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Process

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# Expedition (updated to version 1.1.11)

**User Guide** 

Version 1.2



# What is Expedition?

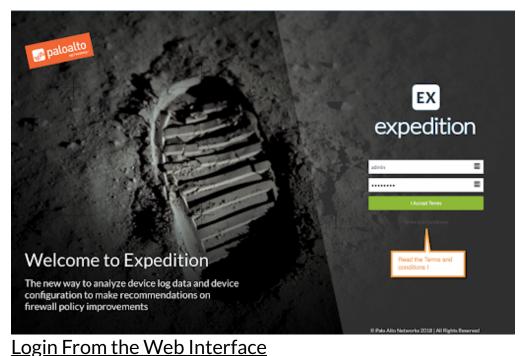
**Expedition** is the fourth evolution of the Palo Alto Networks Migration Tool. The original main purpose of this tool was to help reduce the time and effort to migrate a configuration from one of the supported vendors to Palo Alto Networks.

By using the Migration Tool, everyone can convert a configuration from Checkpoint or Cisco or any other vendor to a PAN-OS and give you more time to improve the results. Migration Tool 3 added some functionalities to allow our customers to enforce security policies based on App-ID and User-ID as well.

With Expedition, we have gone one step further, not only because we want to continue helping to facilitate the transition of a security policy from others vendors to PAN-OS but we want to ensure the outcome makes use of the most advanced features of the platform to get you closer to the best of the possible configurations. For this reason, we added a **Machine Learning module**, which can help you to generate new security policies based on real log traffic, and we have introduced the **Best Practices Assessment Tool**, which checks whether the configuration complies with the Best Practices recommended by our security experts.

With all these huge improvements, we expect the next time you use Expedition the journey to excellence will be easier.

## Login



### Web Interface Login

This is only referencing the access via web interface

Username	admin
Password	paloalto

**SECURITY WARNING:** We encourage you to change the username and password after your first login.

#### Changing default credentials

As a best practice, we recommend that you change the default credentials as soon as possible (DP – upon first log in)

#### Web Interface Login

After you log in via the web browser, follow these instructions to change the password for the "admin" user.

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	0 EXPEDITION R	ELEASE INFORMATION	CPU(s) #4	RAM	HD	a,	Charge Password
_	Name	Value				(+	Log Out
EX	Running	Expedition VM			1		

A new window to change the password will be shown:

- 1. Type the current password
- 2. Type NEW password
- 3. Re-type NEW password
- 4. Click on Save

Remember the password length has to be at least 10 characters long.

Username: admin	
Validation	
Old Password:	•
New Information	
Password:	2
Confirm Password:	3

# Let's Migrate

Expedition can help you migrate pieces of configuration from other security vendors and import them into a Palo Alto Networks configuration. The goal is to reduce time and mistakes. Expedition results always need to be reviewed by a professional with knowledge of the vendor that has been migrated and with Palo Alto Networks technologies as well.

There is no easy button that magically converts a configuration from any vendor to Palo Alto Networks without applying the right methodologies and using qualified people.

## **Migration Workflow**

The migration workflow applies to all the vendors we support:

- a. Import a Configuration (from a supported vendor)
- b. Export Unused Objects Report
- c. Remove Unused
- d. Clean Invalid Objects
- e. Rename, Remap Interfaces to PAN-OS Naming Convention
- f. Import a Base Configuration (Palo Alto Networks configuration from the device that you are migrating to)
- g. Move Objects From the Configuration Migrated to the Base Configuration.
- h. Merge
- i. Remove Duplicates (if any)

#### j. Generate the Output (XML, SET Commands, API Calls)

First step will be always creating a Project, then enter the project by double-click on it.

## Importing a configuration into the project

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104.Fie			drawn.	SPIRE				Brook
	3) means 🔶 norment							
Image	Rame .	Rochame	Securit	Rel	7694	Faron.	Deur Skiller	
10121	Overatione	10.11.29.230	10000000000000	+43	p4.030			

Expedition can read from different sources. For more specific insights on each vendor, go to the Appendix at the end of this document. Here we will describe the common procedure to migrate any configuration.

Navigate to the Import Tab and select from what vendor you want to migrate. After the configuration has been imported to Expedition, check for invalid objects and clean them before you move forward.

#### **Project Dashboard**

As a good starting point, it's recommended to take a look at the Project Statistics panel. We can search here for invalid, unused, and duplicate objects. We can go straight to review the invalid services by clicking on the number shown under the invalid column for the Services Row. That will move the view to Services, which is located under Objects and will apply a predefined filter to show only the Invalid Services.

Object	Count	Duplicated	Disabled	Unused	Invalid	Ghost	Warning
🔙 Address	1750	10	0	1750	122	0	14/04
🔆 Services	486	a	0	486		0	N/A
😝 Address Groups	304	0	0	304	5	0	N/A
Service Groups	106	0	0	106	3	0	N/A
🕵 Regions	0	0	0	0	0	0	N/A
Security Rules	0	0	0	0	0	0	0
Nat Rules	41	3	0	0	0	0	a
Application Override Ru	0	0	0	0	0	0	0
(iii) Security Zone	23	0	0	0	10	0	N/A
interfaces	25	1	0	0	0	0	N/A
🙆 IPSec Tunnels	0	0	0	0	0	0	N/05

#### **Remove Unused Objects**

Before searching how to fix those invalid services, it's important to remove what was imported but not used in any security or NAT policy. Let's call them unused objects. To remove the unused objects, you have to navigate to the Objects Tab and look at the bottom right bar.



At the very end, you will find three buttons. The green button will recalculate the objects that are defined as used or not used. This should be used after changes have been made on the configuration, so Expedition can recalculate the used objects. The red button is will remove the unused objects from the configuration. The third button with the "X" on it will export a report with all the unused objects.

We recommend exporting the Excel file to track which objects will be removed from the configuration when you click on the red button, and it's good to keep it for your migration records.

After export the Excel file, click the red button to remove all the unused, and recheck your dashboard to see if you reduced the number of fixes you have to make.

#### **Fixing Invalid Services**

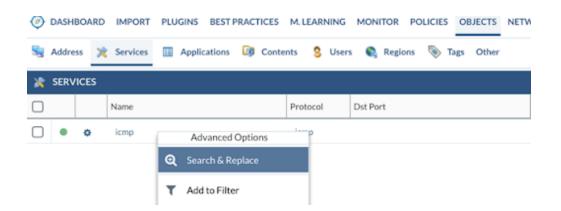
Every time you import a configuration from a vendor other than Palo Alto Networks, it's common to have what we call invalid services. We consider invalid services all of those who were based on IP protocols other than TCP or UDP. For example, you can find ICMP services related or IPSec, GRE.

🧼 das	HBOARD	IMPORT PLUGINS BEST PRACTICE	S M. LEARNIN	G MONITOR POLICIES OBJECTS NE	TWORK DEVICE	TOOLS EXPORT
San Sada	ress	Services 🔲 Applications 🕼 Co	ntents 🙎 Us	ers 🚯 Regions 📎 Tags Other		
🖹 SER	RVICES					+-≣
		Name	Protocol	Dst Port	Vsys	src File
	•	echo		7	vsys1	default
	•	discard			vsys1	default
•	•	tacacs		Valid protocols are only	vsys1	default
•	•	sunrpc		TCP or UDP	vsys1	default
•	•	pim-auto-rp		496	vsys1	default
	•	talk		517	vsys1	default
	•	kerberos		750	At least one	default
	•	nfs		2049	destination port	default
	•	sip		5060	needed	default
	•	icmp	icmp		vsys1	default

After we have removed the Unused Objects, only the used ones will be kept for remediation. In the case of invalid services, the only way to fix it, in case the original service was not TCP or UDP, is change it to an App-ID from Palo Alto Networks.

PROJECT STATISTICS								
Object	Count	Duplicated	Disabled	Unused	Invalid			
Sig Address	391	1	0	0	-			
🔀 Services	114	0	0	0	(1)			
🙀 Address Groups	26	0	0	0	0			
🙀 Service Groups	7	0	0	0	0			

To update the App-IDs, just right-click on the invalid service and click Search and Replace from the advanced menu.



This will open up the Tools Tab and show you the Search & Replace Tab. The view is divided in two panels: the left panel shows the output of the applied filters and the right panel will show you where the selected items from the left panel are used.

C DASHBOARD IMPORT PLUCINS BEST PRACTICES M. LEAN	RNING MONITOR POLICIES OBJECTS NETWO	AK DEVICE TOOLS EXPORT	
SEARCH RESULTS	ہ ہے	OPTIONS	
Name		🖂 PREFIX/SUPPIX/REPLACE 😭 RENAME 🧕 SEARCH&REPLACE	
K Services (2)	Open to edit the Filters	FOUNDIN	REPL
🖻 🔹 konp	vnol	Security Policy (1) NAT Policy (1)	100
•	Clear all the Filters	Goup Nard Imp object is member of a group	

#### **Replace Services by App-ID**

Select the service to be replaced. For instance, in our example, we will select the Group where ICMP was a member and clicked the Replace button located on the bottom bar.

Click Security Policy (1) then select the rule where the service is used and click Replace again.

OPTIONS		
	LACE	
FOUND IN	REPLACE (2)	
😼 Objects Groups (1) 🗰 Security Policy (1) 🐌 NAT Policy (0)	App Override Policy (3)	Click here to Replace by
S Name	Double-click on a Rule	1997
k icmp (1)	to apply a filter on it and see it	
🗹 💷 236] acl_dmz_46	a rvice	vays1

If you want to see the rule(s) that use this object, just double-click on the rule and you will be redirected to the Policy Tab and a filter by that rule will be applied.

After review, move back to the Tools Tab, click the Search & Replace Tab, and click on Replace. In this example, we are replacing a service by an App-ID, so select Replace by "Applications" and then to "ICMP" and click Replace All.

There are a couple options enabled by default:

- 1. Split rules when needed In case we are replacing services by App-ID, check if the rule where the invalid service is in use has more services defined. In that situation, the rule will be cloned to allow the new App-ID but removing all the other services from the cloned rule, and then the invalid service will be removed from the original rule. By doing this, we don't mix services with apps in the same rule which can lead to change the original behavior of the rule.
- 2. Remove Service from Group In case the invalid service was a member of a group, it will be removed after the replace as a member.

□     aci,dnz,46     vys1     Ør Acidatz,46     Pastion     Wrst     Pastion by     Paptice by       □     % Samicas (2)     □     % None (2)     Paptice by     Paptice by     Paptice by       □     is imp     vys1     □     aci,dnz,46     Samica     Vys1     Paptice by       □     is imp     vys1     □     aci,dnz,46     Samica     vys1       □     is imp     is imp     is imp     is imp     is imp     Octors       □     is imp     is imp     is imp     is imp     is imp     is imp	SEAR	CH RESULTS	• T Ø	OPTIONS						
Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2) <th></th> <th>Name</th> <th>Viyi</th> <th>E PROFIL</th> <th>SUPPO/REPLACE</th> <th>ta rename</th> <th>Q SEARCHERS</th> <th>IPLACE</th> <th></th> <th>•</th>		Name	Viyi	E PROFIL	SUPPO/REPLACE	ta rename	Q SEARCHERS	IPLACE		•
Image: Service (2)     Image: Service (2)     Image: Service (2)     Applications       Image: Service (2)     Image: Service (2)     Image: Service (2)     Applications       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (2)     Image: Service (2)     Image: Service (2)     Image: Service (2)       Image: Service (3)     Image: Service (3)     Image: Service (3)     Image: Service (3)       Image: Service (3)     Image:	•	Security Policies (1)		FOUND IN				REPLACE (2)	Select Replace	Ψ
Kines ()      Kines ()		<ul> <li>aci_dmz_46</li> </ul>	wayat	R	Objects		Pasition	Ways.	Beglace by	
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Changes will applied to	8	<ul> <li>kmp</li> </ul>	veys1	8 .	ad, dmz, 46		Service	saul	Ta	
Changes will applied to	0	<ul> <li>low</li> </ul>	vays1	8 6	2. Jun		Groups	ways 2	- iste	-
		selected	lami	]		App-ID			Soli Index when reacted Remove Service from Gross	3

This procedure can be used in many other ways. For example, if we want to filter by a service or address and remove that object from the configuration, just select the object from the Search Results panel then add to Replace from where it was being used. To replace, select Replace by combo "Remove." That will remove the object from where it was used, or if you have an address-group or service-group and you want to replace it by the members instead, you will do the same but in the Replace and select "Members" then click Replace All.

After replacement of the invalid objects, you can repeat the step for removing the unused objects since they will not be used anymore.

**Remapping Interface Names** 

Expedition, when imports configurations from other vendors, keeps the original interface names to make the validation process easier after the import. The problem with that is naming usually doesn't match the one that Palo Alto Networks expects, so we have to rename them to ensure the changes will be captured by our Palo Alto Networks configuration.

For example, we import a configuration from Cisco, and the interface names are "Ethernet1/1" which is very similar to a Palo Alto Networks naming convention, but, in our case, it must be all in lowercase.

To convert it to the proper naming convention, you can select the Ethernet1/1 that is parent for more sub-interfaces (vlan tags) and click on the Remap Interface Name located at the bottom left-side bar. From there, select Slot 1 and ethernet1/1.

٥	DASHBOARD IMPORT	PLUGINS BEST PRACTIO	ES M.LEARNING MONITOR POLICIES OBJECTS NETWORK DEVICE TOOLS EXPORT	
	Interfaces 🕅 Zones		Virtual Wires 💑 VLANs 🎂 VPN	
-	INTERFACES		m Rename Interfaces X	
	Name	Туре	Remap Selected interface by	Management P
	Media: ethernet		Selected: Ethernet1/1	
⊠	Ethernet1/1	layer3	Slot 1   thermet1/ti	None
	Ethernet1/1.400	layer3	OUTSIDE	None
	Ethernet1/2	layer3		None
	Ethernet1/2.38	layer3	X Cancel 🔐 Remap	None

After clicking the Remap button, the Expedition tool will replace the name of the interface in the whole configuration, including any references to it and any subinterfaces.

٢	DASHBOARD IMPORT PLU	GINS BEST-PRACTICES M.LE	ARNING MONITOR POLICE	ES OBJECTS NETWORK D	EVICE TOOLS EXPORT	<b>8</b> ter	sti 💌		
	🛲 Interfaces 🎮 Zones 🏶 Virtual Routers 🎭 Virtual Wires 💑 VLANa 🎂 VFN 🛛 🍸 Filters (N								
-	INTERFACES					+ -	- =		
	Name	Туре	Virtual Router	Tog	Zone	Management Profile			
	Media: ethernet								
Ø	methernet1/1	layer3	🚭 Nane	Untagged	none	None	Û.		
	ethernet1/1400	layer3	🚭 vr.,vajst	400	<b>PR</b> OUTSIDE	None	Û.		

You will have to repeat the process to adapt all the interfaces that you want to migrate.

Import Your Base Configuration

What is the Base Configuration?

Base Configuration is a device's specific configuration that is usually taken from the Palo Alto Networks device that you are migrating to. The base configuration should be used, as the name suggests, as a base and should be merged with the imported thirdparty vendor configuration that you have imported and manipulated. The result of the merge should be a working and migrated Palo Alto Networks configuration.

The first PAN-OS configuration imported into the project will be assigned as Base Configuration. The Base Configuration is the one that will be used at the time to export the configuration out of Expedition or by generating an XML file or API calls. Any changes made to the Base Configuration will be applied to the output. To import a Base Configuration, click the Import Tab from the PALO ALTO Tab and enter a link to your XML file that you previously exported from your PAN-OS device or just double click on one of the devices added to the project (if any) to import the config from the snapshot stored in Expedition.

DASHBOARD	IMPORT PLUGINS	BEST PRACTICES M. LEARNING	MONITOR POLICIES OBJECTS NE	TWORK DEVICE TOOLS	EXPORT
( <sup>PL</sup> PALO ALTO	CSV	СНЕСКРО	INT CISCO	FORTINET	IBM XGS
Single File				— Multiple	2 Files (in ZIP)
Description:	Upload a Panos or Pano	arama configuration XML file. Export	it from your device.	Descripti	ion: Upload a ZIP file with all the c
XML File:				Browse ZIP File:	
	SNIPPETS				
	me	Hostname	Serial #	Port	Type Panos
P	w220	10.11.29.250	X0000000000000000000000000000000000000	443	pa220 8.1.1

After that, you can check from the Export Tab that the config has been set as Base Config by seeing if it has been placed in the right panel.

-	Mappings at All Curput Manager			-
101	INCE CONFIGURATION FUEL (INFUTL)	o -	BASE COMPRESSION (OUTPUT)	c
T:	al.		To al. • To al.	
0	Other Venders Configurations 1		Palo Alto Networks Configuration	
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0	💌 🏥 cleant	0	• 🛐 Ps220,000000000000000000	
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D	<ul> <li>Witsal Butes</li> </ul>	8	irrade 🥅	
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3	<ul> <li>Chiperts</li> </ul>	8		
0	Policies	0		
ā	<ul> <li>(98) Zorean</li> </ul>	0		

From there, you can select what objects we want to move from the left panel to the Base Configuration (right panel) by using drag and drop.

In case you want to move the objects from the left panel and convert them as shared objects, drop them into the Shared vsys/DG. After the merge, they will be transformed into shared objects, and all the references to them will point to the new shared objects (from policies, groups, etc).

#### Merge Objects to your Base Configuration

All migrated objects should be visible on the left panel under the Export Tab. The right panel should have your Base Configuration that you previously imported. You just need to drag and drop the migrated objects and policies from the left to the right. You can select certain parts of the migrated configuration to be moved to the final configuration or all of them.

Please make sure you place the objects and policies into the desired vsys configuration.

sou	IRCE CONFIGURATION FILES [INPUTS]	BASE CONFIGURATION [OUTPUT]
T:	lle.	* <b>1</b> at *
	Other Vendors Configurations	Palo Alto Networks Configuration
	🔻 🗁 Configurations to Migrate	🗄 📼 😂 Base Configuration
	💌 🚋 disea.txt	Pu220_0000000000000000000000000000000000
	🕨 📦 Network	Device
	ingo 🔤 🔸	🖬 👻 🚥 viyit
		Chijects
		Policies

Repeat the same procedure with the Zones, Interfaces, Virtual Router(s) and drop them into the correct vsys.

SOU	IRCE CONFIGURATION FILES (INPUTS)	<i>c</i> -	BASE CONFIGURATION [OUTPUT]
τ:	li l	*	T: all T: all
	Other Vendors Configurations 1		Palo Alto Networks Configuration
	<ul> <li>Configurations to Migrate</li> </ul>	0	💌 🗁 Base Configuration
	T the cisco.txt	0	Pa220_0000000000000000000000000000000000
	🔻 😜 Network	0	▼ III Device
Ø	Interfaces		- um vays1
Ø	🕨 🌚 Virtual Routers	0	Objects
			▶ (# Zones
			Policies
			🗱 shared
			S Network

The final step is to merge the migrated configuration and your base configuration and create you final configuration. To do this, click the MERGE button.

After this action, all the selected objects will be transferred from one configuration to the Base Configuration. If you want to see how it looks, you need to change the selected configuration and the vsys to the Base Configuration from the bottom bar by going to the Objects Tab. This will filter and show you the objects and rules on the Base Configuration.



After you have created the final configuration, you have two options to deploy it. One option is a manual XML file export that can be deployed on the Palo Alto Networks device to which you are migrating, and the other option is to use API calls to send parts

of the configuration or the whole configuration to the device if that Palo Alto Networks device is already connected to Expedition.

#### Find Duplicates After the Merge and Removing Them

It is recommended that you run another check for duplicates and remove or merge them after a configuration migration. A common scenario is to have duplicates amongst objects, services, and/or interfaces.

Using the dashboard from within the project, it will tell you how many duplicated objects you have in your current configuration. You can click on the duplicate object to go to the object view, and Expedition will filter by duplicate and by name predefined filter.

Object	Count	Duplicated	Disabled	Unused	Invalid	Ghost	Warning
Sig Address	1750	10	0	1750	122	0	N/A
× Services	486	8	0	486	7	0	N/A
Address Groups	304	0	0	304	5	0	N/A
Rervice Groups	106	0	0	106	3	0	N/A
💽 Regions	0	0	0	0	0	0	N/A
Security Rules	0	0	0	0	0	0	0
🐟 Nat Rules	41	3	0	0	0	0	0
Application Override Ru	0	0	0	0	0	0	0
(R) Security Zone	23	0	0	0	10	0	N/A
and Interfaces	25	1	0	0	0	0	N/A
n IPSec Tunnels	0	0	0	0	0	0	N/A

Next, check the duplicated services to demonstrate the workflow to follow and get rid of them.

5	Addre	ss 🔀	Services 🛄 Applications 🔯 Contents	8	Users 🔇 Re	rgions 🐌 Tags Other	
×	SERV	ICES					
			Name		Protocol	Dst Port	Vs
	٠	٥	36000-59999-udp		udp	36000-59999	C
	٠	۰	36000-59999-udp		udp	36000-59999	s
	٠	٥	8882_TCP		tcp	8882	C
	٠	٠	8882_TCP		tcp	8882	s
	٠	٥	DNS-UDP-53		udp	53	C
	٠	٥	DNS-UDP-53		udp	53	C

The object in Pink is a Shared object, so that means you have selected the vsys equal to all from the bottom bar. This will do a search across all the vsys/DG to find objects seen more than once.

In our example, we want to keep the object that already exists as Shared and make all the references within the vsys/DG points after the merge to the Shared object only and finally the duplicated object out from the Shared will be removed.

First, select the duplicated objects you want to keep and then right-click and select Merge Options and "Set as Primary." That will tell Expedition to keep the one we set as Primary after Merging the duplicated objects.

-	*		uup			wap	30000 37777
•	•	36000-59999	udp			udp	36000-59999
•	۰	8882_TCP		Advanced Options		tcp	8882
٠	•	8882_TCP	Q	Search & Replace		tcp	8882
٠	٥	DNS-UDP-53	Ŧ	Add to Filter		udp	53
٠	۰	DNS-UDP-53	_			udp	53
•	۰	ISAKMP	۲	Select Predefined Filter	'	udp	500
٠	۰	ISAKMP	Ø	Object Names	•	udp	500
•	٥	Proxy Port	Θ	Add to Group	•	tcp	9090
٠	٠	Proxy Port	æ	Set Protocol	•	tcp	9090
٠	٥	Proxy Port 2	×	Merge options	•	Set as prin	
٠	۰	Proxy Port 2	۰ *		•		
٠	۰	RDP	×-	Merge	-	Set all as p	
٠	۰	RDP				Ø Deselecte	
•	۰	TCP-8010				Ø Deselecte	:d All
-		200 0040					

When the object has been set as Primary, you will notice a new icon appear.

*	SERV	ICES				+	-
			Name	Protocol	Dst Port	Vsys	sr
	•	^	36000-59999-udp	udp	36000-59999	DC-F	1
	•	8	36000-59999-udp	udp	36000-59999	shared	1
	•	÷	8882_TCP	tcp	8882	DC-F	ł
	•	8	8882_TCP	tcp	8882	shared	1

Now you can apply the Merge type. In our case, we will use Merge by Name and Value to validate only the same duplicated object is merged. Right-click and select "Merge" then click "By Name & Value." This will be applied to the selected objects or, in case you didn't select any, it will be applied to all the results from the filter applied.

You can change the filter and add a predefined filter to show only the duplicated services by name only and then apply the merge by the same concept, only by name as well.

All this can be done with the right-click "Select predefined filter."

#### Generating the Output

When you are finished cleaning your configuration, it's time to get the results and export from Expedition and import into your Palo Alto Networks device (Firewall or Panorama).

Navigate to the Export TAB.

Under the Mapping Tab, there is a button at the bottom bar-left titled "Generate XML & SET Output." By pressing this button, Expedition will generate a XML configuration file and based on that configuration (and using a script called Pan-Python made by Kevin Steves <u>https://github.com/kevinsteves/pan-python</u>) it will generate the Set commands as well. After the generation, a new window with the download links will appear. Click the Downloads button to get access to that window as well.



You can generate API Calls to be sent to your devices in case you created them before and you added to the project you are working on. In that case, you will need to go under the tab titled, "API Output Manager."

Here, you have several options. We will start covering Atomic and Subatomic.

Atomic calls will be API calls where with a single API call will add all the address, for instance, to a specific vsys/DG. If you select subatomic, you will get one API call by element you have. If you have 500 addresses, you will get 500 API calls, one for each address. With Atomic, you will get just one API call containing the 500 addresses inside.

**Step One:** Click on "Atomic" or "Subatomic" and click the "Step 1" button to create all the API calls.

After that, the ID of each API call will tell you the order in which you have to send the API call. Yes, order matters. If you don't select any, all API calls will be sent in the proper order.

**Step Two:** Click "Step 2" button and select the DEVICE where you want to send the API calls and send them all.

	Config/shared/address-group API CALLS TO:	name=
	Select Devices to send the API calls	
	myPanorama	
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After the API call is sent, you will get the response from the device itself. If it was successful, you will see in the output.

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## Appendix A: Import

## Importing CSV files

From within a project, it's possible to import CSV files containing objects that you want to add to you current configuration.

#### Requirements

You must have a configuration previously loaded in order to import something else on top by using CSV files.

How the CSV file must be created:

- The character used to split by columns is the semi-colon ";"
- The character used to split members inside a column is the comma ","

#### Process

- 1. Select the object type you want to import. Example: Static Routes
- 2. Select the CSV file from your laptop



#### 3. Map your columns with the predefined fields from the right panel

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# 4. Select where to import the new data loaded from the CSV and mapped

🎯 myTempla	ite1 •	Virtual Router 🚯:	default	•	📥 Import Data

In this example, routes are part of Templates and need to be imported into a Virtual-Router. Plus, select the virtual-system where your VR is located. Then click Import Data.

Order matters! If want to import Service Groups, you need to first import the services used on those Groups or the import will not be successful.

#### Importing an IronSkillet Day1 Configuration

IronSkillet is a project made by Palo Alto Networks to create a configuration that is already configured with some of the best practices recommended by our security experts. If you need to add a Base Configuration into Expedition to use it as a base to migrate something else, it's very simple now with the integration built in Expedition.

#### Process

Create a project and click to get in. After you enter the project, go to IMPORT. Then click the Tab title "Iron-Skillet."

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From here, you can configure some parameters before the configuration is created. You can modify the parameters by hand, or, if you have an IronSkillet configuration file, you can load it to automatically fill the fields.

- Select the Configuration Type (Firewall or Panorama) this will generate the type of configuration selected.
- PAN-OS Version. You can select if the configuration you need but it must be 8.0 or 8.1 or X.X
- If you have an IronSkillet configuration, you can click LOAD FROM CLIPBOARD and paste the content from the file and then click SAVE. That will automatically fill the fields configured.

Example: <u>https://raw.githubusercontent.com/PaloAltoNetworks/iron-</u> <u>skillet/panos\_v8.0/my\_configs/sample-mgmt-dh...</u>

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# Author: Scott Shoaf <sshoaf@paloaltonetworks.com></sshoaf@paloaltonetworks.com>
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Palo Alto Networks my_variables.py Used in tandem with build_my_configs.py to render templates into loadable configurations
Constant and a manufacturing company to render temparates into loadable comparations
This software is provided without support, warranty, or guarantee.
Use at your own risk.
xmlvar = {
xmivar = t # These are sample username and password values to show the variables in the tools script
# The user will be prompted for the actual user and password when the script is run
"ADMINISTRATOR_USERNAME": "iron-skillet", "DNINISTRATOR_USERNAME": "iron-skillet",
"ADMINISTRATOR_PASSWORD": "fortheloveofallthingsholychangeme",
# MY_CONFIGDIR is the prefix to the my_template output folder
"MYCONFIG_DIR": "sample-dhcp-client",
# MGMT_TYPE values: static, dhcp-cloud, or dhcp-client
# if static, update the IP, mask, gateway values below
"MGMT_TYPE": "dhcp-client",
# Panorama types are cloud or standard
# Cloud adds in initcfg bootstrap elements for Panorama
"PANORAMA_TYPE": "standard",
# the values below are specific to the firewall deployment environment or default can be used
# IP addresses are non-routable in the sample config
"FW_NAME": "firewall",
"DEVICE_GROUP": "sample",
"TEMPLATE": "sample",
"DNS_1": "8.8.8.8",
"DNS_2": "8.8.4.4",
"NTP_1": "0.pool.ntp.org",
"NTP_2": "1.pool.ntp.org",
"SINKHOLE_IPV4": "72.5.65.111",
"SINKHOLE_IPV6": *2600:5200::1",
"EMAIL_PROFILE_GATEWAY": "192.0.2.1",
"EMAIL_PROFILE_FROM": "test@yourdomain.com",
"EMAIL_PROFILE_TO": "test@yourdomain.com",
"SYSLOG_SERVER": "192.0.2.2",
# IP address or hostname for config bundle export
"CONFIG_EXPORT_IP": "192.0.2.3",
# configure if management interface type = static
"MGMT_IP": "192.168.55.10",
"MGMT_MASK": "255.255.255.0",
"MGMT_DG": "192.168.55.2",
# Panorama Management IP Address Info
# Set CONFIG_PANORAMA_IP to yes to include in config
# If set to no will not add which may be required for partial config loads
"CONFIG_PANORAMA_IP": 'yes',
"PANORAMA_NAME:" panorama",
"PANORAMA, IP": 192.168.55.7"
"PANORAMA_MASK": "255.255.0",
"PANORAMA DG" 192168.55.2"

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After the changes are made, you have to click on GENERATE CONFIG AND IMPORT. This will create a Palo Alto Networks configuration file based on your selection (Firewall or Panorama) and with the selected version and all the changes made in the parameters will be applied to it. After IronSkillet generates the new configuration, Expedition will Encrypt it and automatically imported into the Project. If this is the first Palo Alto Networks configuration loaded on the Project, Expedition will set it as the Base Configuration.

#### **Revision History**

Date	Revision	Comment
June 22, 2018	А	First release of this document.
October 16,2018	В	Added Appendix A
April 1,2019	С	Updated Screenshots
August 27, 2019	D	Created LIVEcommunity Article and Editorial Revisions

**★★★★★** (1)

15,720 Views