

How to Configure Offline Firewall Authentication

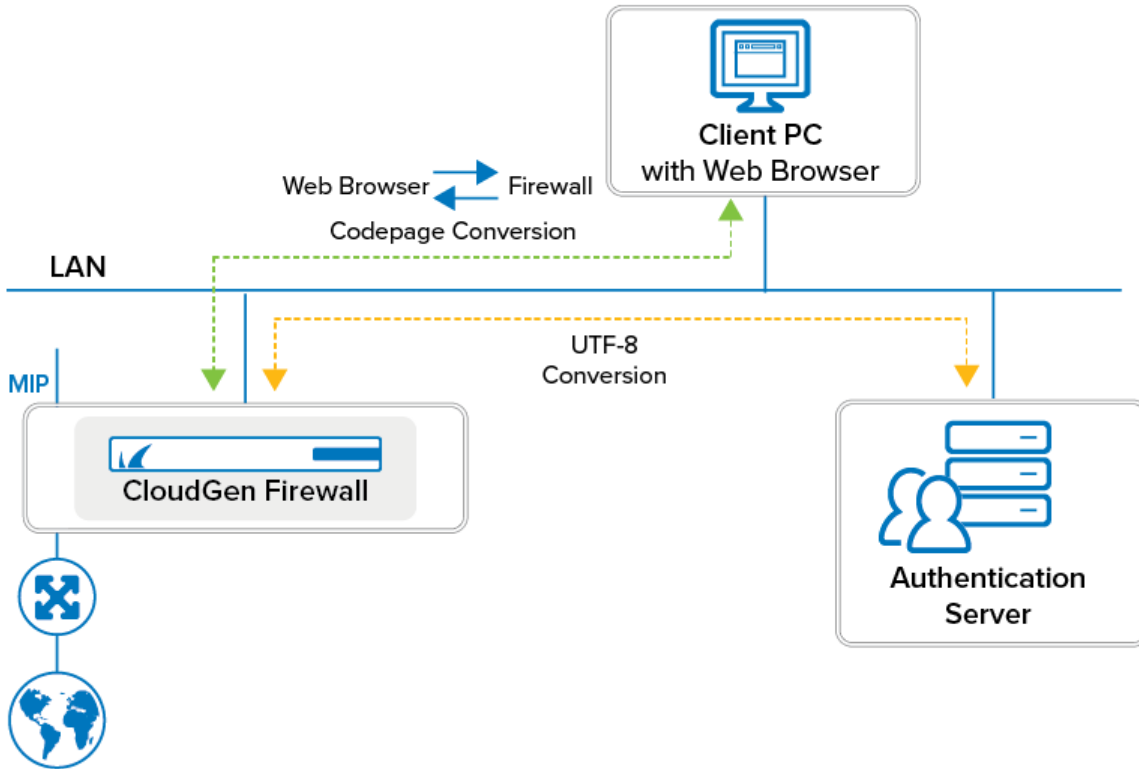
<https://campus.barracuda.com/doc/17537/>

Offline Firewall Authentication works with all CloudGen Firewall services. The user is authenticated by the fwauth daemon. To implement offline firewall authentication, configure your firewall authentication settings and create an App Redirect access rule with the destination set to an internal firewall IP to let users access the fwauth service. The user can then use the Barracuda CloudGen Authentication Client or the browser login. The fwauth service listens on 127.0.0.1. Depending on the type of authentication required, use the following ports:

- **TCP 80** - Username/password authentication. (HTTP only) Use for external authentication servers (e.g., MSAD).
- **TCP 443** - Username/password (HTTPS with automatic redirect to HTTPS for HTTP requests). Use for external authentication servers (e.g., MSAD).
This is the classic method for offline authentication, where a user connects directly to the firewall for authentication. After the login, a success page is displayed and the browser tab needs to stay open as described in this article below.
- **TCP 448** - Username/password (HTTP and HTTPS) with automatic redirection. Use for external authentication servers (e.g., MSAD).
This authentication method is intended to be used similarly to the guest access captive portal. Related rules are similar, and as a result any non-authenticated user will be first sent to fwauth and then be redirected back to the originating target URL.
- **TCP 444** - X.509 certificate authentication (HTTPS with automatic redirect to HTTPS for HTTP requests).
- **TCP 445** - X.509 certificate plus username/password authentication (HTTPS with automatic redirect to HTTPS for HTTP requests).

Usage of Special Characters and Umlauts in Passwords

When configuring Offline Firewall Authentication, you must consider whether passwords may contain special characters, e.g., € or umlauts. Because characters will be translated between the web browser and the firewall and between the firewall and the authentication service using codepages, it is important to decide which client codepage will be used and which authentication scheme supports the appropriate character conversion.



The following table shows if codepage will be used, under which constraints it will be used, and if special characters will be translated correctly:

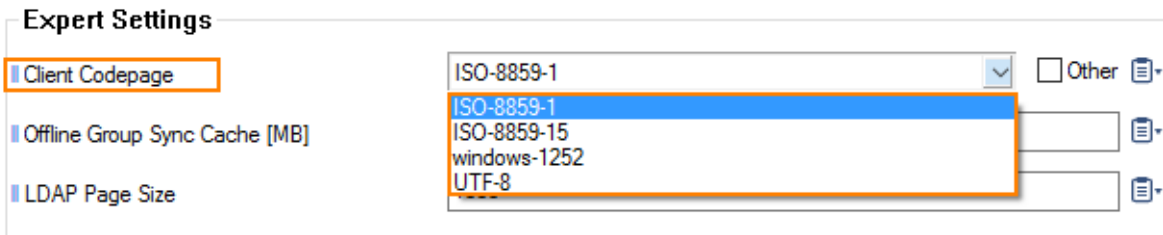
Conversion of special characters	Web Browser > CODEPAGE > Firewall	Firewall > CODEPAGE > Authentication Service	Authentication Scheme
NO	8859-1	UTF-8	Any
YES	8859-15	UTF-8	Any except NGFLocal
YES	UTF-8	UTF-8	Any except NGFLocal
YES	Windows 1252	-	NGFLocal

The codepage in the column *Web Browser > CODEPAGE > Firewall* can be configured.

(Optional) Step 1. Configure the Codepage if Special Characters Must Be Allowed in Passwords

1. Go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Service > Authentication Service.**
2. Click **Lock.**

3. In the left menu, click **Configuration Mode**.
4. In the left menu, click **Switch to Advanced**.
5. In the left menu, click **Timeouts and Logging**.
6. In the section **Expert Settings**, for **Client Codepage**, select the codepage according to the upper table and that best fits your requirements.



The screenshot shows the 'Expert Settings' section of the firewall configuration interface. The 'Client Codepage' setting is highlighted with an orange box. A dropdown menu is open, showing a list of codepages: ISO-8859-1, ISO-8859-15, windows-1252, and UTF-8. The 'ISO-8859-1' option is currently selected and highlighted in blue. To the right of the dropdown, there are three input fields with 'Other' and a list icon, each with a corresponding icon to its right.

7. Click **Send Changes**.
8. Click **Activate**.

Step 2. Configure the Firewall Authentication Settings

Set the HTTPS private key and certificate to activate firewall authentication.

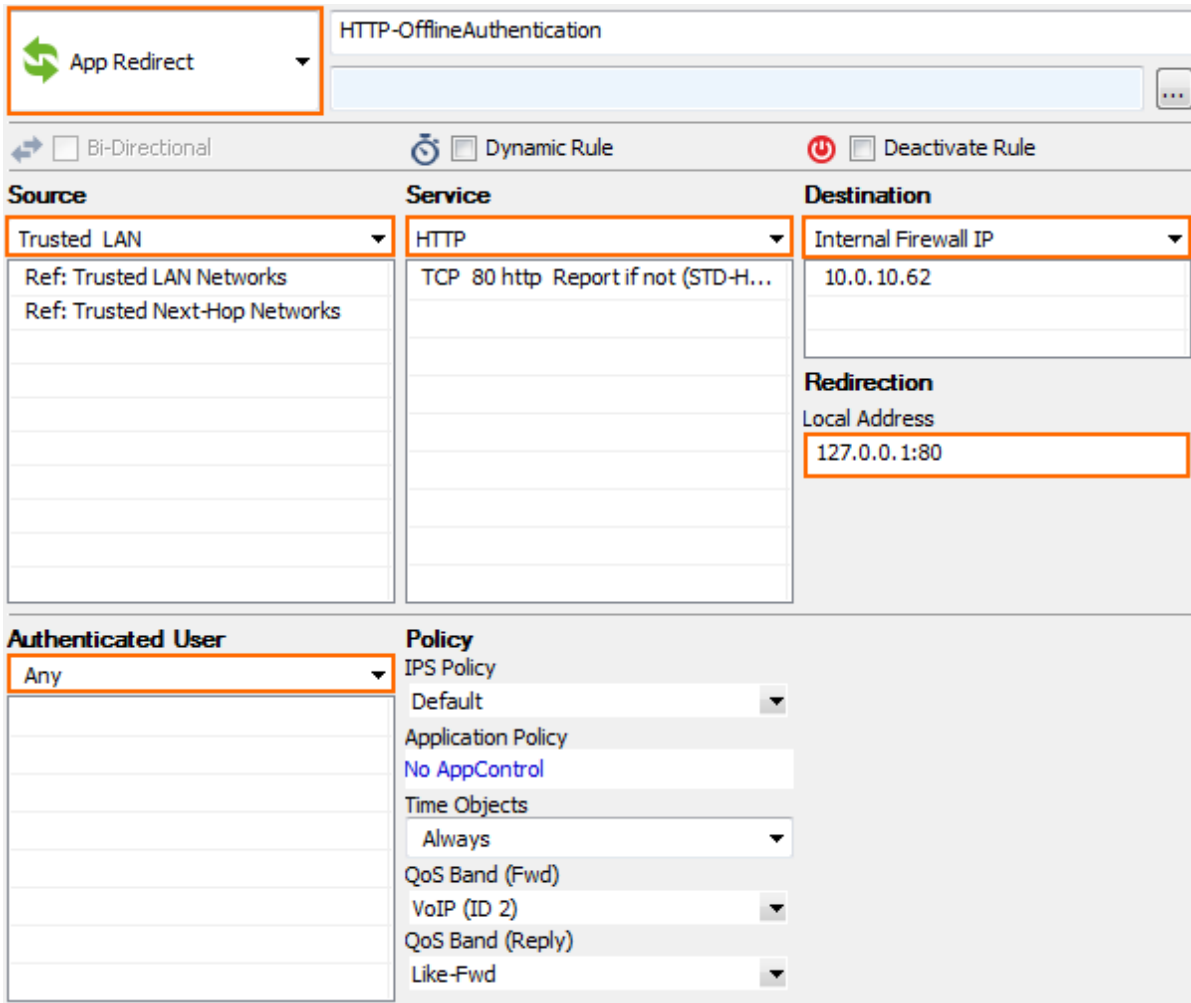
1. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > Firewall > Forwarding Settings**.
2. In the left menu, click **Authentication**.
3. Click **Lock**.
4. (optional) Edit the **Operational Settings**.
5. Upload or create the **HTTPS Private Key** and **Certificate**.
6. Select the **Authentication Scheme** from the list, e.g., **MS Active Directory**. For more information, see [Authentication](#).
7. Click **Send Changes** and **Activate**.

Step 3. Create Access Rules for Offline Authentication

To let users go directly to the firewall login page to log out or log in, set the **Destination IP** to an internal firewall IP (not the management IP).

1. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > Firewall > Forwarding Rules**.
2. Click **Lock**.
3. Create an **App Redirect** access rule for HTTP traffic:
 - **Source** - Select **Trusted Networks**, or enter the internal network for the clients who need to authenticate.

- **Service** - Select **HTTP**.
- **Destination** - Enter an internal IP used by the firewall service. Do not use the management IP.
- **Redirection** - Enter `127.0.0.1: <port>`. Enter the port of the authentication method supporting HTTP: 80, 444, 445, 448 - see list at the top of the page.
- **Authenticated User** - Select **Any**.



App Redirect

HTTP-OfflineAuthentication

Bi-Directional
 Dynamic Rule
 Deactivate Rule

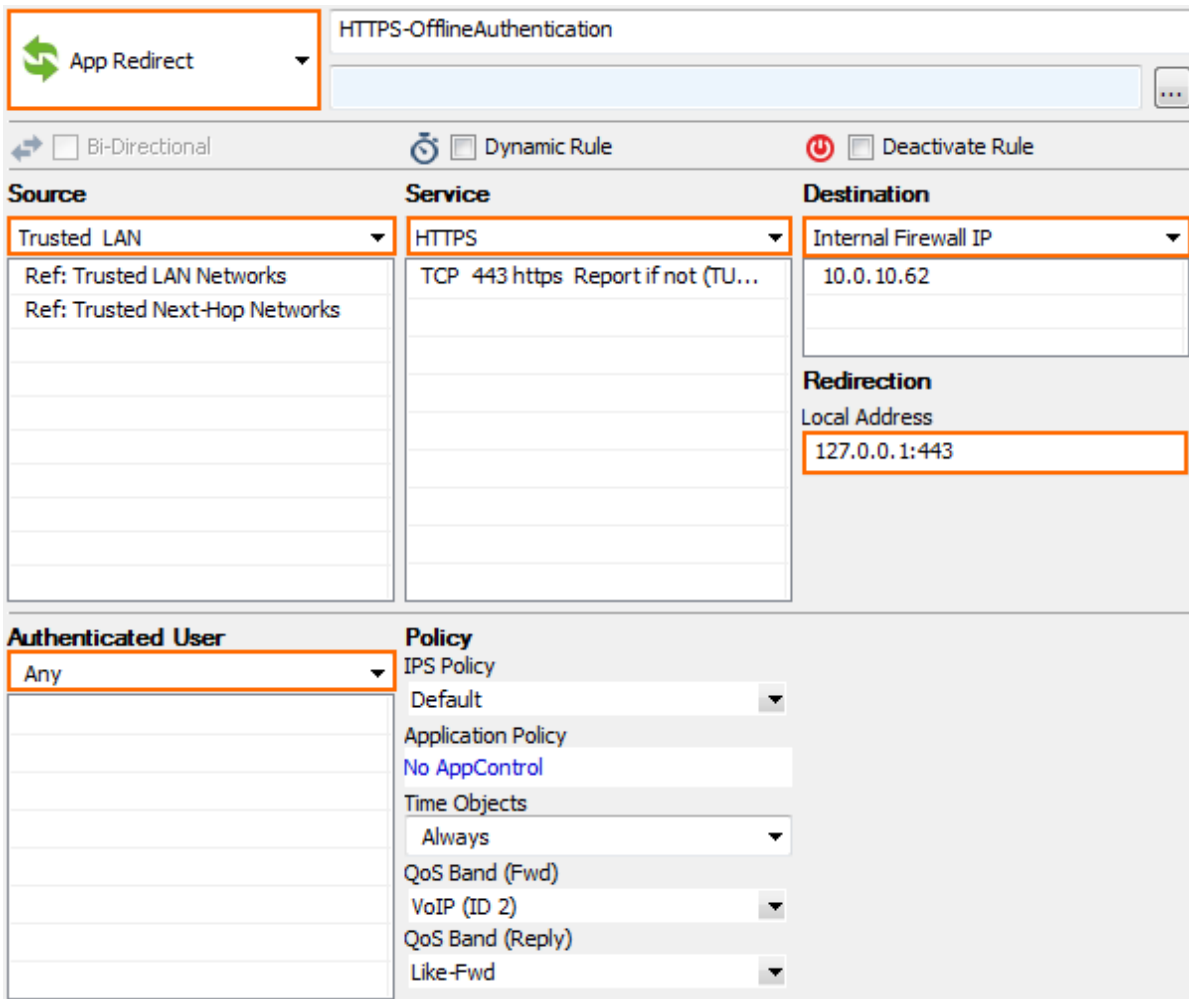
Source	Service	Destination
Trusted LAN Ref: Trusted LAN Networks Ref: Trusted Next-Hop Networks	HTTP TCP 80 http Report if not (STD-H...	Internal Firewall IP 10.0.10.62

Redirection
Local Address
127.0.0.1:80

Authenticated User	Policy
Any	IPS Policy Default Application Policy No AppControl Time Objects Always QoS Band (Fwd) VoIP (ID 2) QoS Band (Reply) Like-Fwd

4. (optional) Create an **App Redirect** access rule for HTTPS traffic:

- **Source** - Select **Trusted Networks**, or enter the internal network for the clients who need to authenticate.
- **Service** - Select **HTTPS**.
- **Destination** - Enter an internal IP used by the firewall service. Do not use the management IP.
- **Redirection** - Enter `127.0.0.1: <port>`. Enter the port of the authentication method supporting HTTP: 443, 444, 445, 448 - see list at the top of the page.
- **Authenticated User** - Select **Any**.



The screenshot shows the configuration for an **App Redirect** rule named **HTTPS-OfflineAuthentication**. The rule is currently **Deactivated**. The configuration is as follows:

Source	Service	Destination
Trusted LAN Ref: Trusted LAN Networks Ref: Trusted Next-Hop Networks	HTTPS TCP 443 https Report if not (TU...	Internal Firewall IP 10.0.10.62

Redirection
Local Address: 127.0.0.1:443

Authenticated User: Any

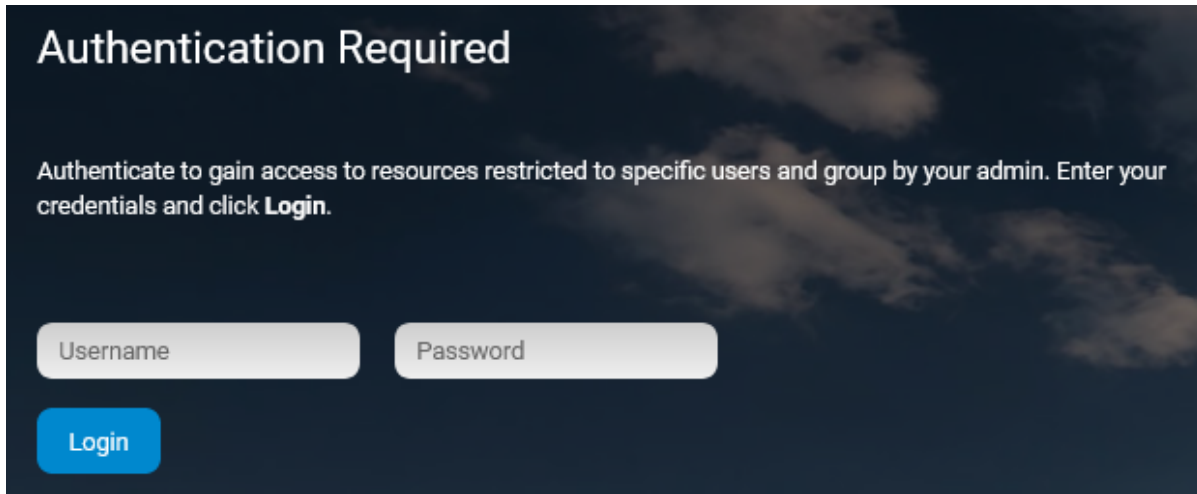
Policy
 IPS Policy: Default
 Application Policy: No AppControl
 Time Objects: Always
 QoS Band (Fwd): VoIP (ID 2)
 QoS Band (Reply): Like-Fwd

5. Move the redirect rules above the **INTERNET-2-LAN** rule.
6. Click **Send Changes** and **Activate**.

Step 4. Authenticate to the Barracuda CloudGen Firewall

After implementing offline authentication, you can use it to log into the CloudGen Firewall.

1. Go to **http://<IP address used as destination in the access rule>**
2. On the login screen, enter your user credentials, and click **Login**.



Authentication Required

Authenticate to gain access to resources restricted to specific users and group by your admin. Enter your credentials and click **Login**.

Username

Password

Login

Keep the authentication page open for as long as you need to be connected to the Barracuda CloudGen Firewall. If you close the browser, you are automatically logged out after five minutes. This limitation does not apply if you are using the [Authentication Client](#) to log in.

Depending on your browser, you may need to adjust performance settings in order to prevent inactive tabs from entering the sleep state after a certain amount of time. For example, in Microsoft Edge, go to **Settings > System and performance**, and change the settings for **Save resources with sleeping tabs**.

Figures

1. code_page.png
2. client_code_page.png
3. FWAuth_OFF01.png
4. FWAuth_OFF02.png
5. cgf_auth.png

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