PerfCap Agents for Windows and VMware ESX/ESXi Version V10.0

User and Installation Guide

February 2012

Revision/Update: Version 10.0 is new feature release.

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PerfCap Agents for Windows and VMware ESX/ESXi Version V10.0

Release Overview

These release notes address version V10.0 of the eCAP Monitor, eCAP Monitor for VMware ESX/ESXi, PAWZAgent, and FindITAgent. Current fixes and known problems are outlined at the end of this document.

This software contains the set of performance data collectors and system agents from PerfCap, for Windows and VMware ESX/ESXi. This software requires a licensing from PerfCap to enable functionality. The eCAP Monitor for Windows and ESX collectors share a license file, *ecapmonitor.txt* (V9.1 format). FindIT Agent requires a *finditagent.txt* file to enable its functionality.

This installation installs a system service for eCAP Monitor for Windows and a system service for eCAP Monitor for VMware ESX.

eCAP Monitor for VMware ESX / ESXi (3.5, 4.n, 5) (vSphere) remotely collects ESX performance data by connecting with the VMware Hypervisor. The eCAP Monitor for VMware ESX is multi-threaded and can collect performance data from multiple VMware ESX hosts.

Having eCAP Monitor for VMware ESX collect performance data from individual VMware hosts is done through the PAWZServer. When a VMware host is added to PAWZServer, it will send a request to the PAWZAgent to register and start an eCAP monitor collector thread.

Summary of features and changes

V10.0 introduces the following features.

- Monitor Multiple ESX/ESXi systems
- PAWZ Agent add/removes ESX collector threads
- Real Time Data Collection

Release Contents

This release of PerfCap Agents product set on Windows consists of two licensed components:

- eCAP Monitor
- FindIT Agent.

Version 10.0 is comprised of the following items:

- PerfCap Agents 10.0 software
 - eCAP Monitor for Windows
 - eCAP Monitor for VMware ESX/ESXi
 - PAWZ Agent
 - PAWZ Real-Time Agent
 - o FindIT Agent
- PerfCap Agents 10.0 User and Installation Guide

Pre-Installation

Several steps should be taken through the vSphere Client prior to installing PerfCap Agents for Windows and VMware ESX.

Required Software for Installaton

- Java Runtime Environment 1.6
- On Windows Server2003, NET framework 2.0

Required Information for Installation:

- A VMware ESX / ESXi account
- VMware host name
- VMware IP address or DNS name
- Path were JRE is installed, (Typically C:\Program Files\Java\Jre6)
- ecap-monitor.txt for Windows or ESX

ESX/ESXi hostname determination

The VMware ESX hostname must be *exactly* what the ESX/ESXi system has defined. This may be fully qualified or not. This will be entered into the PAWZserver DC host screen.

Example 1) Getting hostname from vSphere Client



The connection string for this ESXi system is esxi01.perfcap.com

Example 2) Getting hostname from vSphere Client



The connection string for this ESX system is vsphere01

ESX/ESXi Account creation for data collection

A non-privileged user account must be used for the eCAP Monitor for VMware ESX.

Add User

To add a user account, navigate to the "Users and Groups tab.

192.168.1.191 - vSphere Cli File Edit View Inventory Administr	ent ration Plug-ins Help	
🖸 🖸 🏠 Home 🕨 🛃 In	iventory 🕨 🛐 Inventory	
51 61		🚱 Edit User - ecap 🛛 🗙
H H	esxi01.perfcap.com VMware ESXi, 4.0.0, 20 Getting Started Summary Virtual Machine View: Users Groups UID User 99 99 nobody 100 100 dcui 500 500 douglas 0 0 root 2 2 daemon 501 501 vi-ecap 65534 65534 nfsnobody 502 ecap 12 vimuser	User Information Login: ecap User Name: ecap User name and UID are optional Change password Password: Confirm: Group: Select Group Add Iocaladmin root
Recent Tasks		×
Name Target	Status Details	Remove Impleted Time OK Cancel
🐖 Tasks		root

Set User Permission

Navigate to the "Permissions" tab.

The permissions can be set to "Read Only". The access rule must be marked "propagate". This allows the account gather VM guest performance data.

🖗 192.168.1.191 - vSph	ere Client			
File Edit View Inventory	Administration Plug-ins Help			
🕞 🗈 🏠 Home 👂	🖓 🚮 Inventory 🕨 🗊 Inventory			
 5 [†] 6 ⁺				
192.168.1.191	esxi01.perfran.com VMware E	5Xi. 4.0.0. 208167		
	Cetting Started Summary V		formance Configuration Users & Groups	Events Permissions
	Liser/Group		Defined in	Events Permissions
	ecan	Read-only	This object	
		Administrator	This object	
	Z root	Administrator	This object	
	Select the new role for Read-only Propagate	this user or group.		
ecent Tasks				×
lame	Target Status	Details Initiated by Requeste	i Start Ti 🗸 Start Time Com	pleted Time
🔚 Tasks				root //

Java JRE location

Java JRE is typically installed to C:\Program Files\Java\Jre6. Use a Windows explorer to ensure Java JRE is installed and to discover its installed location.

ecap-monitor.txt license file

An ecap-monitor.txt license file that enables data collection for both "Windows" and "ESX" should be obtained.

Installation

PerfCap Agents for Windows and ESX/ESXi software is installed on a Windows Server system. The following chapter explains the interactive and non-interactive installations.

No VMware configuration information is supplied on installation.

Required Software:

- Windows 2003 or Windows 2008
- Java JRE (1.6)
- (Windows 2003 requires .Net Framework 2.0)
- .Net Framework 3.5 (for VMware Connection editor utility) (optional)

Note: There are separate installation packages for 32 bit windows and 64 bit windows.

Interactive Installation:

To start the installation, either double clicks the file:

"PerfCap Agents 10.0 for Windows and VMware ESX.msi"

or enter:

msiexec "PerfCap Agents 10.0 for Windows and VMware ESX.msi"

Screen 1) Welcome

🙀 PerfCap Agents 9.2 for Win	idows and YMware ESX - InstallShield Wizard 🛛 🛛 🔀
	Welcome to the InstallShield Wizard for PerfCap Agents 9.2 for Windows and VMware ESX
	The InstallShield(R) Wizard will install PerfCap Agents 9.2 for Windows and VMware ESX on your computer. To continue, click Next.
	WARNING: This program is protected by copyright law and international treaties.
	< <u>B</u> ack <u>Next</u> Cancel

Screen 2) License Agreement.

WARRANTY DISCLAIMER: PLEASE READ! PerfCap Corporation will not be liable for any loss of profits, loss of use, interruption of business, nor for any indirect, special, incidental, or consequents damages of any kind, even if PERFCAP has been advised of the possibility of such damages, nor for any claim by any other party. The DAWZ Agent Components for Windows NT / Windows 20 I accept the terms in the license agreement I do not accept the terms in the license agreement	ase read the following license agreer	ment carefully.	V
PerfCap Corporation will not be liable for any loss of profits, loss of use, interruption of business, nor for any indirect, special, incidental, or consequents damages of any kind, even if PERFCAP has been advised of the possibility of such damages, nor for any claim by any other party.	RRANTY DISCLAIMER: PL	EASE READ!	
I accept the terms in the license agreement Pr	rfCap Corporation will ofits, loss of use, in r any indirect, specia	not be liable for any loss o nterruption of business, nor 1, incidental, or consequenti	E al
I do not accept the terms in the licence acreement	mages of any Kind, eve the possibility of su any other party.	n if PERFCAP has been advised ch damages, nor for any claim	20
Tigo not accept the terms in the interse agreement	mages of any Kind, eve: the possibility of su any other party. <u>DANZ Agent Component</u> ccept the terms in the license agreen	n if PERFCAP has been advised ch damages, nor for any claim <u>a for Windows NT / Windows 20</u> ment	nn It

Screen 3) Installation directory



Screen 4) Select Java JRE home

je

Screen 5) Installation type

Setup Type	
Choose the s	etup type that best suits your needs.
Please select	a setup type.
• Complet	e e
1 ⁴	All program features will be installed. (Requires the most disk space.)
C Cu <u>s</u> tom	
1	Choose which program features you want installed and where they will be installed. Recommended for advanced users.
tallShield	
	< Back Next > Cancel

Screen 6) Start installation

PerfCap Agents 9.2 for Windows and VMware ESX - Install	Shield Wizard 🧕
Ready to Install the Program	
The wizard is ready to begin installation.	
Click Install to begin the installation.	
If you want to review or change any of your installation settings, o exit the wizard.	click Back, Click Cancel to
stalishield	
< <u>Back</u> <u>Ins</u>	Stall Cancel

Screen 7) In Progress

ß	Please wait while the InstallShield Wizard installs PerfCap Agents 9.2 for Windows and VMware ESX. This may take several minutes.
	Status:
	Copying new files

PerfCap Agents 9.2 for Windows and VMware ESX - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed PerfCap
Agents 9.2 for Windows and VMware ESX. Click Finish to exit
the wizard.

Screen 8) Installation complete.

Non-Interactive installation:

The /q /n properties are used to start a non-interactive installation. Other information is passed to the msi package through package properties.

Installation command:

msiexec /qn /I "PerfCap Agents 10.0 for Windows and VMware ESX.msi"

Package properties:

Property Name	Default Value			
Common properties				
INSTALLDIR	C:\Program Files\PerfCap			
eCAP Monitor for Windows properties				
ECAP_CONTINUOUS	1			
ECAP_CUSTOM_METRIC_FILTER				
ECAP_DUMP_RATE	120			
ECAP_LICENSE	C:\ecap-monitor.txt			
ECAP_LOG_DETAILS	0			
ECAP_LOW_PRIORITY	0			
ECAP_MANAGE_RETENTION	0			
ECAP_METRIC_LIST	2,4,86,230,234,236,238,260,510,638,546,658,700			
ECAP_PEAK_RATE	0			
ECAP_RETENTION	30			
ECAP_SCAN_RATE	5000			
ECAP_START_SERVICE	1			
eCAP Monitor for VMware ESX properties				
ECAP_ESX_DUMP_RATE	120			
ECAP_ESX_JAVA_HOME				
ECAP_ESX_JAVA_MAX_HEAPSIZE	-mx300m			
ECAP_ESX_START_SERVICE	1			
ECAP_ESX_VMWARE_NAME	<i>u</i> m			
ECAP_ESX_VMWARE_PASSWORD	437			

ECAP_ESX_VMWARE_USERNAME	433			
PAWZ Agent properties				
PAWZAGENT_APPDATA_DIRECTORY	<i>u</i> m			
PAWZAGENT_COMPRESSION_COMMAND	<i>un</i>			
PAWZAGENT_KEEP_PERF	0			
PAWZAGENT_LOG_DETAILS	0			
PAWZAGENT_LOG_RETENTION	5			
PAWZAGENT_LOOP_DELAY	5			
PAWZAGENT_LOW_PRIORITY	0			
PAWZAGENT_PAWZSERVER_IP	0.0.0.0			
PAWZAGENT_PORT	1661			
PAWZAGENT_SETTINGS_SERVER	0.0.0.0			
PAWZ Real-Time Agent properties				
	1			
PAWZRTA_PORT	2101			
PAWZRTA_LOG_DETAILS	0			
PAWZRTA_LOW_PRIORITY	0			
PAWZRTA_PROCESS	1			
PAWZRTA_SCAN	2			
FindIT Agent properties				
	1			
FINDIT_LICENSE	"C:\finditagent.txt"			
FINDITAGENT APPLICATION	4433			

FINDITAGENT_ASSET_NUMBER	""
FINDITAGENT_ASSET_TYPE	""
FINDITAGENT_CONTINIOUS	1
FINDITAGENT_DATA_RETENTION	3
FINDITAGENT_LOCATION	""
FINDITAGENT_LOG_DETAILS	0
FINDITAGENT_LOG_RETENTION	3
FINDITAGENT_MONITOR_CPU	1
FINDITAGENT_MONITOR_PROCESS	1
FINDITAGENT_ORGANIZATION	""
FINDITAGENTs_PORT	3336
FINDITAGENT_SERVER_IP	""
FINDITAGENT_START_SERVICE	1
	·

Installation command with properties:

msiexec /qn ECAP_LICENSE=C:\ecap-monitor.txt ECAP_DUMP_RATE=60 ^ ECAP_PEAK_RATE=10000 ^ ECAP_SCAN_RATE=5000 ^ INSTALLDIR="D:\Program Files\PerfCap" /I "PerfCap Agents 10.(VMware ESX).msi"

Post-Installation

The installation no longer requires any VMware access information. This information is automatically added when a VMware ESX host is added to the PAWZ Server. The PAWZ Agent will add an entry to the *ecap_monitor_esx_startup.csv* file and start a collector thread.

Troubleshooting: Service startup

When the PerfCap eCap Monitor for VMware ESX service will not run check

- The ecap_monitor_esx log files
- The System Event Log.

The ecap_monitor_esx log files generally will give the reason for failure. If there are no ecap_monitor_esx log files, after starting the service, the java configuration may not be correct.

The system event log will log errors associated with running java (and java not found). It also logs the full command that is used by the service to run the data collection. By using Cut and Paste, you can run the command from a *cmd* window which may shed light on why the service is stopping.

ecap_monitor_esx log files:

The log files written by the eCAP Monitor for VMware ESX generally provide a good indication of the reason why the ecap_monitor_esx stopped. The log file will contain the exception output from connecting to the VMware ESX/ESXi system. These exceptions include access denied, system unreachable, invalid password, and other networking errors.

There are log files for the ecap_monitor_esx service (ecpv_ecap_monitor_esx_yyymmmdd.log) and for each VMware host that is being monitored.

ecpv_vmname_yyyymmmdd.log

Sample Log file:

Dos> type ecpv_esxi01_2012Feb22.log

```
eCAP Monitor for ESX V10.0-001 (c) PerfCap Corporation 2012, All Rights
Reserved
Feb 21 2012
```

Check license file, ecap-monitor.txt... Thu Feb 22 00:00:36 2012 MonitorEsx, write CPC header records, C:\Program Files\PerfCap\eCAP\Monitor\data\ecpv_esxi01_2012Feb22.cpc-1 Thu Feb 22 00:00:36 2012 MonitorEsx, write CPC Configuration record. Thu Feb 22 00:00:36 2012 MonitorEsx, rewrite configuration file, C:\Program Files\PerfCap\eCAP\Monitor\tmp\pawz_sysconf_esxi01.dat Thu Feb 22 00:01:59 2012 MonitorEsx, write interval record 0 Thu Feb 22 00:02:59 2012 MonitorEsx, write interval record 1 Thu Feb 22 00:03:59 2012 MonitorEsx, write interval record 2

Error String	Description
vmwareGatherer.connect exception : java.net.NoRouteToHostException: No route to host: connect	VMware system is off- line
Error connecting to VMware server vsphere01.perfcap.com, null	VMware name is incorrect
Error, vmwareGatherer.connect exception : Cannot complete login due to an incorrect user name or password.	VMware access information is incorrect
Error, vmwareGatherer.connect exception : Permission to perform this operation was denied.	Account has insufficient privileges.

Java JRE settings

Having no log files in the C:\Program Files\PerfCap\Ecap\Logs folder may indicate that the java is unable to start. For this type of error, there will be a System Event Log entry with ID 11.

ivent Prop	erties	? 🛛
Event	Console Root\Event Viewer (Lo	cal)
Date: Time: Type: User: Computer:	6/4/2010 Source: ecap_monitor_esx 3:22:30 PM Category: None Warning Event ID: 11 N/A WXP	 ↑ ↓ □
"C:\Progra For more in <u>http://qo.r</u>	am FilesWavaWre1.6.1\bin\java.exe'' not found. nformation, see Help and Support Center at <u>nicrosoft.com/fwlink/events.asp</u> .	
Data: 💿	Bytes 🔿 Words	<
	OK Cancel	Apply

The first check is to see if the JavaHomeDirectory is set correctly.

Use the "eCAP to VMware ESX connection settings" utility to browse for the java.exe image.

Select java.exe and press OK.

Note: the "/bin/java.exe" will be stripped off when "OK" is pressed.

Now restart the ecap_monitor_esx service. (PerfCap eCAP Monitor for VMware ESX)

Note: If the ecap_montor_esx service startup does not find java.exe with the fully specified path, it will attempt to start the collector by issuing the java command with no path. If the java installation path is in the system wide PATH environment variable, the service will be started.

System event log:

The system event log contains startup and stop information from the ecap_monitor_esx system service. The PerfCap eCAP Monitor for VMware ESX service write system event log entries under the "*Application*" tree. The Event source is "ecap_monitor_esx".

In the case where a determination as to the cause of the service startup failure cannot be made; it often is useful to run the full ecap_monitor_esx java command directly in a cmd window. This lets you see any java thrown exceptions, or other errors, that may not be written to the log file.

The following screens show how to navigate the System Event viewer and Cut and Paste the ecap_monitor_esx java command into a CMD window.

1) Open the system event log, open the *Application* tree.

Event Viewer								
File Action View Help								
	§ 🗈							
Event Viewer (Local)	Application 4	82 event(s)						
Application	Туре	Date	Time	Source	Category	Event	User	~
System	Warning	6/4/2010	3:12:05 PM	ecap_monitor_esx	None	3	N/A	
Internet Explorer	Information	6/4/2010	3:12:02 PM	ecap_monitor_esx	None	2	N/A	
	Information	6/4/2010	3:12:02 PM	ecap_monitor_esx	None	1	N/A	×
	<]	>

2) Double click ecap_monitor_esx Event 3.

vent	8/17/2011	Sources	ecan monitor e	ou	• 1	
D <u>a</u> te: Time:	11:56:02 AM	Category:	None	**		N
Type:	Warning	Event ID:	3	(+	
User:	N/A					
Computer:	PAUL-DEV					
See C:\F 2011Jun1	rogram Files\F 7.log for detail	/erfCap\eC/ s	AP\Monitor\Log\	ecpv_esxiu1_		
See C:\F 2011Jun1 Stopping For more <u>http://qo.</u>	rogram Files\F 7.log for detail service nformation, se <u>microsoft.com</u>	'er(Cap\eC/ s e Help and <u>/fwlink/eve</u>	APAMonitorALogA Support Center a ints.asp.	ecpv_esxiui_		
See C:\F 2011Jun1 Stopping For more <u>http://go.</u>	rogram Files\F 7.log for detail service nformation, se <u>microsoft.com</u> ,	'erfCap\eU/ s e Help and <u>/fwlink/eve</u>	APAMonitorALogA Support Center a <u>ints.asp</u> .	ecpv_esxiu1_		
See C:\F 2011Jun1 Stopping Formore <u>http://go</u>	rogram Files\F 7.log for detail service nformation, se <u>microsoft.com</u>	Yer/Lap\eU s e Help and <u>/fwlink/eve</u>	APMonitor/Log/ Support Center a <u>ints.asp</u> .	ecpv_esxiu1_		
See C:\F 2011Jun1 Stopping For more <u>http://qo.</u> Data: ©	rogram Files\F 7.log for detail service nformation, se <u>microsoft.com</u>	YeriLap\eU s e Help and <u>/fwlink/eve</u>	APAMonitorALogA Support Center a <u>ints.asp</u> .	t	4	
See C:\F 2011Jun1 Stopping For more <u>http://qo.</u> Data: ©	rogram Files\F 7.log for detail service nformation, se <u>microsoft.com</u> <u>Bytes C W</u> r	YeriLap\eU s e Help and <u>/fwlink/eve</u>	APAMonitorALogA Support Center a <u>ints.asp</u> .	ecpv_esxiu1_ t	4	

3) We can see that the java process (6548) stopped. We need to go back through the log entries until we find ecap_monitor_esx *Event ID: 1.*

Press the down arrow until you get to event 1

Event Prop	oerties			? 🛛
Event				
Date: Time: Type: User: Computer: Descriptio	6/2/2010 9:55:46 PM Information N/A : WXP	Source: Category: Event ID:	ecap_monitor_esx None 1	 ↑ ↓ □
Starting "C:\Program \Program discovery \lib\comr \Monitor' \Monitor' \Monitor'	., "C:\Program ram Files\PerfCap Files\PerfCap i-0.2.jar;"C:\Pr nons-logging-1 "\axis-1_4\lib\j "\axis-1_4\lib\j "\axis-1_4\lib\j "\axis-1_4\lib\j	n Files/Java Cap/eCAP/Mor /eCAP/Mor ogram Files/ .0.4.jar;"C:/ axrpc.jar;"C og4j-1.2.8.ja saaj.jar;"C:/ wsdl4j-1.5.1	Vire6\bin\java.exe'' - Monitor''\axis-1_4\lib\ nitor''\axis-1_4\lib\con \PerfCap\eCAP\Monit Program Files\PerfCap :\Program Files\PerfCap Program Files\PerfCap .jar;''C:\Program Files\	mx300m -cp axis.jar;"C: ⇒ant.jar;"C: nmons- or"\axis-1_4 o\eCAP erfCap\eCAP o\eCAP o\eCAP PerfCap
Data: ()) Bytes 🔿 Wa	ords		~
)K Cancel	Apply

4) Highlight the command from right after "starting..." to the end and press Control-C

Event Properties
Event
Date: 6/3/2010 Source: ecap_monitor_esx Time: 12:28:28 PM Category: None Type: Information Event ID: 1 User: N/A ■ Computer: WXP ■
Starting, "C:\Program Files\Java\Jre6\bin\java.exe" -mx300m -cp "C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib\axis.jar;"C: \Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib\commons- discovery-0.2.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4 \lib\commons-logging-1.0.4.jar;"C:\Program Files\PerfCap\eCAP \Monitor"\axis-1_4\lib\jaxrpc.jar;"C:\Program Files\PerfCap\eCAP \Monitor"\axis-1_4\lib\jaxrpc.jar;"C:\Program Files\PerfCap\eCAP \Monitor"\axis-1_4\lib\saaj.jar;"C:\Program Files\PerfCap\eCAP \Monitor"\axis-1_4\lib\saaj.jar;"C:\Program Files\PerfCap\eCAP \Monitor"\axis-1_4\lib\saaj.jar;"C:\Program Files\PerfCap\eCAP
Data: Bytes Words
OK Cancel Apply

D <u>a</u> te:	6/16/2011	Source:	ecap_monitor_esx	↑ [
Ti <u>m</u> e:	4:28:08 PM	Category:	None	
Typ <u>e</u> :	Information	Event <u>I</u> D:	1	+
<u>U</u> ser:	N/A			E
Computer:	PAUL-DEV			
Vescription	n: Axis\java\sax vvi_sdk\samp eCAP\Monito Files\PerfCap ''C:\Program I	kpath.jar;"C: les\Axis\jav r"\vi_sdk\s \eCAP\Mor Files\Per <u>fCa</u>	\Program Files\PerfCap\e /a\smtp.jar;"C:\Program Fi /amples\Axis\java\wbem.j nitor"\vi_sdk\samples\Axi /ap\eCAP\Monitor"\ <u>vi_sdk</u>	CAP ar;"C: s\java \samples
Samples Monitor''' PerfCap Program xalan.jar; Axis\java Carp_mo Program	n: Axis\java\sax vvi_sdk\samp eCAP\Monito Files\PerfCap "C:\Program I s\xerces.jar,"C onitor_esx.jar Files\PerfCap	xpath.jar."C: les\Axis\jav r"\vi_sdk\s \eCAP\Mor Files\PerfCa C:\Program com.perfcaj \eCAP\Mor	\Program Files\PerfCap\e va\smtp.jar;"C:\Program Fi amples\Axis\java\wbem.j nitor"\vi_sdk\samples\Axi ap\eCAP\Monitor"\vi_sdk Files\PerfCap\eCAP\Mon p.ecap.monitor.MonitorES nitor"	CAP
Samples Monitor'' PerfCap Program Xalan.jar; Axis\java Accap_mo Program For more in	n: Axis\java\sax vvi_sdk\samp eCAP\Monito Files\PerfCap "C:\Program I a\xerces.jar,"C onitor_esx.jar Files\PerfCap nformation, se Bytes C W	kpath.jar;"C: les\Axis\jav r"\vi_sdk\s \eCAP\Mor Files\PerfCa C:\Program I com.perfcaj \eCAP\Mor e Help and ords	\Program Files\PerfCap\e va\smtp.jar;"C:\Program Fi amples\Axis\java\wbem.j nitor"\vi_sdk\samples\Axi ap\eCAP\Monitor"\vi_sdk Files\PerfCap\eCAP\Mon p.ecap.monitor.MonitorES nitor" Support Center at	CAP
Securitation Assembles Monitor'' PerfCap Program Axis Axis Axis Axis Program Data:	n: Axis\java\sax vvi_sdk\samp eCAP\Monito Files\PerfCap "C:\Program I Nxerces.jar,"C nitor_esx.jar Files\PerfCap nformation, se <u>Bytes C. W</u>	xpath.jar."C: les\Axis\jav r"\vi_sdk\s \eCAP\Mor Files\PerfCa C:\Program I com.perfca \eCAP\Mor e Help and ords	\Program Files\PerfCap\e /a\smtp.jar,"C:\Program Fi amples\Axis\java\wbem.j nitor"\vi_sdk\samples\Axi p\eCAP\Monitor"\vi_sdk Files\PerfCap\eCAP\Mon p.ecap.monitor.MonitorES nitor" Support Center at	CAP iles ar: "C: s\java \samples itor"\bin X "C:

Press Control-C to copy the line to your clipboard.

5) Open a cmd window and select Edit->Paste

C: \	Command F	Prompt		- 🗆 ×
8	Restore	dows XP [Version 1995-2001 Mice	n 5.1.2600]	_
	Move	1705-2001 110	usuft Corp.	
	Size			
-	Minimize			
	Maximize			
×	Close			
	Edit	Mark 🛛		
	Defaults	Copy Enter		
	Properties	Paste		
_		Select All		
		Scroll		
		Find		
				•

6) Press <Enter>

🔤 C:\WINDOWS\system32\cmd.exe - "C:\Program Files\Java\Jre6\bin\java.exe" -mx300m -cp "C:\Pro 📃 🗖	×
C:\> "C:\Program Files\Jaua\Jre6\bin\jaua.exe" -mx300m -cp "C:\Program Files\Per fCap\eCAP\Monitor"\axis-1_4\lib\axis.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib \commons-discovery-0.2.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib \commons-logging-1.0.4.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib \commons-logging-1.0.4.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib \commons-logging-1.0.4.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib \commons-logging-1.0.4.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib \commons-logging-1.0.4.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib \commons-logging-1.0.4.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib\saaj.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib\saaj.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\axis-1_4\lib\saaj.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\apputils25.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\vim_5_jar;"C:\Program Files\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\vim_5_jar;"C:\Program Files\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\vim_5_jar;"C:\Program Files\PerfCap\eCAP\Monitor"\vi_sdk \samples\Axis\java\activation.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\vi_sdk \samples\Axis\java\jaxen-core.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\vim_jar;"C:\Program Files\PerfCap\eCAP\Monitor"\vi_sdk \samples\Axis\java\jaxen-core.jar;"C:\Program Files\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\samples\Axis\java\samples\Axis\java\samples\Axis\java\samples\Axis\java\samples\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\samples\Axis\java\samples\Axis\java\samples\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\samples\Axis\java\samples\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\samples\Axis\java\samples\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\samples\Axis\java\samples\Axis\java\samples\PerfCap\eCAP\Monitor"\vi_sdk\samples\Axis\java\samples\Axis\java\samples\	PAAPorddd psxvaa
Caught Exception : Exception : org.apache.axis.AxisFault Message : ; nested exc eption is: 	2
Caught Exception : Exception : org.apache.axis.AxisFault Message : ; nested exception is:	2
java.net.UnknownHostException: vsphere01.perfcap.com StackTrace : AxisFa	a
uit faultCode: {http://schemas.xmlsoan.org/soan/envelone/}Server_userFycention	
faultSubcode:	
faultString: java.net.UnknownHostException: esxi01.perfcap.com faultActor:	-

Note: The "Unable to find required classes (javax.activation.DataHandler and javax.mail.internet.mimeMultipart)" can be ignored.

The stack trace shows java.net.ConnectionException. This indicates that the current system is either not connected to the network or cannot find the ESX host system.

De-installation

The software can be removed interactively with "Add/Remove Programs" in the system control panel or with "Uninstall PerfCap Agents for Windows and VMware ESX" in the system start bar.

This will leave all performance data files and startup setting files in the product installation folder and it creates a save preferences in the system registry for re-installation.

Non-Interactive de-installation.

The software can also be removed non-interactively through the following *msiexec* command.

msiexec /qn /x {6311BE89-1A15-40CE-9353-65F6A2754FA1}

• This will not delete .CPC data files & retains settings in registry.

msiexec /qn /x RETAIN_SETTINGS="0" {6311BE89-1A15-40CE-9353-65F6A2754FA1} o Remove settings

Installation settings

The following chapter describes some of the PerfCap Agents settings on the installed system.

Installation paths

The actual location may vary. The default installation root is C:\Program Files\PerfCap

Product	Default Location
ECAP Monitor	C:\Program Files\Perfcap\ecap\Monitor
ECAP Monitor for VMware ESX	C:\Program Files\Perfcap\ecap\Monitor
PAWZ Agent	C:\Program Files\Perfcap\PAWZ\Agent
PAWZ Real-Time Agent	C:\Program Files\Perfcap\PAWZ\Agent
FindIT Agent	C:\Program Files\Perfcap\FindIT\Agent

Services installed

The installation will install the following services.

Service Name	Service Display name	Service State
perfcappm	PerfCap eCAP Monitor	Started
ecap_monitor_esx	PerfCap eCAP Monitor for VMware ESX	Started.
pawzagent	PerfCap PAWZ Agent	Started
pawzrta	PerfCap PAWZ Real Time Agent	Started
finditagent	PerfCap FindIT Agent	Not Started

System Event Log

The ecap_monitor_esx service has the following system event log IDs. These are in the "Application" event log.

Source: ecap_monitor_esx

Event ID	Condition	Туре
1	Starting, Startup command	Informational
2	Starting, Java PID	Informational
3	Stopping, Java PID exited	Warning
4	Not used	
5	Stopped Java Process	Informational
6	Unable to stop Java process	Warning
7	Stop on Java process failed	Warning
8	Not used	
9	Not used	
10	ecap_monitor_esx_startup.csv has no entries	Warning
11	Java not found	Warning

Startup Settings

eCAP Monitor for VMware ESX/ESXi

Startup settings file:

The *ecap_monitor_esx* service uses a startup settings file to contain the connection settings to the VMware ESX host system. This file *is ecap_monitor_esx_startup.csv*. This file will be created by the PAWZ Agent as VMware ESX systems are added to a PAWZ Server.

System registry:

The *ecap_monitor_esx* service uses the system registry to store the java properties required to start the ecap_monitor_esx service. These properties are explained in the *System Registry* chapter of this document.

eCAP Monitor for Windows

Startup settings file:

The ecap_monitor service (PERFCAPPM) does not use a startup file.

System registry:

The ecap_monitor (PERFCAPPM) service uses the system registry to store many startup options. These properties are explained in the *System Registry Entries* chapter of this document.

System Registry Entries

The following tables contain each products registry entries, default value and a description.

eCAP Monitor for Windows

Registry Keys:

ECAP Monitor Registry Home

HKEY_LOCAL_MACHINE\SOFTWARE\PERFCAP\PM

Key Name	Default Value (all values are "String")			
InstallDirectory	C:\Program Files\PerfCap\ECAP\Monitor			
InstallDirectory contains the eCAP Monitor ro	ot directory path			
BinDirectory	C:\Program Files\PerfCap\ECAP\Monitor\Bin			
BinDirectory contains the path where eCAP Monitor executable and binary files will be installed				
DataDirectory	C:\Program Files\PerfCap\eCAP\Monitor\Data			
DataDirectory contains the path where eCAP performance data files will be written.				
LogDirectory	C:\Program Files\PerfCap\eCAP\Monitor\Logs			
LogDirectory contains the path where eCAP	Monitor log files will be written.			
DefaultMetricList	2,4,86,230,234,236,238,260,546,638,658,700			
DefaultMetricList contains the Default Metric IDs the collector will monitor				
MetricList	2,4,86,230,234,236,238,260,546,638,658,700			
MetricList contains the currently monitor Metric IDs.				
DefaultPeakList	2,4,238			
DefaultPeakList contains the Default Peak Metric IDs the collector will monitor if PeakInterval is enabled.				
CustomMetricFilter	""			

<i>CustomMetricFilter</i> uses to create a filter of additional metrics to be collected when the ecap_monitor is started. For example a value of "sql*, outlook" would cause all metrics with the name starting with sql and all metrics with the name outlook to be enabled. Their metric IDs are added to <i>CustomMetricIds</i> .		
CustomMetricInterval	"900"	
<i>CustomMetricInterval</i> contains the interval time to check for new custom metrics. The default is 900 seconds.		
CustomMetricIds	""	
CustomMetricIds contains metric ids obtained from matching names in the CustomMetricFilter value		
CurrentMetricList	<i>((</i> 37	
CurrentMetricList contains the values from both DefaultMetricList and CustomMetricIds		
PollInterval	120	
<i>PollInterval</i> contains the interval in seconds to should be a multiple of 60, (60, 120, 300)	o write collected performance data to disk. This	
ScanInterval	5000	
ScanInterval contains the interval in millseconds that process data is sampled.		
PeakInterval	0	
PeakInterval contains the interval in millseconds that peak data is sampled.		
LowPriority	0	
LowPriority contains "0" to run at normal priority or "1" to run at below normal priority		
ManageRetention	0	
<i>ManageRetention</i> contains a value ("0" or "1") enabling/disabling having eCAP Monitor manage retention of the data files. Typically managing retention of data files is not necessary as PAWZ Server will manage it.		
Retention	30	
<i>Retention</i> contains the number of days the eCAP Monitor should retain data files. This is only enabled if the <i>ManageRetention</i> entry is "1"		

Continuous	1	
<i>Continuous</i> contains a value ("0" or "1") enabling/disabling having eCAP Monitor run continuously. If it is set to "0" eCAP Monitor will stop itself at midnight. This is an historical entry, a system that had memory leaks in some performance counters caused eCAP Monitor to leak memory. The eCAP Monitor would disable itself and PAWZ Server would restart it, minimizing the amount of memory consumed by eCAP Monitor.		
ManageTimeDrift	1	
<i>ManageTimeDrift</i> contains a value ("0" or "1") enabling/disabling time drift management. If enabled, the collector adjusts the time the collector will sleep between intervals to maintain the desired sampling rate.		
Version	"version string"	
Version is an output registry entry. The eCAP Monitor will set the value to the version and build date string.		
DataBufferSize	<i>um</i>	
<i>DataBufferSize</i> contains the optimal buffer size, in bytes, used for allocating data buffer space. This reduces collector overhead by minimizing data reallocations. This is an internal value and should not be modified.		

eCAP Monitor for VMware ESX/ESXi

Registry Key:

ECAP Monitor for ESX Registry Home

HKEY_LOCAL_MACHINE\SOFTWARE\PERFCAP\ecap_monitor_esx

Key Name	Default Value (all values are "String")	
JavaHomeDirectory	"C:\Program Files\Java\Jre6\"	
JavaHomeDirectory must contain the root dire subfolder named bin that contains the java.exe	ctory of the Java JRE. This folder must contain a e image.	
AxisDirectory	C:\Program Files\PerfCap\ECAP\Monitor\Axis	
AxisDirectory contains the location of the Axis Libraries used by ecap_monitor_esx.		
ViDirectory	C:\Program Files\PerfCap\ECAP\Monitor\Visdk	

ViDirectory contains the location of the VI SDK Libraries used by ecap_monitor_esx.

JavaMaxHeapSize	-mx300	
JavaMaxHeapSize the command line qualifer to limit the maximum memory of the ecap monitor esx. –mx300 limits to 300 Mb		

PAWZ Agent and PAWZ Real-Time Agent

Registry Key:

PAWZ Agent Registry Home HKEY LOCAL MACHINE\SOFTWARE\PERFCAP\PAWZagent Value (all values are "String") Key Name Default Port 1661 Port contains the PAWZ Agent to PAWZ Server TCP socket InstallDirectory C:\program files\PerfCap\PAWZ\Agent InstallDirectory contains the PAWZ Agent root directory path TmpDirectory C:\program files\PerfCap\PAWZ\Agent\Tmp *TmpDirectory* contains the path where the PAWZ Agent/RealTime Agent temporary files will be created. **BinDirectory** C:\program files\PerfCap\PAWZ\Agent\Bin BinDirectory contains the path where the PAWZ Agent/RealTime Agent executable and binary files will be installed. C:\program files\PerfCap\PAWZ\Agent\Log LogDirectory LogDirectory contains the path where the PAWZ Agent/RealTime Agent log files will be written. C:\program files\PerfCap\PAWZ\Agent\Settings SettingsDirectory

SettingsDirectory contains the path where the PAWZ Agent/RealTime Agent settings files will be written.

 OutgoingDirectory

 OutgoingDirectory is not used.

 DeviceDirectory

 C:\Program Files\PerfCap\PAWZ\Agent\Device

<i>DeviceDirectory</i> contains the path where the PAWZ Agent/RealTime Agent device files will be installed. These files are for PAWZ Planner support		
LoopDelay	5	
LoopDelay contains a value between "0" and "20". This sets a "n" millisecond delay in each CPU consuming loop of a PAWZPERF execution. This allows throttling of the PAWZPERF.exe image. This will spread the CPU consumed by the image over a longer time period.		
AppDataDirectory	""	
<i>AppDataDirectory</i> contains a comma seperated list of paths that the pawzagent is allowed to look into for application data.		
CompressionCommand	""	
<i>CompressionCommand</i> contains simple expression value that the PAWZ Agent to construct a command for compressing application data file(s) before transfer. The CompressionCommand should contain a valid command with asterisks in place of the data file name. For Example: $zip -q -j$ *. zip *		
LowPriority	0	
<i>LowPriority</i> contains a value of "1" or "0". If set to "1" the PAWZ Agent will run data processing requests at BELOW_NORMAL priority.		
LogRetention	5	
LogRetention contains a value for how long the PAWZ Agent should retain log files.		
KeepPerf	0	
<i>KeepPerf</i> contains a value ("0" or "1") for enabling/disabling keeping of .PERF files.		
ServerIPAddress	0.0.0.0	
ServerIPaddress contains a comma seperated list of IP Address of PAWZ Server(s) that the Agent will respond to. The value 0.0.0.0 indicates any server.		
Log Details	0	
LogDetails contains a value ("0" or "1") for enabling/Disabling verbose logging for the PAWZ Agent.		

Log Details RTA	0	
Log Details RTA contains a value ("0" or "1") for enabling/Disabling verbose logging for the PAWZ Real-Time Agent.		
RTA_Port	2101	
<i>RTA_Port</i> contains the port for PAWZ Real-Time Agent to PAWZ Real-Time Server communications.		
RTA_Process	0	
<i>RTA_Process</i> contains a value ("0" or "1") for enabling/disabling Real-Time collection of per- process data: NOT USED		
Version	"	
<i>Version</i> is an output registry entry. The pawzagent will set the value to the version and build date string.		

FindIT Agent

Registry Key:

FindIT Agent Registry Home		
HKEY_LOCAL_MACHINE\SOFTWARE\PERFCAP\finditagent		
Key Name	Default Value (all values are "String")	

AutoDiscAgentApplication	(633	
AutoDiscAgentApplication can be used to supply an application name to the FindIT server on an autodiscovery query.		
AutoDiscAgentAssetnumber	(63)	
AutoDiscAgentAssetnumber can be used to supply an asset number to the FindIT server on an autodiscovery query.		
AutoDiscAgentAssettype	££33	
AutoDiscAgentAssettype can be used to supply an asset type to the FindIT server on an autodiscovery query.		
AutoDiscAgentLocation	££33	
AutoDiscAgentLocation can be used to supply an location to the FindIT server on an autodiscovery query.		
AutoDiscAgentOrganization	££33	
AutoDiscAgentOrganization can be used to supply an organization to the FindIT server on an autodiscovery query.		
BinDirectory	C:\Program Files\PerfCap\FindIT\Agent\Bin	
BinDirectory contains the directory where FindIT Agent binary (executable) images are installed.		
Company		
<i>Company</i> is not used.		
ConfigDirectory	C:\Program Files\PerfCap\FindIT\Agent\Conf	
ConfigDirectory contains the directory where FindIT Agent writes system configuration data.		
DataDirectory	C:\Program Files\PerfCap\FindIT\Agent\Data	
DataDirectory contains the directory where FindIT Agent writes performance data.		
DataRetention	3	
DataRetention contains the number of days to retain performance data files.		
InstallDirectory	C:\Program Files\PerfCap\FindIT\Agent	

InstallDirectory contains the directory where Find	T Agent is installed.	
LogDetails	0	
LogDetails allows or disallows verbose logging (0) disables or 1 enables)	
LogDirectory	C:\Program Files\PerfCap\Findit\Agent\Log	
LogDirectory contains the directory where log files	s are to be written.	
MonitorCPU	1	
MonitorCPU allows or disallows collection of CPU utilization. (0 disables or 1 enables)		
MonitorProcess	1	
MonitorProcess allows or disallows collection of system process. (0 disables or 1 enables)		
Port	3336	
Port contains the TCP socket port that FindIT Age	ent and FindIT Server communicate	
RemoteCommandStatus	1	
<i>RemoteCommandStatus</i> allows or disallows execution of scripts by the FindIT Agent used by auto update. (0 disables or 1 enables)		
ScratchDirectory	C:\Program Files\PerfCap\Findit\Agent\tmp	
ScatchDirectory contains a directory used by FindIT Agent used for AutoUpdate commands.		
ServerIPaddress	""	
ServerIPaddress contains the FindIT server IP ac servers to communicate with; otherwise it contain	Idress when the agent is limiting which FindIT s NULL.	
SystemMemorySize(MB)	""	
<i>SystemMemorySize(MB)</i> can contain a user entered system memory size in megabytes. This field can be used if the FindITAgent is unable to determine the memory size.		
SystemModel	""	
SystemModel can contain a user entered system	model string. This field can be used if the nodel.	

SystemSerialNumber	""	
<i>SystemSerialNumber</i> can contain a user entered system model string. This field can be used if the FindITAgent is unable to determine the system serial number.		
TmpDirectory	C:\Program Files\PerfCap\Findit\Agent\tmp	
ScatchDirectory contains a directory used by FindIT Agent used for temporary files		
User	""	
<i>User</i> is not used.		
Version	""	
<i>Version</i> is an output registry entry. The finditagent will set the value to the version and build date string.		

Problem Resolution

The following chapter describes the problems from prior versions that have been fixed.

eCAP Monitor for VMware ESX

[10.0] Guest Connections

The ecap_monitor_esx process now connects the the VMware HyperVisor only once per interval to collect guest performance statistics.

[9.2] NIC data rate metrics

NIC data rates are now collected.

eCAP Monitor for Windows

[9.2] Memory Leak

A slight memory leak has been fixed.

[9.2] Handle Leak

A slight file handle leak has been fixed.

[9.2] Dropped NIC packets on CPC file creation

A problem where starting the ecap_monitor (or data file rollover at midnight) was causing contention to non-paged pool thereby causing the some NIC packet drops. Has been fixed. This was seen on Windows 2008 X64.

[9.1] Non instanace performance data count.

Processing cpc data for non-instance performance data (memory counters) was seeing a spike in values for the last interval of the day if the data collector wrote out less the the maximum sample count. The CPC file has been modifed to write the "seen" count. Now the processing knows how to compulte the value based on the exact number of samples. The problem with data spikes is fixed.

PAWZ Agent

[9.2] File Handle Leak

A slight file handle leak has been fixed.

[9.2] PAWZ PERF data spikes for last interval fixed

A problem where the .PERF file generation would contain a data spike for the last entry has been fixed.

[9.2] PAWZ PERF disk statistics

Detailed disk statistics (disk response time, queue length) are more accurate.

[9.2] PAWZ PERF IP Discards

A problem where the IP discard rate was not correctly computed has been fixed.

[9.1] Application data file matching for date format YYYYMMD

PAWZ Agent now supports matching the YYYYMMD format. This allows transfer of application data files that use a single digit day format for days 1 through 9.

FindIT Agent

[9.1] FindIT Agent now returns description string on auto discovery

FindIT Agent now returns a detailed description of the system on auto discovery requests.

Restrictions and Known Problems

The following is a summary of currently known restrictions and potential problems.

eCAP Monitor for Windows

TCP metrics stop collecting on Windows 2000/2003

TCP, IP and UDP counters may stop functioning on some Windows 2000 systems. Use the winmgmt/clearadp command to reset them.

The *exctr/st* utility from Microsoft can also enable/disable performance counters.

eCAP Monitor for VMware ESX/ESXi

Installation requirements not checked

The installation does not check for the required .NET framework or Java JRE software.

ecap-monitor.txt license

The ecap_monitor_esx service will start without an ecap-monitor.txt license file. Data collector threads will not be able to start until a license file is placed in the installation folder.

Data Scan Rate

The ecap_monitor_esx always scans at a 20 second interval. If you have a 60 second dump rate, every minute the data is requested for the at a 20 second interval.

FindIT Agent for VMware ESX/ESXi

Platform not supported.

There is no support for having FindIT Agent gather data on the VMware ESX/ESXi system.

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