## **Using Environment Properties**

https://cms.pilotfishtechnology.com/how-to-use-environment-properties-tutorial-pilotfish

eiConsole v.24R1 Tutorial & Working Directory

# eiConsole Tutorial - Topology Using Environment Properties

Note: The <u>Quick Start</u> and <u>Foundation</u> tutorials should be completed before proceeding with the Topology Tutorials.

#### Overview

In this tutorial, we'll cover the uses of environment properties, how to configure them, and what they are used for. In addition, this tutorial expands on the eiConsole Basics tutorials, such as configuring Listeners and Transports, as well as testing.

#### **Before You Begin**



Using Environment Properties Working Directory

Download the Using-Environment-Properties-Working-Directory.zip file with the sample Working Directory and unzip it on your computer to a convenient place. In our case, it's c:\Users\{USER \_NAME}\PilotFish eiConsole Working Directories\Expressions Using Environment Properties where {USER\_NAME} is the user's name.

Open the eiConsole, locate your Simple Route directory, and open it. The **Expressions – Using Environment Properties** route is included in the <u>working directory</u>. Your Route File Management screen will open, as shown below.

Next, follow the tutorial and walk through it step-by-step.

Click on the Expressions – Using Environment Properties route.

a Route File Management				
<u>File Edit View Find Tools Help</u>		<u>a</u>		
File Management				
🔞 Expressions Using Environment Properties [C:\Users\pocht\PilotFish eiConsole Working Directories\Expressions Using	Environment Properties]	📢 Create New	d Browse	🗊 Remove
		^		
Basic View Advanced View				
Interface Overview: eip-root				
Name Name				
🕏 Expressions - Using Environment Properties				121
	😤 Add Route 🛛 🜍 Add Interface	Package 2 C	onfigure Common	Modules
▲ ▼				
			🕂 Quit eiC	onsole 🕜
			-	

Most modules in the eiConsole, such as Listeners, <u>Processors</u>, Transports, and so forth, make use of configuration items, which, so far, we've primarily configured as static, constant values. For example, we'll use a Directory/File Listener's configuration:

PilotFish eiConsole [Expressions	- Using Environment Propertie	s]				- 🗆 X
<u>File Edit M</u> ode <u>F</u> ind <u>T</u> ools <u>H</u>	<u>H</u> elp					
	Add Source	ce 😥 Delete Source	🐺 Move Down 🔥 N	ove Up 🛛 😽 Add Target	Delete Target	
Source System	Listener	Source Transform	Route	Target Transform	Transport	Target System
		XML	XML			
System Unnamed Us	sing Environment Properties Inbound	Relay (System Format)	Expressions - Using Environm	Relay (System Format)	Not Defined	System Unnamed
Listener C	Configuration Processor C Listene Listene	onfiguration rr Configuration er Name: Using Enviror	nment Properties Inbound			
	Listene	er Type: Directory / File er Description: Monitors a sp	e view files.			
	Po Po File Sp Pa To	Throttlina Post-F Basic Advance ling interval:	Process Schedulin ced Transacti 5 ÷ second in	Criteria Si n Logging Inact s V Re Re Re V Re M	orting ivity	

Now, suppose our interface is made up of many <u>routes</u>, each with multiple Listeners and Transports. Some might be interacting with folders, meaning we'd need to change the paths each time. Others might be querying and updating databases, meaning we'd need to change connectivity information, including usernames, passwords, connection strings, driver names, etc., each time. The problem of moving interfaces from environment to environment quickly scales up as the complexity of an interface grows.

Fortunately, there's a pretty simple, straightforward solution: Environment Properties. Environment properties are property values defined in an external file that exists, relative to an interface, at a fixed location (the root directory). We can edit and use the contents of this file from within the eiConsole by going to the Edit menu and selecting **Environment Properties**.



#### This will open the Environment Properties dialog.

🛃 Environment Properties Dialog								>
Search:					🔍 Search	<	>	Clear Search
Key	*	Value			An	cestor Val	ue	
Ancestor Key	Aposter Vey 92 Aposter Vejus					Name		
Ancesion Rey	· ·	Ancestor Value			Ancestor	Name		
Encrypt environment properties								
	Save	Merge to Root 🛛 🔜 Add File Path	Add Folder F	'ath 🤇 🤇	Remove			
				R	eload Environme	nt Properti	es	📲 Close 🕜

### **Defining Our Source Directory and Polling Interval**

Here we have the contents of the Environment Properties file shown in a table. The "key" is the name of the property and the "value" is its current value. Let's try defining our source directory and polling interval here by adding two rows: the first key is **source\_directory**, and its value is ....**in**; the second key is **polling\_interval**, and its value is **5**.

dia Environment Properties Dialog		-						×
Search:					🔍 Search	<	>	Clear Search
Key	*	Value			An	icestor Va	lue	
source_directory		\.\in						
polinig_interval	5	1						
Ancestor Key	♥	Ancestor Value			Ancestor	Name		
Encrypt environment properties	P Save	Merge to Root 🛛 🕞 Add File Path 📢	Add Folder F	Path 🛛 📢	Remove	nt Properti	es	f Close

We could add as many keys and values as we wished, so long as each key has a unique name. It's generally a good idea to qualify keys by intent or through some namespace. We can then click the **Save** button to save our changes.

Bnvironment Properties Dialog					×
Search:			🔍 Search	< >	Clear Search
Кеу	♥ Value		And	cestor Value	
source_directory	.\.\in				
poliing_interval	5				
Ancestor Key	Ancestor Value		Ancestor	Name	
☐ Encrypt environment properties	e Merge to Root Add File Path 📢	Add Folder Path	Remove		
		¢.	Reload Environment	t Properties	- Close

After saving, click **Close** to close the dialog. Returning to our Directory/File Listener's configuration, we'll note a button visible to the right of each configuration item with a document+ icon on it.

Listener Configuration								
Listener Name:	Using En	vironment Proper	rties Inbound					
Listener Type:	Directory	/ File	▼	?				
Listener Description:	Monitors	onitors a specified directory for new files.						
Throttlina	P	ost-Process	Scheduling	Criteria	Sorting			
Basic	Ad	lvanced	Transaction L	.ogging	Inactivity			
Polling interval:			5 seconds					
Polling directory:		\\in						
File/folder name re	estriction:							
File extension rest	riction:			🖬				
Specify full file path	1:	Disabled						
Path to file/folder:				🗈				
Tokenizers:								

This button enables **Enhanced Configuration Values**, meaning it provides access to various dynamically evaluated expressions, including our defined environment properties. Click the button and it should be replaced by three more.

Listener Configuration	n							
Listener comgaration	·							
Listener Name:	Using En	vironment Prop	erties Inbound					
Listener Type:	Directory	/ File	•	?				
Listener Description:	Monitors	a specified dire	ctory for new files.					
Throttling	P	ost-Process	Scheduling	Criteria	a Sorting			
Basic	Ad	vanced	Transaction Log	gging	Inactivity			
Polling interval:			5 📩 seconds					
Polling directory:								
File/folder name re	estriction:							
File extension res	triction:							
Specify full file pat	h:	Disabled						
Path to file/folder:								
Tokenizers:								

The first button allows us to select from defined environment properties. The second will enable us to construct

OGNL expressions (covered in another tutorial). Finally, the third returns us to "standard" configuration values. Click the first button and it will open a dialog showing our defined properties:

d Environment Properties Dialog								×
Search:			[	🔍 Search	<	>	Clear Se	arch
Кеу	Value Value			An	cestor Va	ue		
polling_interval source_directory	5 \\in							
A V								
Ancestor Key 📎	Ancestor Value			Ancestor	Name			
		A. Colort			at Drop of		Close	
	⇒ Edit Mode	Select	Re Re	ioad Environmer	ii Properti	es	T Close	

For this item, we'll select "source\_directory." Select it in the table, then click the **Select** button:

🛃 Environment Properties Dialo	g								×
Search:						🔍 Search	<	>	Clear Search
Key		*	Value			Ar	ncestor Va	lue	
polling_interval		5							
source_directory		\\in							
( <u> </u>									
			1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	1					
Ancestor Key	*		Ancestor Value			Ancesto	r Name		
					1				
			Edit Modo	Solect		aload Environmo	nt Properti		
						sidad Environnie	neriopen	<u> </u>	

Our configuration item's value now looks like this:

Listener Configuration								
Listener Name:	Using Er	vironment Proper	rties Inbound					
Listener Type:	Directory	/ File	<b>.</b>	?				
Listener Description:	Monitors	Monitors a specified directory for new files.						
Throttlina	P	ost-Process	Scheduling	Criteria	Sorting			
Basic	Ac	Advanced Transaction Logging Inactivity						
Polling interval:		5 🗐 seconds 🔍 🕞						
Polling directory:		\$\$source_direc	tory=\\in	0				
File/folder name re	estriction:							
File extension rest	triction:			🕞				
Specify full file path	h:	Disabled						
Path to file/folder:								
Tokenizers:								

The "\$\$source\_directory" text tells us that we're looking for an environment property named "source\_directory." The "=..\..\in" simply tells us the current value of that property, as understood by the eiConsole.

Repeat the exercise for the Polling Interval item:

Listener Configuration						
Listener Name:	Using En	vironment Propert	ies Inbound			
Listener Type:	Directory	/ File	•	🕐		
Listener Description: Monitors a specified directory for new files.						
Throttling Basic	Po	ost-Process	a Sorting			
Polling interval:	710	\$\$polling_interva	II=5		indetwiky	
Polling directory:		\$\$source_direct	ory=\\in			
File/folder name re	striction:					
File extension rest	riction:			🕞		
Specify full file path	n:	Disabled				
Path to file/folder:				🗈		
Tokenizers:						

Now, whenever we move this Route between systems, we can either make our changes in the eiConsole Environment Properties dialog or edit the file directly. If we examine our working directory, we'll see it now looks like this:

☐   ☑ ☐ 〒   Expressions Using Er	nvironment Properties			-		× ~ 2
← → ∽ ↑ 🛄 « PilotFish eiCo	onsole Working Directories	onment Properties	✓ Ö ✓	Search Expressi	ons – Us	ing E
	Name	Date modified	Туре	Size		
🖈 Quick access	data	9-Jul-23 15:08	File folder			
len OneDrive - Personal	formats	9-Jul-23 15:08	File folder			
This PC	📙 in	9-Jul-23 15:08	File folder			
This is the second seco	lib	9-Jul-23 15:08	File folder			
	out	9-Jul-23 15:08	File folder			
Desktop	processed	9-Jul-23 15:08	File folder			
Documents	routes	9-Jul-23 15:08	File folder			
🕂 Downloads	environment-settings.conf	9-Jul-23 15:25	CONF File	1	KB	
👌 Music						
Pictures						
F Videos						
🏥 OS (C:)						
💣 Network						
8 items						:==

We now have a file named "environment-settings.conf" - this is the external file. You can open it in any standard text editor; do so now and you should see the following:



When we move our interface between systems, we only need to update this single file. If the interface exists already on a particular system then our deployment is simply a matter of not copying over it.

Using Environment Properties in the eiConsole module configuration items allows for externally defined values for Listeners and Transports which you can now use. Next, move on to more advanced topics like Expressions - Using OGNL.