PATTON TECH NOTES
Configuring RADIUS for Patton RAS Products

Synopsis

This tech note covers how to configure your Patton RAS for RADIUS authentication and accounting. For more information about RADIUS, please read the Patton Tech Note “About RADIUS" http://www.patton.com/technotes/ras_about_radius.pdf.

Overview

You may configure your Patton RAS to use RADIUS Athentication, RADIUS Accounting, or both. Before authenticating any users, your Patton RAS must first authenticate with the RADIUS server to validate it’s identity.

Configuring **RADIUS authentication** involves two parts:

1. Configuring *RAS authentication*
   a) on the RADIUS Server and
   b) on the RAS
2. Configuring *user authentication and authorization* on the RAS

Configuring your RAS for **RADIUS Accounting** is completed on a single management page.

Configuring RADIUS Authentication

On your radius server . . .

In the following procedure you will learn your RAIDUS server’s IP address and UDP port numbers, and add your RAS to your server’s list of known RADIUS clients. The following information provides an overview of the necessary steps. For detailed operating procedures for your specific RADIUS server please consult the user documentation.

A. Collecting Information

Collect the following information from your RADIUS server:

1. What is the IP Address of your RADIUS Server?
2. Which UDP port numbers does your RADIUS server use for:
   - RADIUS (1645 or 1812)?
   - RADIUS accounting services (1646 or 1813)?

B. Defining Your RAS as a known Client

An example *client list* from a Cistron RADIUS server is shown below.

```
IP Address      Secret                      friendly name
192.168.200.1   my_red_ras1_shared_secret   my_red_ras1
192.168.200.2   my_red_ras2_shared_secret   my_red_ras2
```

Add the IP address, shared secret and friendly name for your RAS to the list of known clients at your RADIUS server. Record the shared secret and friendly name for use in the next procedure.

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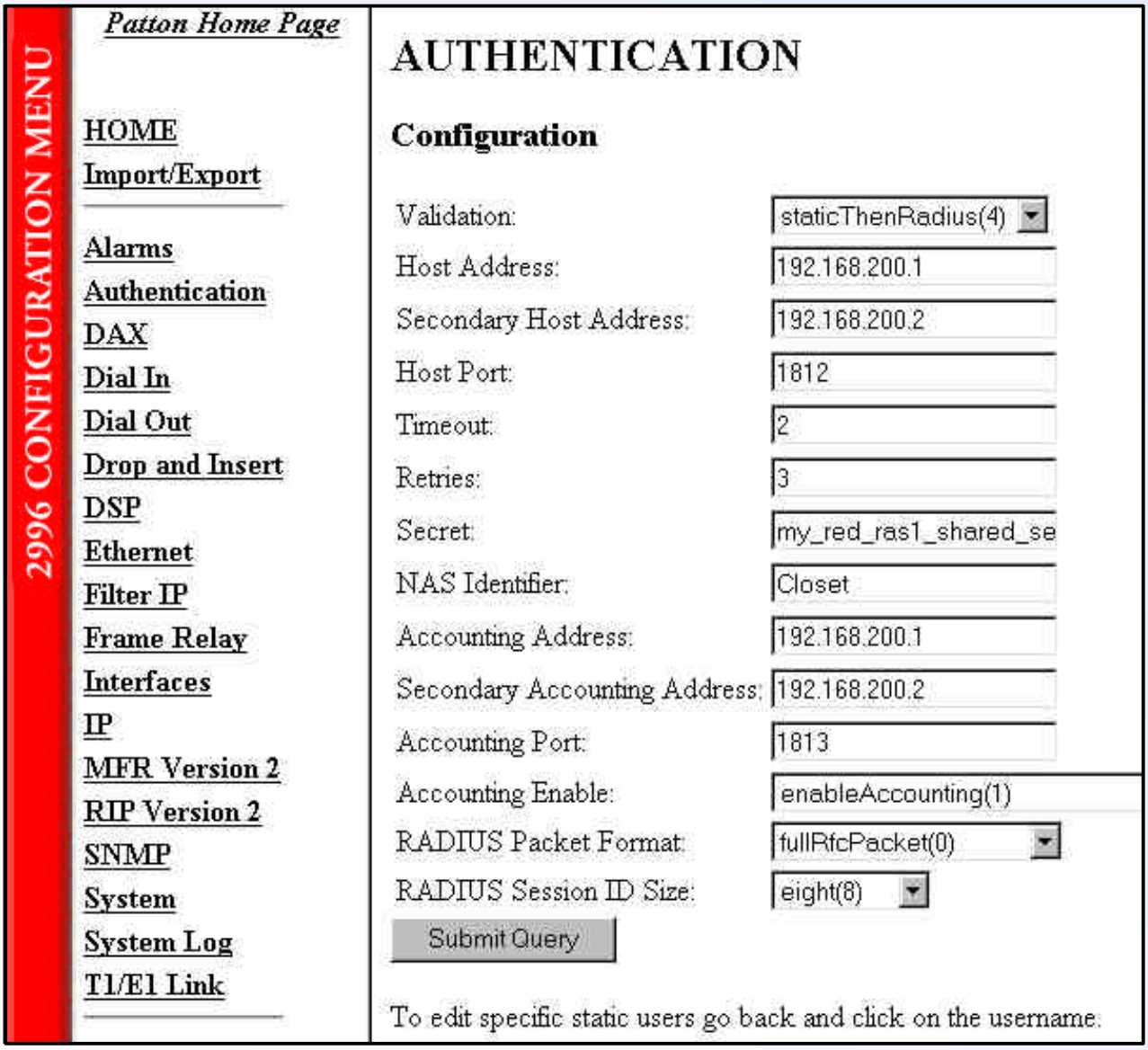
On your Patton RAS . . .

In the following procedure you will tell your RAS what you learned in the above procedure, *Collecting Information*.

1. From your RAS Configuration Menu, click the second link, **Authentication**., then click the Modify... hyperlink to edit the configurable parameter fields, shown below.



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2. On the **Authentication** page, define values for the parameters as follows:

Validation:	Select **staticThenRadius(4)** or **radiusUsers(2)**. ***NOTE**: We recommend you select staticThenRadius then add a static user to the RAS's user database. This will provide you an alternate login method so you can still manage your RAS if RADIUS authentication should fail.*
Host Address:	Enter the IP address of your RADIUS server.
Secondary Host Address:	Enter the IP address of your fallback RADIUS server, if you have one. Otherwise, leave blank.
Host Port:	Enter the UDP Port number your RADIUS server uses to receive authentication requests (typically 1645 or 1812). ***NOTE**: Both the primary and secondary RADIUS server will use the same port number.*
Timeout:	2 is the default value; leave it alone unless you know better.
Retries:	3 is the default value; leave it alone unless you know better
Secret:	Enter the secret from your RAS client profile on your RADIUS server.
NAS Identifier:	Optional. You may enter the IP address or 'friendly name' of your RAS as defined in your RADIUS server's client list. ***NOTE**: Depending on how you define* NAS-Identifier*, Authentication Request packets sent to the RADIUS server will contain **either** the* NAS-Identifier *attribute **or** the* NAS-IP Address, *but not both.* ***If you define this parameter**, your RAS will insert the value into the* NAS-Identifier *attribute field in Authentication Request packets sent to the RADIUS server* ***If you leave the field blank**, your RAS will insert its IP address as the value in the NAS-IP-Address attribute field in Authentication Request packets sent to the RADIUS server.*

NOTE: Your RAS is now configured for RADIUS Authentication, but not yet configured for RADIUS Accounting.

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Troubleshooting RADIUS Authentication

Let's say you're testing your RAS authentication and the user does not authenticate. To view the disconnection reason for the call:

1. From your RAS Configuration Menu, click the fourth link, **DialIn**, to bring up the DIAL IN page.
2. Find the table row for the user in the first column and look at the associated value under the column labeled Discnct Reason.

If the disconnect reason is:

AuthServerTimeout

Your RAS did not receive a response from your RADIUS Authentication Server within the configured timeout period (default = 3 seconds). The following issues are common causes for Authorization Server Timeout:

1. Verify the correct IP address and port number are defined on your RAS Authentication page for your RADIUS Server.
2. Verify your RAS is defined correctly in you RADIUS Server's client list, including the correct `shared secret` and `friendly name` (if you are using one).
3. If you are using IAS, check the `Authentication Signature` attribute check box and make sure it is unchecked. Patton does not support the Authentication `Signature` attribute.
4. Use ping to verify that the remote access server and RADIUS server have network connectivity.

If the disconnect reason is:

papAuthenticationFailure.

Your RAS and RADIUS Server are communicating, but the username/password combination is NOT correct. The following issues are common causes for PAP authentication failure:

- If you are using an encrypted password file such as the SAM database in Windows, make sure that you are using PAP authentication only.
- If your RADIUS Server runs under UNIX and you are storing your passwords in the UNIX password file, you cannot use CHAP.
- In Windows 2000 you can use CHAP if you change a setting in Windows. See the following URL for allowing chap with Windows 2000: http://support.microsoft.com/default.aspx?scid=kb;en-us;Q254172

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Configuring RADIUS Accounting

In the following procedure you will tell your RAS how to reach the RADIUS Accounting Server (typically the same machine as your RADIUS Authentication Server).

On the **Authentication** page (shown on page 2 of this Tech Note), continue defining values for the parameters as follows:

Accounting Address:	Enter the IP address of your RADIUS Server.
Secondary Accounting Address:	Enter the IP address of your fallback RADIUS Accounting Server (if you have one). Otherwise, leave blank.
Accounting Port:	Enter the UDP Port number of your RADIUS Accounting Server uses to receive accounting requests (normally 1646 or 1813). *NOTE: Both the primary and secondary RADIUS server will use the same port number.*
Accounting Enable:	Select enableAccounting(1).
RADIUS Packet Format:	Select fullRfcPacket(0), which is the default value.
RADIUS Session ID Size:	Select eight(8). which is the default value.

RADIUS Resources

Patton Tech Notes:

About RADIUS
http://www.patton.com/technotes/ras_about_radius.pdf

RADIUS Standards Specifications
http://www.ietf.org/rfc/rfc2138.txt (Authentication, April 1977)
http://www.ietf.org/rfc/rfc2139.txt (Accounting, April 1977)
http://www.ietf.org/rfc/rfc2865.txt (Authentication, June 2000)
http://www.ietf.org/rfc/rfc2866.txt (Accounting, June 2000)

Lucent White Paper
http://portmasters.com/marketing/whitepapers/radius_paper.html

Cisco: How Does RADIUS WORK?
http://www.cisco.com/warp/public/707/32.html

Microsoft: RADIUS Security and Best Practices:
http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/network/maintain/security/radiusec.asp

Intel: RADIUS Overview
http://support.intel.com/support/si/library/bi0407.htm

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