

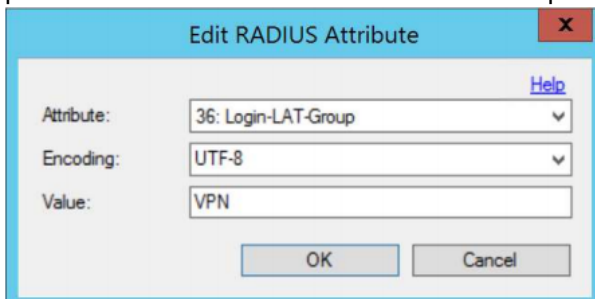
## How to Configure the Azure Multi-Factor Authentication Server for VPN Client Authentication

<https://campus.barracuda.com/doc/76284326/>

Install an Azure Multi-Factor Authentication (MFA) server and configure RADIUS authentication with the CloudGen Firewall as RADIUS client. The Azure MFA server supports only PAP and MSCHAPv2 when acting as a RADIUS server.

### Configure the MFA Server

1. Install your MFA server as described in <https://docs.microsoft.com/en-gb/azure/multi-factor-authentication/multi-factor-authentication-get-started-server-radius>.
2. On the MFA server, configure RADIUS authentication with the CloudGen Firewall as RADIUS client. Ideally, enable **Require Multi-Factor Authentication** user match, but you can also import/create the users manually.
3. In the MFA RADIUS authentication, you can assign a group in one of two ways:
  - To set one manually, go to **Attributes** on the MFA server, add **Login-LAT-Group**, and provide a value. Note that the firewall expects a group provided from the RADIUS server.



Or:

- The CloudGen Firewall can take the groups from Active Directory if LDAP servers are available. For more information, see [How to Configure MSAD Authentication](#).

### Configure RADIUS Authentication on the CloudGen Firewall

1. On the firewall, go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Services > Authentication Service**.
2. In the left navigation pane, select **RADIUS Authentication**.
3. From the **Configuration Mode** menu on the left, select **Advanced View**.
4. Enable the RADIUS scheme and add a new RADIUS server. Configure the settings with the correct IP address and port to match your MFA server details. For more information, see [How to Configure RADIUS Authentication](#).
  - In combination with manual group setup, leave **Group Attribute** values as default.
  - To allow the firewall to look up the users group via the MSAD scheme:

1. Set **User Info Helper Scheme** to **MSAD**.
2. Set **OTP Preserves State** to **Yes**.

|                         |      |
|-------------------------|------|
| User Info Helper Scheme | MSAD |
| OTP Preserves State     | Yes  |

5. Go to **Timeouts and Logging**.
6. Increase the **Request Timeout [s]** value from 10 to 130. (You may need to increase this value if your users are struggling to authenticate in time.)
7. Go to **VPN Settings** and **Click here for Server Settings**.
8. Increase the value for **Handshake Timeout (sec)** to 30. (You may need to increase this value if users are struggling to complete authentication in time.)

Server Configuration

|   |        |
|---|--------|
| Port 443 VPN Listener                                       | Yes    |
| CRL Poll Time (min)   | 0      |
| Global TOS Copy   | Off    |
| Global Replay Window Size, Packets(0...Use Default)         |        |
| Use Site to Site Tunnels for Authentication                 | Yes    |
| Pending Session Limitation                                  | Yes    |
| Prebuild Cookies on Startup                                 | No     |
| Tunnel HA Sync  | Yes    |
| Maximum Number of Tunnels                                   | <auto> |
| Allow Fast Requests   | Yes    |
| Handshake Timeout (sec)                                     | 30     |
| Allow Dynamic Mesh  | Yes    |
| Add VPN Routes to Main Routing Table (Single Routing Table) | No     |
| Allow Concurrent User Sessions                              | <auto> |
| Use Perfect Forward Secrecy                                 | Yes    |
| Accounting Information Storage Time (Days)                  | 14     |

9. Under **VPN > Client to Site**, go to **External CA** and click the **Rules** tab.
10. Select **Click here for options** and select **radius** as the **Authentication Scheme**. If you are not using MSAD as the Group Helper, configure the VPN group attribute value found to match the value you provided.

|                               |  |
|-------------------------------|--|
| Server                        |  |
| Authentication Scheme         | Default Authentication Sch ▾                           |
| Default Authentication Scheme | radius ▾   |
|                               | <input type="checkbox"/> Ras Login permission required |
| Server                        | -Use-Default- ▾  |
| Server Protocol Key           | -From-Server-Cert- ▾                                   |
| Used Root Certificates        | -Use-All-Known- ▾                                      |
| X509 Login Extraction Field   | -NONE- ▾   |

|                                 |                      |
|---------------------------------|----------------------|
| LDAP or Radius Attributes       |                      |
| IP Attribute Name               | <input type="text"/> |
| VPN Group Policy Name Attribute | VPN                  |

- On the VPN clients, you may also need to go into the **Advanced Settings** of the profile and adjust the **Connect Timeout** from the default of 10 to 60 (or greater) to give users enough time to complete the process.  
The more complex the method, the more time users will need.
- Configure the remaining settings as recommended at [Client-to-Site VPN](#).

## MFA Validation Methods

In the Microsoft MFA methods, you can configure the method either globally (**Company Settings**) or per user.

|  |            |                  |
|--|------------|------------------|
| <input checked="" type="checkbox"/> Enable Global Services |            |                  |
| <input checked="" type="radio"/> Phone call                | Standard ▾ | Reset Voiceprint |
| <input type="radio"/> Text message                         | One-Way ▾  | OTP ▾            |
| <input type="radio"/> Mobile app                           | Standard ▾ |                  |
| <input type="radio"/> OATH token                           |            |                  |

To enable the OTP via text message, you must make two changes:

- As indicated in the **User-** or **Company Settings**, configure **Text message with One-Way OTP** or **OTP plus PIN**. If you use **OTP plus PIN**, the OTP and the **PIN** must be entered as one value. For example: 12345**9876**
- To support OTP via the firewall:
  - Go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Services > Authentication Service**.

2. In the left navigation pane, select **RADIUS Authentication**.
3. Set **OTP Preserves State** to **Yes**.

|                         |      |   |   |
|-------------------------|------|---|---|
| User Info Helper Scheme | MSAD | ▼ | 📄 |
| OTP Preserves State     | Yes  | ▼ | 📄 |

## Figures

1. mfa01.png
2. mfa02.png
3. mfa03.png
4. mfa04.png
5. mfa\_valid.png
6. mfa02.png

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