Support.

Priority One 24x7 Support offers extended service 24 hours a day, 7 days a week, and includes a toll-free number for customers in the U.S.

Platinum Support is our most comprehensive support and education offering. It includes the advantages of Priority One 24x7 Support as well as a dedicated support team, highest priority service, and educational opportunities.

For a complete list of Priority One 24x7 and Platinum Support services, please visit our website at:

http://www.websense.com/global/en/ProductsServices/Services

For additional information, please contact our U.S. Sales Department at **1 800 723 1166** or **1 858 320 8000**, or send an email to **sales@websense.com**.

For information about the availability of premium support programs for customers outside the U.S., please contact your local Websense sales office:

http://www.websense.com/global/en/AboutWebsense/ContactUs

Support Options

Websense Technical Support can be requested 24 hours a day, 7 days a week.

Web Portal

You can submit support tickets through the Web Portal 24 hours a day, 7 days a week. The response time during business hours is approximately 4 hours. Response to after-hours requests will occur the next business day. Support tickets can be submitted at:

http://www.websense.com/global/en/SupportAndKB/CreateRequest.

Email Questions

You may email your questions to us at the addresses listed below. Make sure you include your subscription key. This option is available 24 hours a day, 7 days a week. We will respond during business hours Monday through Friday.

- **support@websense.com**—San Diego, California, USA
- **uksupport@websense.com**—London, England
- **japansupport@websense.com**—Japan (Asia)

Email support can take up to 24 hours for a response. If you need a quicker turnaround, submit your issues through the Web Portal.

Telephone Assistance

Before you call a Websense Technical Support representative, please be ready with the following:

- Websense subscription key.
- Access to the configuration interface for your Websense products.
- Access to the machine running the Filtering Service, the Websense Reporting components, and the database (MSDE or SQL Server).
- Permission to access the Websense Log Database.
- Familiarity with your network's architecture, or access to a person who has this familiarity.

- Specifications of the machines running the Filtering Service and the Websense configuration files.
- A list of other applications running on the Filtering Service machine.

For severe problems, additional information may be needed.

Telephone assistance is available during normal business hours Monday through Friday at the following numbers:

- U.S. Technical Services in San Diego, California, USA: **1 858 458 2940**
- U.K. Technical Services in London, England: **+44 (0) 1932 796244**

Customer Care

Not sure who to call? Contact Customer Care for assistance with:

- General concerns
- Subscription key questions or issues
- Follow-up on telephone support issues
- General service requests

A Customer Care representative can be reached at:

- Customer Care U.S. in San Diego, California: **1 866 355 0690** (from the U.S.only) or **1 858 320 9777**, or **customercare@websense.com**
- Customer Care International in Dublin, Ireland: **+353 (0) 1 6319360** or **intcustcare@websense.com**

Improving Documentation

Websense, Inc. understands the value of high quality, accurate documentation. If you have any suggestions for improving the documentation, contact us at **DocFeedback@websense.com**. We appreciate your input.

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