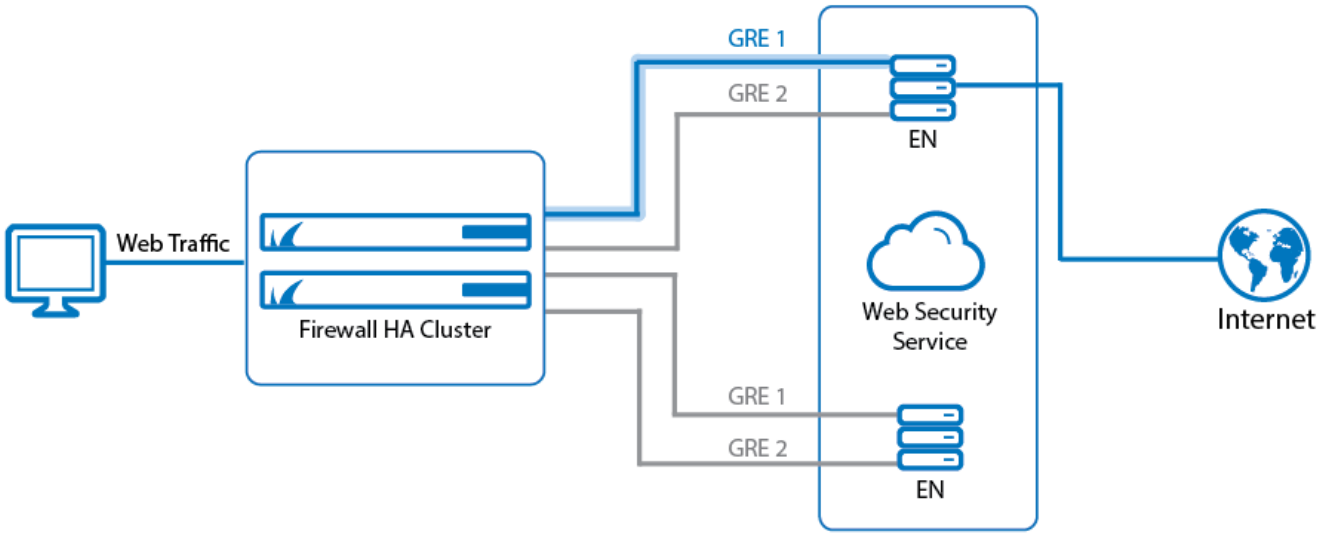
How to Configure Web Security Service Integration using GRE Tunnels and a Static Public IP

https://campus.barracuda.com/doc/68355191/

Barracuda Web Security Service offers a cloud-based web security solution. To forward web traffic from your internal networks to the Web Security Cloud Enforcement Nodes (EN), all traffic must be sent through two redundant GRE tunnels connecting the NextGen Firewall to the Web Security cloud. During normal operations, all web traffic uses the primary GRE tunnel. In case the primary tunnel goes down, all traffic is routed through the second GRE tunnel, which terminates in a different node. Traffic is redirected through the GRE tunnels using transparent redirect. This allows you to forward web traffic without using source NAT while allowing the Web Security Service to work with and log the original IP address of the client. Forwarding web traffic to the Web Security Service works for both high availability clusters and stand-alone firewalls.



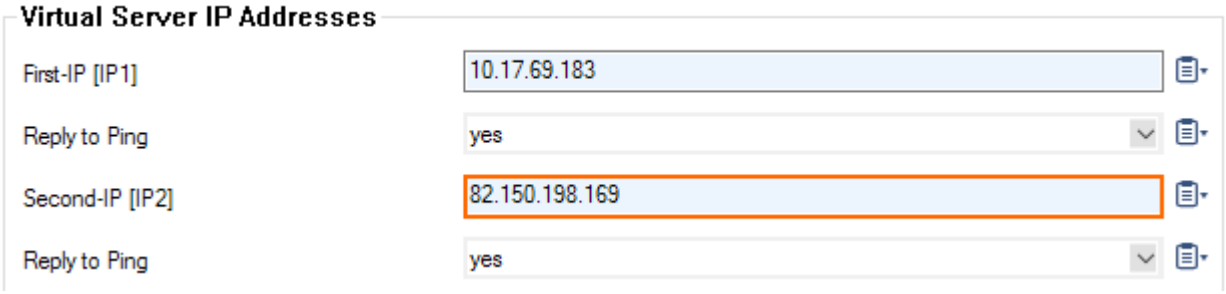
Limitations

- The firewall must use a WAN connection with a static public IP address.
- The forwarding firewall **Feature Level** must be set to **Release 6.2** or higher.

Before You Begin

- Contact Barracuda Networks Technical support to receive the GRE tunnel configuration.
- Go to **CONFIGURATION > Configuration Tree > Box > Virtual Servers > S1 > Server Properties** and verify that the public IP address used for the GRE tunnel is a **Server IP**. For

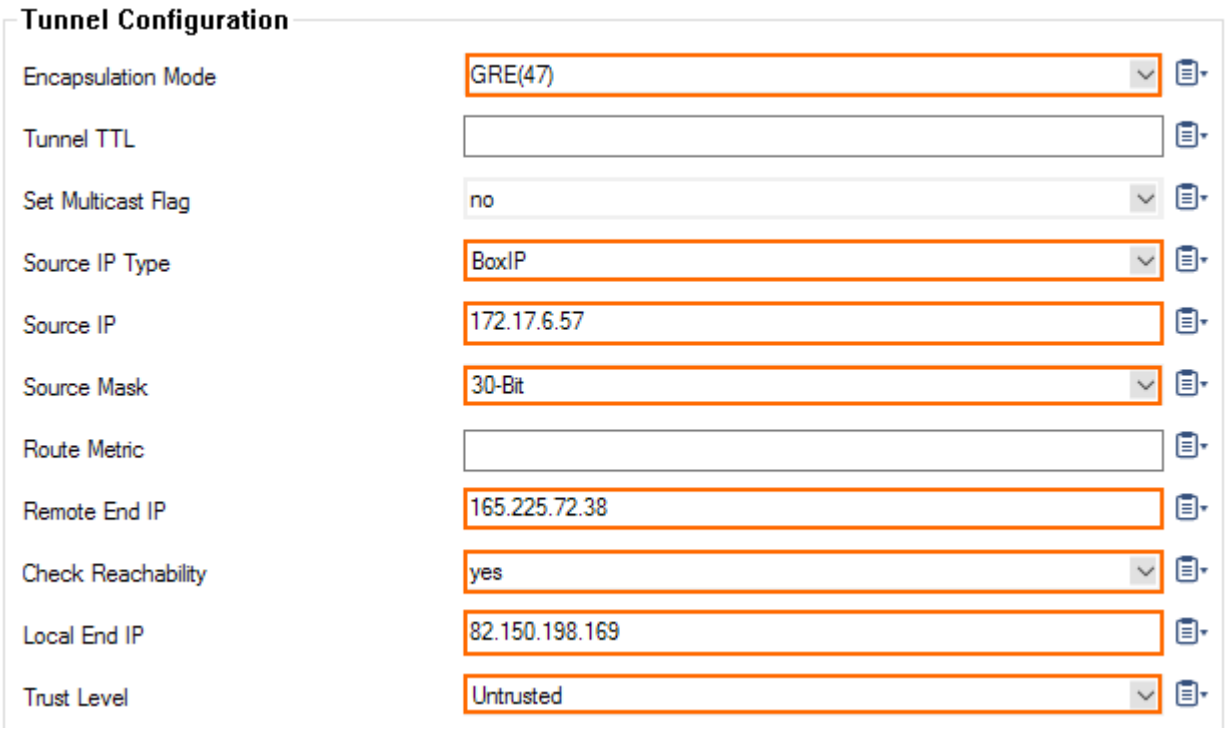
more information, see Virtual Servers and Services.



Step 1. Configure the Primary GRE Tunnel on the Primary Firewall

Create the GRE tunnel on the primary firewall.

1. Go to **CONFIGURATION > Configuration Tree > Box > Network**.
2. In the left menu, expand **Configuration Mode** and click **Switch to Advanced**.
3. In the left menu, click **IP Tunneling**.
4. Click **Lock**.
5. In the **Tunnel Configuration** table, click **+** to add an IP tunnel.
6. Enter a **Name**.
7. Click **OK**. The **Tunnel Configuration** window opens.
8. Enter the following for GRE tunnel settings:
   - **Encapsulation Mode** – Select **GRE(47)**.
   - **Source IP Type** – Select **BoxIP**.
   - **Source IP** – Enter the **Primary Internal Router IP** assigned by the Web Security Service.
   - **Source Mask** – Select **30-Bit**.
   - **Remote End IP** – Enter the **Primary Tunnel Destination** IP address assigned by the Web Security Service.
   - **Check Reachability** – Select **yes**.
   - **Local End IP** – Enter the public IP address of the firewall.
   - **Trust Level** – Select **Untrusted**.



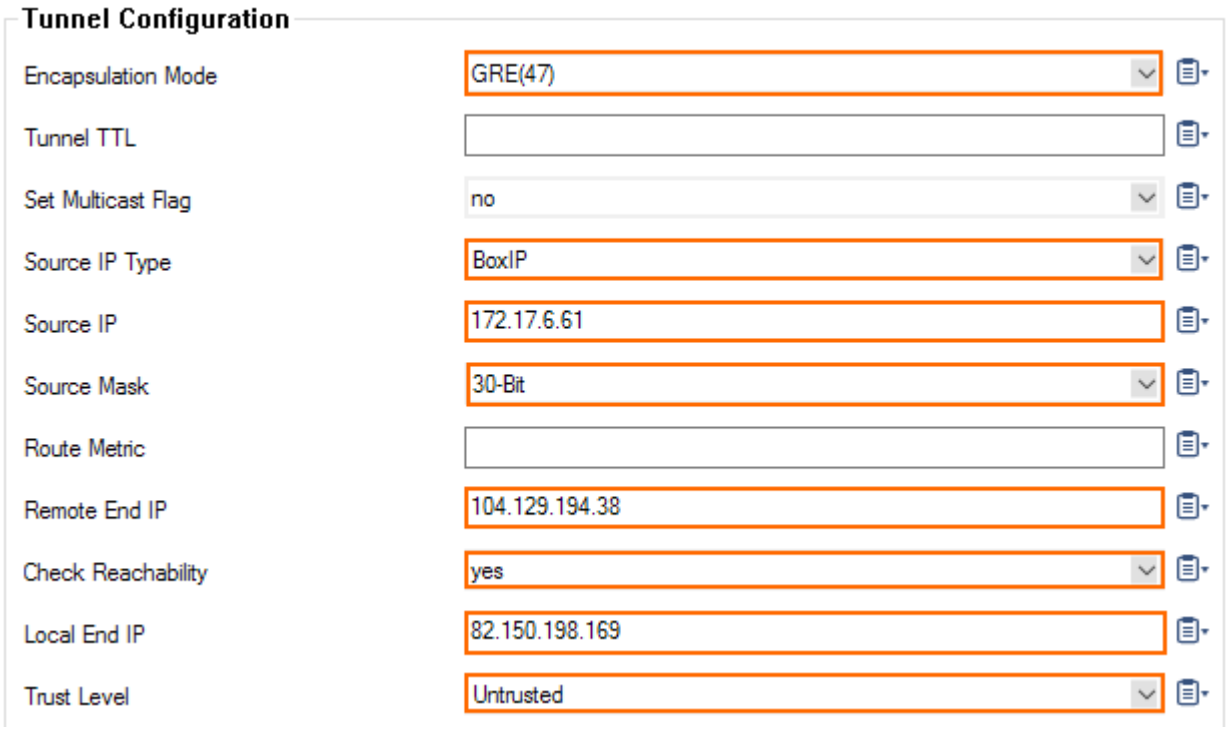
9. Click **OK**.
10. Click **Send Changes** and **Activate**.

Step 2. Configure the Secondary GRE Tunnel on the Primary Firewall

Create the secondary GRE tunnel. Use a higher metric for the secondary GRE tunnel, so that traffic is sent via the primary tunnel by default.

1. Go to **CONFIGURATION > Configuration Tree > Box > Network**.
2. In the left menu, expand **Configuration Mode** and click **Switch to Advanced**.
3. In the left menu, click **IP Tunneling**.
4. Click **Lock**.
5. In the **Tunnel Configuration** table, click **+** to add an IP tunnel.
6. Enter a **Name**.
7. Click **OK**. The **Tunnel Configuration** window opens.
8. Enter the following for GRE tunnel settings:
   - **Encapsulation Mode** – Select **GRE(47)**.
   - **Source IP Type** – Select **BoxIP**.
   - **Source IP** – Enter the **Secondary Internal Router IP** assigned by the Web Security Service.
     Source Mask – Select **30-Bit**.
   - **Remote End IP** – Enter the **Secondary Tunnel Destination** IP address assigned by the Web Security Service.
   - **Check Reachability** – Select **yes**.

- **Local End IP** – Enter the public IP address of the firewall.
- **Trust Level** – Select **Untrusted**.



9. Click **OK**.
10. Click **Send Changes** and **Activate**.

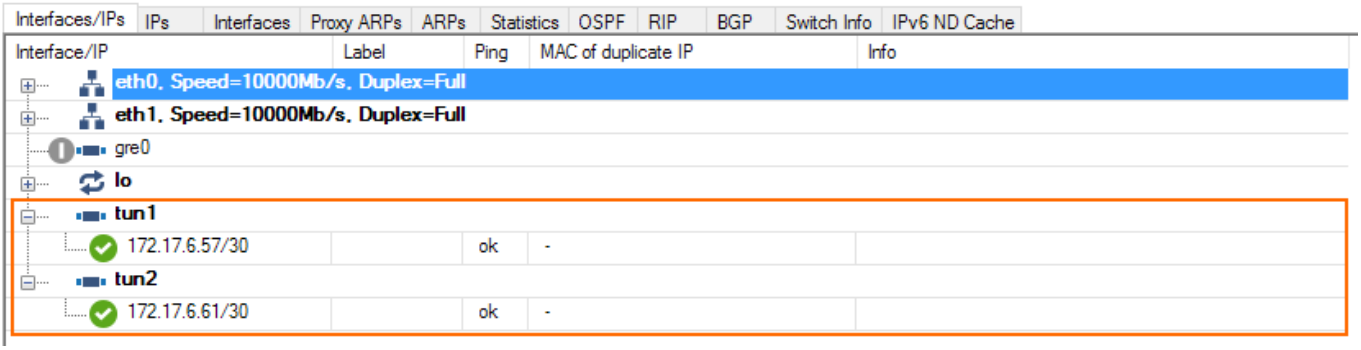
Step 3. (High Availability Clusters Only) Configure Identical GRE Tunnels on the Secondary Firewall

Repeat steps 1 and 2 to configure same GRE tunnels on the secondary firewall as well. Since the **Local End IP** is a server IP address, only the active firewall can send traffic through the GRE tunnels. Traffic can only be sent through the GRE tunnels on the active firewall.

Step 4. Activate the Network Configuration

1. Go to **CONTROL > Box**.
2. In the left menu, expand the **Network** section and click **Activate new network configuration**.
3. Click **Failsafe**.

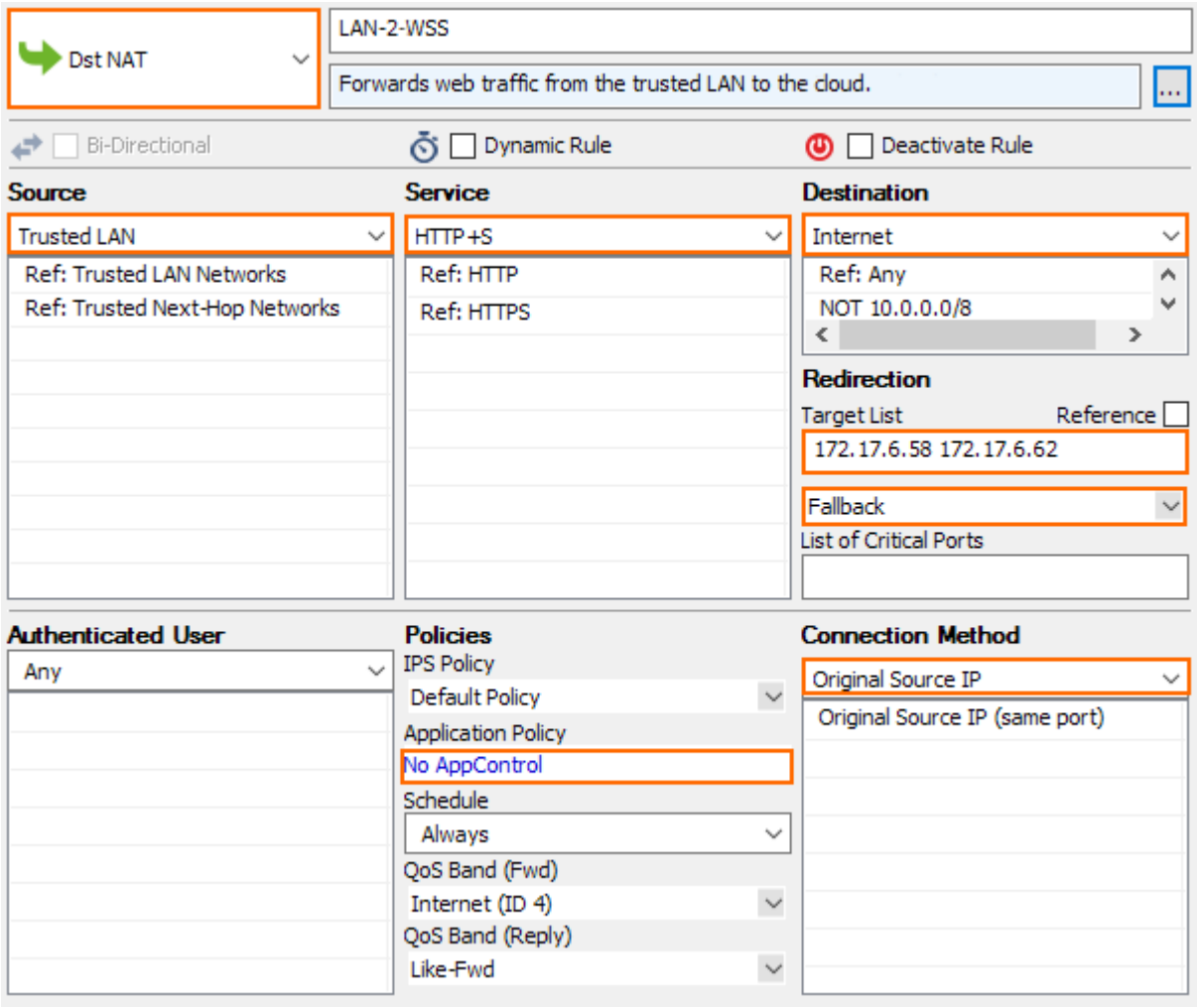
The **tun1** and **tun2** interfaces are now listed with a green status icon on the **CONTROL > Network** page of the primary and secondary firewalls.



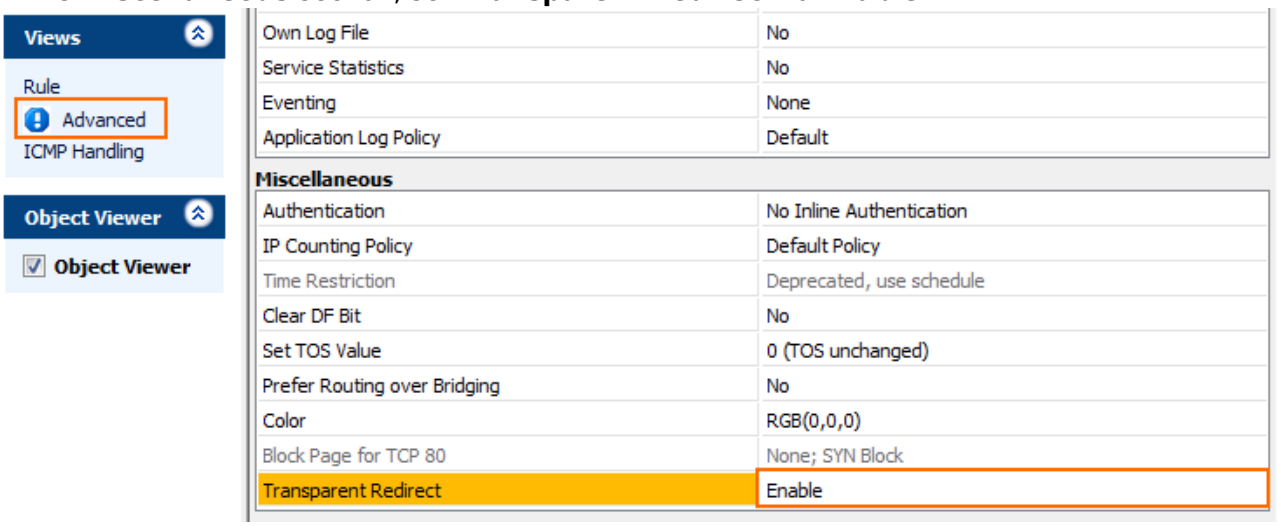
Step 5. Create Transparent Redirect Access Rule for Web Traffic

Create an access rule to send web traffic through the active GRE tunnel.

1. Go to **CONFIGURATION > Configuration Tree > Box > Virtual Servers > *your virtual servers* > Firewall > Forwarding Rules**.
2. Click **Lock**.
3. Create an access rule to forward selected traffic coming from your clients:
   - **Action** – Select **Dst NAT**.
   - **Source** – Select **Trusted Networks**, or select the network object containing the client networks.
   - **Destination** – Select **Internet**.
   - **Service** – Select **HTTP+S**.
   - **Target List** – Enter the **Primary Internal EN IP** and **Secondary Internal EN IP** separated by a space. E.g., `172.17.6.58 172.17.6.62`
   - **Fallback/Cycle** – Select **Fallback**.
   - **Connection Method** – Select **Original Source IP**.
   - **Application Policy** – Disable **Application Control**.



4. In the **Miscellaneous** section, set **Transparent Redirect** to **Enable**.



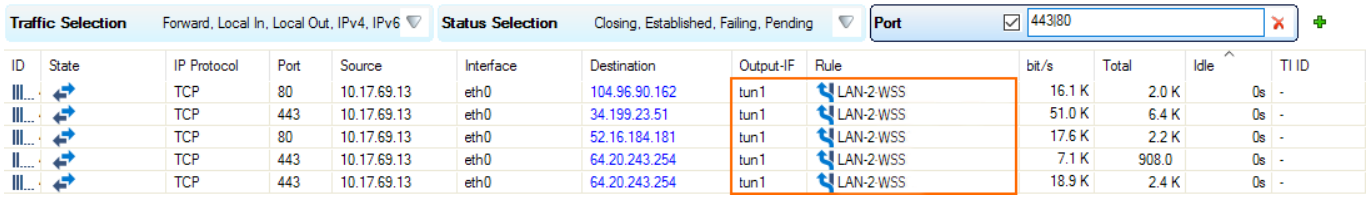
5. Click **OK**.
6. In the ruleset, drag and drop the access rule before all other access rules matching HTTP/HTTPS traffic from the client networks.
7. Click **Send Changes** and **Activate**.

Step 6. Configure the Web Security Service Web URL Filtering Policies

Configure the Web Security Service URL filtering policies in the Web Security cloud.

1. Sign into the Web Security Service portal.
2. Go to **Policy** – **URL & Cloud App Control**
3. Under **URL Filtering Policy**, click on Add **URL Filtering Rule**
4. Configure the policy:
   - **Rule Order** – Specify the order of precedence.
   - **Rule Status** – Enabled/Disabled
   - **URL Categories** – Specify the URL categories for filtering.
   - **HTTP Requests** – **All or POST**
   - **Users** – If this is a user-specific policy, choose the username. Otherwise, select **Any** to apply the policy to all users.
   - **Groups** – If this is a specific group-based rule, select the group name. Otherwise, select **Any** to apply the rule to all users and groups.
   - **Departments** – Select any specific department or choose **Any**.
   - **Locations** – Select any specific location or choose **Any**.
   - **Time** – Select any specific time or choose **Any**.
   - **Action** – Select **Allow**, **Caution**, or **Block** based on the policy.
   - **Daily Bandwidth Quota (MB), Time Quota (min) (optional)** – If the **Action** is set to **Allow** or **Caution**, you can specify the bandwidth and time quota.
   - **Allow Override** – Enable to allow specific users or groups access to the blocked site.
   - **Description** – Describe the policy name.
5. Click **Save**.

All HTTP and HTTPS traffic is now sent through the active GRE tunnel to the Web Security Service enforcement point to be processed according to the web filtering rules.



Figures

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