Using RADIUS Agent for Transparent User Identification

Using RADIUS Agent | Web Protection Solutions |v8.4.x, v8.5.x | 29-Apr-2022

RADIUS Agent works together with the RADIUS server and RADIUS clients in your network to process and track Remote Access Dial-In User Service (RADIUS) traffic.

RADIUS Agent enables your web protection solutions to transparently identify users who access your network using a dial-up, Virtual Private Network (VPN), Digital Subscriber Line (DSL), or other remote connection (depending on your configuration).

This collection includes the following articles to help you understand how RADIUS Agent works, configure RADIUS Agent, and troubleshoot user identification issues.

Processing RADIUS traffic

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RADIUS Agent acts as a proxy that forwards RADIUS messages between one or more RADIUS clients and RADIUS servers. Rather than authenticating users directly, RADIUS Agent identifies remote users authenticated by a RADIUS server and associates them with IP addresses to enable policy enforcement and reporting.

RADIUS Agent captures and processes RADIUS protocol packets of the following types:

- **Access-Request:** Sent by a RADIUS client to request authorization for a network access connection attempt.
- **Access-Accept:** Sent by a RADIUS server in response to an Access-Request message; tells the RADIUS client that the attempted connection is authorized and authenticated.
- **Access-Reject:** Sent by a RADIUS server in response to an Access-Request message; tells the RADIUS client that the attempted connection is rejected.
- **Accounting-Stop-Request:** Sent by a RADIUS client to tell the RADIUS server to stop tracking activity for a specific user.

Each RADIUS message packet contains attributes that describe the connection attempt, such as user name, password, and IP address of an access server. RADIUS Agent stores user name-to-IP-address pairings in a user map, and provides this information to Filtering Service.

If your RADIUS client supports accounting (user logon tracking), and accounting is enabled, RADIUS Agent is able to extract more details about user logon sessions from the RADIUS messages it receives.

For example, if there is no static IP address for an authenticated remote user, a dynamic IP address is assigned to that user. RADIUS Agent receives the dynamic IP address via an accounting request from the RADIUS client, and then records the resulting user name/IP address entry in its user map.

Stop accounting requests tell the RADIUS server to stop tracking logon activity for a particular user. The stop accounting request process is as follows:

1. RADIUS Agent receives a RADIUS stop accounting message.
2. RADIUS Agent extracts the user name and IP address from the request, and tells the RADIUS Agent service to remove the matching entry from its map.

The RADIUS user identification process

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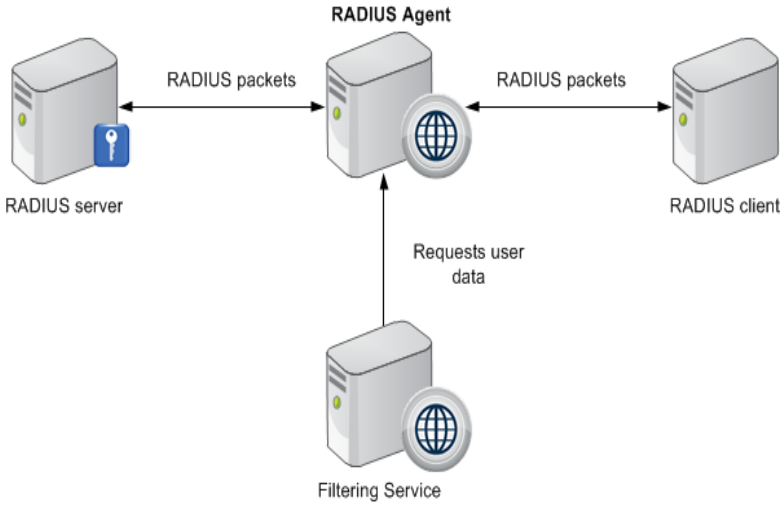
Without RADIUS Agent, remote users are authenticated by a RADIUS client (RAS server, VPN server, or firewall) as follows:

1. A user logs on to the network from a remote machine.
2. The RADIUS client receives an authentication request for that user.
3. The RADIUS client contacts the RADIUS server via the default RADIUS ports (1645 for authentication, and 1646 for accounting), and sends the user name and password to the RADIUS server.
4. The RADIUS server validates the user name/password combination by checking it against the directory service, and then responds to the RADIUS client.

With RADIUS Agent in place in your network, the user authentication process allows the agent to process and transmit remote authentication requests and provide user information to Filtering Service for use in policy enforcement and reporting.



Note that Forcepoint recommends installing RADIUS Agent on a machine separate from the RADIUS server machine. This prevents port and IP address conflicts between RADIUS Agent and the RADIUS server.

The transparent identification process is as follows:

1. RADIUS Agent listens on port 1645 (the RADIUS authentication port) for authentication requests and detects users logging on to domains, or logging on to the RADIUS server directly.

Note

If you are using RADIUS authentication in a specific Windows domain, run the RADIUS Agent service as a domain user, or as the default System account on a machine in that domain.

2. When a remote user logs on to the network, the RADIUS client receives an authentication request and contacts the RADIUS Agent machine via port 1645.
3. RADIUS Agent extracts the authentication request ID (a unique identifier), user name, and originating IP address and stores the data in a user name-to-IP-address map in local memory, and in the **RadiusAgent.bak** file.

Note

If RADIUS Agent receives a new request from an IP address already included in its user map, it **replaces** the existing pair with the new pair.

4. After extracting the required information, RADIUS Agent forwards the authentication request to the RADIUS server.

5. The RADIUS server checks the user name and password entered against the corresponding account in the directory service, and then sends a response to RADIUS Agent indicating the status of the authentication request.

Note

To configure the amount of time RADIUS Agent waits for a response from the RADIUS server before ending a query attempt, modify the **Timeout** parameter in the RADIUS configuration file (**wsradius.ini**).

For more details, see *Custom configuration for a RADIUS Agent instance*, page 11, and *RADIUS Agent initialization parameters*, page 11.

6. RADIUS Agent evaluates the response from the RADIUS server. If the RADIUS message received is an authentication **rejection**, RADIUS Agent removes the corresponding entry from its user map.

   If the RADIUS packet received is an authentication **acceptance**, RADIUS Agent copies the corresponding entry to its main user map (a listing of full domain/user name/IP address entries).

7. RADIUS Agent forwards the authentication response to the RADIUS client.
8. RADIUS Agent sends user names and IP addresses to Filtering Service each time its user map is updated, using port 30800. Filtering Service records user name/IP address pairs to its own copy of the user map in local memory. No confidential information (such as user passwords) is transmitted.

Note

If you configure RADIUS Agent to require authentication, the RADIUS Agent service checks the password provided by Filtering Service against the password you specified on the **Settings .> General > User Identification** page in the Web Security module of the Forcepoint Security Manager. See *Configuring RADIUS Agent settings in the Forcepoint Security Manager*, page 8.

9. Filtering Service queries User Service to get group information for user names in its copy of the user map. User Service queries the directory service for group information corresponding to those users, and sends the information to Filtering Service.
10. Filtering Service applies policies to logged-on users. For more information about applying policies to directory clients, see the Administrator Help for your web protection solution.

Components used for transparent identification with RADIUS Agent

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Transparent identification with RADIUS Agent uses the following components.

RADIUS Agent

By default, RADIUS Agent listens for authentication requests on the RADIUS authentication port. Filtering Service uses the information provided by RADIUS Agent to apply policies to remote users logged on to the network.

RADIUS Agent extracts the authentication request ID (a unique identifier), user name, and originating IP address. The Agent stores this data in a user name-to-IP-address map in local memory and in the **RadiusAgent.bak** file.

IP addresses are the key element in tracking logon sessions, because the same user may log on to the network from different locations. In cases where users share an IP address (as with Windows Terminal Services), your web protection software may not always be able to identify users. In this case, user requests receive computer or network policies, or the **Default** policy.

A RADIUS Agent installation typically includes the following files:

File name	Location	Functionality
RADIUSAgent.exe	C:\Program Files\Websense\Web Security\bin\ or /opt/Websense/	The RADIUS Agent executable. Automatically sends new entries to Filtering Service, when queried.
wsradius.ini	Websense\Web Security\bin\ or /opt/Websense/	Contains RADIUS Agent initialization parameters.
RadiusAgent.bak	Websense\Web Security\bin\ or /opt/Websense/	Backup copy of RADIUS Agent's user name-to-IP address map. Read at startup.
ignore.txt (optional)	Websense\Web Security\bin\ or /opt/Websense/	Contains list of user names for RADIUS Agent to ignore.

User Service

User Service interacts with your directory service to get group information corresponding to logged-on users. It provides this information to Filtering Service.

Filtering Service

Filtering Service receives user logon information from RADIUS Agent as users log on to the network. At each transmission, only the record of logon sessions established since the last transmission is sent back to the server. This includes new users logged on to existing remote machines and new users logged on to new remote machines.

Filtering Service receives user data in the form of user name/IP address pairs (originating from RADIUS Agent's map in local memory). When Filtering Service gets the IP address of a machine making an Internet request, the server matches the address with the corresponding user name provided by RADIUS Agent, allowing users to be identified transparently whenever they make Internet requests. Filtering Service then applies the policies assigned to those users or groups.

Filtering Service is the destination for the user information RADIUS Agent gleans from authentication requests. When you are troubleshooting user identification problems, be sure to determine whether Filtering Service is getting the latest and most accurate user data.

Your web protection software can be configured to prompt users to manually authenticate if it cannot obtain user information via RADIUS Agent. With manual authentication, if a user does not provide a valid user name and password, he or she is blocked from Internet access.

If a user cannot be identified transparently, and manual authentication is not enabled, a computer or network policies, or the **Default** policy, is applied to the request.

RADIUS Client

Typically, the RADIUS client is a Network Access Service (NAS) or remote access server, which acts as the point of contact for remote user logons. The client receives authentication requests as users log on, and sends authentication requests to RADIUS Agent for processing.

The RADIUS client sends authentication requests to the port specified in the TForcepoint Security Manager (go to the **Web > Settings > General > User Identification** page and click a RADIUS Agent instance to view and configure this setting).

These port values are also stored as **AuthInPort** and **AccInPort** in the RADIUS Agent **wsradius.ini** file (see *Custom configuration for a RADIUS Agent instance*, page 11, and *RADIUS Agent initialization parameters*, page 11).

RADIUS Server

The RADIUS server is typically a service that performs Internet authentication, such as the Microsoft Internet Authentication Service (IAS).

The RADIUS server performs the actual user authentication function. The RADIUS server receives authentication requests from RADIUS Agent, and checks the user name and password entered against the corresponding account in the directory service.

Finally, the RADIUS server sends a response to RADIUS Agent indicating the status of the authentication request.

RADIUS Agent deployment and configuration

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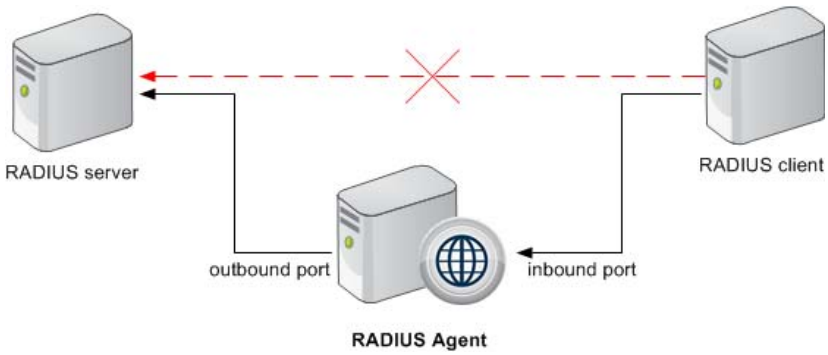
To implement transparent user identification via RADIUS Agent:

- Install RADIUS Agent on a server machine running one of the following supported operating systems:
  - Windows Server 2008 R2, 2012, 2012 R2, or 2016
  - Red Hat Enterprise Linux 6 or 7

  RADIUS Agent needs to be installed on only one machine in the network. However, if your network is very large, you may benefit from installing RADIUS Agent on multiple machines. This allows ample space for files that are continually populated with user information, and the user identification process is faster.
- Configure Filtering Service to communicate with RADIUS Agent. (For information about securing communication between the agent and Filtering Service, see *Configuring RADIUS Agent settings in the Forcepoint Security Manager*, page 8.)

  In most cases, you need only one Filtering Service that communicates with every instance of RADIUS Agent in your network. If you have installed multiple Filtering Service instances for load-balancing purposes, each Filtering Service must be able to communicate with every RADIUS Agent.
- Configure the RADIUS client to communicate with RADIUS Agent instead of directly with the RADIUS server. The RADIUS client uses RADIUS Agent as the source of responses to authentication requests.



- Configure RADIUS Agent to forward authentication requests from client machines to the RADIUS server.

- Configure the RADIUS server to use RADIUS Agent as a proxy.

Note

If you use Lucent RADIUS Server and RRAS, you must configure the RADIUS server to use Password Authentication Protocol (PAP), and the RRAS server to accept only PAP requests. For more information, see the related product documentation.

- Use the Web Security module of the Forcepoint Security Manager to add the directory clients you want to assign policies.

Configuring RADIUS Agent settings in the Forcepoint Security Manager

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Use the **Web > Settings > General > User Identification** page to review and edit RADIUS Agent configuration information.

To edit settings for a RADIUS Agent instance:

1. Use the Transparent Identification Agents table to select the IP address or host name of the RADIUS Agent instance that you want to configure.

   If you have installed a new RADIUS Agent instance that does not appear in the list, click **Add Agent**, then select **RADIUS Agent** from the drop-down list.
2. Under Basic Agent Configuration, enter the RADIUS Agent **IPv4 address or host name**.

Note

Hostnames must start with an alphabetical character (a-z), not a numeric or special character.

Hostnames containing certain extended ASCII characters may not resolve properly. To avoid this issue, enter an IP address instead of a hostname.

3. Enter the **Port** that RADIUS Agent should use to communicate with other web protection components. The default is 30800.
4. To establish an authenticated connection between Filtering Service and RADIUS Agent, select **Enable authentication**, and then enter a **Password** for the connection.

Next, customize global RADIUS Agent settings. By default, changes that you make here affect all RADIUS Agent instances. Settings marked with an asterisk (*), however, can be overridden in an agent's configuration file to customize the behavior of that agent instance (see *Custom configuration for a RADIUS Agent instance*, page 11, and *RADIUS Agent initialization parameters*, page 11).

1. Under RADIUS Server, enter the **RADIUS server address or name**. If you provide the IP address, use IPv4 address format.

   RADIUS Agent forwards authentication requests to the RADIUS server, and must know the identity of this machine.

2. If your network includes a RADIUS client, enter the **RADIUS client address or name**. If you provide the IP address, use IPv4 address format.

   Your web protection software queries this machine for user logon sessions.

3. Enter the **User entry timeout** interval, used to determine how often RADIUS Agent refreshes its user map. Typically, the default query value (24 hours) is best.

4. Use the **Authentication Ports** and **Accounting Ports** settings to specify which ports RADIUS Agent uses to send and receive authentication and accounting requests. For each type of communication, you can specify which port is used for communication between:

   - RADIUS Agent and the RADIUS server (authentication default 1645; accounting default 1646)
   - RADIUS Agent and the RADIUS client (authentication default 12345; accounting default 12346)

5. When you are finished making configuration changes, click **OK** to return to the **Settings > User Identification** page, then click **OK** again to cache your changes. Changes are not saved until you click **Save and Deploy**.

Configuring the RADIUS client

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Your RADIUS client must be configured to transmit authentication and accounting requests to the RADIUS server via RADIUS Agent.

Modify your RADIUS client configuration so that:

- The RADIUS client sends authentication requests to machine and port on which RADIUS Agent listens for authentication requests. This is the **Authentication Port** specified during RADIUS Agent configuration.
- The RADIUS client sends accounting requests to the machine and port on which RADIUS Agent listens for accounting requests. This is the **Accounting Port** specified during RADIUS Agent configuration.

The exact procedure for configuring a RADIUS client differs by client type. For details, see your RADIUS client documentation.

Note

The RADIUS client should include the attributes **User-Name** and **Framed-IP-Address** in authentication and accounting messages it sends. RADIUS Agent uses the values of these attributes to interpret and store user name/IP address pairs. If your RADIUS client does not generate this information by default, configure it to do so (see the RADIUS client documentation).

Configuring the RADIUS server

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To enable proper communication between RADIUS Agent and your RADIUS server:

- Add the IP address of the RADIUS Agent machine to your RADIUS server's client list. For instructions, see your RADIUS server documentation.
- Define shared secrets between the RADIUS server and all RADIUS clients that use the agent to communicate with the RADIUS server. Shared secrets are usually specified as authentication security options.

  Configuring a shared secret for RADIUS clients and the RADIUS server provides secure transmission of RADIUS messages. Typically, the shared secret is a common text string. For instructions, see your RADIUS server documentation.

Note

The RADIUS server should include the attributes **User-Name** and **Framed-IP-Address** in authentication and accounting messages. RADIUS Agent uses the values of these attributes to interpret and store user name/IP address pairs. If your RADIUS server does not generate this information by default, configure it to do so (see the RADIUS server documentation).

Configuring RADIUS Agent to ignore certain user names

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The method that some Windows services use to contact domain controllers from user machines can cause the users logged on to those machines to be misidentified. For example, problems can be caused by:

- The internal user names (Local Service and Network Service) that Windows XP assigns for processes to use for communication with domain controllers
- Running Systems Management Server (SMS) on a client machine.

To prevent or work around possible misidentification, configure your transparent identification agent to ignore logon names that are not associated with actual users.

1. Use the Windows Services tool or /opt/Websense/WebsenseDaemonControl command to stop **RADIUS Agent**.
2. Navigate to the **bin** directory (C:\Program Files\Websense\Web Security\bin or /opt/Websense/bin/, by default).
3. Use a text editor to either create or open **ignore.txt**.
4. Populate the file as follows. Place each entry on a separate line.
   - Add each **user name** that should be ignored on its own line. Your web protection software ignores these users, regardless of which machine they use.

- To add a **user name/machine pair**, enter the user name, followed by a comma, and then the machine host name or IP address (ypark,YPARK-WS1). In this case, your web protection software ignores the specified user only on the specified machine.

The following example shows correctly formatted entries:

```
anonymous logon
admin,WKSTA-NAME
```

These examples are also supported as of v8.5.3:

```
*, WKSTB-NAME
*, 10.209.34.56
*, 10.203.34.1-10.203.34.255
```

In these examples, the Windows 7 service account **anonymous logon** is ignored on all machines, the user name **admin** is ignored only when associated with machine **WKSTA-NAME**, and logons for **WKSTB-NAME**, **10.209.34.56**, and the network range **10.203.34.1** to **10.203.34.255** are ignored.

With v8.5.3 and later, regular expressions are also supported as part of each of these entries.

5. When you are finished making changes, save and close the file.
6. Start RADIUS Agent.

Custom configuration for a RADIUS Agent instance

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The settings configured in the Web Security module of the Forcepoint Security Manager are global, and apply to all instances of the agent you have installed. If you have multiple instances of any agent, however, you can configure one instance independently of the others.

Settings specified for a particular agent instance override the global settings in the Security Manager. Note that not all settings can be overridden.

1. Use the Windows Services tool or /opt/Websense/WebsenseDaemonControl command to stop **RADIUS Agent**.
2. Navigate to the **bin** directory (C:\Program Files\Websense\Web Security\bin or /opt/Websense/bin/, by default) and open the **wsradius.ini** file in a text editor.
3. Add or modify parameters and values in the file, as needed (see *RADIUS Agent initialization parameters*, page 11).
4. When you are finished, save and close the INI file.
5. Start RADIUS Agent.

RADIUS Agent initialization parameters

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After configuring RADIUS Agent behavior in the Web Security module of the Forcepoint Security Manager, you can customize the behavior of a specific RADIUS

Agent instance in **wsradius.ini**, the agent's initialization file. This file resides in the **bin** directory (C:\Program Files\Websense\Web Security\bin\ or /opt/Websense/bin/, by default).

- Some RADIUS Agent settings can only be configured via the Security Manager.
- Some settings can only be configured via the initialization file.

Some parameters can be modified either via the Security Manager or via **wsradius.ini**; these parameters are marked with an asterisk (*).

The parameters and values described here are case-sensitive.

Before making changes to the initialization files, please consider that the default values are designed to maximize accuracy and efficiency in most environments. In most cases, Forcepoint recommends leaving the default values as they are.

AccInPort*

Port over which RADIUS Agent accepts accounting requests from RADIUS clients.

Default	12346
Options	1024 through 65535
Required	No
Synopsis	If your RADIUS environment is configured to support RADIUS accounting (user tracking), RADIUS Agent receives accounting requests from client machines over this port.

AccOutPort*

Port over which the RADIUS server listens for RADIUS accounting messages.

Default	1646
Options	1024 through 65535
Required	No
Synopsis	If your RADIUS environment supports RADIUS accounting, the RADIUS server receives accounting messages from client machines over this port.

AuthInPort*

Port over which RADIUS Agent accepts authentication requests from RADIUS clients.

Default	12345
Options	1024 through 65535
Required	No
Synopsis	Used to configure the port on which RADIUS Agent receives authentication requests from the RADIUS client as users log on to the network.

AuthOutPort*

Port on which the RADIUS server listens for authentication requests.

Default	1645
Options	1024 through 65535
Required	No
Synopsis	RADIUS Agent processes the authentication requests it receives from the RADIUS client, and then forwards them to the RADIUS server over this port.

DebugLevel

Determines the detail level of the RADIUS Agent diagnostic activity. (See definition for *DebugMode*.)

Default	0
Options	0, 1, 2, 3
Required	No
Synopsis	Specifies the level of log file detail provided for debugging purposes, from none (0) to high (3). Any value outside the range of 0-3 is interpreted as 0. Diagnostic output with a detail level of 3 includes all RADIUS transactions involved in a user logon.

DebugMode

Controls the RADIUS Agent diagnostic activity.

Default	Off
Options	On, Off
Required	No
Synopsis	Enables or disables RADIUS Agent's built-in diagnostic (logging and debugging) capabilities.

LogFile

Output file for RADIUS Agent diagnostic messages.

Default	N/A
Options	Any string of characters valid for your operating system
Required	No
Synopsis	If you have enabled *DebugMode*, specify a name for the text file in which RADIUS Agent stores diagnostic (log) output.

RADIUSHost*

IP address of the RADIUS server machine.

Default	None
Options	Valid IP address in the format 123.123.123.123
Required	Yes
Synopsis	RADIUS Agent forwards authentication and accounting requests to the RADIUS server, and must therefore know the location of the RADIUS server machine.

RRASHost*

IP address of a machine running Microsoft RRAS.

Default	N/A
Options	Valid IP address in the format 123.123.123.123
Required	No
Synopsis	*(Windows)* If Microsoft RRAS is in use, your web protection software queries the machine running RRAS for user logon sessions. If no IP address is entered, no query occurs.

Timeout

Amount of time to wait for a response from the RADIUS server.

Default	1000 [milliseconds = 1 second]
Options	Integers greater than 500
Required	Yes
Synopsis	RADIUS Agent waits for a response to an authentication request from the RADIUS server for a specified amount of time before ending a query attempt.

RADIUS Agent troubleshooting

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Use the following troubleshooting articles to help identify and resolve RADIUS Agent transparent user identification issues:

- *Enabling RADIUS Agent diagnostics*, page 15
- *RADIUS Agent: VPN issues*, page 16
- *RADIUS Agent fails to start*, page 17
- *RADIUS server Event Log warnings or error messages*, page 17
- *RADIUS agent: Remote users are not receiving correct policies*, page 18

Enabling RADIUS Agent diagnostics

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RADIUS Agent has built-in diagnostic capabilities, but these are not activated by default. To activate RADIUS Agent logging and debugging:

1. Use the Windows Services tool or /opt/Websense/WebsenseDaemonControl command to stop **RADIUS Agent**.
2. Navigate to the **bin** directory (C:\Program Files\Websense\Web Security\bin or /opt/Websense/bin/, by default) and open the **wsradius.ini** file in a text editor.
3. Locate the **[RADIUSAgent]** section.
4. To enable logging and debugging, change the value of **DebugMode** to **On**:

   ```
   DebugMode=On
   ```

5. To specify the log detail level, modify the following line:

   ```
   DebugLevel=<N>
   ```

   N can be a value from 0-3, where 3 indicates the most detail.
6. Modify the **LogFile** line to indicate the name of the output file:

   ```
   LogFile=filename.txt
   ```

   By default, log output is sent to the RADIUS Agent console. If you are running the agent in console mode (see *Running RADIUS Agent in console mode*, page 15), you can optionally keep the default value.
7. Save and close the **wsradius.ini** file.
8. Start RADIUS Agent.

If remote users are not being identified and receiving correct policies as expected, the likely cause is communication problems between RADIUS Agent and your RADIUS server. Check your RADIUS Agent logs for errors to determine the cause.

Running RADIUS Agent in console mode

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To start RADIUS Agent in console mode (as an application), enter the following:

- At the Windows command prompt:

  ```
  RadiusAgent.exe -c
  ```

- At the Linux shell prompt:

  ```
  ./RadiusAgent -c
  ```

To stop the agent at any time, press **Enter** again. It may take a couple of seconds for the agent to stop running.

RADIUS Agent accepts the following command-line parameters:

> **Note**
> On Linux, Forcepoint recommends using the script provided to start or stop RADIUS Agent (**WsRADIUSAgent start|stop**), instead of the -r and -s parameters.

Parameter	Description
-i	Installs RADIUS Agent service/daemon.
-r	Runs RADIUS Agent service/daemon.
-s	Stops RADIUS Agent service/daemon.
-c	Runs RADIUS Agent as an application process instead of as a service or daemon. When in console mode, RADIUS Agent can be configured to send log output to the console or to a text file.
-v	Displays the version number of RADIUS Agent.
-? -h -help <*no option*>	Displays usage information on the command line. Lists and describes all possible command line parameters.

RADIUS Agent: VPN issues

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The VPN client is not successfully logged onto the VPN network

To verify that RADIUS server is authenticating clients, check the RADIUS server's log file for the user name in question.

For Microsoft IAS, go to the IAS management console and see **Remote Access Logging** to find out where the log file is. (Set which actions are logged via the **Properties** panel).

RADIUS Agent is blocking a VPN connection

Because RADIUS Agent sits between a VPN client and VPN server, RADIUS Agent may block VPN traffic. In this case, you must remove the agent. Simply stopping the agent is not sufficient; the agent must be removed from the link between the RADIUS client and server.

To ensure that RADIUS Agent is removed:

- On the VPN client, configure the client to communicate directly with the server. In most cases, this involves setting the IP address of the RADIUS server and changing the port number from 12345 to 1812.

- On the RADIUS server, remove RADIUS Agent as a client.

RADIUS Agent fails to start

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If RADIUS Agent does not start, check your RADIUS Agent logs for the following message:

- Windows:

  ```
  Cannot bind to port: 10048
  ```

- Linux:

  ```
  Cannot bind to port: 98
  ```

The usual cause is that another application (for example, a second instance of RADIUS Agent, or the RADIUS server) is currently running on the RADIUS Agent machine and using the same port RADIUS Agent is defined to use. Ensure that each RADIUS application on the RADIUS Agent machine uses a different port.

RADIUS server Event Log warnings or error messages

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The RADIUS server Event Log can be helpful in determining the cause of VPN connection or authentication problems, and in distinguishing whether the problem lies in RADIUS Agent or VPN setup.

RADIUS Accounting is not enabled on the RADIUS server

With some RADIUS servers (Microsoft IAS for example), RADIUS Accounting must be enabled so that RADIUS Agent can get the IP address of the RADIUS client.

The RADIUS server should include the attributes **User-Name** and **Framed-IP-Address** in authentication and accounting messages. RADIUS Agent uses the values of these attributes to interpret and store user name/IP address pairs. If your RADIUS server does not generate this information by default, configure it to do so. See your RADIUS server documentation for instructions.

RADIUS Agent has not been added as a client to the RADIUS server

Configure your RADIUS server to use RADIUS Agent as a proxy. This involves adding RADIUS Agent as a client to the RADIUS server.

See your RADIUS server documentation for instructions on configuring a proxy.

- If you have multiple RADIUS servers, each server must be configured separately.
- Failure to configure RADIUS Agent as a proxy results in a RADIUS connection failure.

Is RADIUS Authentication for Windows domain users in use?

If you require the RADIUS server to authenticate Windows domain users, the RADIUS server may need to reside in the same Windows domain as these users. See your RADIUS server documentation for information on domain user authentication.

Is Livingston RADIUS server in use?

Lucent RADIUS Server must be configured to use Password Authentication Protocol (PAP), and the RRAS server must be configured to accept only PAP requests. For instructions, see your respective product documentation.

Is Microsoft Routing and Remote Access Server (RRAS) in use?

Run RADIUS Agent with administrative rights on an RRAS server. This ensures that when it is restarted, RADIUS Agent can retrieve all currently logged-on users from the RRAS server. In most cases, domain administrative rights are sufficient.

To verify that RADIUS Agent is retrieving all currently logged-on users, check the RADIUS Agent log file for the following entry:

```
WsRadiusApp::StartAgent()
WsRRASInspector::Inspect(127.0.0.1, 151ff24)
Adding RRAS entry to user map: ip=C0A8030C,
user=SOFIA\radiustest
```

RADIUS agent: Remote users are not receiving correct policies

Using RADIUS Agent | Web Protection Solutions |v8.4.x, v8.5.x | 29-Apr-2022

If remote users requests are not going through your web protection software, or are not receiving the correct policies, check your RADIUS Agent logs for the message **Error receiving from server: 10060** (Windows) or **Error receiving from server: 0** (Linux).

This usually occurs when the RADIUS server does not recognize RADIUS Agent as a client (source of RADIUS requests). Make sure that the RADIUS server is configured properly (see *Configuring the RADIUS server*, page 10).

Users bypass a logon prompt to circumvent web policies

If a user logs on to a RADIUS server as a local user, the user is identified as RADIUS_SERVER_HOST\username. Because user-based policies require that the user belong to a domain or LDAP container, a local user receives the policy assigned to the computer (IP address) or network (IP address range), or the **Default** policy.

Run TestLogServer to see if the user is logged on locally (see Using TestLogServer for Troubleshooting).