Windows Service Monitoring

Overview

SNMPc 9.0.7 includes support for discovering and monitoring Windows services. You can predefine a list of Windows Services into an 'Application' definition (e.g. NMS = Service1+Service2+.....).

SNMPc will discover which servers are running an Application and generate alerts when any monitored service fails. Applications can be defined either via a GUI or directly in the SNMPc.ini file.

Prerequisites

The Windows Server must have the SNMP service enabled. You can verify the Windows SNMP agent is enabled by right-clicking on the Server icon and selecting the Servers \rightarrow Windows \rightarrow Service Table... menu.

Enabling Windows Service Discovery

As default the Windows Service discovery is disabled. To enable this functionality open the Config → Discovery/Polling... menu and select the Proto Tab. The Find Windows Services option should be checked.

Discovery/Polling Agents	X
Address Status localhost connected	General Proto Seeds Comm Filters Image: Find Non-SNMP (Ping) Nodes Image: Find RMON Devices Image: Map Multicast Networks Image: Find Windows Services Find TCP Ports Image: WEB Telnet Image: SMTP FTP
Layout: Top Level/Incremental Use full DNS name Enable Poll After Layout	Delete OK Cancel Help

The SNMPc discovery engine will detect an SNMP enabled Windows based server. When the Find Windows Services option is enabled the discovery engine will compare the list of defined Applications against the list of services running on the server. When it discovers a match it will automatically configure SNMPc to monitor the Application and generate alerts should any of the services fail.

Once an application has been discovered and is monitored any Service failure will generate an alarm. The following shows an example log entry for when a monitored Windows Service has failed.

	Event Hist	ory - HP2008-TE	EST - Any-Pric	ority	_ 8	×
	Normal	08/18/2014	11:00:56	HP2008-TEST	Device Responding to Poll	^
	Major	08/18/2014	11:01:04	HP2008-TEST	NMS Service Component SNMPc OnLine Export Service Down	
	Normal	08/18/2014	11:01:06	HP2008-TEST	Web Service Up	=
	Normal	08/18/2014	11:01:06	HP2008-TEST	NMS Service Up	.
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Defining a Windows Service Application (Overview)

SNMPc uses the Windows Service 'Description' to identify the Windows Service. In the image below the SNMPc Discovery Agent service is defined as

Name:	discagt
PID:	2716
Description:	SNMPc AutoDiscovery Agent
Status:	Running
Group:	N/A

The service description text "SNMPc AutoDiscovery Agent" would be used in SNMPc to identify this service.

oplications Processes Servi	ces Perform	ance Networking Users		
Name	PID	Description	Status	Group
SCardSvr		Smart Card	Stopped	LocalServiceAr
SCPolicySvc		Smart Card Removal Policy	Stopped	netsvcs
SNMP	3240	SNMP Service	Running	N/A
SNMPTRAP		SNMP Trap	Stopped	N/A
discagt	2716	SNMPc AutoDiscovery Agent	Running	N/A
bkserv	2336	SNMPc Backup Server	Running	N/A
FlowExport	2804	SNMPc Flow Export Server	Running	N/A
hist32	1216	SNMPc History Agent	Running	N/A
crserv	2576	SNMPc Management Server	Running	N/A
dbex	2680	SNMPc OnLine Export Service	Running	N/A 🗏
crsyslog	2612	SNMPc Syslog Service	Running	N/A
sppsvc		Software Protection	Stopped	N/A
sppuinotify		SPP Notification Service	Stopped	LocalService
CASprint		Sprint Con App Svc	Stopped	N/A
SprintRcAppSvc		Sprint RcAppSvc	Stopped	N/A
	1000		D	11/A
				F
				Services

Example

The following example show how to define a new Application called 'NMS. It will monitor all 7 SNMPc services. These Services are highlighted in the previous Task Manager image. The descriptions for the services are:

SNMPc AutoDiscovery Agent SNMPc Backup Server SNMPc Flow Export Server SNMPc History Agent SNMPc Management Server SNMPc OnLine Export Service SNMPc Syslog Service

Defining a Windows Service Application (GUI) To manually define the NMS Service

1) Right-click on the server icon and Select Properties... In the resulting window select the Attributes Tab and double-click on Service Polling. A new Poll Services... window will appear

Poll Services	X
Polled Services for this Object All Services: Polled Services: Polled Services: Add >> Telnet *Smtp *Telnet *Web AnonFTP Apache DNS ECHO LTTD TO	ices:
Edit Custom Services Service Name: *Ftp	Add
Service ID: 2 TCP Port: 21	Change Delete
Expect String: Poll Exec:	Test
Poll Args:	
OK Cancel	Help

2) Define a Service Name (NMS in this example). From the Poll Exec field select the pulldown and choose the predefined WinSvcPoll.exe option.

Poll Services	X
Polled Services for this Object All Services: Polled Service Polle	ces:
Edit Custom Services	Add
Service ID: 2 TCP Port:	Delete
Poll Exec: WinSvcPoll.EXE	
Poll Args: OK Cancel	Help

3) Select the ... button beside Poll Args to bring up the list of Windows Services present on the server. Use the Add>> option to define the list of services in the Application. The image below shows the 7 'NMS' services to be polled

Poll Services	X
All Running Services: Remote Procedure Call (RPC) RPC Endpoint Mapper SeaPort Security Accounts Manager Security Center Server Shell Hardware Detection Sierra Wireless Card Detection Service	Polled Services: SNMPc AutoDiscovery Agent SNMPc Backup Server SNMPc Flow Export Server SNMPc History Agent SNMPc Management Server SNMPc OnLine Export Service SNMPc Syslog Service
	OK Cancel

4) Select OK to close the Poll Services... window. Then Add the Custom Service so it is listed under the All Services list. The newly defined Application is now available to be selected or discovered for any device. The definition is also added to the SNMPc.ini file. To manually enable polling for the Application highlight the name and select Add>>. The Application is now listed under Polled Services.

Poll Services		X
Polled Services for All Services: AnonFTP Apache DNS ECHO HTTP IMAP MSSQL NMS	or this Object Polled Servi Add >> NMS Del <<	ces:
Service Name:	NMS 23 TCP Port:	Add Change
Send String:		Delete Test
Poll Exec:	WinSvcPoll.EXE	
Poll Args:	OK Cancel	Help

Manually Defining a Windows Service Application (SNMPc.ini)

Application definitions can be manually added to the SNMPc.ini file. They are created under the [Services] section. The general format is

SVCXX=myAppName,,,,,"\$"WinSvcPoll.EXE\$" \$"ServiceDescription1\$" \$"ServiceDescription2\$""

Where XX is a unique number

So with the 7 Windows Services that made up the NMS Application definition the entry would be:

Svc23=NMS,,,,,"\$"WinSvcPoll.EXE\$" \$"SNMPc AutoDiscovery Agent\$" \$"SNMPc Backup Server\$" \$"SNMPc Flow Export Server\$" \$"SNMPc History Agent\$" \$"SNMPc Management Server\$" \$"SNMPc OnLine Export Service\$" \$"SNMPc Syslog Service\$""

Things to Note

SNMPc is using a Microsoft SNMP table to monitor the state of the Windows Services. The table status is updated by the agent every 60 seconds. Therefore there is a small time window between when a service fails/changes state and when it can be detected by the service monitor

You can define up to 256 Applications to be monitored. Each icon can be configured to monitor 16 Application definitions.

There is a 256 character limit when defining the application. If you have an application that comprises many services you should split the application definitions into appropriate sections.