PALO ALTO NETWORKS FIREWALL 11.0 ESSENTIALS

Lab 9: Blocking Inappropriate Web Traffic with Advanced URL Filtering

Document Version: 2025-10-13

Copyright © 2025 Network Development Group, Inc.
www.netdevgroup.com

NETLAB+ is a registered trademark of Network Development Group, Inc.

Palo Alto Networks, PAN-OS, WildFire, RedLock, and Demisto are registered trademarks of Palo Alto Networks, Inc. All other marks mentioned herein may be trademarks of their respective companies.

Contents

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

Introduction

Access restrictions for potentially malicious or inappropriate websites can be achieved through two distinct approaches.

The first method involves the creation of Security Policy rules with a "Deny" action, incorporating URL categories as part of the rule criteria. This approach allows for granular control over web access by specifying which categories of websites should be blocked.

The second method entails the development of a dedicated URL Filtering Profile that encompasses blocked website categories. This Profile is subsequently applied to a specific Security Policy rule that permits the use of web-browsing and SSL applications.

This strategy offers a balanced approach, granting users access to web resources while ensuring that they conform to predefined security and content filtering guidelines.

In this lab, you will use both methods so that you can see the differences in how they are configured and in the kind of detail available through the logs when you use one method compared to the other.

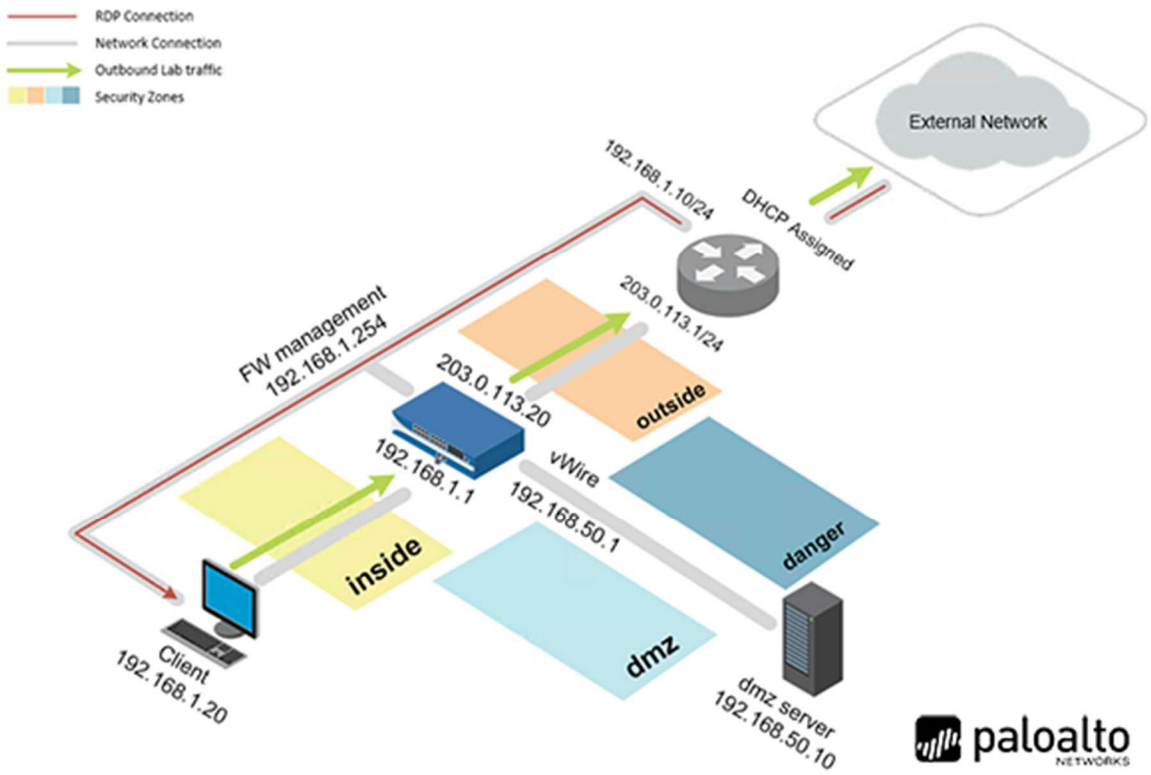
Objective

In this lab, you will perform the following tasks:

- Test access to inappropriate web content without URL blocking in place.
- Create a Security Policy rule to block inappropriate web content using the URL Category.
- Test the Security Policy rule and examine the results.
- Disable the Security Policy rule.
- Create and apply a URL Filtering Profile to block access to a malicious URL.
- Test the Security Profile and examine the results.

Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

Lab Topology



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

Lab Settings

The information in the table below will be needed in order to complete the lab. The task sections below provide details on the use of this information.

Virtual Machine	IP Address	Account (if needed)	Password (if needed)
Client	**192.168.1.20**	`lab-user`	`Pal0Alt0!`
DMZ	**192.168.50.10**	`root`	`Pal0Alt0!`
Firewall	**192.168.1.254**	`admin`	`Pal0Alt0!`
vRouter	**192.168.1.10**	`root`	`Pal0Alt0`

Lab Guidance

There are two sections in this lab guide:

- High-Level Lab Steps
- Detailed Lab Steps

The High-Level Lab Steps section provides only general guidance and information about how to accomplish the lab objectives. This section is more challenging and is suited for students who have a working knowledge of Palo Alto Networks firewalls. If you have never worked with a Palo Alto Networks firewall, we strongly encourage you to use the Detailed Lab Steps section.

The instructions in the Detailed Lab Steps section provide guided, detailed steps and screenshots to accomplish the lab objectives.

If you decide to use the High-Level Lab Guide and get stuck, switch to the Detailed Lab Guide for guidance.

You are not required to complete both the High-Level Lab Guide and the Detailed Lab Guide for each lab. Instead, please select the appropriate section based on your familiarity with Palo Alto Networks Firewalls.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

1 Blocking Inappropriate Web Traffic with Advanced URL Filtering - High Level Lab Steps

It is recommended to use this section if you possess significant experience in working with Palo Alto Networks firewalls. In case you require more comprehensive instructions to achieve the objectives, please utilize the Detailed-Lab Steps section in Task 2.

1.1 Apply a Baseline Configuration to the Firewall

- On the Zorin desktop, select *lab-user*, enter **Pal0Alt0!** for the password.
- For the Palo Alto Firewall, enter **admin** for the user and **Pal0Alt0!** for the password.
- Load and commit the configuration file - **edu-210-11.0a-09.xml** to the Firewall.

1.2 Test Access to Inappropriate Web Content

- Run the **Clear Firewall Logs** script on the *client* desktop.
- Use Firefox to browse to **hacker9.com** and **hidester.com** and verify that both sites are available.

1.3 Create a Security Policy Rule to Block Categories

- Use the information in the tables below to create a Security Policy rule to block traffic to certain URL Categories:

Rule Name	**Block-Bad-URLs**
Description	**Blocks bad URLs based on categories**
Source Zone	**Users_Net**
Destination Zone	**Internet**
Application	**Any**
Service	**application-default**
URL Category	Add the following: **adult** **command-and-control** **extremism** **hacking** **high-risk** **malware** **nudity** **parked** **peer-to-peer** **phishing** **proxy-avoidance-and-anonymizers** **questionable**

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

Action	**Deny**

- Move the **Block-Bad-URLs** rule to the top of the Security Policy.

1.4 Commit the Configuration

- Commit the changes before proceeding.

1.5 Test Access to URLs Blocked by the Security Policy

- Use Firefox and attempt to connect to **hacker9.com** and **hidester.com**.
- Note the message displayed by browser.
- Examine the **Traffic** log and use a filter to locate entries that have been blocked by the **Block-Bad-URLs.**
- Examine the **URL Filtering** log and use a filter to locate entries that have been blocked by the firewall.

1.6 Block Access to Inappropriate Web Content Using Security Profile

- Create a URL Filtering Profile using the information in the table below:

Name	**Corp-URL-Profile**
Description	**Standard corporate URL profile for all security policy rules**
Site Access All Categories (except those below)	**Alert**
Site Access Block	**adult** **command-and-control** **copyright-infringement** **extremism** **hacking** **high-risk** **malware** **nudity** **parked** **peer-to-peer** **phishing** **proxy-avoidance-and-anonymizers** **questionable** **unknown**

Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

1.7 Add the URL Profile to the Corp-Profiles-Group

- Edit the **Corp-Security-Group** and add the URL Filtering Profile **Corp-URL-Filtering**.

1.8 Disable Block-Bad-URLs Rule

- Disable the **Block-Bad-URLs** in the Security Policy so that it does not interfere with your URL Filtering Profile testing.

1.9 Commit the Configuration

- Commit the changes before proceeding.

1.10 Test Access to URLs Blocked by a URL Filtering Profile

- Use Firefox and browse to **hidester.com** and **hacker9.com.**
- Note the difference between this error page and the one you received when using a Security Policy rule to block categories.
- Examine the **Traffic** log and use a filter to display entries that fall in the URL Category of **hacking.**
- Examine the **URL Filtering** Log and use a filter to display entries that fall in the URL Category of **hacking**.

1.11 Create a Custom URL Category

- Use the information in the table below to create a **Custom URL Category**:

Parameter	Value
Name	**Block-Per-Company-Policy**
Description	**URLs that are blocked by company policy.**
Sites	Add the following: ***.nbcnews.com** ***.theguardian.com**

1.12 Use Custom Category to Block URL Access in Security Policy Rule

- Enable the Security Policy Rule **Block-Bad-URLs.**
- Add the **Block-Per-Company-Policy** custom URL category to the rule.

1.13 Commit the Configuration

- Commit the changes before proceeding.

1.14 Test Access to Custom URLs Blocked by the Security Policy

- Use the Firefox browser and connect to **www.nbcnews.com** and **www.theguardian.com.**
- Note the **Application Blocked** page message presented by the firewall.
- Examine the **URL Filtering** log and use it to locate entries with an **Action** of **block-url.**

Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

1.15 Add Custom URL Category to URL Filtering Profile

- Edit the **Corp-URL-Profile** and set the **Site Access** for **Block-Per-Company-Policy** to **block**.
- Disable the Security Policy rule **Block-Bad-URLs** so that it does not interfere with the URL Filtering Profile.

1.16 Commit the Configuration

- Commit the changes before proceeding.

1.17 Test Access to Custom URLs Blocked by the URL Filtering Profile

- Use Firefox and browse to **www.nbcnews.com** and **www.theguardian.com.**
- Note the Block page presented by the firewall.

1.18 Create an EDL to Block Malicious URL Access

- Use the information in the table below to create an **External Dynamic List:**

Parameter	Value
Name	**malicious-urls-edl**
Type	**URL List**
Description	**List of malicious URLs maintained on Extranet server**
Source	**http://192.168.50.80/malicious-urls.txt** (The EDL contains only the URL www.popurls.com)
Check for updates	**Every Five Minutes**

1.19 Block Access to the URL List with a Security Policy Rule

- Add the **malicious-urls-edl** to the URL Category of the **Block-Bad-URLs** Security Policy rule.
- Enable the **Block-Bad-URLs** Security Policy rule.

1.20 Commit the Configuration

- Commit the changes before proceeding.

1.21 Test Access to URLs Blocked by the EDL in the Security Policy

- Use Firefox and browse to **http://www.popurls.com**.
- Note the Application Blocked that the firewall displays.
- Examine the **URL Filtering** log.
- Use a filter that will display entries that have an action of block-url.
- Disable the Security Policy rule **Block-Bad-URLs**.

1.22 Commit the Configuration

- Commit the changes before proceeding.

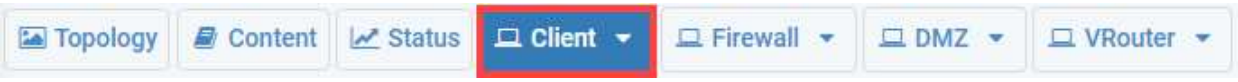
Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

2 Blocking Inappropriate Web Traffic with Advanced URL Filtering – Detailed Lab Steps

2.1 Apply a Baseline Configuration to the Firewall

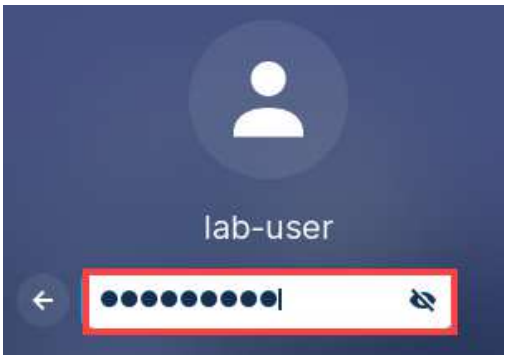
In this section, you will connect to the Firewall and load the Firewall configuration file.

1. Click on the **Client** tab to access the Client PC.



2. On the *Zorin* desktop, click **lab-user.**

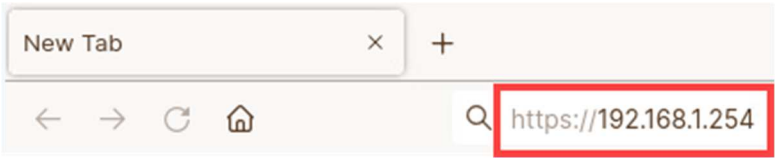
3. For the *lab-user* password, enter **Pal0Alt0!** and press **Enter**.



4. Double-click the **Firefox Web Browser** icon located on the *Desktop*.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

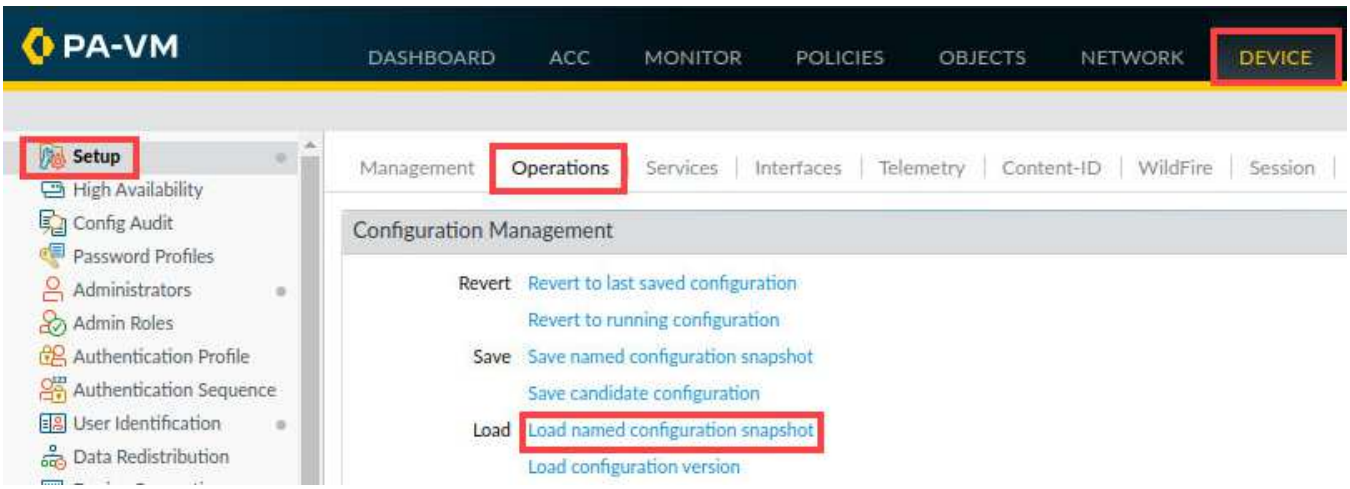
5. In the *Firefox* address field, type **`https://192.168.1.254`** and press **Enter**.



6. Log in to the Firewall web interface as username **admin**, password **`Pal0Alt0!`**.

If you do not immediately see the login page, please wait an additional 1-3 minutes for the *Firewall* to fully initialize. If needed, refresh the page.

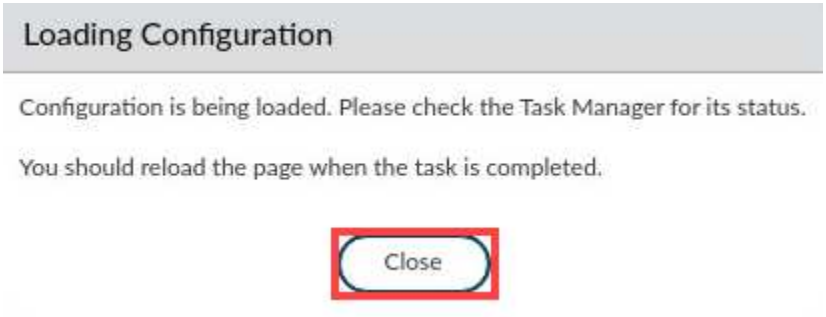
7. Navigate to **Device > Setup > Operations** in the web interface and click on **Load named configuration snapshot** underneath the *Configuration Management* section.



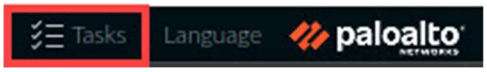
 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

8. In the *Load Named Configuration* window, select **edu-210-11.0a-09.xml** from the *Name* drop-down box and click **OK**.

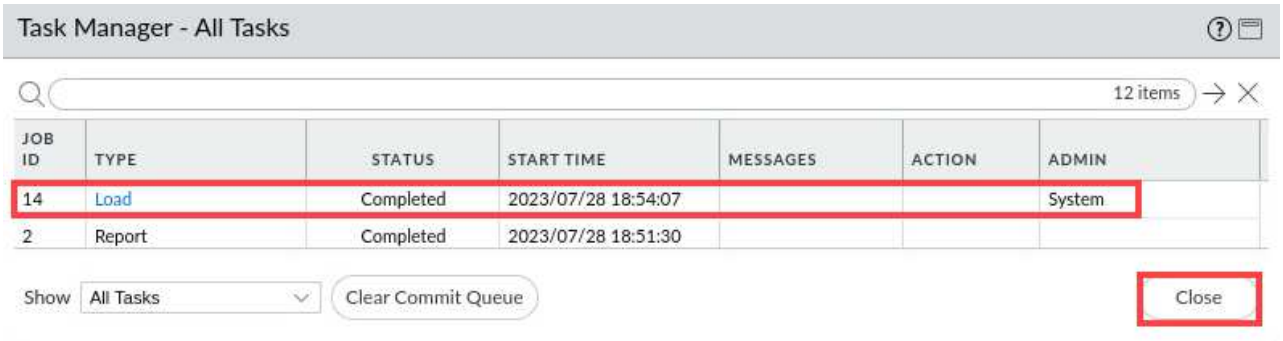
9. In the *Loading Configuration* window, a message will show *Configuration is being loaded*. *Please check the Task Manager for its status. You should reload the page when the task is completed.* Click **Close** to continue.



10. Click the **Tasks** icon located at the bottom-right of the web interface.



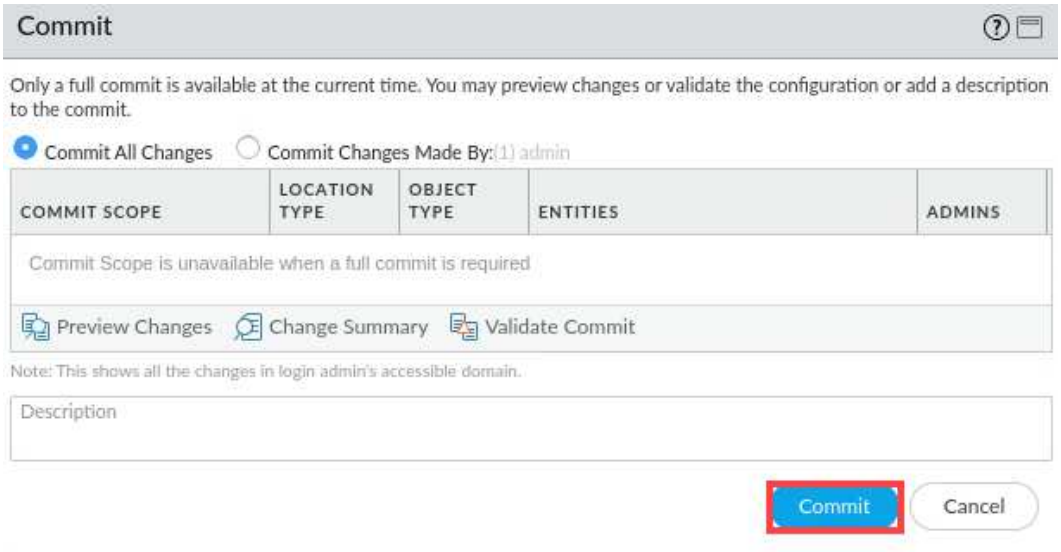
11. In the *Task Manager – All Tasks* window, verify the *Load* type has been completed. Click **Close**



12. Click the **Commit** link located at the top-right of the web interface.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

13. In the *Commit* window, click **Commit** to proceed with committing the changes.



14. When the commit operation is complete, click **Close** to continue.

The commit process takes changes made to the Firewall and copies them to the running configuration, which will activate all configuration changes since the last commit.

15. Minimize the *Palo Alto Networks Firewall* open and continue to the next task.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

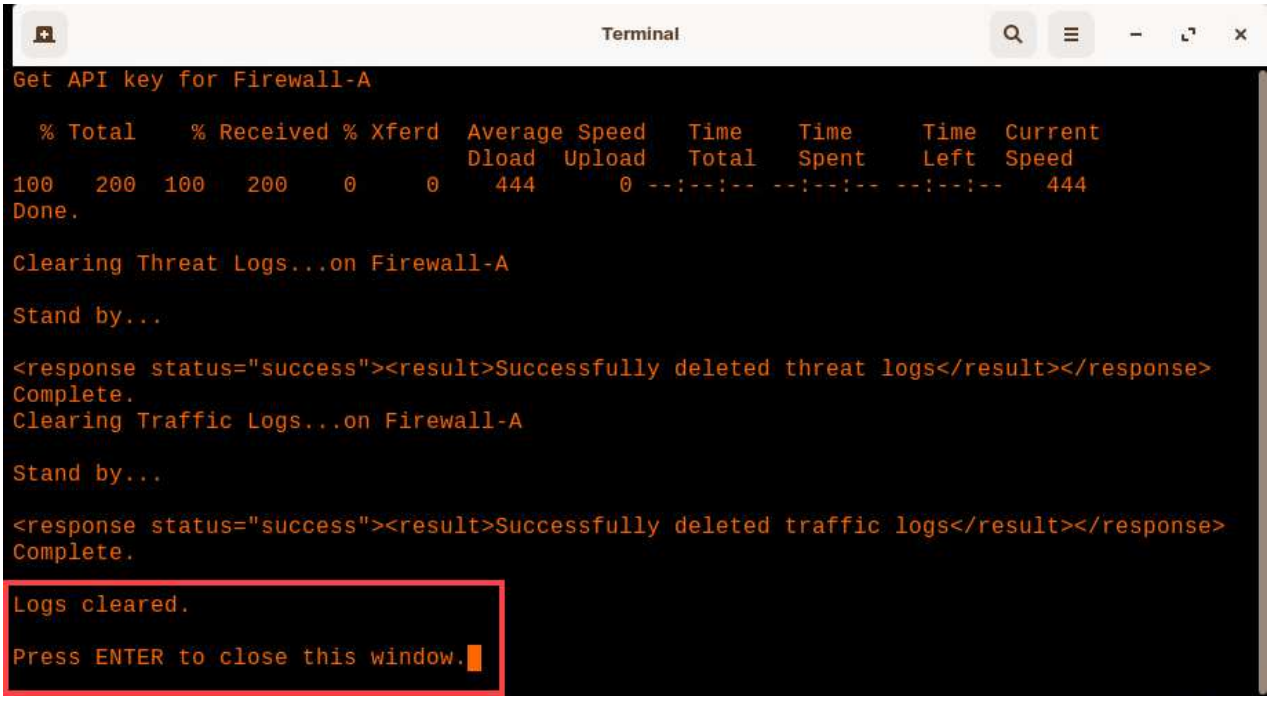
2.2 Generate Traffic Without Security Profiles

You can block access to inappropriate or malicious URLs by creating rules in the Security Policy. In this section, you will create a rule that blocks access to several URL categories.

Before you create the rule, you will clear the log file entries on the firewall (to make it easier to see new entries generated during this lab). You will also test access to two websites to verify that they are not being blocked.

1. On the client desktop, double-click the **Clear Logs Firewall-A** application.

2. Verify the *Clear Logs* script has cleared the logs. Press **Enter**.



3. On the client desktop, open another **Firefox Web Browser** application.

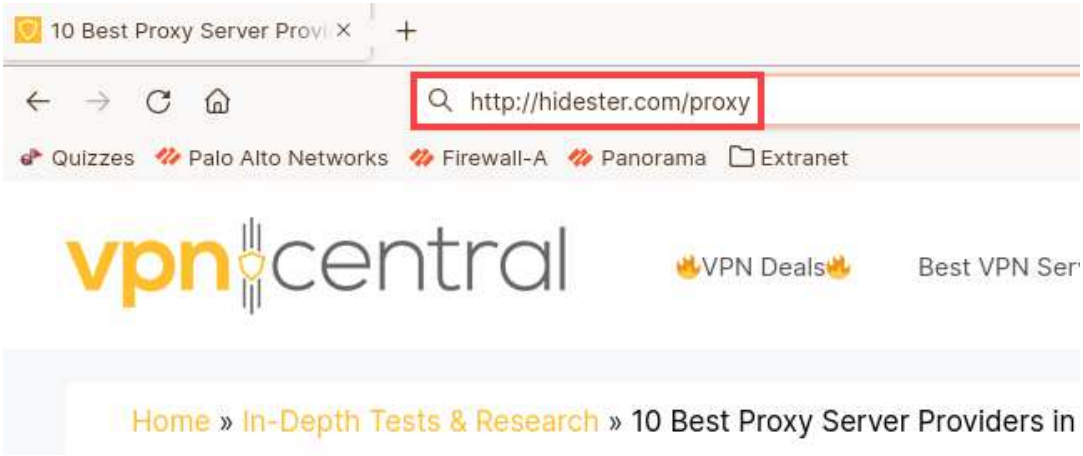
 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

4. Type **`http://www.hacker9.com`**, which belongs to the URL category *hacking*.

Please Note

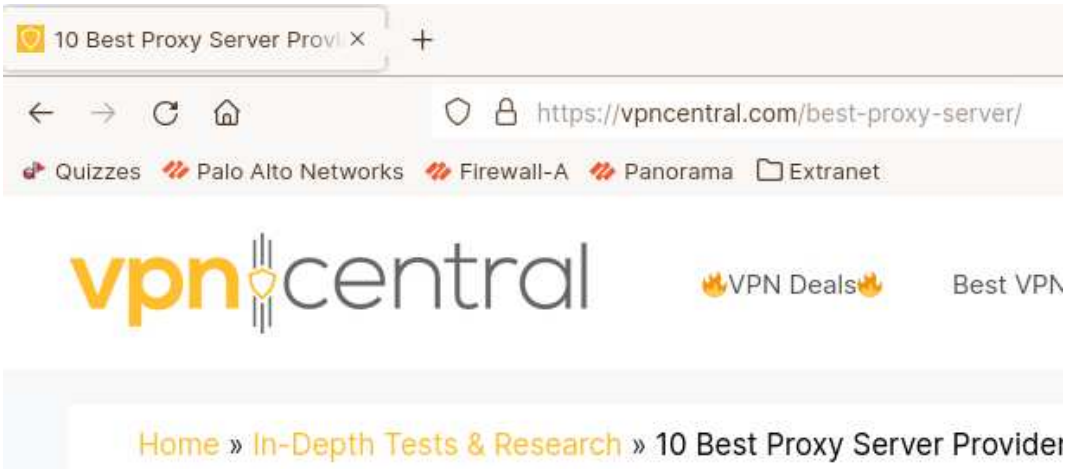
The browser should display a valid webpage.

5. Type **`http://www.hidester.com/proxy`**, which belongs to the URL category *proxy-avoidance-and-anonymizers*.



Please Note

The browser should display a valid webpage. Notice the redirect to vpncentral.com.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

6. Close the *Firefox browser*.

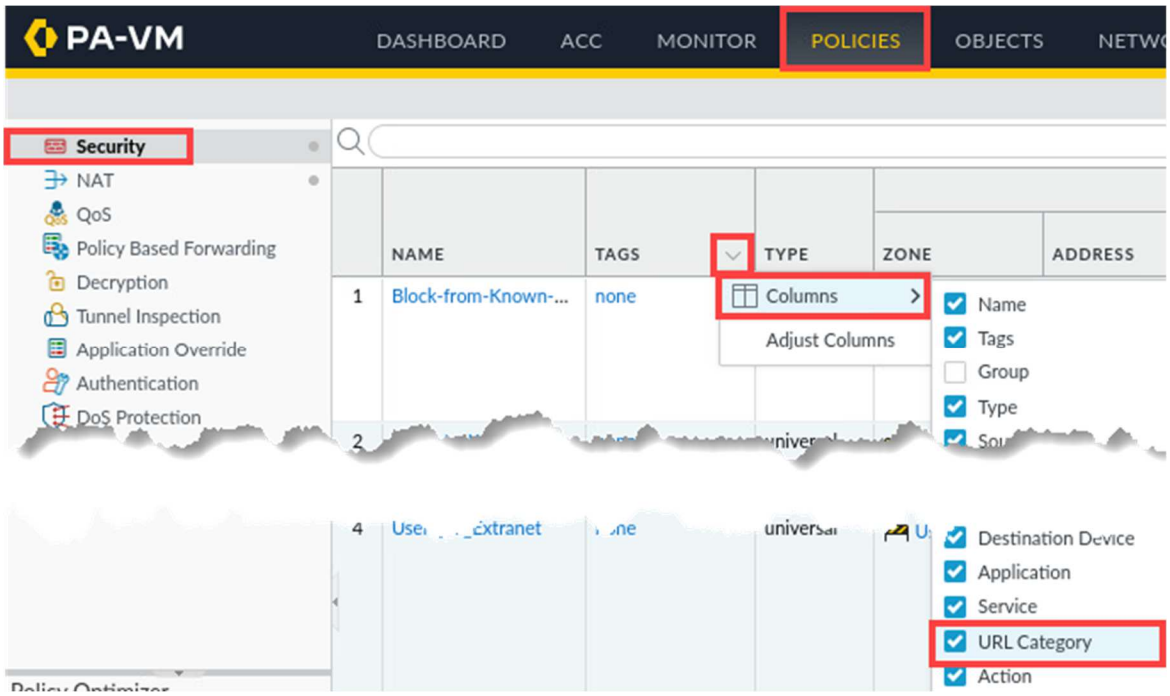
7. Re-open the *PA-VM firewall* web interface by clicking on the **firewall-a – Mozilla Firefox** icon in the task bar.

8. Leave the *Palo Alto Networks Firewall* open and continue to the next task.

2.3 Create a Security Policy Rule to Block Categories

In this section, you will block access to known-malicious URLs by configuring the firewall's URL Filtering feature. You will add URL categories to a Security policy rule configured to block traffic.

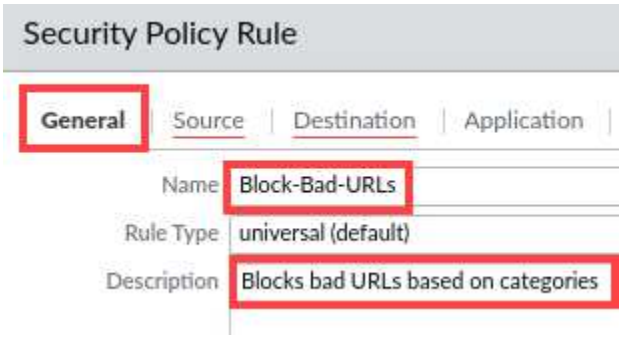
1. In the web interface, select **Policies > Security**. If the **URL Category** column is not displayed, click the **down-arrow** menu that appears next to any column header (hover your pointer over a header to see the **Down arrow**) and select **Columns > URL Category.**



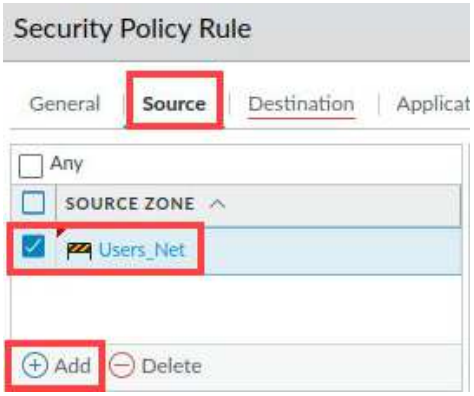
2. In the *Security Policies* window, click **Add** to create a *new Security policy* rule.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

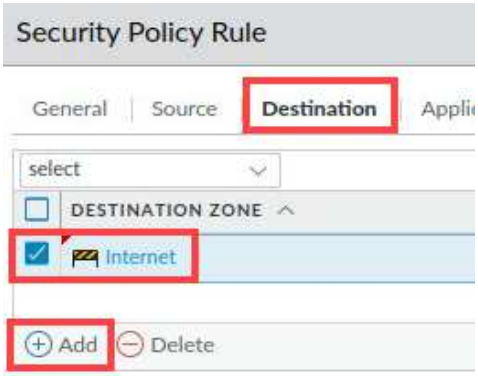
3. In the *Security Policy Rule* window, on the *General* tab, type **Block-Bad-URLs** as the *Name*. For *Description*, enter **Blocks bad URLs based on categories**.



4. Click the **Source** tab and for the *Source Zone*, select **Users_Net**.



5. Click the **Destination** tab and for the *Destination Zone*, select **Internet**.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

6. Click the **Application** tab and verify that **Any** is selected.

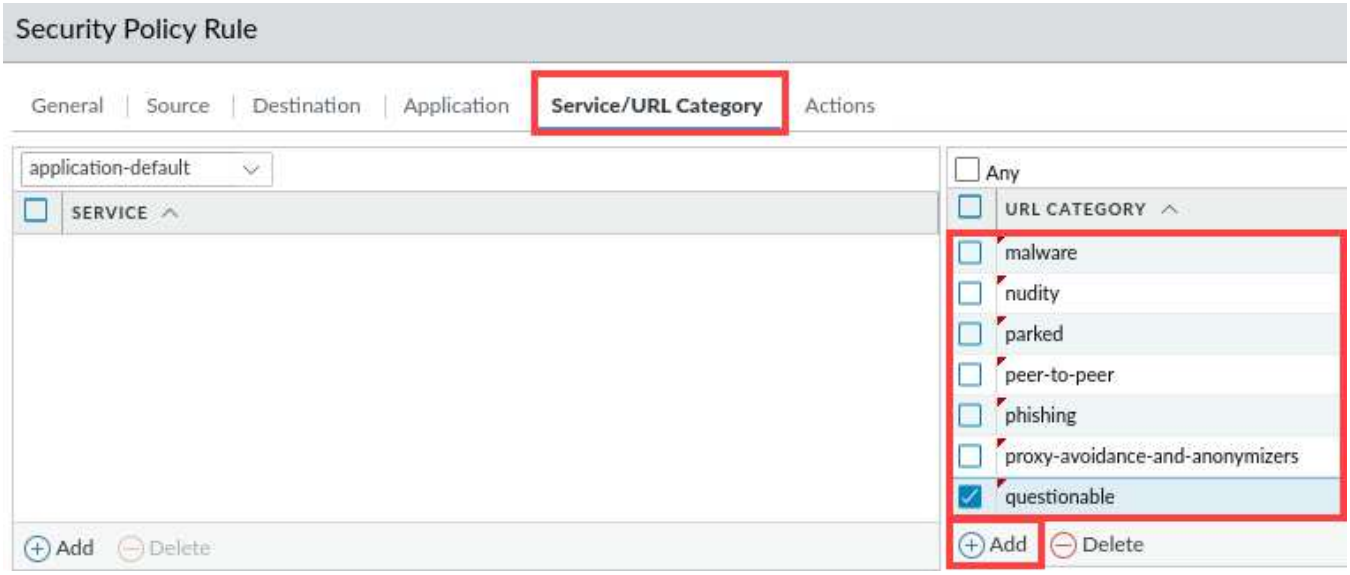
7. Click the **Service/URL Category** tab and configure the following.

Parameter	Value
Service	**application-default**
URL Category	Add the following: **adult** **command-and-control** **extremism** **hacking** **high-risk** **malware** **nudity** **parked** **peer-to-peer** **phishing** **proxy-avoidance-and-anonymizers** **questionable**

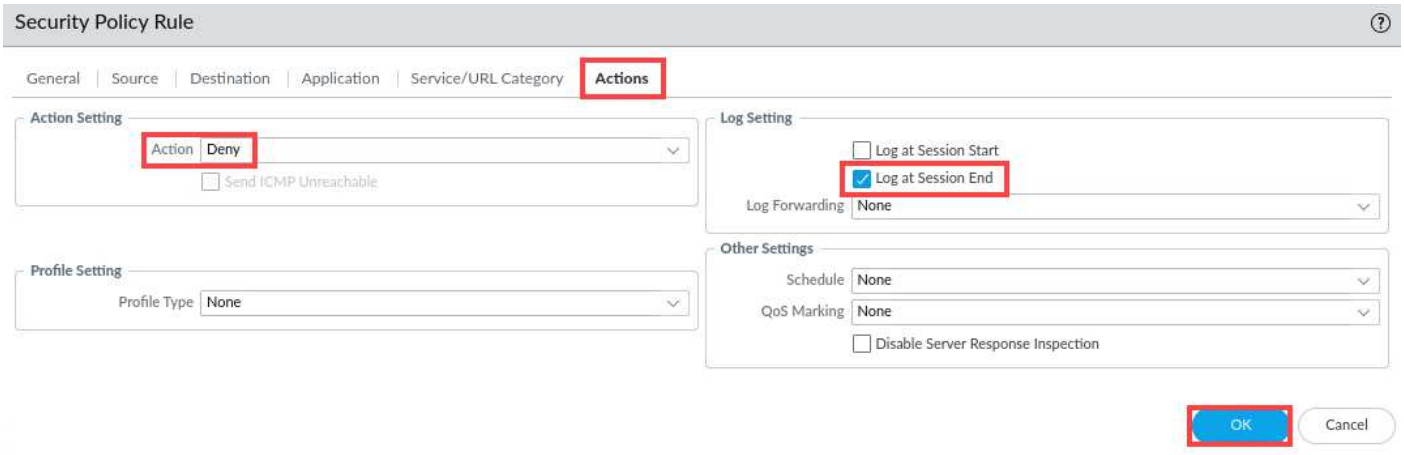
Please Note

Note: you can type in the first few letters of each category to locate each one more quickly.

Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

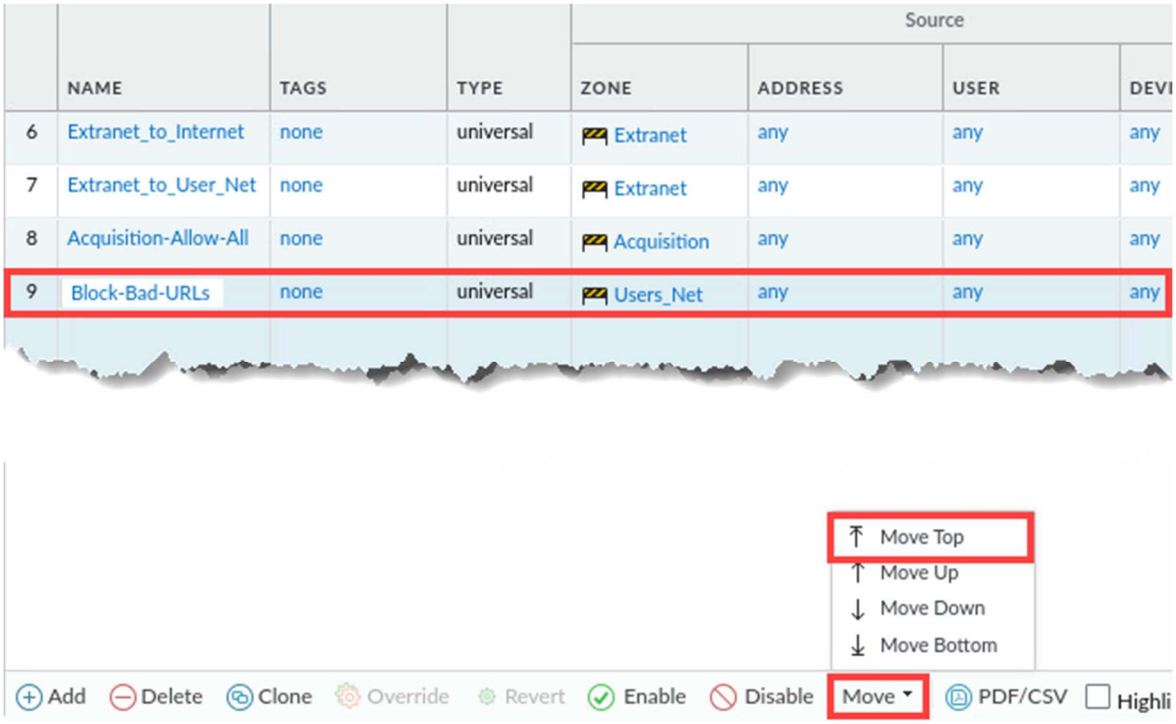


8. Click the **Actions** tab and for the action, select **Deny**. Verify *Log at Session End* is checked. Click **OK**.



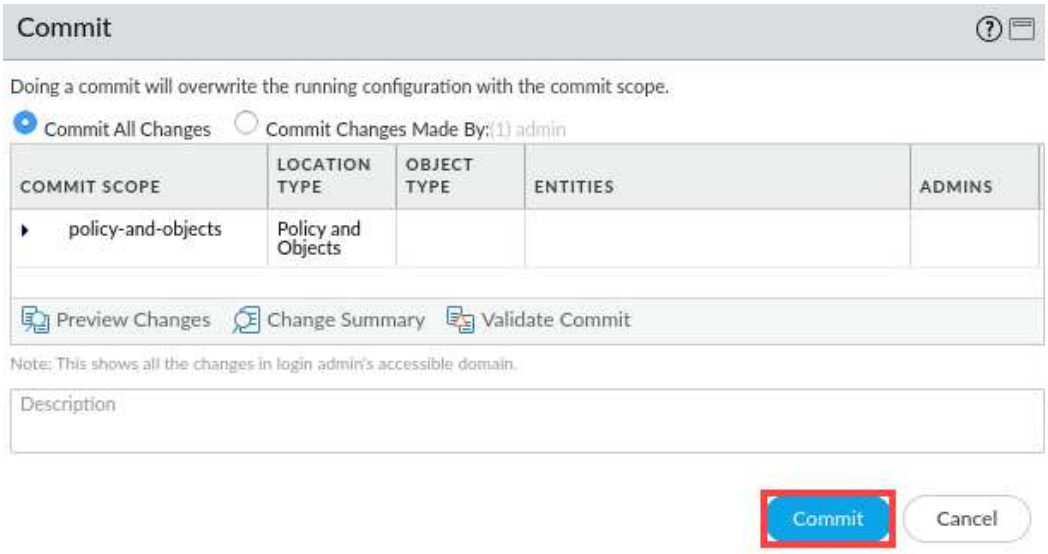
 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

9. Select, but do not open, the **Block-Bad-URLs** rule in the Security policy. Select **Move > Move Top** to move the "block-known-bad-urls" rule to the top of the Security policy.



10. Click the **Commit** button at the upper right of the web interface.

11. In the *Commit* window, click **Commit**.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

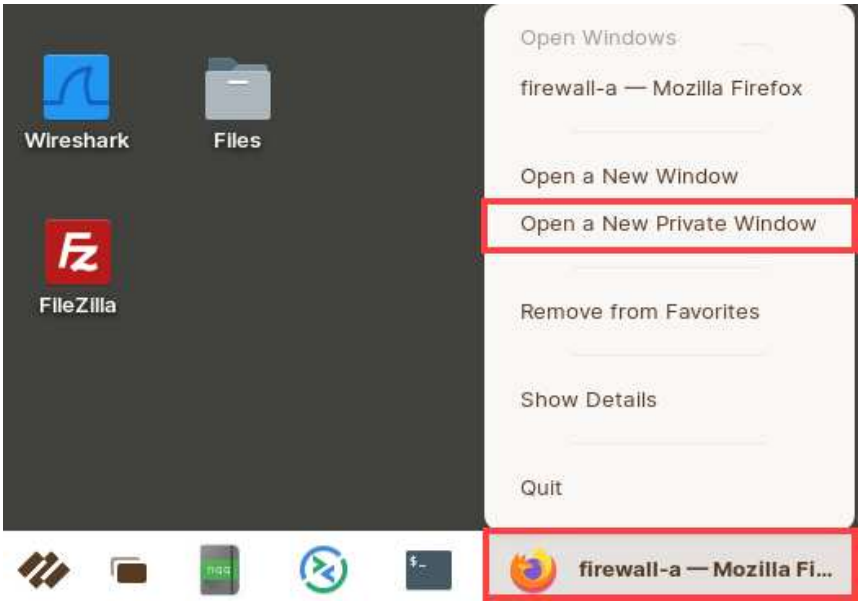
12. Wait until the *Commit* process is complete. Click **Close**.

13. Minimize the *Palo Alto Networks Firewall* open and continue to the next task.

2.4 Test Access to URLs Blocked by the Security Policy

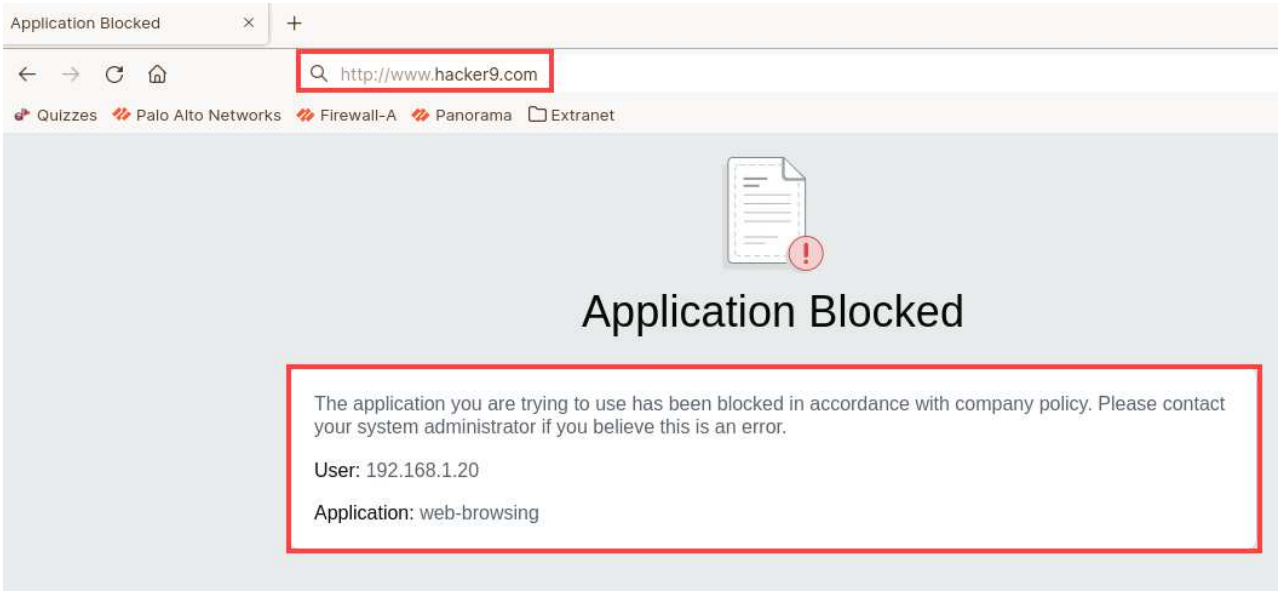
In this section, you will test access to URLs that belong to URL categories prohibited by the Security Policy.

1. On the client taskbar, right-click the **firewall-a – Mozilla Firefox Web Browser** application. Select **Open a New Private Window**.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

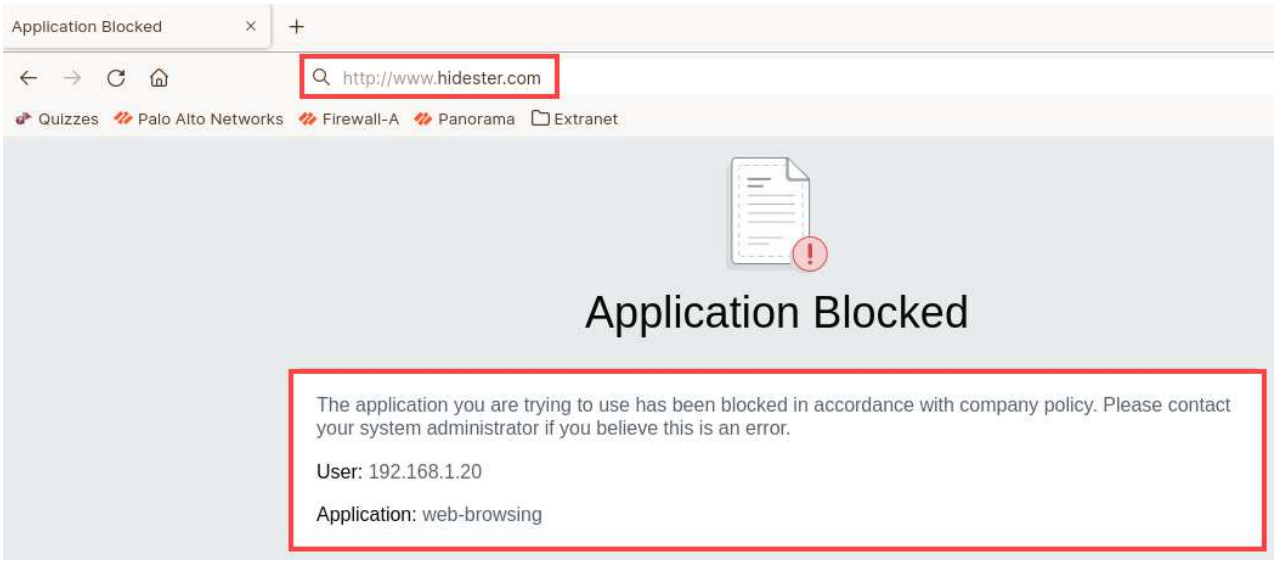
2. Type **`http://www.hacker9.com`**, which belongs to the URL category *hacking*. The browser should display an error message similar to the following example because the URL category hacking is blocked in the Security Policy.



Please Note

Although this page says the Application web-browsing has been blocked, the firewall is actually blocking the site based on its category – hacking. The firewall uses this page to inform users that the firewall has blocked a web page deliberately. You will see a different message when the firewall blocks a page using a URL Filtering Profile.

3. Type **http://www.hidester.com/proxy**, which belongs to the URL category *proxy-avoidance-and-anonymizers*. The browser should display the same kind of block page.

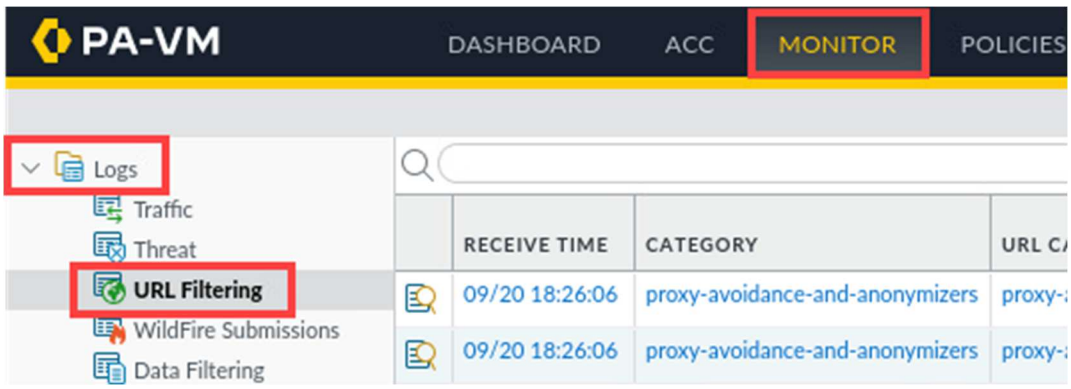


 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

4. Close the *Firefox browser*.

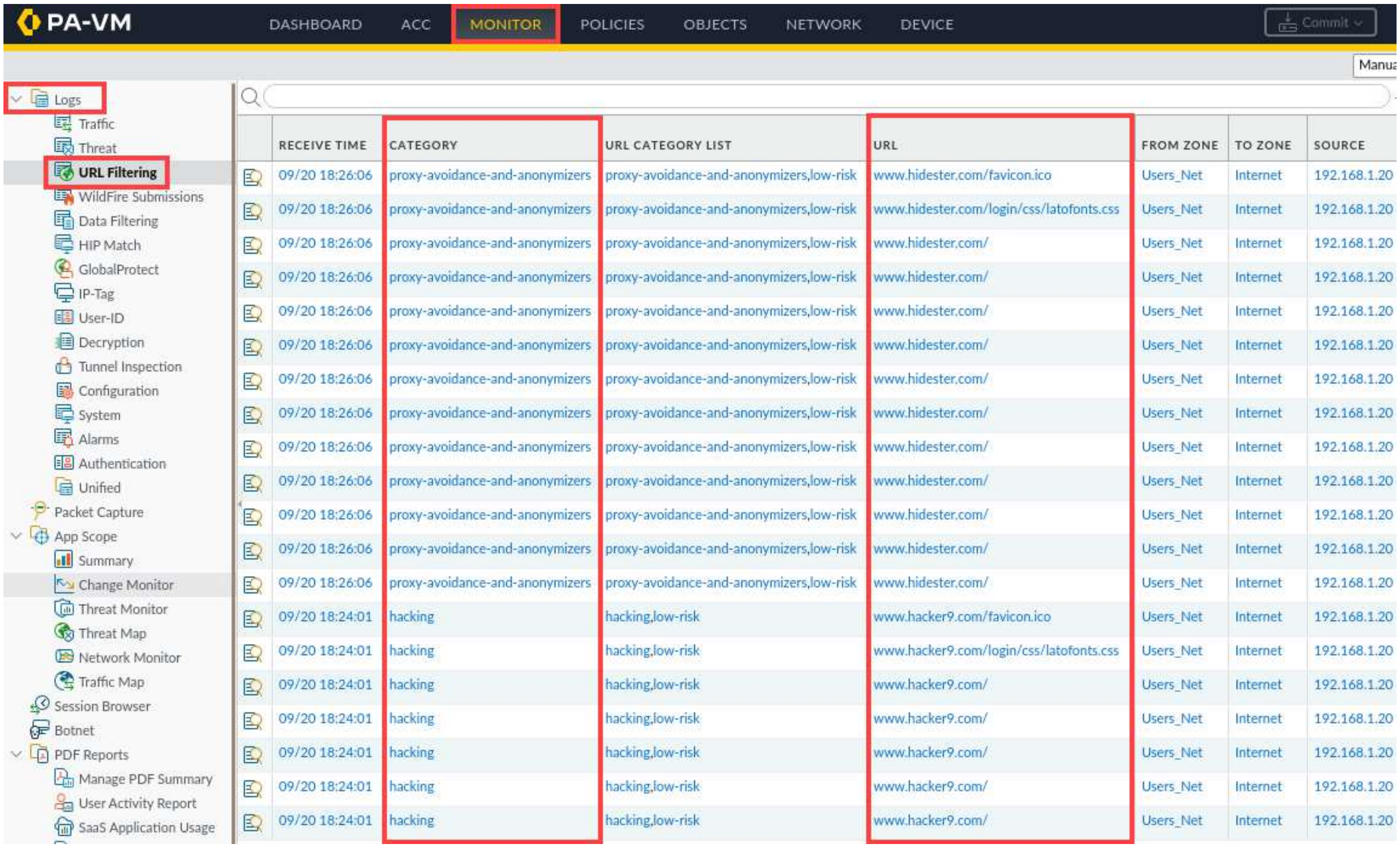
5. Re-open the *PA-VM firewall* web interface by clicking on the **firewall-a – Mozilla Firefox** icon in the task bar.

6. In the *firewall* web interface, select **Monitor > Logs > URL Filtering**.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

7. Although this page says the Application web-browsing has been blocked, the firewall is actually blocking the site based on its category – hacking. The firewall uses this page to inform users that the firewall has blocked a web page deliberately. You will see a different message when the firewall blocks a page using a URL Filtering Profile.



Please Note

You should see multiple entries that have been blocked. Several default columns have been hidden in the example URL Filtering log file shown here.

8. Leave the *Palo Alto Networks Firewall* open and continue to the next task.

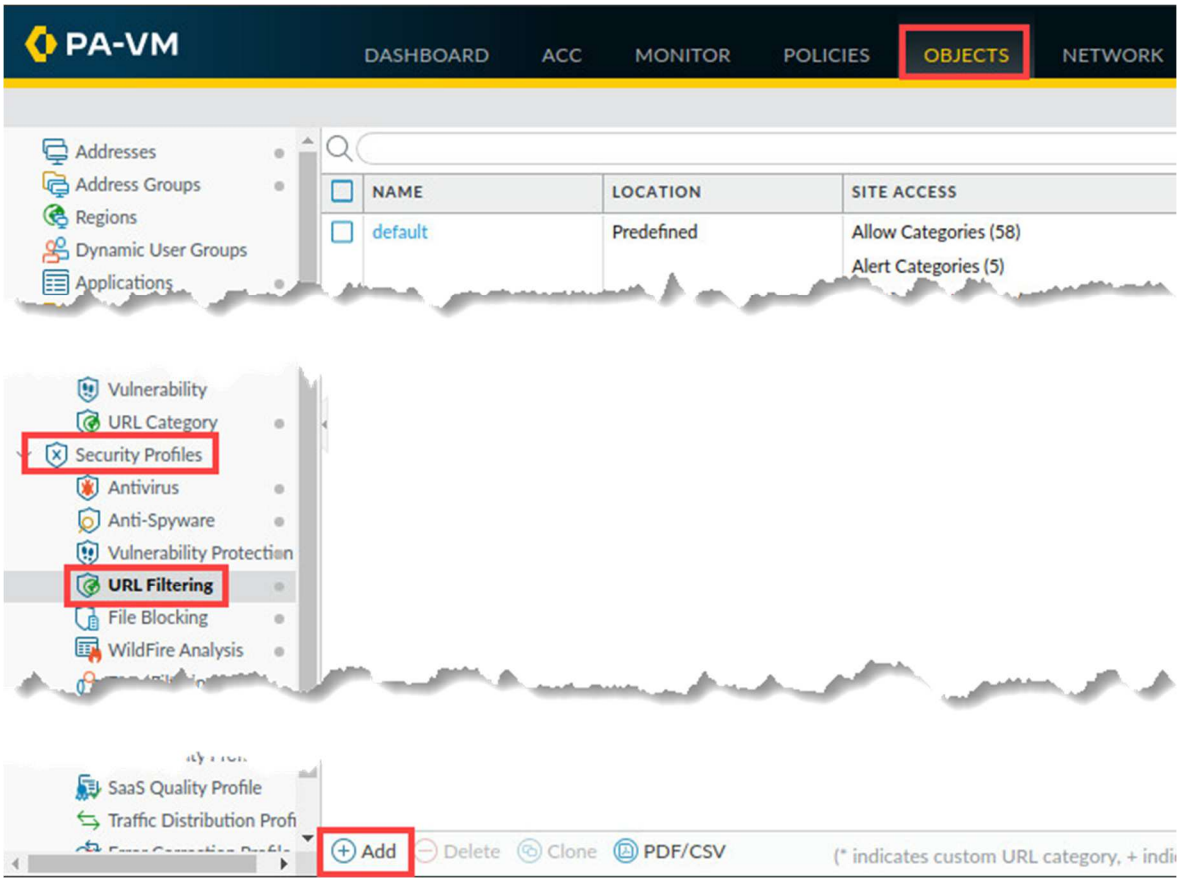
2.5 Block Access to Inappropriate Web Content Using Security Profile

You can use a Security Policy rule to control access to web site categories or you can use a URL Filtering Profile to accomplish the same task. One significant difference between the two is that you can configure a URL Filtering Profile to log access to all websites and categories; not just to websites that have been blocked by a Security Policy rule.

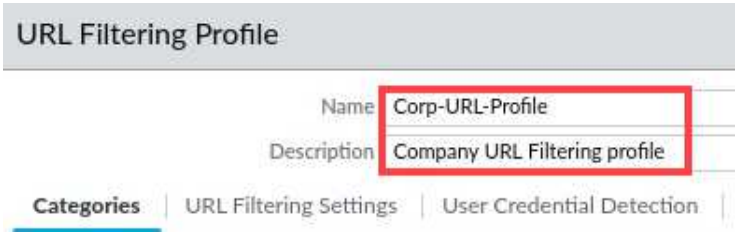
In this section, you will create a URL Filtering Profile that blocks certain categories of web content.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

1. In the web interface, select **Objects > Security Profiles > URL Filtering**. Click **Add** to create a new profile.

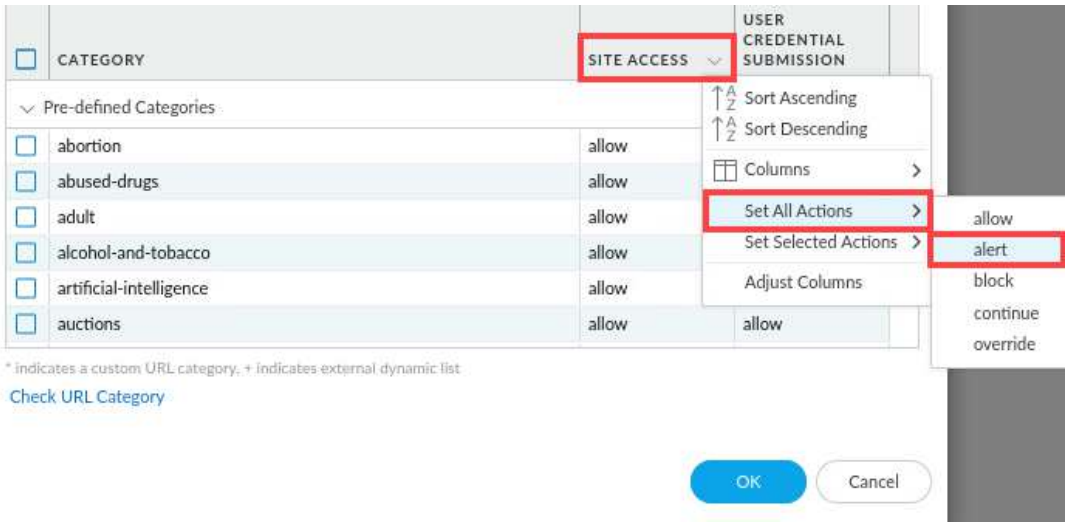


2. In the *URL Filtering Profile*, type **Corp-URL-Profile** as the *Name* of the profile. For *Description*, enter **Company URL Filtering profile**.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

3. In the **Site Access** column, click the small triangle. Choose **Set All Actions > alert**.



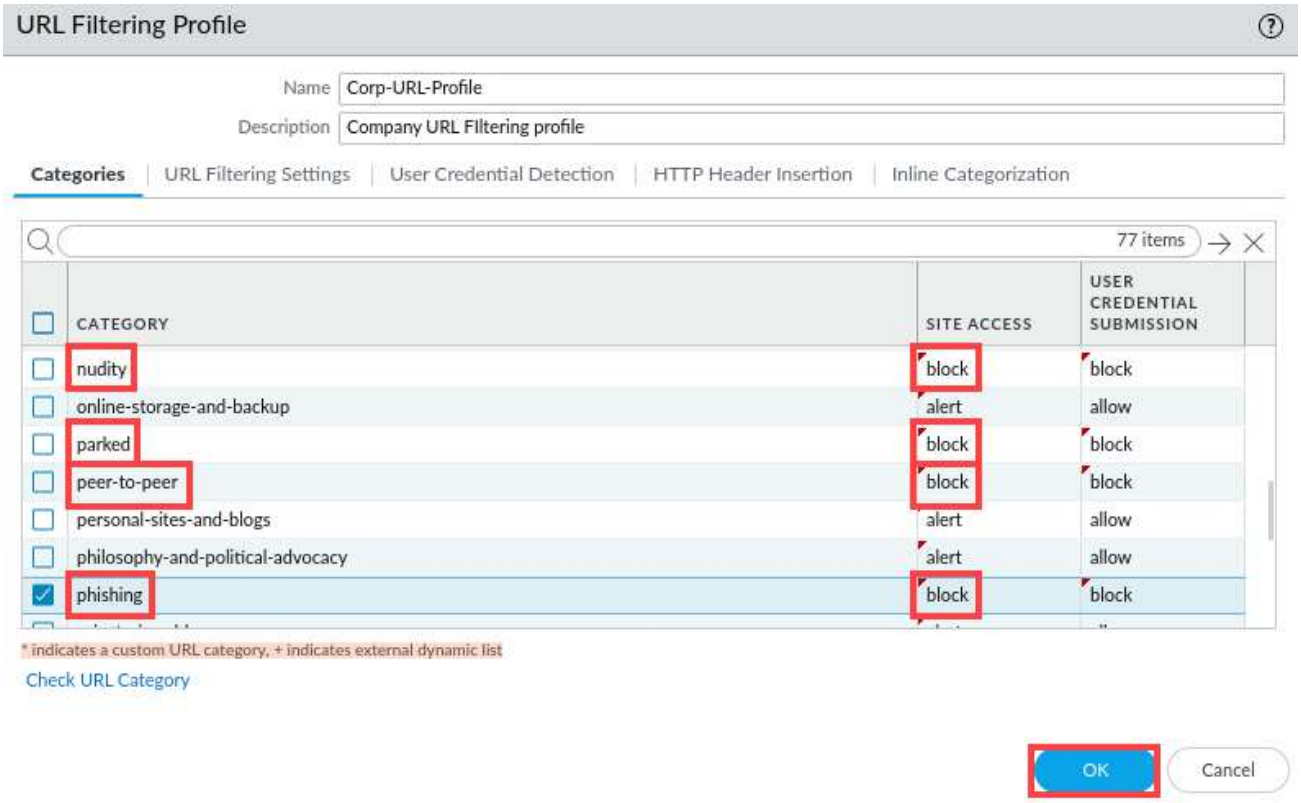
Please Note

This shortcut allows you to change the setting for all categories in the list rather than changing each one entry at a time. Setting the action to alert instructs the firewall to allow access to the category and to write an entry to the URL Filtering log. When the action is set to allow, the firewall allows access but does not write an entry to the URL Filtering log.

4. On the **Categories** tab, configure the following. You will need to scroll through each category for the value to set it to block the site access. Click **OK**.

Parameter	Value
Site Access	Configure the **block** action for the following URL categories: **adult** **command-and-control** **copyright-infringement** **extremism** **hacking** **high-risk** **malware** **nudity** **parked** **peer-to-peer** **phishing** **proxy-avoidance-and-anonymizers** **questionable** **unknown**

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com



Please Note

For this step, the screen shot only shows the block access to four categories. Ensure you have blocked all the categories for this step before continuing.

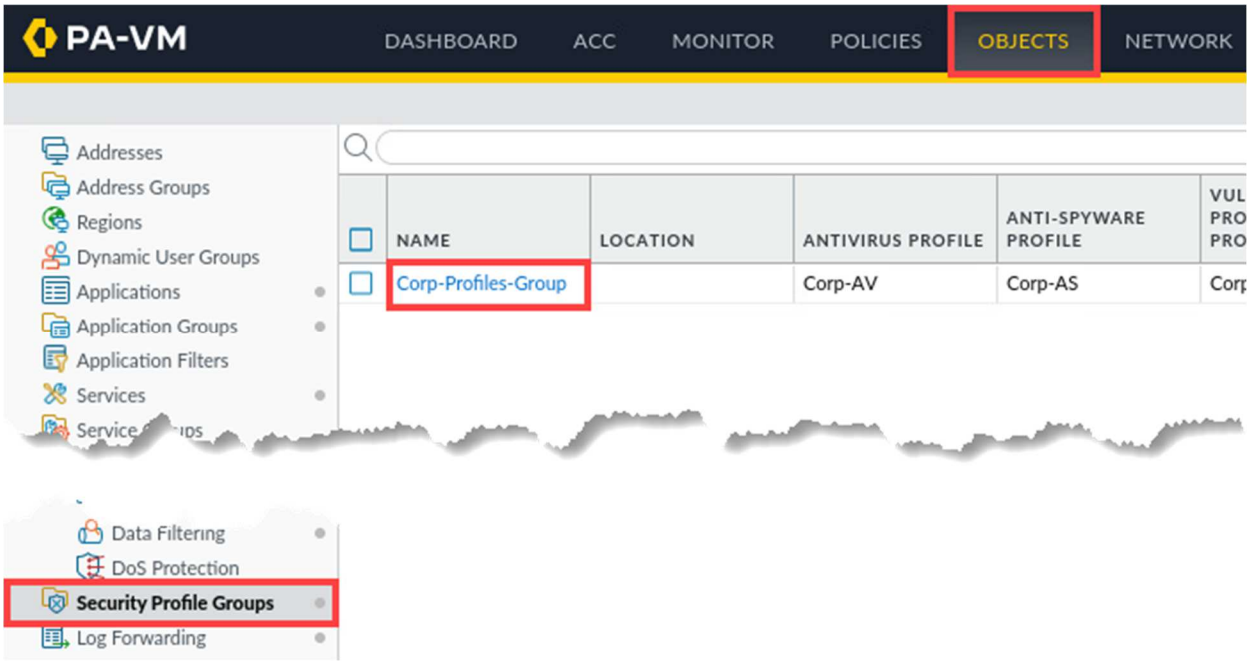
5. Leave the *Palo Alto Networks Firewall* open and continue to the next task.

2.6 Add the URL Profile to the Corp-Profiles-Group

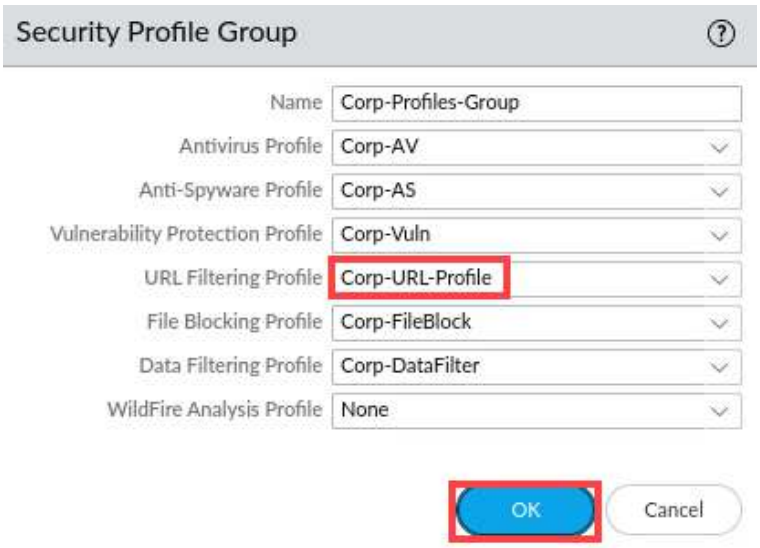
In this section, you will add the URL Filtering Profile **Corp-URL-Filtering** to the existing Security Profile Group and disable the rule that blocks URLs based on categories so that it does not interfere with the URL Filtering Profile.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

1. Select **Objects > Security Profile Groups**. Click the entry for **Corp-Profiles-Group** to edit it.

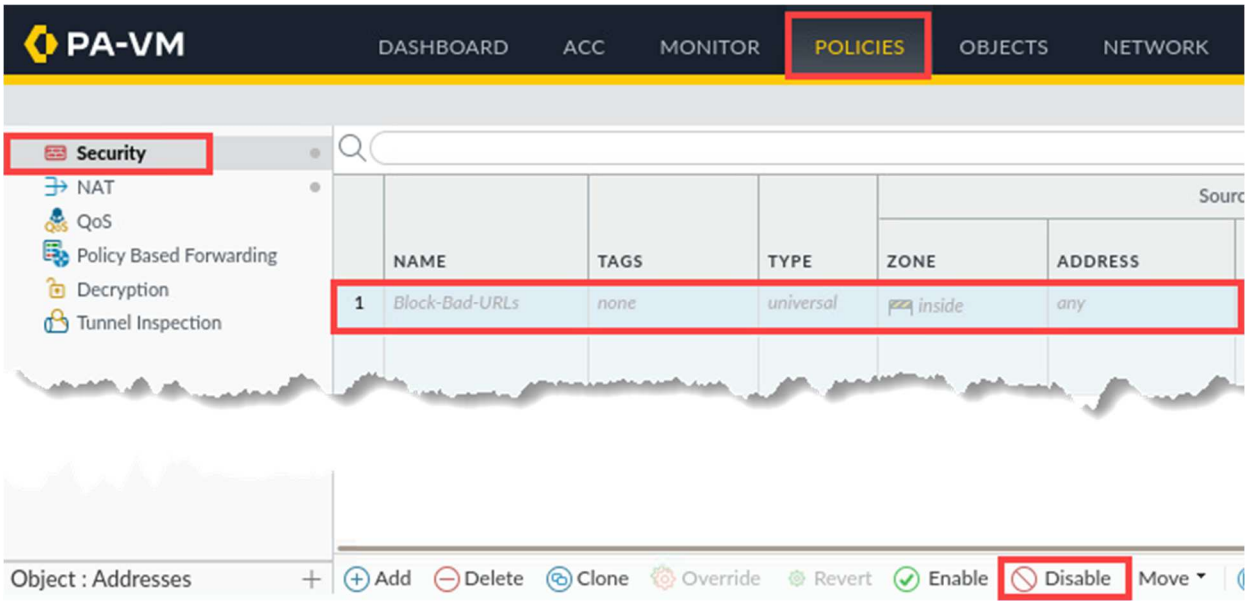


2. Use the drop-down list for **URL Filtering Profile** to select **Corp-URL-Profile**. Click **OK**.

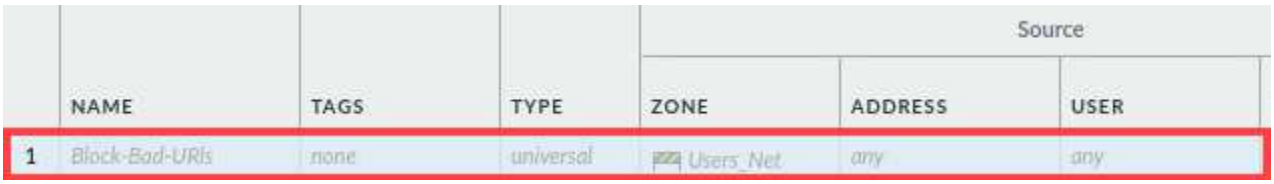


 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

3. In the firewall web interface, navigate to **Policies > Security.** Highlight the entry for **Block-Bad-URLs** but do not open it and click **Disable**.

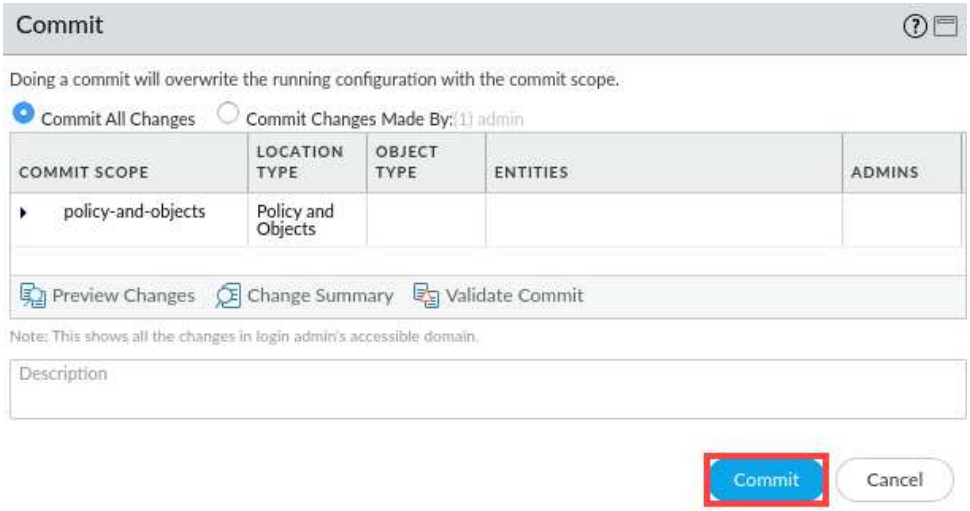


4. The entry will change to *italics* to indicate that the rule is now **Disabled.**



5. Click the **Commit** button at the upper right of the web interface.

6. In the *Commit* window, click **Commit**.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

7. Wait until the *Commit* process is complete. Click **Close**.

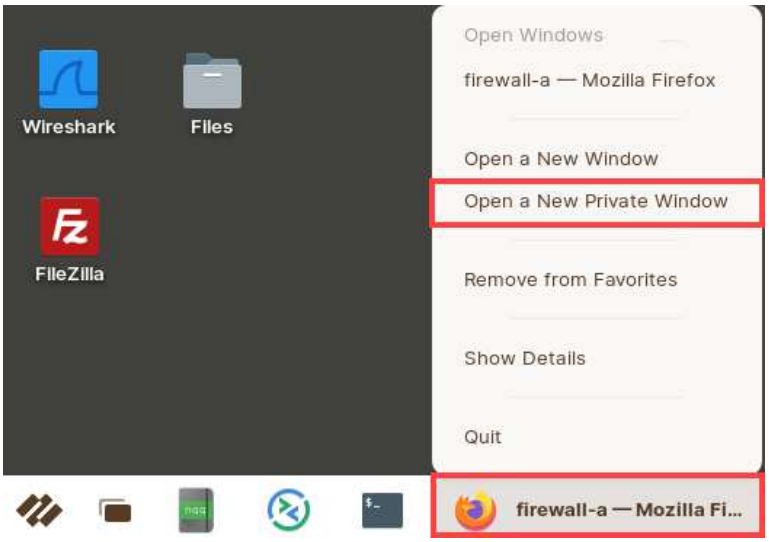
8. Minimize the *Palo Alto Networks Firewall* open and continue to the next task.

2.7 Create a Custom URL Category

In some situations, you may want to block only a few websites in a particular category, but you do not want to block the entire category itself. You can accomplish this by creating a Custom URL Category. Adding individual URLs to the Custom URL Category allows you to then block the Custom URL Category within a Security Policy rule or within a URL Filtering Profile.

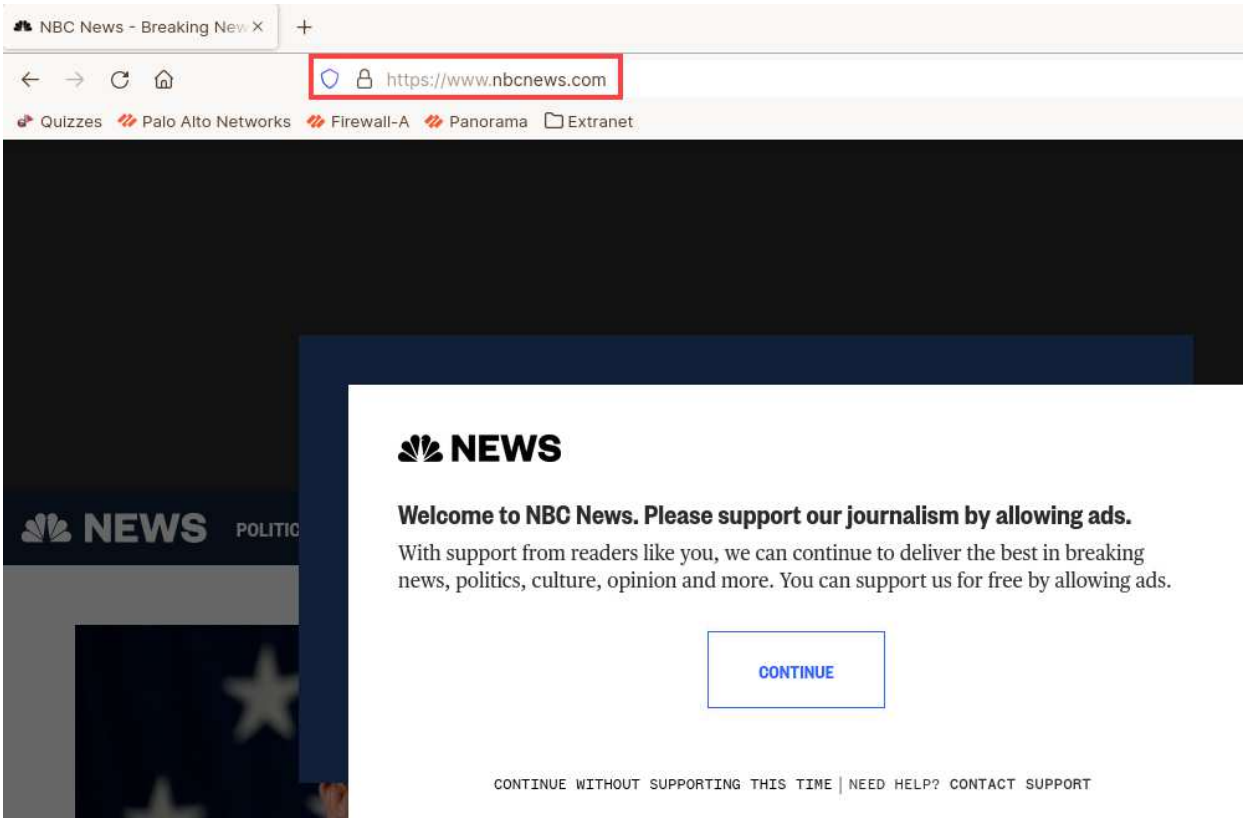
In this section, you will test access to a URL and then create a Custom URL Category that includes that URL along with a few others.

1. On the client taskbar, right-click the **firewall-a – Mozilla Firefox Web Browser** application. Select **Open a New Private Window**.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

2. Type **`http://www.nbcnews.com`**, you should get a valid webpage displayed.

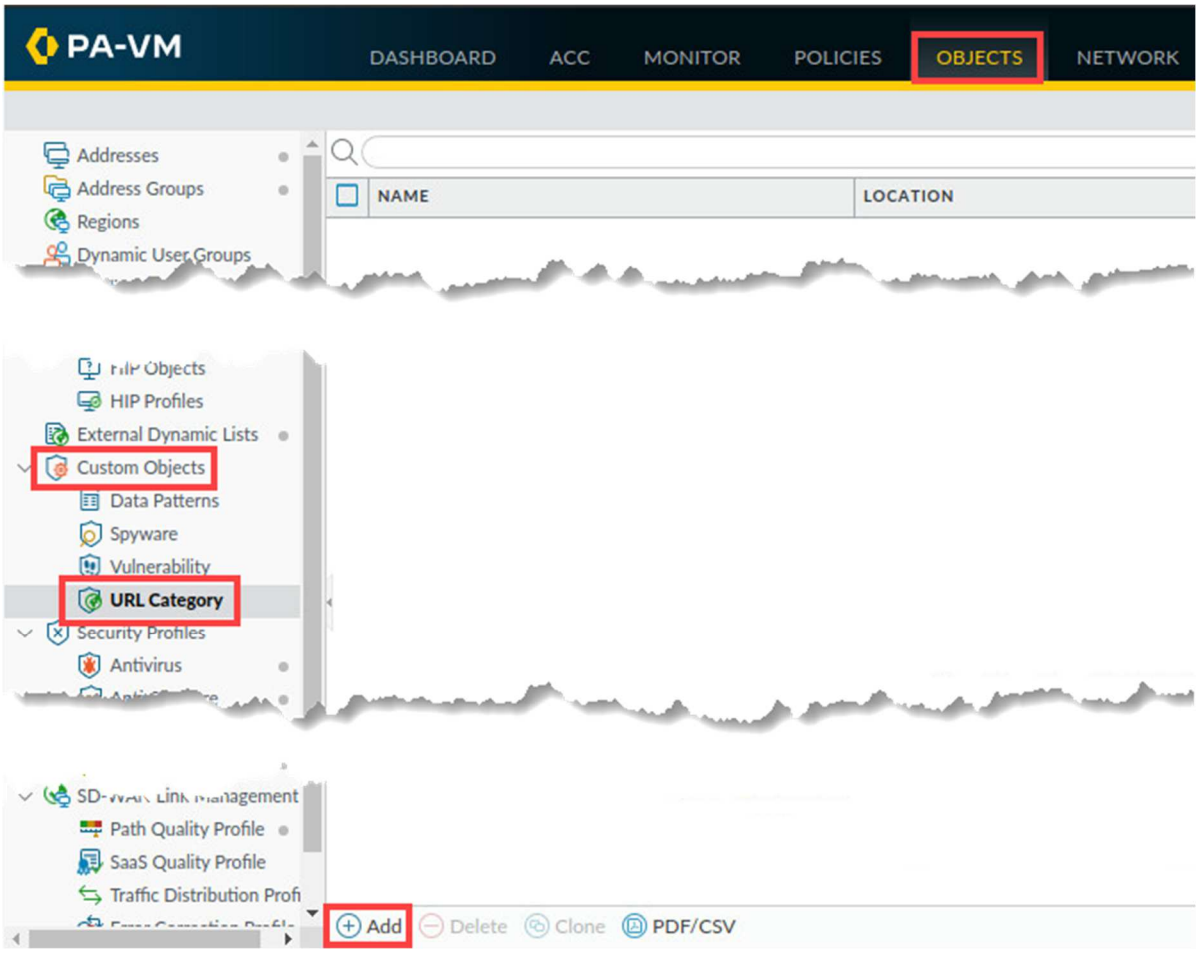


3. Close the *Firefox browser*.

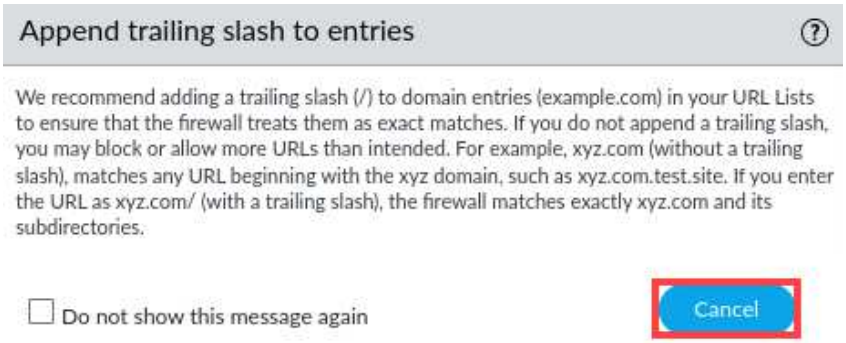
4. Re-open the *PA-VM firewall* web interface by clicking on the **firewall-a – Mozilla Firefox** icon in the task bar.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

5. In the web interface, select **Objects > Custom Objects > URL Category.** Click **Add**.



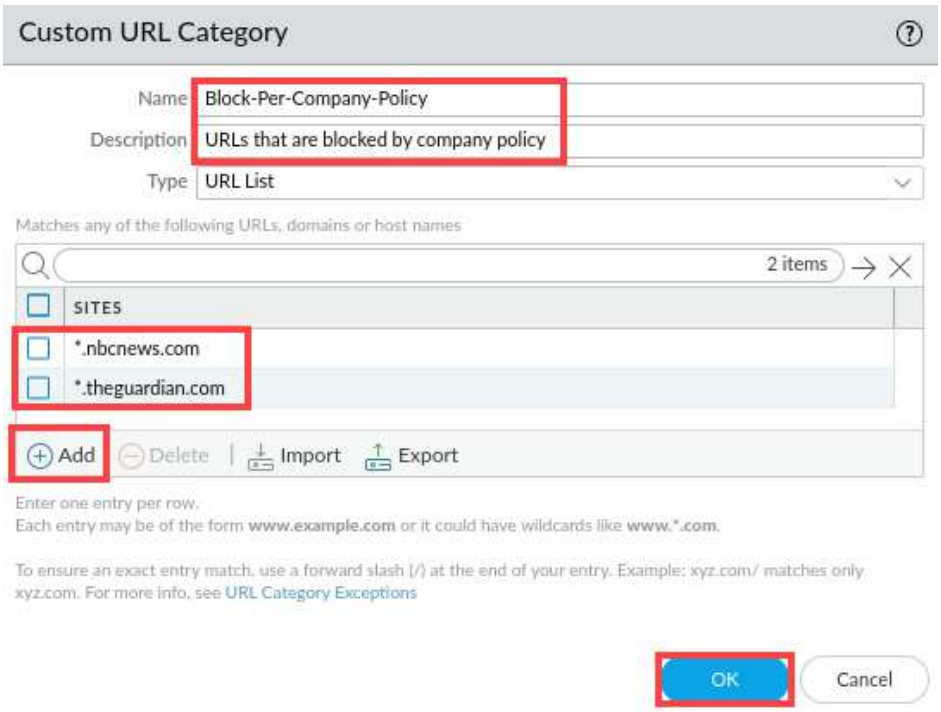
6. Click **Cancel** on the message about *Append trailing slash to entries*.



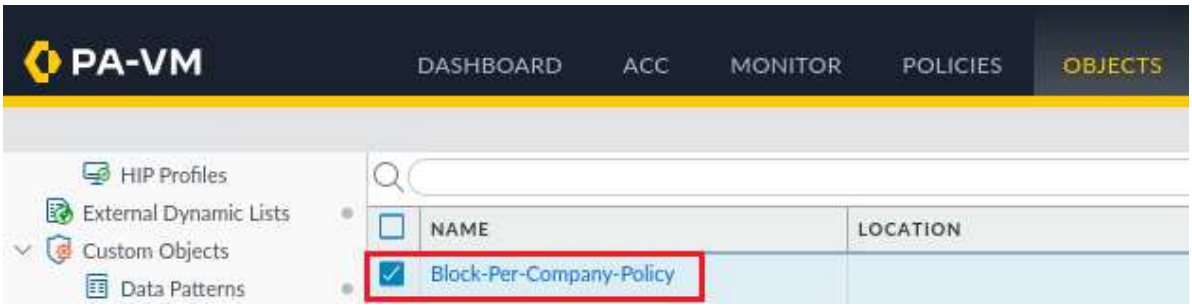
 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

7. In the *Custom URL Category* window, configure the following. Click **OK**.

Parameter	Value
Name	**Block-Per-Company-Policy**
Description	**URLs that are blocked by company policy.**
Type	**URL List**
Sites	Add the following: ***.nbcnews.com** ***.theguardian.com**

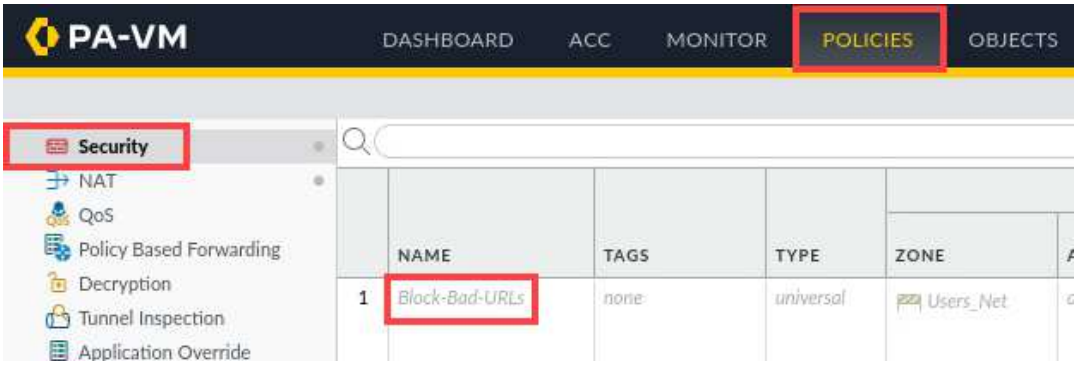


8. Confirm the *Block-Per-Company-Policy* Custom URL is showing in the URL Category window.

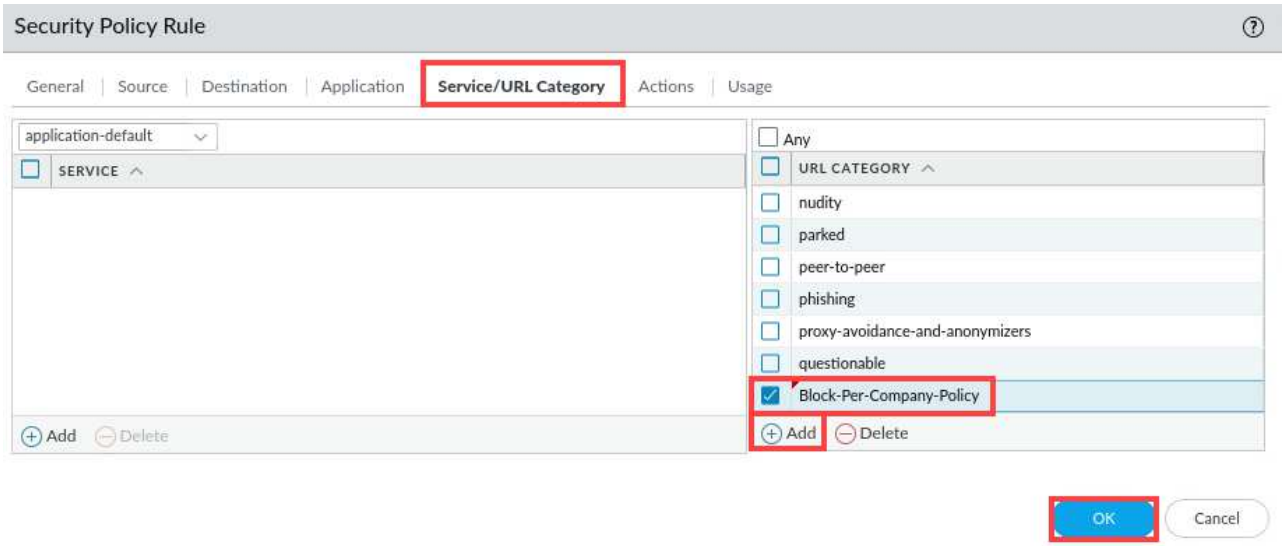


 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

9. Add your *Custom URL Category* to a Security policy rule that has a "**deny**" action. Select **Policies > Security**. Click **Block-Bad-URLs** to edit the rule.

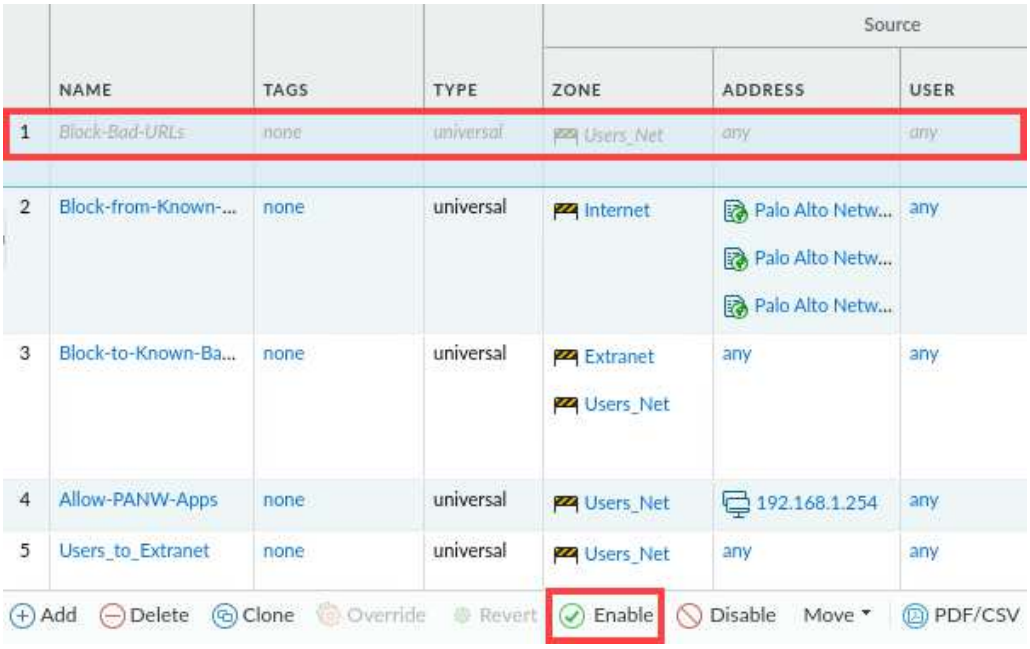


10. Select the **Service/URL Category** tab and click **Add**. Add **Block-Per-Company-Policy** to the list. Click **OK**.



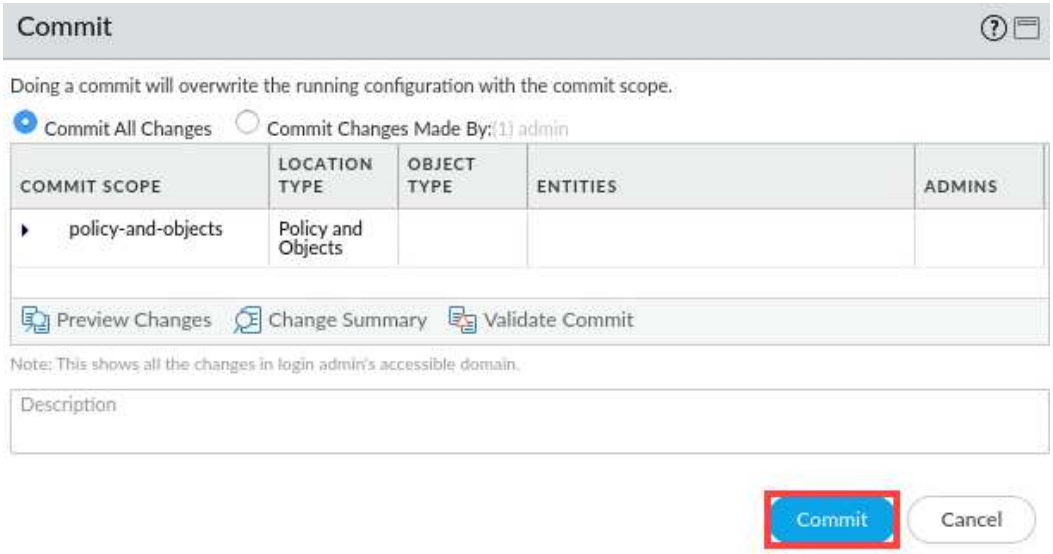
 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

11. Highlight the rule for **Block-Bad-URLs** but do not open it. Click the **Enable** button at the bottom of the window.



12. Click the **Commit** button at the upper right of the web interface.

13. In the *Commit* window, click **Commit**.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

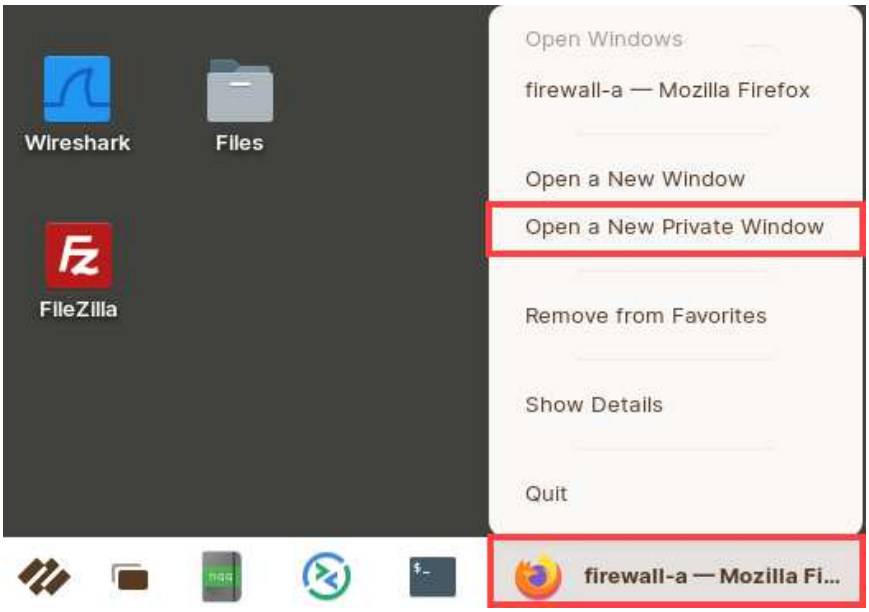
14. Wait until the *Commit* process is complete. Click **Close**.

15. Minimize the *Palo Alto Networks Firewall* open and continue to the next task.

2.8 Test Access to Custom URLs Blocked by Security Policy

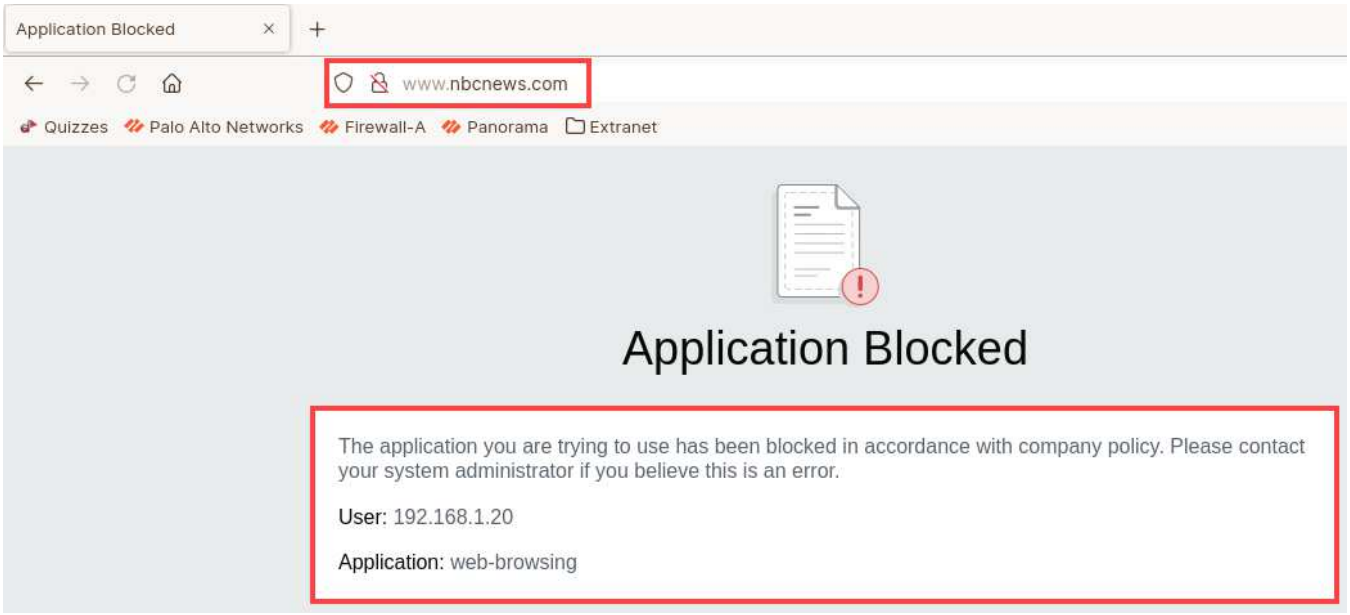
In this section, you will test access to URLs that belong to the Custom URL Category that you added to a Security Policy deny rule.

1. On the client taskbar, right-click the **firewall-a – Mozilla Firefox Web Browser** application. Select **Open a New Private Window**.

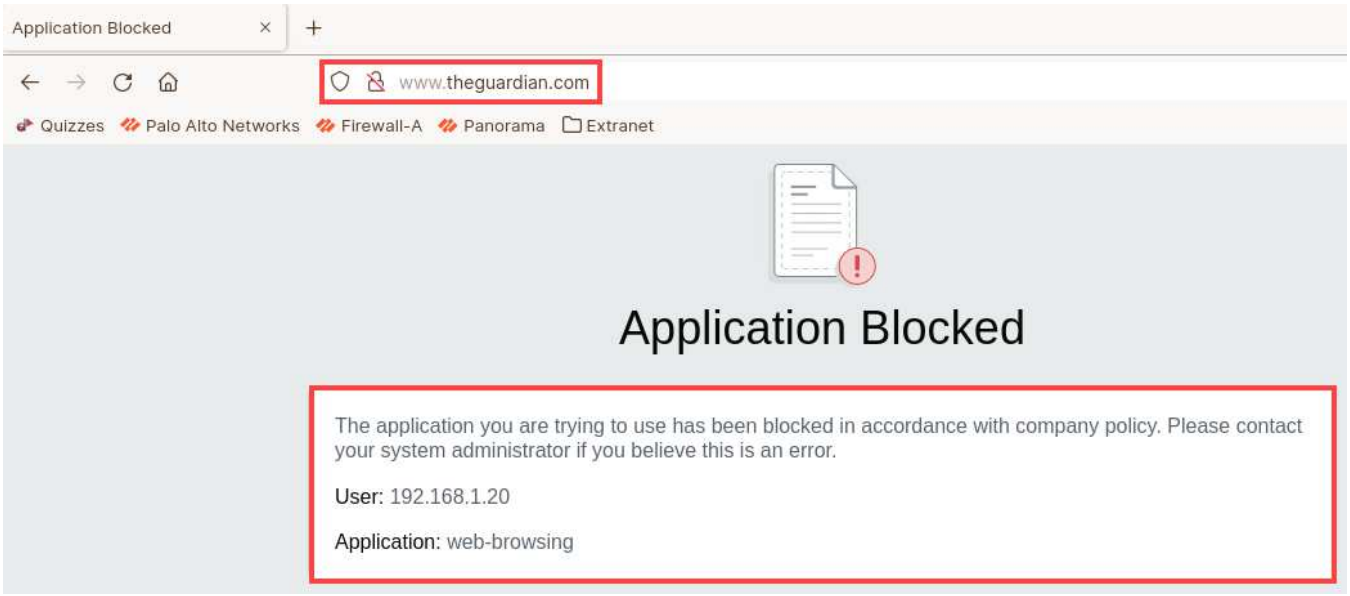


 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

2. Type **www.nbcnews.com,** the browser should display an Application Blocked page message because the Custom URL Category in the Security Policy blocks access to the webpage.



3. Type **www.theguardian.com**, the browser should display the Application Blocked page again.

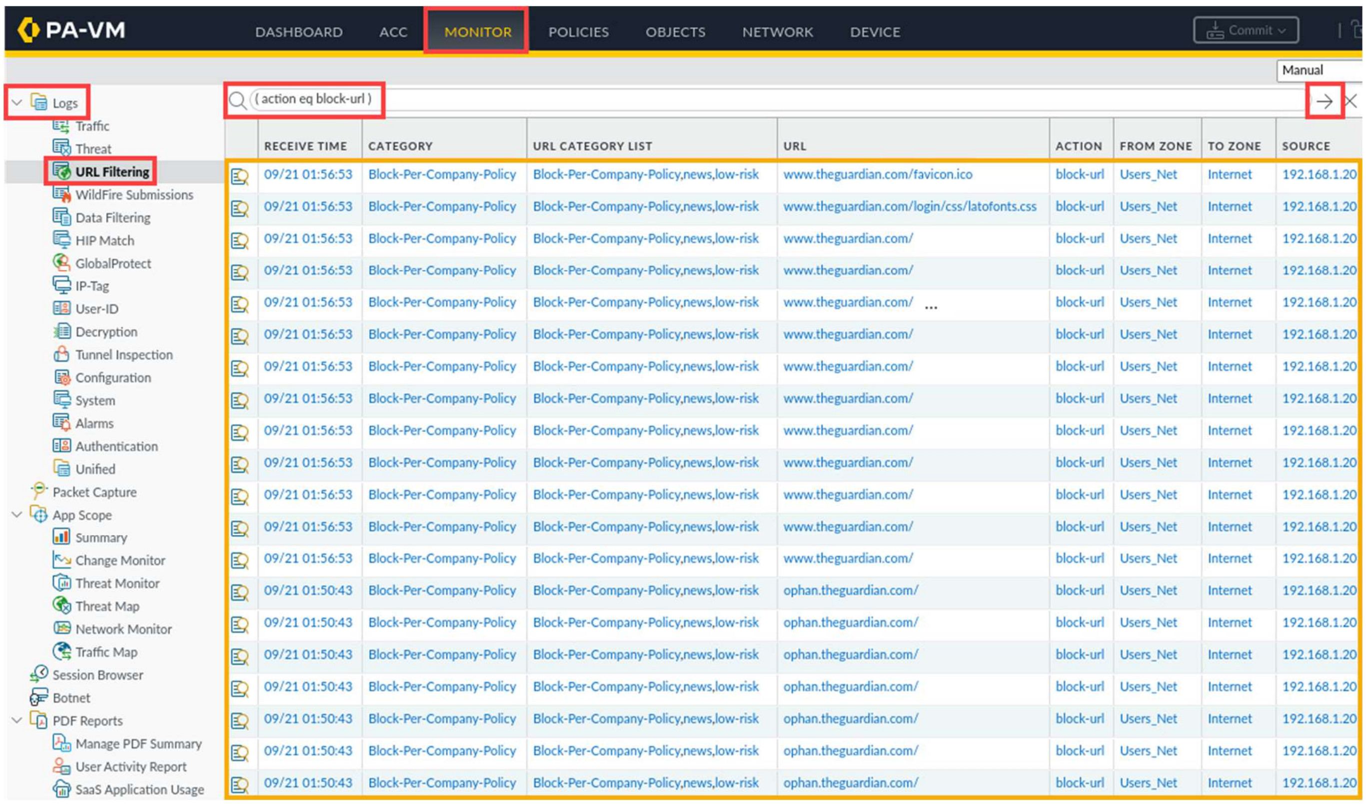


4. Close the *Firefox browser*.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

5. Re-open the *PA-VM firewall* web interface by clicking on the **firewall-a – Mozilla Firefox** icon in the task bar.

6. In the *firewall* web interface, navigate to **Monitor > Logs > URL Filtering**. Create and apply the filter **(action eq block-url).** You should see multiple entries for sessions to www.nbcnews.com and www.theguardian.com that the firewall has blocked.



Please Note

Note that several default columns have been hidden in the example URL Filtering log file shown here.

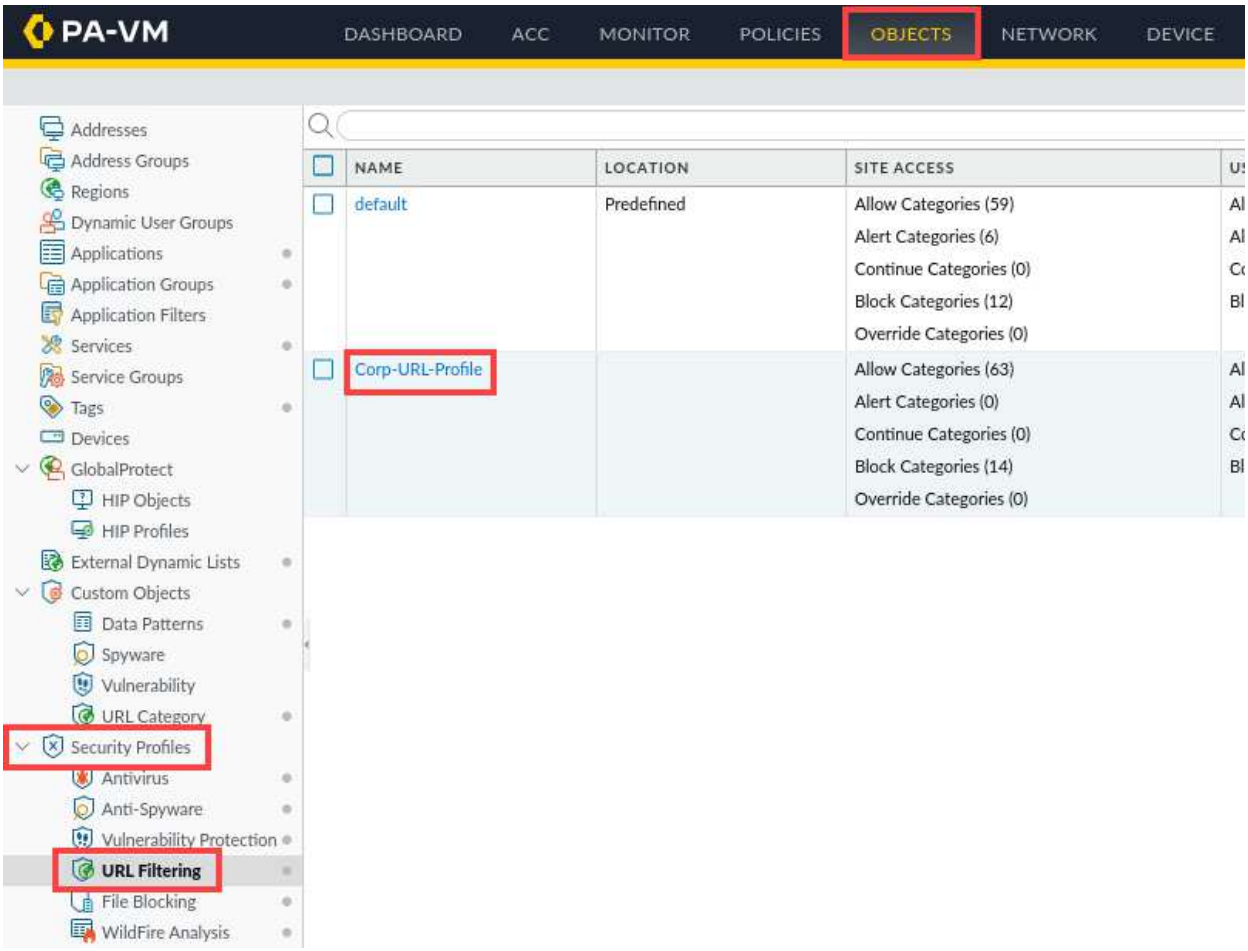
7. Leave the *Palo Alto Networks Firewall* open and continue to the next task.

2.9 Add Custom URL Category to URL Filtering Profile

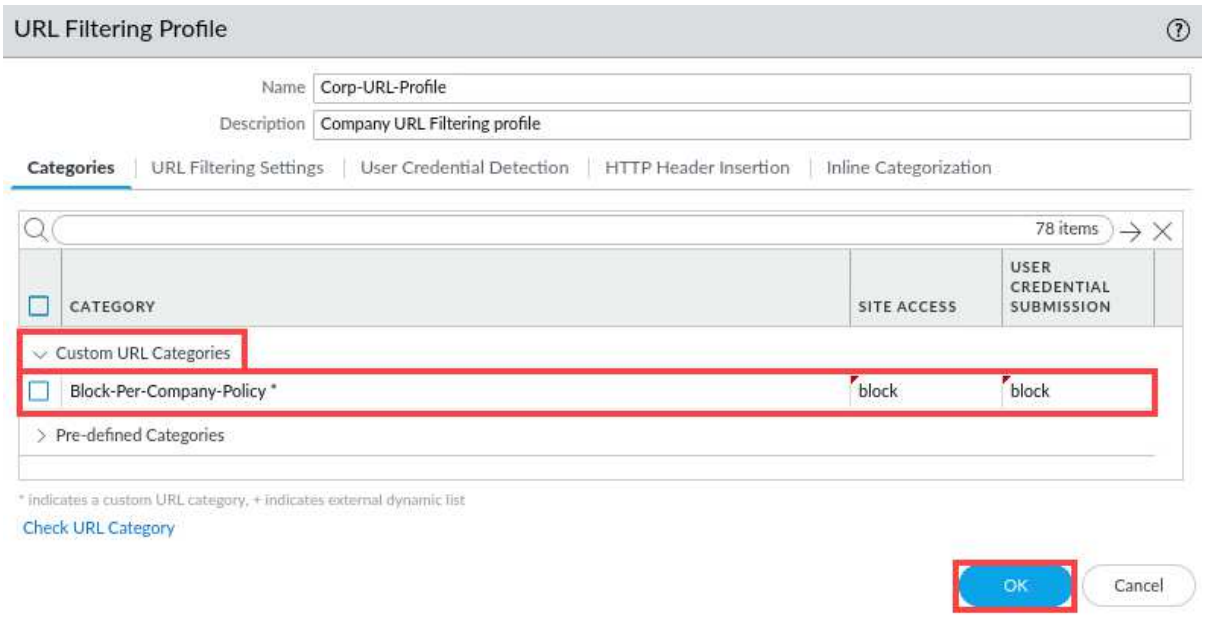
In this section, you will set the **Block-Per-Company-Policy** category to **block** in the **Corp-URL-Profile** URL Filtering Profile.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

1. Select **Objects > Security Profiles > URL Filtering**. Click the **Corp-URL-Profile** entry.

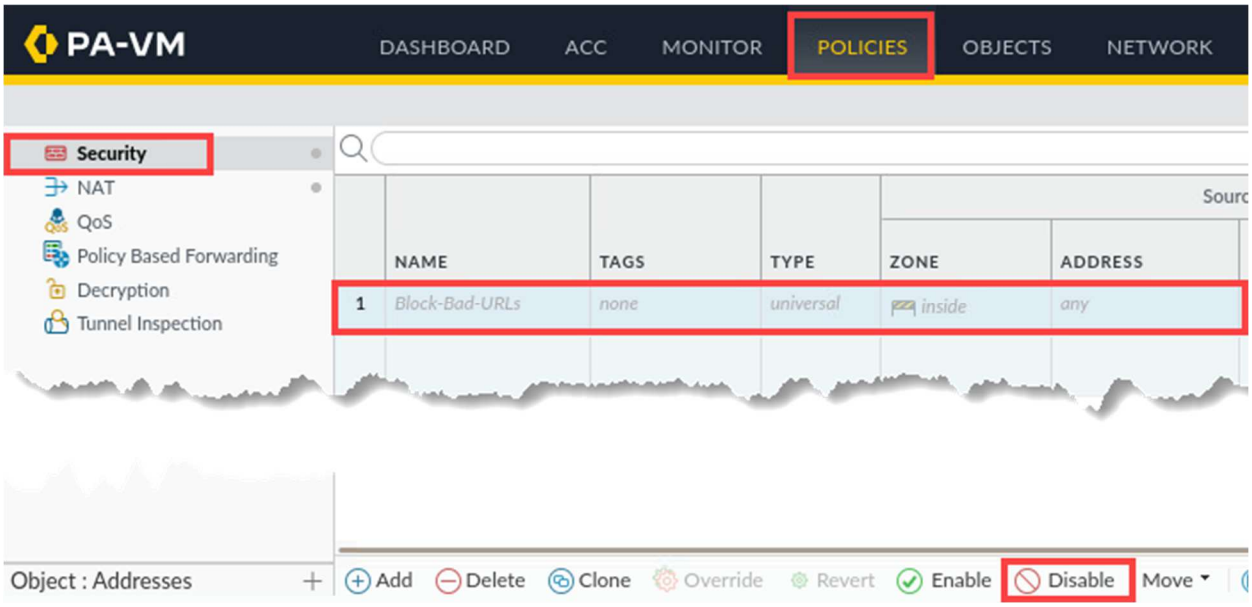


2. Under the **Custom URL Categories** section, set the **Site Access** for **Block-Per-Company-Policy** to **block**. Click **OK.**



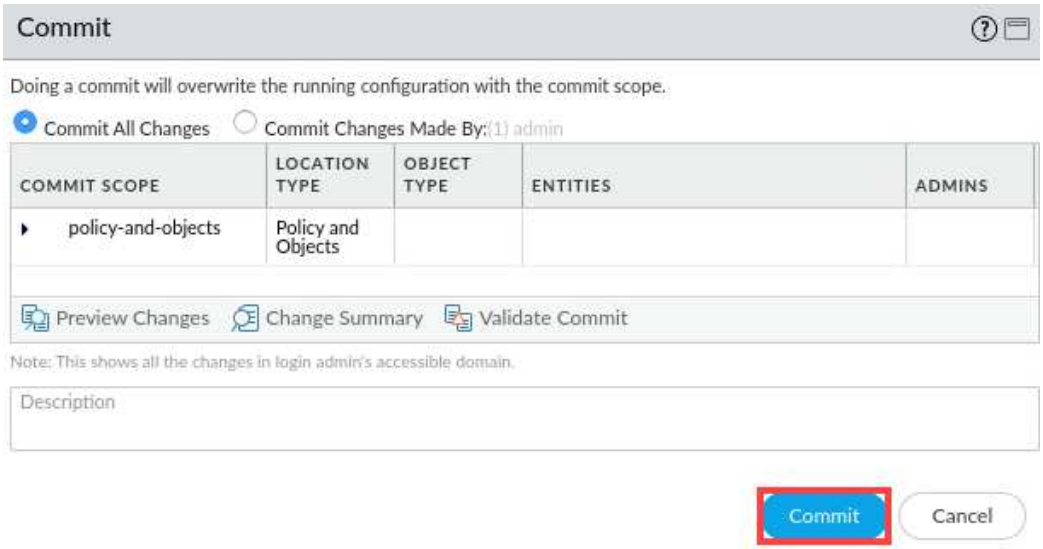
 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

3. Navigate to **Policies > Security**. Highlight the entry for **Block-Bad-URLs** but do not open it. Click **Disable** at the bottom of the window.



4. Click the **Commit** button at the upper right of the web interface**.**

5. In the *Commit* window, click **Commit**.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

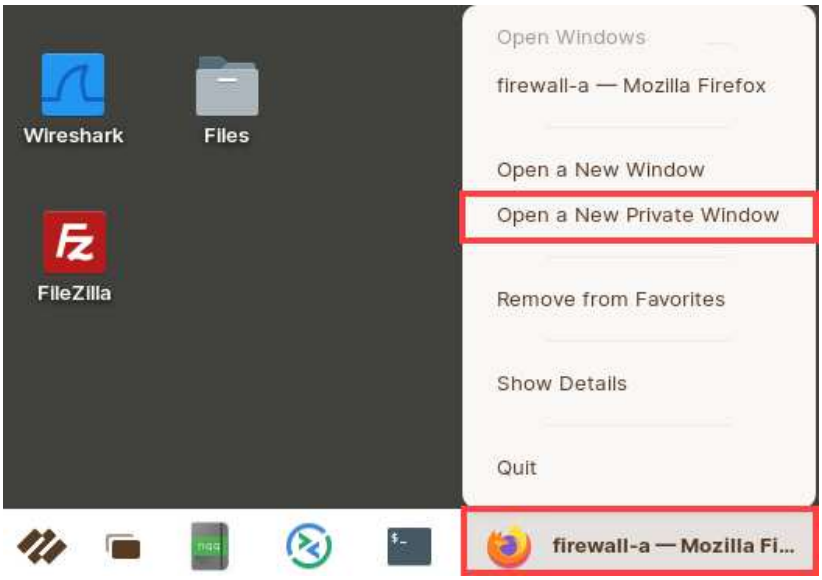
6. Wait until the *Commit* process is complete. Click **Close**.

7. Minimize the *Palo Alto Networks Firewall* and continue to the next task.

2.10 Test Access to Custom URLs Blocked by the URL Filtering Profile

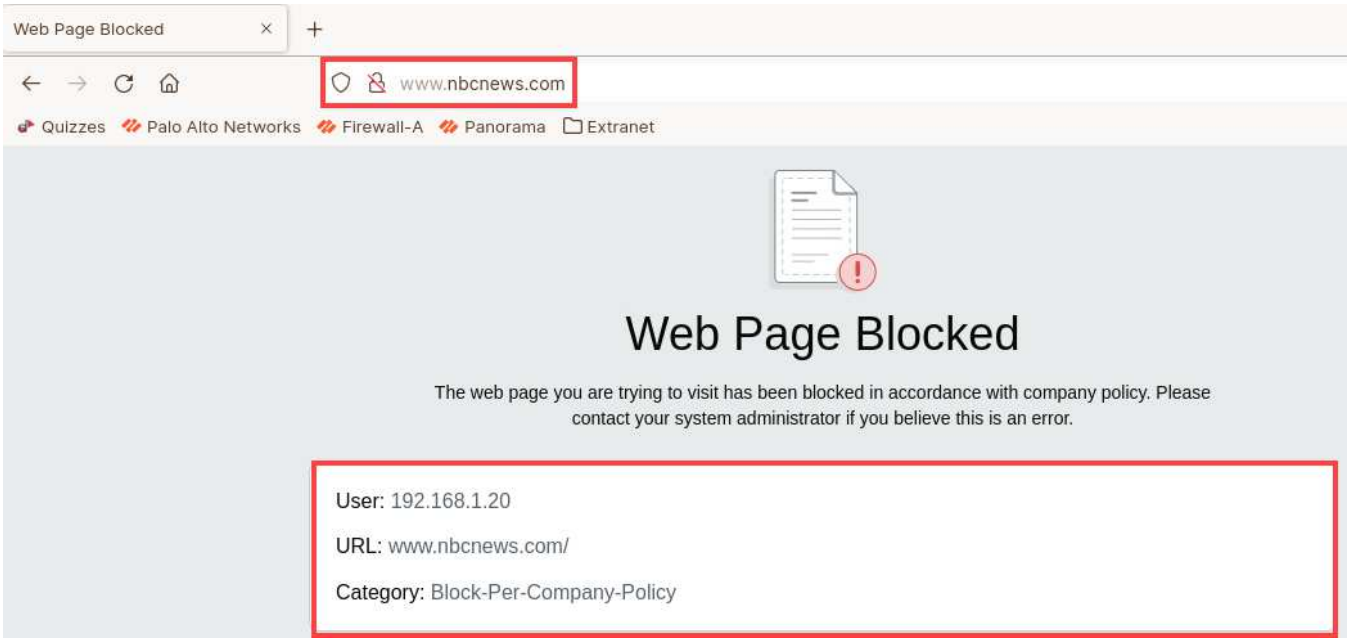
In this section, you will test access to URLs that belong to the Custom URL Category that you added to the URL Filtering Profile.

1. In the client taskbar, right-click the **firewall-a – Mozilla Firefox Web Browser** application. Select **Open a New Private Window**.

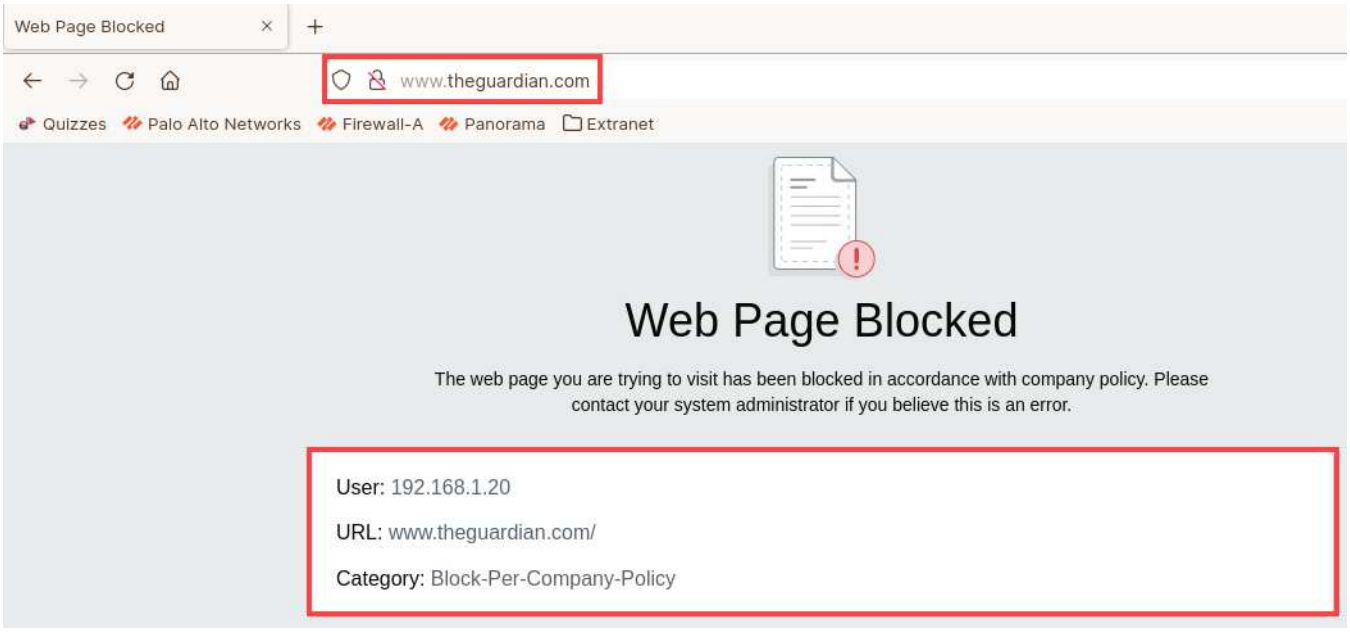


 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

2. Type **www.nbcnews.com,** the browser should display a Web Page Blocked message because the Custom URL Category in the URL Filtering Profile blocks access to the webpage.



3. Type **www.theguardian.com**, the browser should display the Web Page Blocked again.



4. Close the *Firefox browser*.

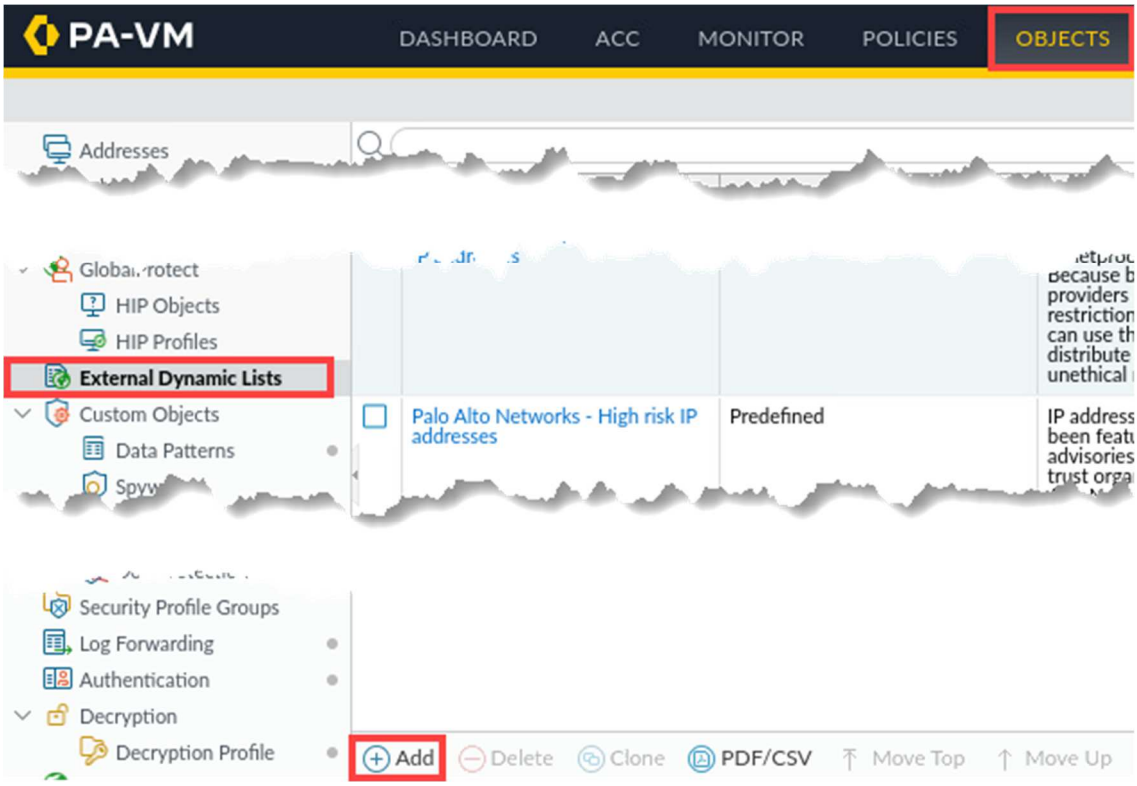
 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

5. Re-open the *PA-VM firewall web* interface by clicking on the **firewall-a – Mozilla Firefox** icon in the task bar and continue to the next task.

2.11 Create an External Dynamic List to Block Malicious URL Access

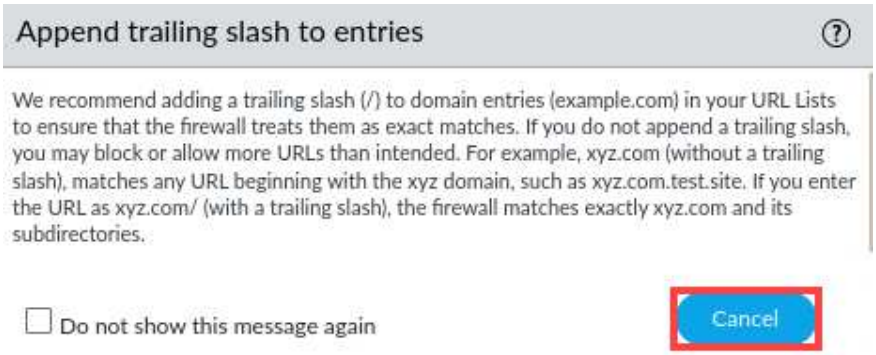
You can add a list of malicious URLs to a file on an external web server, and then configure the firewall to access the list as an External Dynamic List (EDL). The advantage of this approach is that you can regularly update the malicious URL list without the need to recommit the firewall configuration each time, as you would have to do if you updated a Security Policy rule with a new URL.

1. Select **Objects > External Dynamic Lists**. Click **Add**.



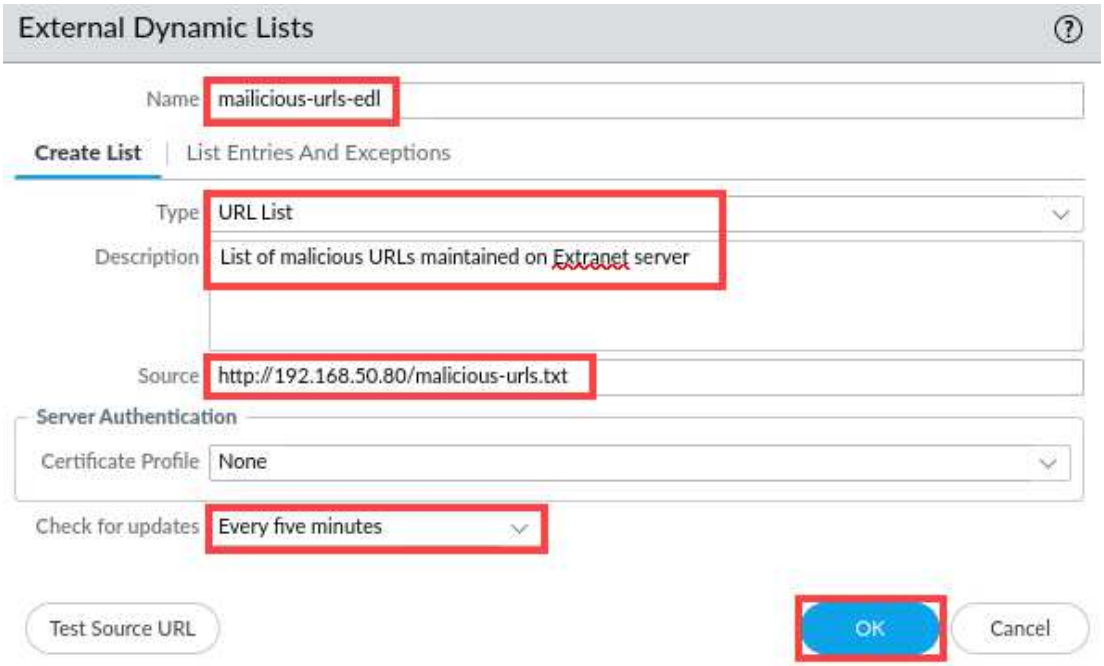
 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

2. The firewall presents a notice about adding a trailing slash for domain entries, read the notice and click **Cancel**.



3. In the *External Dynamic Lists* window, configure the following and click **OK**.

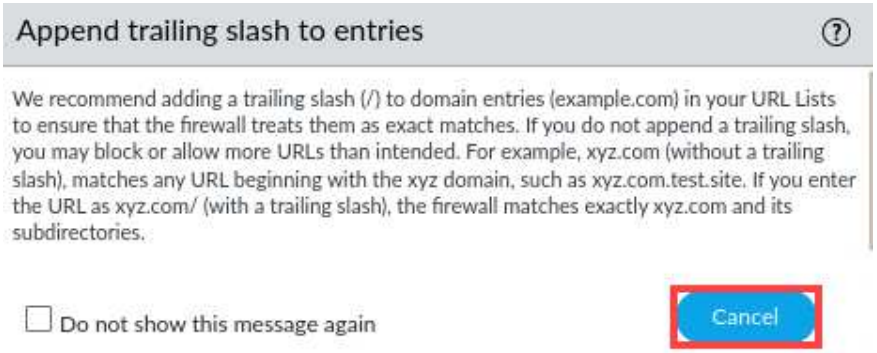
Parameter	Value
Name	**malicious-urls-edl**
Type	**URL List**
Description	**List of malicious URLs maintained on Extranet server**
Source	**http://192.168.50.80/malicious-urls.txt** (The EDL contains a single URL for testing purposes - www.popurls.com)
Check for updates	**Every Five Minutes**



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

4. Click **malicious-urls-edl**.

5. The firewall presents a notice about adding a trailing slash for domain entries, read the notice and click **Cancel**.

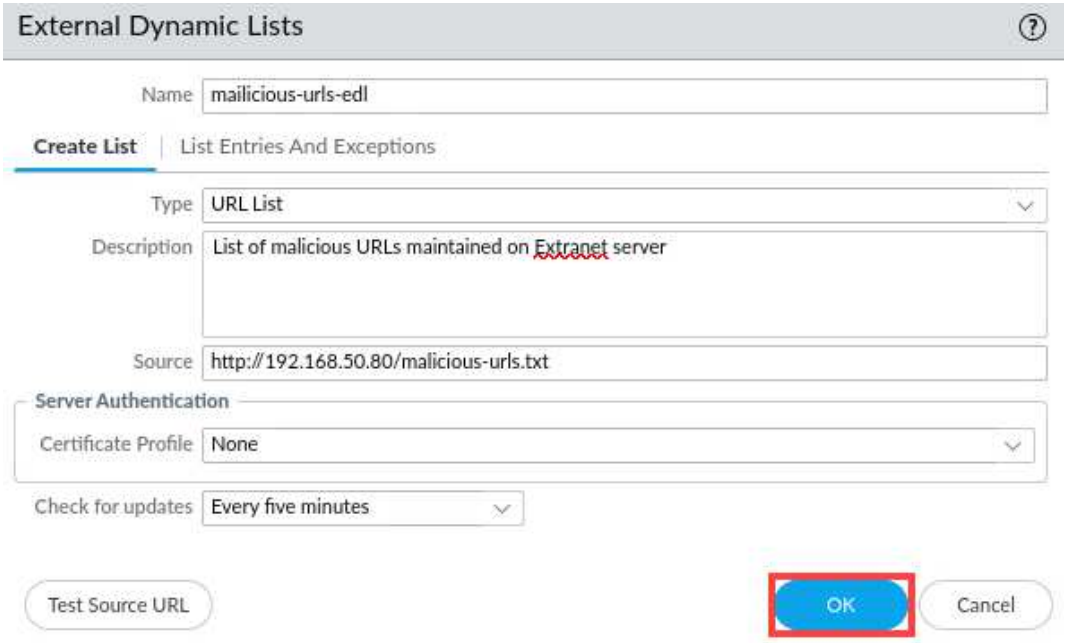


6. Click **Test Source URL** to verify that the firewall can access the EDL URL.

7. A message window should open and state that the source URL is accessible. Click **Close**.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

8. Click **OK** to close the **External Dynamic Lists** window.

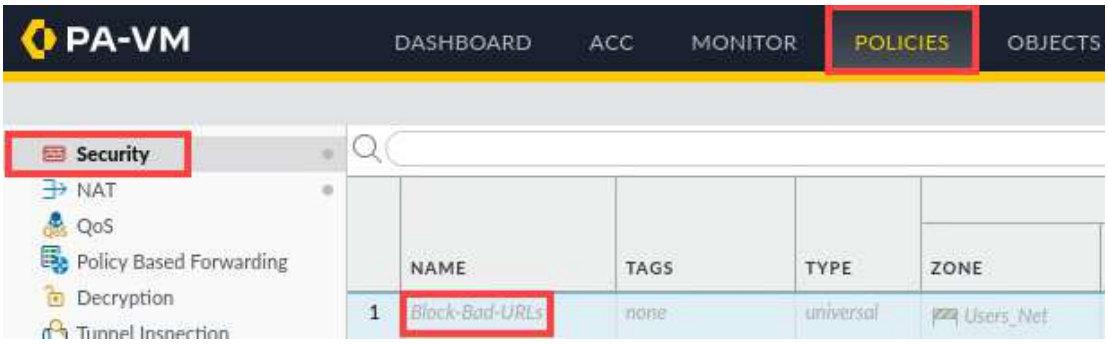


9. Leave the *Palo Alto Networks Firewall* and continue to the next task.

2.12 Block Access to the URL List with a Security Policy Rule

In this section, you will add the EDL containing the malicious URL list to a Security Policy rule with a "deny" action.

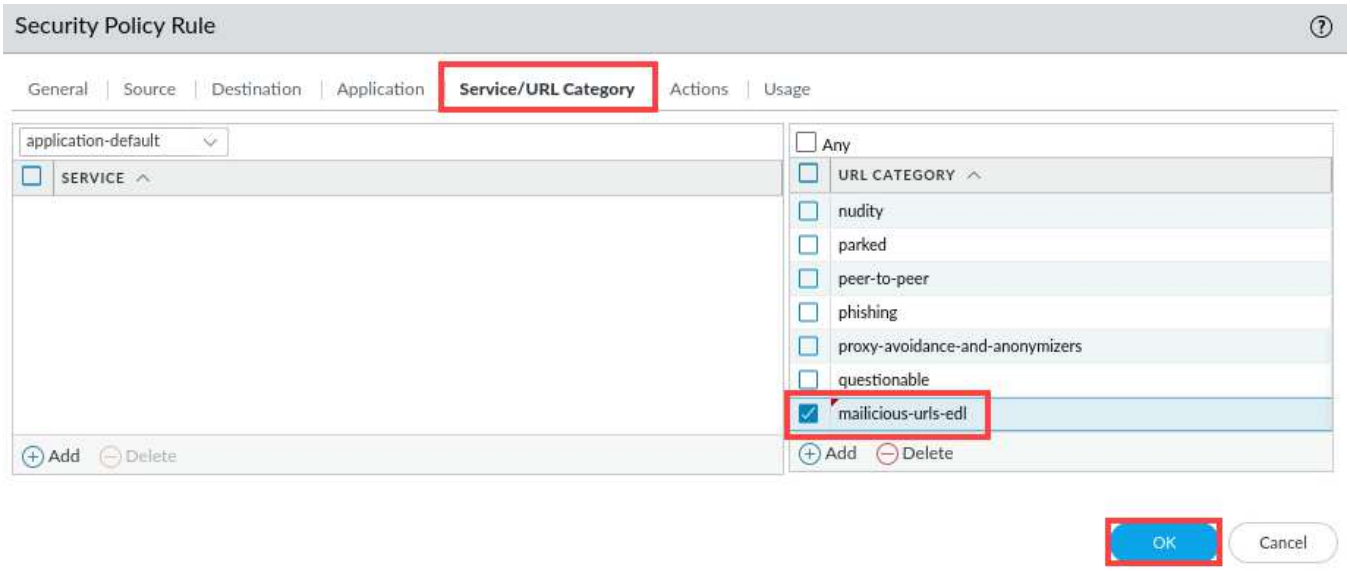
1. Select **Policies > Security** and click the **Block-Bad-URLs** policy.



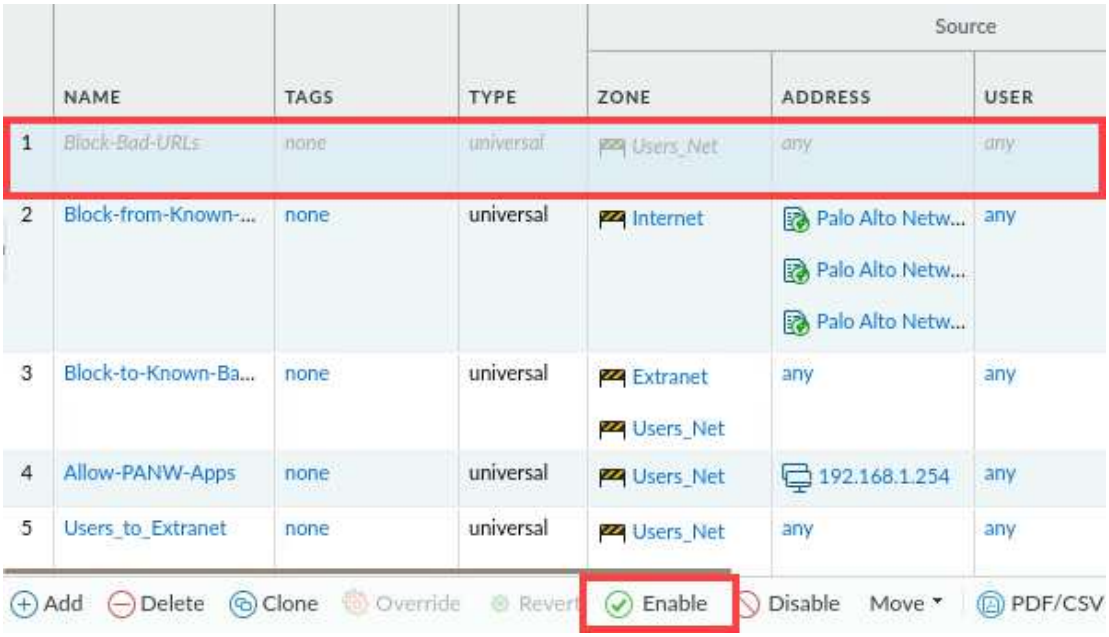
 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

2. In the *Security Policy Rule* window, click the **Service/URL Category** tab and configure the following**.** Click **OK**.

Parameter	Value
URL Category	Add **malicious-urls-edl** to the list. This EDL will block access to www.popurls.com.



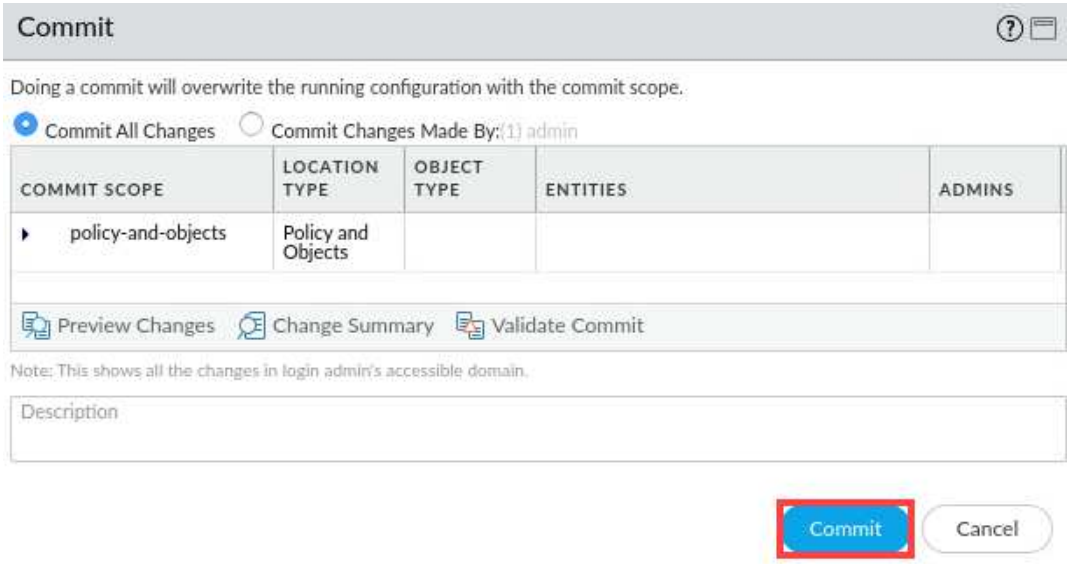
3. With the **Block-Bad-URLs** Security Policy rule highlighted, click **Enable** at the bottom of the window.



 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

4. Click the **Commit** button at the upper right of the web interface.

5. In the *Commit* window, click **Commit.**



6. Wait until the *Commit* process is complete. Click **Close**.

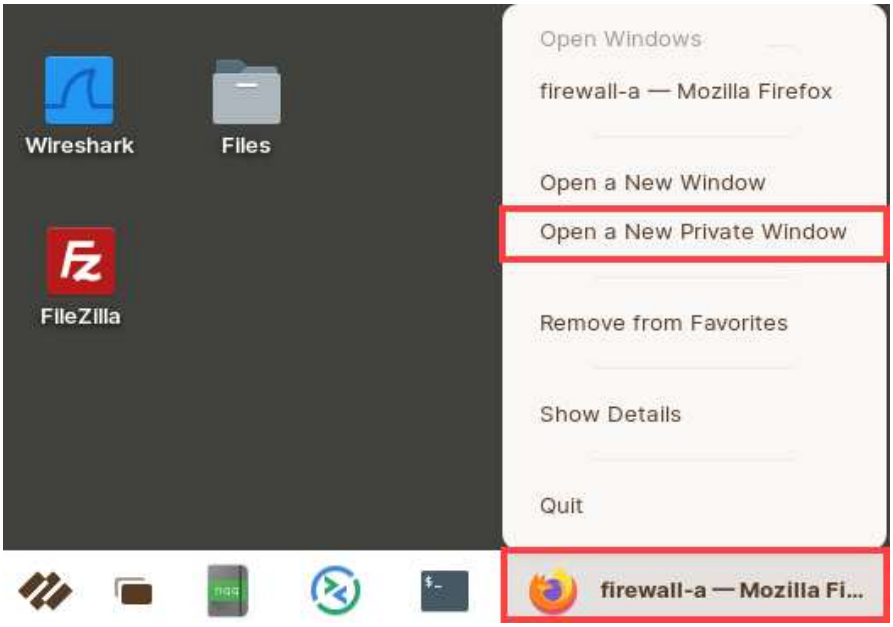
7. Minimize the *Palo Alto Networks Firewall* open and continue to the next task.

2.13 Test Access to a URL in the EDL added to the Security Policy Rule

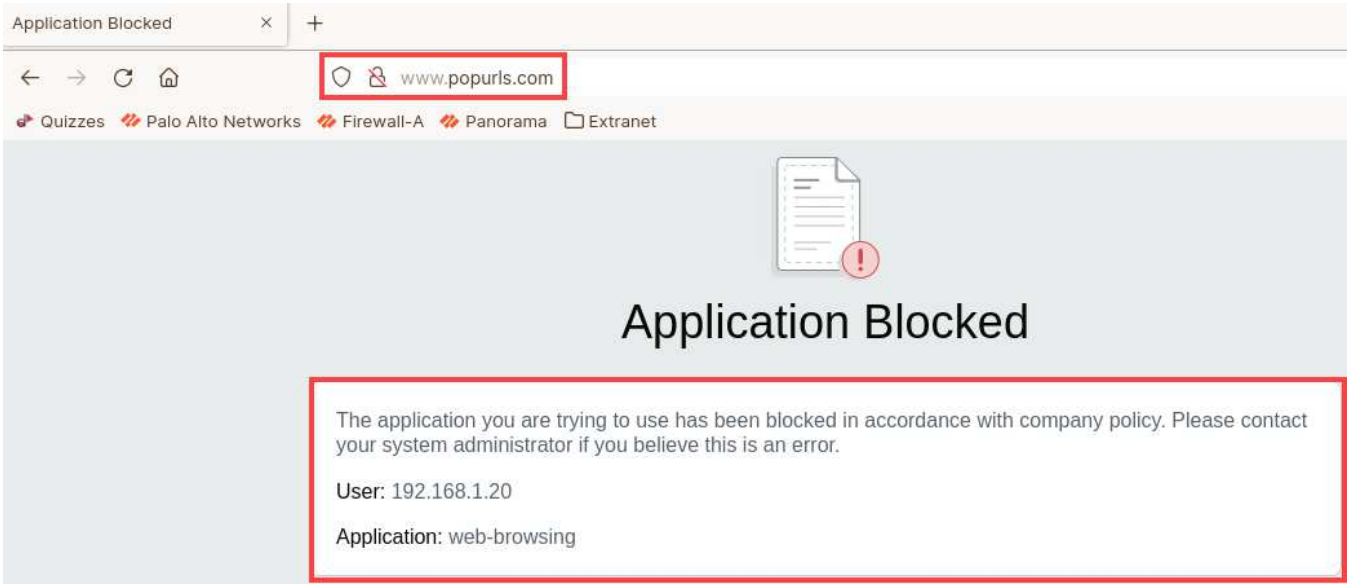
In this section, you will test access to a URL that is contained in the EDL that you added to a Security Policy rule with a “deny” action.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

1. In the client taskbar, right-click the **firewall-a – Mozilla Firefox Web Browser** application. Select **Open a New Private Window**.



2. Type **`www.popurls.com`**, the browser should display an Application Blocked because the EDL in the Security Policy blocks access to the popurls.com webpage.

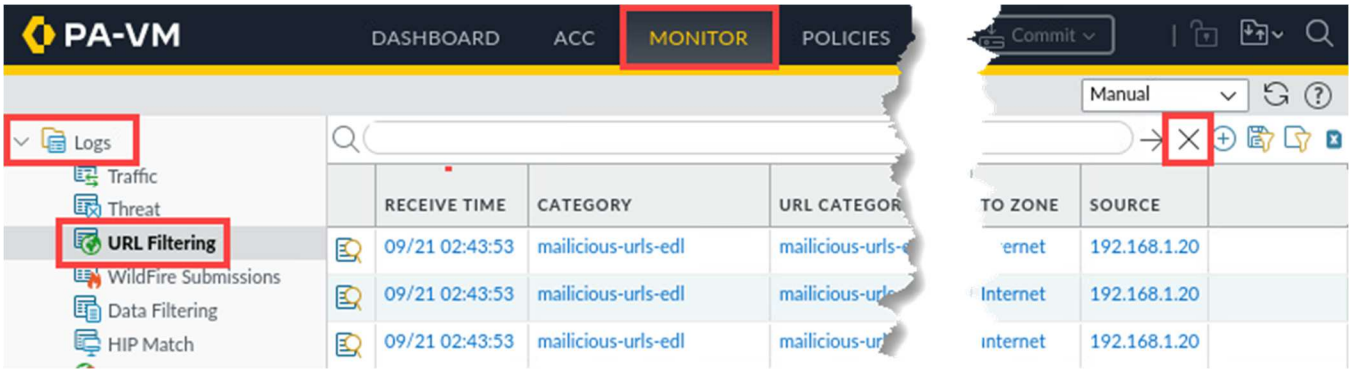


3. Close the *Firefox browser*.

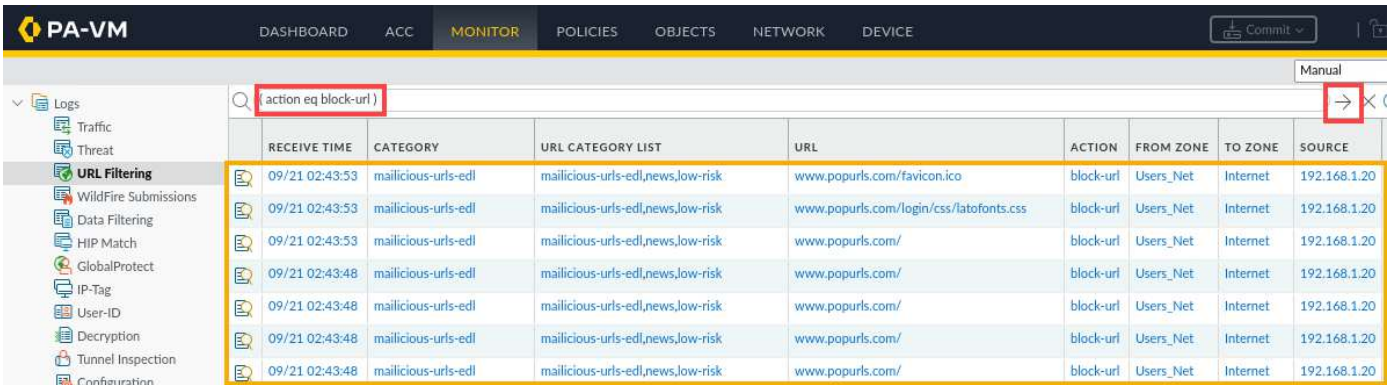
 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com

4. Re-open the *PA-VM firewall* web interface by clicking on the **firewall-a – Mozilla Firefox** icon in the task bar.

5. Navigate to **Monitor > Logs > URL Filtering** and clear any filters you have in place.



6. Create and apply the **(action eq block-url)** filter that will display entries that have an action of block-url. You should see multiple entries for sessions to www.popurls.com that the firewall has blocked.



7. The lab is now complete; you may end your reservation.

 Copyright © 2025 Network Development Group, Inc. www.netdevgroup.com