

# Supermicro Server Monitoring with SuperDoctor 5<sup>®</sup> and SCOM 2012

**User's Guide** 

**Revision 1.0** 

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#### **Revision History**

Date	Rev	Desc	cription
May-29-2015	1.0	1.	Initial document.

### **1** Introduction

In this guide, we will show you the four methods of using System Center 2012 R2 Operations Manager (SCOM 2012 R2) to check the health status of a system monitored by SuperDoctor 5<sup>®</sup>. You can use SCOM 2012 to monitor SD5 by checking event logs, SNMP GET or SNMP trap, allowing you to choose the method that suits your needs.

#### **2** Prerequisites

#### 2.1 Managed Systems - SD5

To install SuperDoctor 5<sup>®</sup>, please refer to "Chapter 2 Setting Up SD5" in *SuperDoctor 5 User's Guide* for details. To quickly install SD5 to multiple systems, see "2.1.4 Tips for Deploying a Large Number of SD5s" in *SuperDoctor 5 User's Guide*.

#### 2.2 Management Server - SCOM 2012 R2

To install SCOM 2012 R2, refer to Microsoft's website at <u>https://technet.microsoft.com/en-us/library/hh205987.aspx</u> for more information.

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## 3 Creating an NT Event Rule to Monitor SD5

The example below illustrates the use of SCOM 2012 to check a managed system's event log that was written by SD5 when a monitored item was triggered or recovered. In this example, two conditions must be met,

- The SD5 event log function must be enabled. You have to configure the SD5 notification methods in advance. See *4.5.1 Alert Configuration* in *SuperDoctor 5 User's Guide* for more information.
- The Windows computer with SD5 must be discovered/managed by SCOM 2012.

If the above conditions are met, follow these steps:

Step 1: In the Operations Console, click the Authoring Tab.

Step 2: Go to Management Pack Objects > Rules. Right-click Rules and select Create a new rule.

Authoring	*	Rules (54)		
▲ 📝 Authoring		Management pack objects are now scope		
Management Pack Templates		Name		
🖄 Distributed Applications		Type: Windows Server 2012 Operating S		
🔤 Groups		Memory % Committed Bytes in Use \		
a 🚎 Management Pack Objects		Pages Output Per Second		
E Attributes		Reserved		
Monitors		Disk can not be read		
Object Discoveries		Duplicate ID Address has been Detect		
- Overrides				
📄 Rules		System Cache Resident Bytes		
Service Level Tracking		re <u>a</u> te a new rule		
Tasks	Q B	efresh F5 i		
🖉 Views		A Software Update Installation Failed		
		Total Processor Information % Interru		
		Collection Rule for Software Updates		
		📄 NTFS - Delayed Write Lost		
Add Monitoring Wizard		< ·····		
New Distributed Application		Rule details:		
New Group				
		<ol> <li>Select a rule above to view details</li> </ol>		
Monitoring		C		
Authoring				

**Step 3:** In the Rule Type section, select **NT Event Log (Alert)** and click **New** to create a custom SD5 management pack.

	Create Rule Wizard	X
Select a Rule Type		
Rule Type		🕢 Help
	Select the type of rule to create	
	Art Generating Rules         Event Based         Genetic CSV fot Log (Vert)         Genetic Text Log (Vert)         Syrlog (Vert)         WINI Event (Alert)         Become Command (Alert)         WINI Event (Alert)         WINI Event (Alert)         WINI Event (Alert)         Wini Event (Alert)         Become Commands         Description:         Generate an aller in response to Windows events         Management pack         Select destination management pack: <cselect management="" pack=""></cselect>	
	< Previous Next > Create C	ancel

**Step 4:** Type the name, version and description. Click **Next** to continue.

<b>=</b>	Create Rule Wizard								
. 🗟	Create a Management Pack								
General Propertie	ŝ								
General Properties	Weip	5							
Knowledge	Management Pack General Properties	1							
	ID : SD.Log								
	Name :								
	SUS LOG								
	1.0.0.0 For example, 1.0.0.0								
	Description :								
	SD5 Log Test.								
	< Previous Next > Create Cancel								

Step 5: Click Create to start creating the management pack and return to the Create Rule Wizard.

<b>=</b>	Create Rule Wizard	x
1 · · · · · · · · · · · · · · · · · · ·	Create a Management Pack	×
Rule Knowledge Article		
General Properties	(e)	Help
Knowledge	Knowledge	
	Edit	
		-
	< Previous Next > Create Cance	

**Step 6:** In the General section, input the rule name and click **Select** to set up the Rule target.

Ē	(	Create Rule Wizard
Rule Name and De		
Rule Type General	Colort suls assure of	🎯 Нер
Event Log Type Build Event Expression	Rule name: SD5 Log Rule	rescription and target
Configure Alerts	Description (optional):	
	Management Pack:	SD5 Log
	Rule Category: Rule target:	Alet v
	L	
	✔ Rule is enabled	
		<previous next=""> Create Cancel</previous>

**Step 7:** Find "Windows Server 2012 Operating System" and click **OK**. Note that if you cannot find the target, go to the Microsoft Download Center <u>https://www.microsoft.com/en-us/download/</u> to find "System Center Management Pack for Windows Server Operating System", then import it into your SCOM 2012.

Select Items to Target							
Select the class, group, or object that you want to target from the list below. You can also filter or sort the list to make items easier to find							
items easier to find.							
Look for:							
Server 2012 ope			Clear				
<ul> <li>View common targ</li> </ul>	ets						
View all targets							
larget	Management Pack	Description					
Windows Server 201	2 Opera Windows Server Operatin	ng 5 An instances of the windows serv	er zorz operacing system				
93 total Targets, 1 vis	ible, 1 selected						

**Step 8:** Select the type of event log. **Application** is selected by default and click **Next**.

	Create Rule Wizard
Event Log Name	
Rule Type	🕢 Help
General	Specify the event log to read the events from
Evert Log Type Build Event Expression Configure Alerts	Specify an event log name to read events from. You can browse to a computer to view and select from available event logs. Log name:
	< Previous Next > Create Cancel

Step 9: In the Value fields, type 4096 for Event ID and SD5 for Event Source. Click Next to continue.

		Create Rul	e Wizard		X
Build Event Expres					
Rule Type General	Filter on	e or more events			🍘 Help
Build Event Expression	Build the	expression to filter one or	more events:		منيحا متناس
		Parameter Name	Operator these are true) Equals Equals	Value 4096 SD5	
			< Previous	Next >	Create Cancel

**Step 10:** Click **Create** to start creating a rule for SD5. The dialog box will close.

	Create Rule Wizard	×
Configure Alerts		
Rule Type		Help
General Event Log Type	Specify the information that will be generated by the alert	
Build Event Expression	Alert name:	Priority:
Configure Alerts	SD5 Log	Medium V
	Alert description:	Severity:
	Event Description: \$Data[Default="/EventDescription\$	[Catcal v]
	Custom alert fields	
	< Previous Next :	Create Cancel

**Step 11:** In the **Operations Console**, click the **Monitoring** Tab and go to **Monitoring** > **Active Alerts**. In the figure below, you can see that a hard disk error (\\.\PHYSICALDRIVE 0 is Unavailable) occurred on the managed system (Slave.TEST.SSM).

Monitoring <	A	ctive Alerts (2)							
a 🧱 Monitoring		💫 Look for:		Find Now Clear					
Active Alerts	6	lcon	Source	• Ø	) Name		Resolution State	Created	Age
Discovered Inventory		Severity: Critical (1)							
Distributed Applications		Second, C.,	Microsoft Windows Senu	er 2012 R2 Datacenter	SD5 Log R	ule	New	5/13/2015 1-47-51 AM	< 1 Minute
💑 Task Status 🗏		Generalites Microsofters (4)	Wile osofe Will dows Servi	er zorz na botocenter	JUDIEUgik	aic		3/13/2013 1.4/131 AM	s i minute
UNIX/Linux Computers	11	Seventy: warning (1)						5 // D / D / C / D / D / D / D / D	2715
Windows Computers		4	SCOM.TEST.SSM		Operation	s Manager Failed to Access the Wi	New	5/13/2015 1:21:06 AM	27 Minutes
Agentless Exception Monitoring									
Application Monitoring									
Data Warehouse									
Microsoft Audit Collection Services									
A Contract Mindows Client									
Logical Disk State									
iii Network Adapter State									
Operating System Performance									
💑 Task Status									
Windows Client State									
Health Monitoring									
Performance									
Microsoft Windows Server	_								
Active Alerts	-								
					1	•			>
Show or Hide Views		Alert Details							~
New View 🕨									
		SD5 Log Rule				Alert Description			^
Monitoring		Source: 🛛 🖓 Microsoft W	ndows Server 2012 R2 Data	acenter		Event Description: 2015-05-13,01:47:	51, UNKNOWN, "\\.\F	HYSICALDRIVE0 () is Unavailal	ble"
Authoring		Full Path Name: Slave.TEST.SS	M\Microsoft Windows Ser	ver 2012 R2 Datacenter					
		Alert Rule: O SD5 Log Rule	2						
Reporting		Created: 5/13/2015 1:4	7:51 AM						
🚳 Administration						M2			
My Workspace		Knowledge:				View additional knowledge			
		No knowledge was available for th	is alert.						

## 4 Creating an SNMP Probe Monitor for SD5

The example below illustrates the use of SCOM 2012 to probe a managed system's SNMP OID value. The value changes when a health-monitored item is triggered or recovered. In this example, two conditions must be met:

- SD5 must be set up with the SD5 SNMP extensions configured in advance. See 5 SNMP Extension in SuperDoctor 5 User's Guide for more information.
- SNMP device SD5 must be discovered/managed by SCOM 2012.

If the conditions above are met, follow these steps:

Step 1: In the Operations Console, click the Authoring Tab.

Step 2: Go to Management Pack Objects > Monitors. Right-click Monitors and select Create a Monitor > Unit Monitor.

Authoring	< Monitors
TCP Port	▲ Look for:
<ul> <li>UNIX/Linux Log File Monitoring</li> <li>UNIX/Linux Process Monitoring</li> <li>Web Application Availability Monitoring</li> <li>Web Application Transaction Monitoring</li> <li>Web Applications</li> <li>Distributed Applications</li> <li>Groups</li> <li>Management Pack Objeds</li> <li>Htributes</li> </ul>	Target         > (Obsolete) Router Processor (Foundry)         > .NET 3-Tier Application         > .NET Application Component         > .NET Application Component Group         > .NET Application Monitoring Agent         > .NET Function Transaction (Windows Service)         > .NET Function Transaction Role (Windows Service)
Monitors	NET Windows Service
🙀 Object Discove 🔘 Create a Monitor	<ul> <li>Unit Monitor</li> </ul>
🤯 Overrides 🔍 Refresh	F5 Sependency Rollup Monitor
<ul> <li>■ Rules</li> <li> <i>Service</i> LevelTracking      </li> <li>             Tasks         </li> <li> <i>Views</i> </li> </ul>	Sel      Aggregate Rollup Monitor

Step 3: The Create a unit monitor wizard shows up. Go to SNMP > Probe Based Detection > Simple Event Detection > SNMP Probe Monitor and select All SNMP Events Collection as destination management pack. Note that "All SNMP Events Collection" is predefined. Alternatively, you can click New to create a custom management pack.

$\bigcirc$	Create a unit monitor
Select a Monitor Ty	
Monitor Type	🔞 Help
General	Select the type of monitor to create
First SnmpProbe	
Build First Expression	Probe Based Detection
Second SnmpProbe	E-C Simple Event Detection
Build Second Expression	SNMP Probe Monitor
Configure Health	WMI Performance Counters
Configure Alerts	B Con Files
	Windows Ervices
	Windows Performance Counters
	Scripting     WIII Events
	Description: Two.etate monitor, with a senarate SNMP none setting each state
	beschpilon. Two state monitor, with a separate ontwin probe setting each state
	Management mark
	Select destination management pack:
	All SNMP Events Collection
	< Previous Next > Create Cancel

**Step 4:** In the **General** section, click **Select**.

Create a unit monitor					
General Properties					
Monitor Type General	General properties				
Build First Expression Second SnmpProbe Build Second Expression	Specify the name and description for the monitor you are creating. Name: [				
Configure Health Configure Alerts	Description (optional):				
	Management pack: All SNMP Events Collection Monitor target Select				
	Parent monitor: ↓ v ✓ Monitor is enabled				
	< Previous Next > Create Cancel				

**Step 5:** A **Select Items to Target** dialog box pops up.

Select the class, group, or object that you want to target from the list below. You can also filter or sort the list to make tiems easier to find. Look for:  View ognmon targets View ognmon targets View gill targets Target Management Pack Description NET Application Monitoring Operations Manager APM Inf Activated APM Agent AdvisorConnector Class Microsoft System Center Adv Agent System Center Core Library Cluster Disk Construction Management Server. Computer Network Adapter Windows Server Cluster Disk Cluster Disks on fallover clusters (Windows Server 2008 ac Cluster Stared Volum Windows Server Cluster Disk Cluster Disks on fallover clusters (Windows Server 2008 ac Cluster Stared Volum Windows Server Cluster Disk Cluster Disks on fallover clusters (Windows Server 2008 ac Cluster Stared Volum Computer Network Adapter Windows Core Library Defines the basic properties of all computers, such as a W Computer Network Adapter Data Access Service System Center Core Library All WINX/Linux Computer Network Adapters Data Access Service System Center Core Library All Management Server: Cabet Orsenvice Operations Manager APM III VIX/Linux Computer Network Adapters Data Access Service System Center Core Library All Management Server: Cabet Service System Center Core Library All Management Server: Cabet Service System Center Core Library All Management Server: Cabet Service System Center Core Library Mit Shotsed WCT Web Service Operations Manager APM WII Shotsed WCT Web Service Configuration System Center Operations System Center Core Library Mit Shotsed WCT Web Service Operations Manager APM WII Shotsed WCT Web Service Service Management Configuration System Center Operations Manager APM WII Shotsed WCT Web Service Configuration System Center Operations Manager APM WII Shotsed WCT Web Service Configuration System Center Operations Manager APM WII Shotsed WCT Web Service Configuration Service Mit Shotsed WCT Web Service Operations Manager APM WII Wishotsed WCT Web Service Configuration Service Semplice		Sciect iten	is to ranget			
	Select the class, group, or object that you want to target from the list below. You can also filter or sort the list to make					
Look for:         Clear           Image: Strength Strengt Strength Strength Strengt Strength Strengt Stren	terna edater to inita.					
View ogmmon targets     View gll targets     V	_ook for:					
View ogmmon targets View ogmmon targets View gill targets Target Management Pack Description NET Application Monitoring Operations Manager APM Inf Activated APM Agent Adivated APM Agent Operations Manager APM Inf Activated APM Agent Adivated APM Agent Operations Manager APM Inf Activated APM Agent Adivated APM Agent Operations Manager APM Inf Activated APM Agent Adivated APM Agent Operations Manager APM Inf Client-Side Monitoring Agent Client-Side Monitoring Operations Manager APM Inf Client-Side Monitoring Agent Client-Side Monitoring Age Operations Manager APM Inf Client-Side Monitoring Agent Client-Side Monitoring Age Operations Manager APM Inf Client-Side Monitoring Agent Client-Side Monitoring Age Operations Manager APM Inf Client-Side Monitoring Agent Client-Side Monitoring Age Operations Manager APM Inf Client-Side Monitoring Agent Client-Side Monitoring Age Operations Manager APM Inf Client-Side Monitoring Agent Client-Side Monitoring Age Operations Manager APM Inf Client-Side Monitoring Agent Computer Visitem Center Core Library This class represents an Collection Management Server. Computer Network Adapter Windows Core Library Data Access Service Data Warehouse Connectio Data Warehouse Connection Data Warehouse Library All Management Servers capable of sending data to the S Gateway System Center Core Library This type represents the System Center Health Service. IIS Hosted WCF Web Service Operations Manager APM Will Shosted WCF Web Service Endpoint Management Configuration System Center Operations M System Center Management Configuration Service applic Windows Server Cure Library IIS Hosted WCF Web Service Configuration System Center Operations Manager APM Will Shosted WCF Web Service Endpoint Management Configuration System Center Operations M System Center Management Configuration Service applic </td <td></td> <td></td> <td>Clear</td> <td></td>			Clear			
Otex         Operations         Manager         APM Int Activated APM Agent         Operations         Manager APM Int Alter Application Monitoring Agent         Advisor Connector Class         Microsoft System Center Adv         Advisor Connector Class         Operations         Manager APM Int Altered APM Agent         Advisor Connector Class         Client-Side Monitoring Agent         Operations         Manager APM Int Altered APM Agent         Advisor Connector Class         Client-Side Monitoring Agent         Operations         Manager APM Int Altered APM Agent         Advisor Connections Manager APM Int Client-Side Monitoring Agent         Client-Side Monitoring Agent         Operations         Manager APM Int Altered APM Agent         Advisor Client Advisor Client Agent         Client-Side Monitoring Agent         Client-Side Monitoris Agent         Client-Side Monitoring Agent	Now common targets			_		
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Agent         System Center Core Library         All System Center Agents.           Client-Side Monitoring Age         Operations Manager APM Inf Client-Side Monitoring Agent           Client-Side Monitoring Age         Operations Manager APM Inf Client-Side Monitoring Agent           Cluster Disk         Windows Server Cluster Disk         Cluster Disk Some Conter Concerts Shared Volumes on failower clusters (Windows Server Cluster Disk Cluster Shared Volumes on failower clusters (Windows Server Cluster Disk Cluster Shared Volumes on failower clusters (Windows Server Cluster Disk Cluster Shared Volumes on failower clusters (Windows Server Cluster Disk Cluster Shared Volumes on failower clusters (Windows Server Cluster Disk Cluster Shared Volumes on failower clusters (Windows Server Cluster)           Computer Network Adapter         Windows Core Library         Defines the basic properties of all computers, such as a W           Computer Network Adapter         System Center Operations M         System Center Data Access Service         All UNIX/Linux Core Ulibrary           Data Access Service         System Center Operations M         System Center Core Library         All Management Servers capable of sending data to the S           Stateway         System Center Core Library         This type represents the System Center Release Parver           Bata Marehouse ConterCice         System Center Core Library         This type represents the System Center Health Service.           IIS Hosted WCF Web Service Coperations Manager APM W         IIS Hosted WCF Web Service Endpoint <td>AdvisorConnector Class</td> <td>Microsoft System Center Adv</td> <td></td> <td>H</td>	AdvisorConnector Class	Microsoft System Center Adv		H		
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Cluster Diak Volume Windows Server (Luster Diak Cluster Diak on failouer clusters (Windows Server 2008 a Cluster Shared Volumes on failouer clusters (Windows Server Cluster Diak Cluster Shared Volumes (Windows Server Cluster Diak Cluster Shared Volumes (Windows Server Cluster) This class represents an Collection Management Server. System Center Core Library Computer Network Adapter (Windows Core Library Computer Network Adapter UNIX/Linux Core Library Defines the basic properties of allower clusters Service Data Warehouse Connectio Data Warehouse Library System Center Core Library System Center Core Library System Center Core Library System Center Core Library All Management Servers capable of sending data to the S Gateway System Center Core Library This type represents the System Center Core Library IIS Hosted WCF Web Service Coperations Manager APM W IIS Hosted WCF Web Service Endpoint Management Configuration System Center Ora Adapter Management Configuration System Center Core Library IIS Hosted WCF Web Service Endpoint Manager APM W IIS Hosted WCF Web Service Endpoint Management Configuration System Center Core Library IIS Hosted WCF Web Service Endpoint Management Configuration System Center Core Library IIS Hosted WCF Web Service Endpoint Management Configuration System Center Core Library IIS Hosted WCF Web Service Endpoint Management Configuration System Center Core Library IIS Hosted WCF Web Service Endpoint Management Configuration System Center Core Library IIS Hosted WCF Web Service Endpoint Management Configuration System Center Core Library IIS Hosted WCF Web Service Endpoint Management Configuration System Center Core Library IIS Hosted WCF Web Service Endpoint Management Configuration System Center Core Library IIS Hosted WCF Web Service Endpoint Management Configuration System Center Core Library IIS Hosted WCF Web Service Endpoint Management Configuration System Center Management Configuration Service Endpoint Management Configuration Service Endpoint Management Configuration Service Endpoint	Client-Side Monitoring Age	Operations Manager APM Inf	Client-Side Monitoring Agent			
Cluster Shared Volume         Windows Server Cluster Disk         Cluster Shared Volumes on failower clusters (Windows Ser           Collection Server         System Center Core Library         This class represents an Collection Management Server.           Computer         System Library         Defines the basic properties of all computers, such as a W           Computer Network Adapter         Windows Core Library         Defines the basic properties of all computers, such as a W           Computer Network Adapter         Windows Core Library         All UNIX/Linux Core Library         All UNIX/Linux Core Library           Data Access Service         System Center Operations         M System Center Data Access Service         All Management Servers capable of sending data to the S           Stateway         System Center Core Library         This type represents the System Center Center.         This type represents the System Center Health Service.           UIS Hosted WCF Web Service Operations M System Center Center Derators M System Center Core Library         This type represents the System Center centries or a pateway management to service applic           Kanagement Configuration System Center Operations M System Center Center Management Configuration Service application to the service operations Manager APM W         System Center Center Center Management Configuration Service application to the service operations Manager APM W	Cluster Disk	Windows Server Cluster Disk	Cluster Disks on failover clusters (Windows Server 2008 a	а		
Collection Server         System Center Core Library         This class represents an Collection Management Server.           Computer         System Library         Defines the basic properties of all computers, such as a W           Computer Network Adapter         Windows Core Library         Defines the basic properties of all computers, such as a W           Computer Network Adapter         Windows Core Library         All WINIC/Linux Computer Network Adapters           Data Access Service         System Center Core Library         All Management Servers: capable of sending data to the S           Data Warehouse Connectio         Data Warehouse Library         All Management Servers: capable of sending data to the S           Seaway         System Center Core Library         Properties of a gateway management server           Health Service         System Center Core Library         This type represents the System Center Health Service.           IS Hosted WCF Web Service Edupoint         Management Configuration System Center Operations M System Center Management Service application Service applications.         System Center Core Library           K         Service Service         System Center Operations M System Center Management Service applications.         System Center Operations Manager APM W IIS Hosted WCF Web Service Endpoint           Management Configuration System Center Operations M         System Center Management Service Service applications Service Service applications Service Service APM W IIS Hosted WCF Web Service	Cluster Shared Volume	Windows Server Cluster Disk	Cluster Shared Volumes on failover clusters (Windows Se	er		
Computer         System Library         Defines the basic properties of all computers, such as a W           Computer Network Adapter         Windows Core Library         All UNIX/Linux Core Library         System Center Oce Library         All UNIX/Linux Core Library         All UNIX/Linux Core Library         System Center Core Library         This type represents the System Center Health Service.         IS Hosted WCF Web Service Endpoint         Management Configuration System Center Operations M         System Center Core Library         This type represents the System Center Indepint         All Management Configuration Service applic           K         Service Endpoint         Management Configuration Service Service Endpoint         Management Configuration Service applic         Service Service Service Indepint	Collection Server	System Center Core Library	This class represents an Collection Management Server.			
Computer Network Adapter Windows Core Library         All UNIX/Linux Core Library           Computer Network Adapter Windows Core Library         All UNIX/Linux Computer Network Adapters           Data Access Service         System Center Operations M         System Center Obta Access Service           Data Morehouse Connectio         Data Warehouse Library         All Management Servers capable of sending data to the S           Sateway         System Center Core Library         Note the System Center Core Library         Properties of a gateway management server           Health Service         System Center Core Library         This type represents the System Center All Service.         IS Hosted WCF Web Service Endpoint           Management Configuration         System Center Operations M         System Center Management Configuration Service applic            III         III         System Center Core Library         Note the Service Endpoint	Computer	System Library	Defines the basic properties of all computers, such as a \	N		
Computer Network Adapter         UNIX/Linux Core Library         All UNIX/Linux Computer Network Adapters           Data Access Service         System Center Operations M         System Center Operations M         System Center Core Library         All Magement Service; capable of sending data to the S           Data Warehouse Library         System Center Core Library         Properties of a gateway management server           Health Service         System Center Core Library         This type represents the System Center Health Service.           IIS Hosted WCF Web Service Operations Manager APM W         IIS Hosted WCF Web Service Endpoint         Management Configuration Service applied           Kanagement Configuration System Center Operations M         System Center Management Service.         IIS Hosted WCF Web Service Endpoint	Computer Network Adapter	Windows Core Library				
Data Access Service         System Center Operations M System Center Data Access Service           Data Warehouse Connectio         Data Warehouse Library         All Management Servers capable of sending data to the S           Gateway         System Center Core Library         Properties of a gateway management server           Health Service         System Center Core Library         This type represents the System Center Health Service.           IIS Hosted WCF Web Service         Operations Manager APM W IIS Hosted WCF Web Service Endpoint         Management Configuration Service applic           K         Imagement Configuration         System Center Operations M         System Center Manager APM W IIS Hosted WCF Web Service Endpoint	Computer Network Adapter	UNIX/Linux Core Library	All UNIX/Linux Computer Network Adapters			
Data Warehouse Connectio         Data Warehouse Library         All Management Servers capable of sending data to the S           Gateway         System Center Core Library         Properties of a gateway management server           Health Service         System Center Core Library         This type represents the System Center Health Service.           IIS Hosted WCF Web Service Operations Manager APM W         IIS Hosted WCF Web Service Endpoint         Management Configuration Service applied           Kanagement Configuration         System Center Operations M System Center Management Configuration Service applied         III	Data Access Service	System Center Operations M	System Center Data Access Service			
Gateway         System Center Core Library         Properties of a gateway management server           Health Service         System Center Core Library         This type represents the System Center Health Service.           IIS Hosted WCF Web Service Operations Manager APM W         IIS Hosted WCF Web Service Endpoint           Management Configuration System Center Operations M         System Center Operations Management Configuration Service applied           <	Data Warehouse Connectio	Data Warehouse Library	All Management Servers capable of sending data to the	s		
Health Service         System Center Core Library         This type represents the System Center Health Service.           IIS Hosted WCF Web Service Operations Manager APM W         IIS Hosted WCF Web Service Endpoint         Management Configuration System Center Operations M           Kanagement Configuration System Center Operations M         System Center Management Configuration Service applic         III	Gateway	System Center Core Library	Properties of a gateway management server			
IIS Hosted WCF Web Service Operations Manager APM W IIS Hosted WCF Web Service Endpoint Management Configuration System Center Operations M System Center Management Configuration Service applic <	Health Service	System Center Core Library	This type represents the System Center Health Service.			
Management Configuration System Center Operations M. System Center Management Configuration Service applie <	IIS Hosted WCF Web Service	Operations Manager APM W	IIS Hosted WCF Web Service Endpoint	L		
< III >	Management Configuration	System Center Operations M	System Center Management Configuration Service appli	ic '		
	<	III	>			
/3 total Targets, 93 visible, 0 selected	3 total Targets, 93 visible, 0 s	selected				
			Help OK Cance	i.		

**Step 6:** Look for the **Node** Type, select to **View all targets** and click **OK** to continue.

	Select I	ems to Target	X
elect the class, group,	or object that you want to target	rom the list below. You can also filter	or sort the list to make
enis easier to find.			
.ook for:			
Node			Clear
) View common target	\$		
View all targets			
Farget 🔻	Management Pack	Description	
Node	Network Management Lil	rar This class represents the networ	rk device
078 total Targets, 1 visi	ble, 1 selected		
		Help	OK Cancel

**Step 7**: Enter the **Name** of the monitor you are creating and click **Next** to continue.

General properties		
Specify the name and des	cription for the monitor you are creating.	
Name:		
SD5 - Built-in Sensor Heal	th	
Description (optional):		
		^
		~
Management pack:	All SNMP Events Colletion	
Monitor target:		
Node		Select
Parent m <u>o</u> nitor:		
Availability		~
Monitor is enabled		

**Step 8**: In the **First SnmpProbe** section, enter .1.3.6.1.4.1.10876.2.2<sup>1</sup> for the Object Identifier and click **Next** to continue.

reque	ncy 2 🔹 Minutes 🗸						
Object Identifier Properties							
	Object Identifier						
	.1.3.6.1.4.1.10876.2.2						
▶*							

Step 9: In the Build First Expression section of the Create a unit monitor wizard,

- 1) Click the **Insert** button to add a new row.
- 2) Enter SnmpVarBinds/SnmpVarBind[OID=".1.3.6.1.4.1.10876.2.2"]/Value to the Parameter Name field.
- 3) Click **Does not equal** in the **Operator** field.
- 4) Enter **0** to the **Value** field.
- 5) Click **Next** to continue.

Fill Bu	t <b>er on</b> ild the	e or more events expression to filter one or more e	vents:				
				🛟 In:	sert 🔫	Delete 🗙	Formula 🏂
		Parameter Name	Operator		Value		
	•	SnmpVarBinds/SnmpVarBin	Does not equa		0		

<sup>&</sup>lt;sup>1</sup> This specifies the all-in-one health status of built-in sensors monitored by SD5.

**Step 10:** In the **Second SnmpProbe** section, enter .1.3.6.1.4.1.10876.2.2 for the Object Identifier and click **Next** to continue.

Frequen	ncy 2 🗘 Minutes 🗸	
Object lo	dentifier Properties	
	Object Identifier	
	.1.3.6.1.4.1.10876.2.2	
▶*		

Step 11: In the Build Second Expression section,

- 1) Click **Insert** to add a new row.
- 2) Enter SnmpVarBinds/SnmpVarBind[OID=".1.3.6.1.4.1.10876.2.2"]/Value in the Parameter Name field.
- 3) Click **Equals** in the Operator field.
- 4) Enter **0** in the Value field.
- 5) Click **Next** to continue.

Filt	er one	or more events				
Bui	ld the e:	pression to filter one or more e	vents:			
				🛟 Insert 💌	Delete $ imes$	Formula 🏂
		Parameter Name	Operator	Value		
	•	1.3.6.1.4.1.10876.2.2"]/Value	Equals	0		

**Step 12:** In the **Configure Health** section, change the **Operational State** and Health State (see the figure below) and click **Next** to continue.

Map monitor conditions to health states						
Specify what health state should be generated for each of the conditions that this monitor will detect:						
	Monitor Condition	Operational State	Health State			
	Second Probe Raised Built-in Sensors are OK.		🕢 Healthy			
•	First Probe Raised	Built-in Sensors contain Critical.	😢 Critical			

Step 13: In the Configure Alerts section,

- 1) Select Generate alerts for this monitor.
- 2) Use the drop-down list to select **The monitor is in a critical health state**.
- 3) Click **Create** to continue.

Alert settings		
Generate alerts for this monitor		
Generate an alert when:		
The monitor is in a critical health state	~	
Automatically resolve the alert when the monitor returns to a heat Alert properties	althy sta	ate
Alert name:		Priority:
SD5 - Built-in Sensor Health	]	Medium 🗸
Alert description: Please see the alert context for details.	•••	Severity: Critical V

**Step 14:** In the **Operations Console**, click the **Monitoring** Tab and go to **Network Monitoring** > **Active Alerts**. In the figure below, you can see that the managed system (10.134.14.32) is in a critical state.

Monitoring	<	Active Alerts (1)					
Microsoft Audit Collection Services	^	Q Look for:	Find Now	Clear			
Microsoft Windows Client		🚯 Source 🖉 Name		Resolution State	Created	👻 Age	
Microsoft Windows Server		<ul> <li>Severity: Critical (1)</li> </ul>					
A G Network Monitoring		🐼 10.134.14.32 SD5 - Built-in Sensor Health		New	4/29/2015 4:55:15 AM	4 Minutes	
Active Alerts		e					
Hosts							
HSRP Groups	=						
🔛 Legacy Network Devices							
Network Devices							
📑 Network Summary Dashboard							
iii Routers							
👯 Switches		Alert Details					~
👯 VLANs		Alert Details					
▷ 📴 Performance		SD5 - Built-in Sensor Health		Alert Description			~
4 🚘 Operations Manager							
Active Alerts		Source: 🙀 10.134.14.32		Please see the ale	rt context for details.		
≤ Management Group Diagram		Full Path Name: 10.134.14.32					
📰 Management Group Health	$\sim$	Alert Monitor: USD5 - Built-in Sensor Health					
< III >		Createo: 4/29/2015 4:55:15 AM					

**Step 15:** Go to **Network Monitoring** > **Hosts**. In the figure below, you can see the managed systems (10.134.14.32, 10.134.12.13, and 10.134.14.36) are healthy.

Monitoring	<	Hosts (3)								
Application Monitoring	^	🔍 Look for:			Find Now	Clear				
👂 📴 Data Warehouse		State 🛛 👻 🔗	Maintenan	Name	Location		Model	SNMP Agent Address	Vendor	
Microsoft Audit Collection Services		Healthy		10.134.14.32	Unknown		Net-SNMP Age	10.134.14.32	LINUX	
Microsoft Windows Client		Healthy		10.134.12.13	Unknown (e	dit /etc/snm		10.134.12.13		
Microsoft Windows Server		A Healthy		10.134.14.36	Unknown (e	dit /etc/snm	Net-SNMP Age	10.134.14.36	LINUX	
4 🚈 Network Monitoring	_	•								
Active Alerts	=									
Hosts										
HSRP Groups										
🔢 Legacy Network Devices										
1 Network Devices		<			ш					>
🐏 Network Summary Dashboard		Detail View								~
III Routers		Detail field								
III Switches		Host properties of 10.134	.14.32							~
III VLANs		Display Name	0 134 14 32							
Performance		Full Path Name	0.134.14.32							
A Constant Analysis and Anal		Access Mode	NMPONLY							
Active Alerts	$\sim$	Certification	ERTIFIED							
< III >		Description	inux softlab3 (	2.6.18-238.el5 #1	SMP Sun Dec 19	14:22:44 EST 20	10 x86 64			

**Step 16:** Double-click one of the selected hosts and a **Health Explorer dialog box** pops up. Click **Close** to show all monitors.



**Step 17:** Go to **Entity Health > Availability > SD5 - Built-in Sensor Health** in the left pane. All state change events for SD5 - Built-in Sensor Health are shown on the State Change Events tab in the right pane.

a contraction of the second se	Health Explorer fo	or 10.134.14.3	2		_ 0
🕜 Reset Health 🔣 Recalculate Health  🍸 Filter Monitors 🔉 Refresh 📰 P	roperties 🔞 Help 🕴 📆 Overrides 👻				
Health monitors for 10.134.14.32					
4 🕢 Entity Health - 10.134.14.32 (Objed)	Knowledge State Change Even	3 (6)			
🔺 🕢 Availability- 10.134.14.32 (Object)	Time - From	То		Operational State	
V 🐼 Network Device Responsiveness - 10.134.14.32 (Node)	4/29/2015 5:02 AM	8	Ø	Built-in Sensors are OK.	
🕢 SD5 - Built-in Sensor Health - 10.134.14.32 (Node)	4/29/2015 4:55 AM	Ø	8	Built-in Sensors contain Critical.	
Configuration - 10.134.14.32 (Object)	4/29/2015 4:50 AM	Ø	$\checkmark$	Built-in Sensors are OK.	
Performance - 10.134.14.32 (Object)	4/29/2015 4:41 AM	8	Ø	Built-in Sensors are OK.	
O Security- 10.134.14.32 (Object)	4/29/2015 4:40 AM	Ø	$\otimes$	Built-in Sensors contain Critical.	
	4/29/2015 4:40 AM	0	$\checkmark$	Built-in Sensors are OK.	
	Details				
	Context:				
	Source		1	).134.14.32	
	Destination		1	27.0.0.1	
	FronCode		2	Innace	
	Litorcoac		101		
	Object Identifier	Syntax	Va	lue	
	.1.3.6.1.4.1.10876.2.2	Integer	0		

## **5 Creating an SNMP Trap Monitor for SD5**

The example below illustrates the use of SCOM 2012 to probe a managed system's SNMP trap that has changed when a health-monitored item is triggered or recovered. In this example, three conditions must be met,

- SD5 SNMP trap function must be enabled. You have to configure SD5 notification methods in advance. See *4.5.1 Alert Configuration* in *SuperDoctor 5 User's Guide* for more information.
- SD5 must be set up with SD5 SNMP extensions configured in advance. See 5 SNMP Extension in SuperDoctor 5 User's Guide for more information. Note that this condition is for SD5 to be discovered as an SNMP device.
- SNMP device SD5 must be discovered/managed by SCOM 2012.

If the above conditions are met, follow these steps:

Step 1: In the Operations Console, click the Authoring Tab.

Step 2: Go to Management Pack Objects > Monitors. Right-click Monitors and select Create a Monitor > Unit Monitor.

Authoring	< Monitors
CP Port	A Q Look for:
<ul> <li>UNIX/Linux.Log File Monitoring</li> <li>UNIX/Linux.Process Monitoring</li> <li>UNIX/Linux.Process Monitoring</li> <li>Web Application Availability Monitoring</li> <li>Web Application Transaction Monitoring</li> <li>Windows Service</li> <li>Distributed Applications</li> <li>Groups</li> <li>Management Pack Objeds</li> <li>Attributes</li> </ul>	Target         > (Obsolete) Router Processor (Foundry)         > .NET 3-Tier Application         > .NET Application Component         > .NET Application Component Group         > .NET Application Monitoring Agent         > .NET Function Transaction (Windows Service)         > .NET Function Transaction Role (Windows Service)
Monitors	- NET Windows Service
📸 Object Discove 🔘 Create a Monitor	<ul> <li>Unit Monitor</li> </ul>
🥵 Refresh	F5 Sependency Rollup Monitor
<ul> <li>Image: Rules</li> <li>Image: Service Level Tracking</li> <li>Tasks</li> <li>✓ Views</li> </ul>	1 See Aggregate Rollup Monitor

Step 3: The Create a unit monitor wizard is shown below. Go to SNMP > Trap Based Detection > Simple Trap Detection > SNMP Trap Monitor and select SD5 SNMP Trap Collection as the destination management pack. Note that "SD5 SNMP Trap Collection" is predefined. Alternatively you can create a custom management pack by clicking New.

0	Create a unit monitor	x
Select a Monitor T	уре	
Monitor Type	🥹 Helj	р
General	Select the type of monitor to create	
First SnmpTrapProvider	m 🙈 SMMP	
Build First Expression	Probe Based Detection	
Second SnmpTrapProvider	E C Trap Based Detection	
Build Second Expression	Simple Trap Detection	
Configure Health	H WMI Performance Counters	
Configure Alerts	H - Log Files	
	Windows Events	
	Windows Performance Counters	
	Scripting	
	VVNI EVents	
	Description: Two state menter with a second a CMMP tree estime cash state	1
	Description. I worstate monitor, with a separate Siximir trap setting each state	
	Hanagement pack	
	Select destination management pack:	
	SD5 SNMP Trap Collection V New	
	< Previous Next > Greate Cancel	

Step 4: In the General section, click Select. The Select Items to Target dialog box pops up.

	Create a unit monitor	x
General Properties		
General Properties Monitor Type General First SmpProbe Build First Expression Second SmpProbe Build Second Expression Configure Health Configure Alerts	General properties         Specify the name and description for the monitor you are creating.         Name:         [	Help
	< Previous Next > Create	Cancel

Step 5: In the Look for field, type "Node", select to View all targets and click OK to continue.

elect the class, group, or object that you want to target from the list below. You can also filter or sort the list to make ense easier to find.  ook for:  Node  View common targets  View all targets  Target  Management Pack Description Node Network Management Librar This class represents the network device  078 total Targets, 1 visible, 1 selected				
ook for: Node Clea View common targets View all targets Target Management Pack Description Node Network Management Librar This class represents the network device Node Network Management Librar This class represents the network device	elect the class, group ems easier to find.	i, or object that you want to target f	rom the list below. You can also filter or sort the list ti	o make
Node     □ Cleat       ○ View common targets     ● View all targets       Target ✓     Management Pack     Description       Node     Network Management Librar     This dass represents the network device	ook for:			
View common targets View all targets Target Management Pack Description Node Network Management Librar This class represents the network device 1078 total Targets, 1 visible, 1 selected	Node			Clear
<ul> <li>View all targets         Target Management Pack Description         Node Network Management Librar This class represents the network device     </li> <li>Node Network Management Librar This class represents the network device</li> </ul>	View common targe	łs		
Target     Management Pack     Description       Node     Network Management Librar     This class represents the network device	View all targets			
Node Network Management Librar This class represents the network device 078 total Targets, 1 visible, 1 selected	Target 🔻	Management Pack	Description	
078 total Targets, 1 visible, 1 selected	Node	Network Management Lib	rar This class represents the network device	
078 total Targets, 1 visible, 1 selected				
078 total Targets, 1 visible, 1 selected				
1078 total Targets, 1 visible, 1 selected				
	078 total Targets, 1 vi	sible, 1 selected		

**Step 6**: Enter the **Name** of the monitor you are creating and click **Next** to continue.

	Create a unit monitor	x
General Properties		
Monitor Type	Ø He	lp
General	General properties	
First SnmpTrapProvider	Specify the name and description for the monitor you are creating	
Build First Expression	Specify the name and description for the monitor you are creating.	
Second SnmpTrapProvider	SD5 - Fan Health	1
Build Second Expression	Description (ontional):	
Configure Health	A A	
Configure Alerts		
	V	
	Management pack: SD5 SNMP Event	
	Monitor target:	
	Node Select	
	Parent monitor:	
	Availability	
	Monitor is enabled	
	< Previous Next > Create Cancel	
	< Previous Net > Create Cancel	

**Step 7**: In the **First SnmpTrapProvider** step, enter .1.3.6.1.4.1.10876.100.3.0.103<sup>2</sup> for the Object Identifier and click **Next** to continue.

<sup>&</sup>lt;sup>2</sup> This means that the fan is critical.

0	Create a unit monitor	x
Configure the trap		
Monitor Type		Help
General	Object Identifier Properties	
First SnmpTrapProvider		_
Build First Expression	Object Identifier	
Second SnmpTrapProvider	*	
Build Second Expression		
Configure Health		
Configure Alerts		
	< Previous Next > Create	Cancel

Step 8: In the Build First Expression section,

- 1) Click Insert to add a new row.
- 2) Enter SnmpVarBinds/SnmpVarBind[OID=".1.3.6.1.4.1.10876.100.3.0.103"]/Value in the Parameter Name field.
- 3) Click **Contains** in the Operator field.
- 4) Enter **CRITICAL** in the Value field.
- 5) Click **Next** to continue.

Filter or	Filter one or more events							
Build the expression to filter one or more events:								
			📲 Insert 💌 Delete 🗙 Formula 💃					
	Parameter Name	Operator	Value					
•	SnmpVarBinds/SnmpVarBin.	Contains	CRITICAL					

**Step 9:** In the **Second SnmpTrapProvider** section, enter .1.3.6.1.4.1.10876.100.3.0.101<sup>3</sup> as the Object Identifier and click **Next** to continue.

First SnmpTrapProvider			
Build First Expression		Object Identifier	
Build I first Expression		.1.3.6.1.4.1.10876.100.3.0.101	
Second SnmpTrapProvider	▶*		
Build Second Expression	1.1		

Step 10: In the Build Second Expression section,

3	This	means	the	fan	is	OK.

- 1) Click **Insert** to add a new row.
- 2) Enter SnmpVarBinds/SnmpVarBind[OID=".1.3.6.1.4.1.10876. 100.3.0.101"]/Value in the Parameter Name field.
- 3) Click **Contains** in the Operator field.
- 4) Enter **OK** in the Value field.
- 5) Click **Next** to continue.

Filter o	ne or more events				
Build the	expression to filter one or mo	re events:			
			🛟 Insert 💌 D	elete 🗙 🛛 F	ormula 🏂
	Parameter Name	Operator	Value		
١.	SnmpVarBinds/SnmpVarBin	Contains	OK		

**Step 11:** In the **Configure Health** section , change the **Operational State** and Health State as shown below and click **Next** to continue.

Мар	Map monitor conditions to health states						
Speci	fy what health state shou	ld be generated for each o	f the conditions that this mon	itor will detect:			
	Monitor Condition	Operational State	Health State				
	First Trap Raised	Fans contain Critical	🐼 Critical				
١.	Second Trap Raised	Fans are OK	🕢 Healthy				

Step 12: In the Configure Alerts section,

- 1) Select Generate alerts for this monitor.
- 2) Use the drop-down list to select **The monitor is in a critical health state**.
- 3) Click **Create** to continue.

Alert settings		
$\checkmark$ Generate alerts for this monitor		
Generate an alert when:		
The monitor is in a critical health state	~	
$\checkmark$ Automatically resolve the alert when the monitor returns to a he	althy st	ate
Alert properties		
Alert name:		Priority:
SD5 - Fan Health	]	Medium 🗸
Alert description:		Severity:
Please see the alert context for details.		Critical 🗸
1		

**Step 13:** In the **Operations Console**, click the **Monitoring** tab and go to **Network Monitoring** > **Active Alerts**. In the figure below, you can see the managed system (10.134.14.32) is in a critical condition.

Monitoring	<	Acti	ve Alerts (1)						
Microsoft Windows Server	^	ø	Source	$\bigotimes$	Name	Resolut	ion State	Created	- Age
A Contract Monitoring		4	Severity: Critical (1)						
Active Alerts		0	10.134.14.32		SD5 - Fan Health	New		5/18/2015 8:32:07 PM	1 Minute
Hosts									
HSRP Groups									
Legacy Network Devices									
Network Devices									
Retwork Summary Dashboard									
Routers	≡	A	ert Details						
Switches									
VLANs		0	SD5 - Fan Health	h			Alert Des	cription	
Performance		S	ource: 😽	10.13	34.14.32		Please se	e the alert context for deta	ls.
D Derations Manager		Fi	ull Path Name:	10.13	34.14.32				
📔 SD5 SNMP Event	$\sim$	A	ert Monitor: 🛛 🔘	SD5	- Fan Health				
<		C	reated:	5/18/	/2015 8:32:07 PM				

**Step 14:** Go to **Network Monitoring** > **Hosts**. In the figure below, you can see that the managed systems (10.134.14.32, 10.134.12.13, and 10.134.14.36) are healthy.

Monitoring	۲	Hosts (3)								
Application Monitoring	^	🔍 Look for:			Find Now	Clear				
👂 📴 Data Warehouse		State 🛛 👻 🖉	Maintenan	Name	Location		Model	SNMP Agent Address	Vendor	
D A Microsoft Audit Collection Services		Healthy		10.134.14.32	Unknown		Net-SNMP Age	10.134.14.32	LINUX	
Microsoft Windows Client		Healthy		10.134.12.13	Unknown (ei	dit /etc/snm		10.134.12.13		
D G Microsoft Windows Server		A Healthy		10.134.14.36	Unknown (ei	dit /etc/snm	Net-SNMP Age	10.134.14.36	LINUX	
A Contract Monitoring		United by the second se				,,				
Active Alerts	=									
III Hosts										
HSRP Groups										
🔢 Legacy Network Devices										
🔢 Network Devices		<			ш					>
📑 Network Summary Dashboard		Detail View								~
III Routers		Detail view								
🗱 Switches		Host properties of 10.134	1.14.32							~
HI VLANS		Dicplay Name	10 124 14 22							
👂 📴 Performance		Full Path Name	10.134.14.32							
A Comparison of Comparison		Access Mode	SNMPONLY							
Active Alerts	~	Certification	CERTIFIED							
< III >		Description	Linux softlab3 (	2.6.18-238.el5 #1 9	MP Sun Dec 19	14:22:44 EST 20	10 x86 64			

**Step 15:** Double-click one of the selected hosts and a **Health Explorer dialog box** pops up. Click **Close** to show all monitors.



**Step 16:** Go to **Entity Health > Availability > SD5 - Fan Health** on the left pane. On the right pane are shown all state change events for SD5 with Fan Health are shown on the State Change Events.

	Health Expl	orer for 10.	134.14.32		x
🛛 🕢 Reset Health 📆 Recalculate Health 🍸 Filter Monitors 🄇	🕽 Refresh 🔚 Properties 🔞 Help	🗧 📆 Overrie	les 🔹		
Health monitors for 10.134.14.32					
A Sentity Health - 10.134.14.32 (Object)	Knowledge State Change Events	(5)			
<ul> <li>Availability - 10.134.14.32 (Object)</li> </ul>	Time 🔻 From	То		Operational State	
Vetwork Device Responsiveness - 10.134.14.32 (Node)	5/18/2015 8:33 PM	3	Ø	Second Trap Raised	
SD5 - Fan Health - 10.134.14.32 (Node)	5/18/2015 8:32 PM	0	8	First Trap Raised	_
Configuration - 10.134.14.32 (Object)	5/18/2015 8:19 PM	3	õ	Second Trap Raised	
Performance - 10.134.14.32 (Object)	5/18/2015 8:19 PM	0	×	First Trap Raised	
Security - 10.134.14.32 (Object)	5/18/2015 8:18 PM	5	õ	Second Trap Raised	
			•		
	Details				_
	Context:				~
	Source		10.134.14.	32	
	Destination		127.0.0.1		
	Version		1		
	ErrorCode		Success		
	Object Identifier	Syntax	Value		
	.1.3.6.1.2.1.1.3.0	Timeticks	6678241		
	.1.3.6.1.6.3.1.1.4.1.0	Oid	.1.3.6.1.4.	1.10876.100.3.0.101	
	.1.3.6.1.2.1.1.3.0	Timeticks	6678241		
	.1.3.6.1.6.3.1.1.4.1.0	Oid	.1.3.6.1.4.	1.10876.100.3.0.101	
	.1.3.6.1.4.1.10876.100.3.0.101	Octets	Recovery:	FAN 5 is OK at 2015-05-19 11:33:52. FAN 5 is 3025.0 RPM, low limit = 576.0 RPM	
	.1.3.6.1.6.3.1.1.4.3.0	Old	1.3.6.1.4.	1.108/6.100.3	
					$\sim$
< III >					

## 6 Creating a Rule for an SNMP Trap to Check SD5 Status

The example below illustrates the use of SCOM 2012 to receive a managed system's SNMP trap that is sent when a health-monitored item is triggered or recovered. In this example, three conditions must be met,

- The SD5 SNMP trap function must be enabled with SD5 notification methods configured in advance. See 4.5.1 Alert Configuration in SuperDoctor 5 User's Guide for more information.
- SD5 must be set up with SD5 SNMP extensions configured in advance. See 5 SNMP Extension in SuperDoctor 5 User's Guide for more information. Note that this condition is for SD5 to be discovered as an SNMP device.
- SNMP device SD5 must be discovered/managed by SCOM 2012.

If the above conditions are met, follow these steps:

Step 1: In the Operations Console, click the Authoring Tab.

Step 2: Go to Management Pack Objects > Rules. Right-click Rules and select Create a new rule.



**Step 3:** In the Rule Type section, select **SNMP Trap (Event)** and click **New** to create a custom SD5 management pack.

	Create Rule Wizard	X
Select a Rule Type		
Rule Type		🕜 Help
	Select the type of rule to create	
	Aret Generating Rules	n ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂ ⊂
	< Previous Next > Create C	Cancel

**Step 4:** Type the name, version and description. Click **Next** to continue.

	Create Rule Wizard						
l 🕺	Create a Management Pack						
Rul General Propertie	25	p					
General Properties	@ Help						
Knowledge	Management Pack General Properties	1					
	ID :						
	SD.SNMP.Event						
	Name :						
	SD5 SNMP Event						
	Version :						
	1.0.0.0 For example, 1.0.0.0						
	Description :						
	< Previous Next > Create Cancel	I					

**Step 5:** Click **Create** to start creating the management pack and return to the Create Rule Wizard.

	Create Rule Wizard	x
	Create a Management Pack	×
Rule Knowledge Article		
General Properties		🕢 Help
Knowledge	Knowledge	
		Edit
	1	
	< Previous Next > Create	Cancel
	Create Create	- Control

**Step 6:** In the General section, input the rule name and click **Select** to set up the Rule target.

	(	Create Rule Wizard
Rule Name and De		
Rule Type		Help
General	Select rule name, d	escription and target
SNMP Trap Provider		
	SD5 SNMP Event Bul	a
		·
	Description (optional):	
		×
	Management Pack:	SD5 SNMP Event
	Rule Category:	Event Collection v
	Rule target:	
	Node	Select
	Rule is enabled	
		< <tr>          Next &gt;         Create         Cancel</tr>

Step 7: In the Look for field, type "Node", select View all targets and click OK.

	Select	Items to Target	X
Select the class, gro items easier to find.	oup, or object that you want to targe	t from the list below. You can also filter or s	ort the list to make
Look for:			
node			Clear
View common tail	rgets		
View all targets			
Target 🔹	Management Pack	Description	
Node	Network Management I	ibrar This class represents the network de	evice

**Step 8:** In the SNMP Trap Provider step, input **.1.3.6.1.4.1.10876**<sup>4</sup> as the Object Identifier and click **Create** to start creating a rule for SD5.

	Create Rule Wizard					
Configure the trap	) OIDs to collect					
Rule Type General SNMP Trap Provider	Object Identifier Properties Object Identifier					
	< Previous Next > Create	Cancel				

**Step 9:** In the **Operations Console**, click the **Monitoring** tab and go to **Monitoring** > **Network Monitoring** > **Network Devices**.

<sup>&</sup>lt;sup>4</sup> For more information regarding the Supermicro MIB tree (.1.3.6.1.4.1.10876 OID tree), refer to 5.3 *Supermicro MIB* in the *SuperDoctor 5 User's Guide*.



Step 10: Select the SNMP device (Name: 10.134.14.32) and click Event View on the Navigation panel.

Network Devices - SCOMGROUP - Operations Manager							_ <b>□</b> X	
File Edit View Go Tasks Tools Help								
i seatch , é i alle scobe   >> tura [12] teaxes   🚳 é								
Monitoring <	Network Devices (1)						3	Tasks
Microsoft Audit Collection Services	State	👻 🖉 Mai	ntenan 1	Name	Location	Model		2 😡
D A Microsoft Windows Client	Healthy		1	10.134.14.32	Unknown	Net-SNMP Agent 5.1		· · · · · ·
Microsoft Windows Server							2	State Actions
a 🖓 Network Monitoring								🖞 Start Maintenance Mode
Active Alerts							1	👫 Edit Maintenance Mode Settings
Hosts								Stop Maintenance Mode
HSRP Groups			-					
Egacy Network Devices			-	Personalize view				
It Network Devices							1	Tasks ^
Network Summary Dashboard								Tothe Descention
III Routers							E	Entity Properties
Switches							6	A Health Explorer
1 VLANs							,	Navigation
Performance								- A A A A A A A A A A A A A A A A A A A
D Contractions Manager								Alert View
CDS CNIMD Event	<						>	< Diagram View
Show or Hide Views	Detail View						~ [	2 Event View
New View 🕨	Detail View							Performance View
	Node properties of	10.134.14.32					~	III Chata Manual
Monitoring	Display Name	10 134 14 32						State view
Authoring	Full Path Name	10.134.14.32						Network Node Dashboard
	Access Mode	SNMPONLY					1	Network Vicinity Dashboard
Reporting	Certification	CERTIFIED						
Administration	Description Linux softlab3 2.6.18-238.eI5 #1 SMP Sun Dec 19 14:22:44 EST 2010 x86_64					- '	Node lasks	
	Device Key UU-25-90-25-6A-20					l	Ping Ping	
My Workspace	Model	Net-SNMP Agent 5.1					[	SNMP GET
-	Port Number	161					V [	SNMP Walk
· · · · · · · · · · · · · · · · · · ·	Primary Owner Contact	root@localhost						· · · · · ·
Ready								

**Step 11:** In the figure below, the managed system has sent a recovery trap which denotes that the FAN 5 changes from a non-OK state to an OK state.

			E.e.	CCOMCDO						_ 0	x
Events - SCOMGROUP - Operations Manager											
File Edit View	Go Tasks Tool	s Help									
	Search 👻 🝦 Ove	rrides 👻 🖕 🜆 🛙	Scope 👂 Find	🛛 Tasks 🔞 📮							
Events (12)								1	> Tasks		
Level 👻	Date and Time	Source	Name	User	Event Number	Log Name		<u>^</u>			
🔄 Other	5/17/2015 10:44:04	Snmp Event	10.134.14.32		1501	SnmpEvent		<b>—</b> ,	Fuent Actions		
🔄 Other	5/17/2015 10:44:58	Snmp Event	10.134.14.32		1501	SnmpEvent			Event Actions		
🔄 Other	5/17/2015 10:45:16	Snmp Event	10.134.14.32		1501	SnmpEvent			Show Associated Rule Prope	rties	
									📷 Overrides 🕨		
Details								~	Personalize view		
	E (17/201E 10:4E-1	6 Descriptions									
Date and Time:	PM	o Description:							Navigation		^
Log Name:	SnmpEvent								Alert View		
Source: Snmp Event								Diagram View			
Generating Rule: SD5 SNMP Event Rule									Event View		Ξ.
Level: Other											
Logging									Performance view		
Computer:									State View		
User:								Network Node Dashboard			
								Network Vicinity Dashboard			
Event Data:							v Event Data				
Source 10.134.14.32								Tasks		^	
Destination 127.0.0.1								Entity Properties			
Version 1 Front/ode Survers						Health Explorer					
Object Identifier	S	ntax Value							Node Tasks		^
.1.3.6.1.2.1.1.3.0	1.0 O	meticks 74663	/4bb522 1.3.6.1.4.1.10876.100.3.0.101					E Ping			
136121130	Ti U	meticks 74663	7466322								
.1.3.6.1.6.3.1.1.4.	1.0 0	id .1.3.6.	.1.3.6.1.4.1.10876.100.3.0.101					SNMP GET			
.1.3.6.1.4.1.10876	5.100.3.0.101 0	ctets Recov	Recovery: FAN 5 is OK at 2015-05-18 13:45:16. FAN 5 is 3025.0 RPM, low limit = 576.0 RPM				1	SNMP Walk			
.1.3.6.1.6.3.1.1.4.	3.0 O	id .1.3.6.	.1.3.6.1.4.1.10876.100.3					Teinet Console			
						V	Traceroute				
Click here to hide even	Citck here to hide event data						*				
Ready											

### **Contacting Supermicro**

#### Headquarters

Address:	Super Micro Computer, Inc.
	San Jose CA 95131 U S A
Tel:	+1 (408) 503-8000
Fax:	+1 (408) 503-8008
Email:	marketing@supermicro.com (General Information) support@supermicro.com (Technical Support)
Website:	www.supermicro.com
Europe	
Address:	Super Micro Computer B.V.
	Het Sterrenbeeld 28, 5215 ML
	's-Hertogenbosch, The Netherlands
Tel:	+31 (0) 73-6400390
Fax:	+31 (0) 73-6416525
Email:	sales@supermicro.nl (General Information)
	support@supermicro.nl (Technical Support)
	rma@supermicro.nl (Customer Support)
Website:	www.supermicro.nl

#### Asia-Pacific

Address:	Super Micro Computer, Inc.
	3F, No. 150, Jian 1st Rd.
	Zhonghe Dist., New Taipei City 235
	Taiwan (R.O.C)
Tel:	+886-(2) 8226-3990
Fax:	+886-(2) 8226-3992
Email:	support@supermicro.com.tw
Website:	www.supermicro.com.tw