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# Quick Installation Guide For Sensors with Cacti

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# 1. Document Overview

This document outlines the integration with the ServersCheck PoE & SNMP sensors with the open source and free Cacti monitoring software.

This document assumes that a sensor was configured to the network user manual instructions. The manual can be downloaded from <u>http://wiki.serverscheck.com</u>

This document also assumes that Cacti has been installed on a system. For more information on Cacti please visit <u>http://www.cacti.net</u>

# 2. Enabling SNMP on the sensor

The SensorGateway supports 2 kinds of SNMP messages:

- Pulling: a network management systems requests status for the sensors through SNMP get requests
- Pushing: the SensorGateway pushing SNMP notifications (called SNMP Traps) to network or building management systems

#### 3.1 SNMP Get Requests

In the SensorGateway the built-in SNMP agent needs to be enabled to allow for querying of the sensor by external applications using the SNMP GET protocol.

The SensorGateway has its own MIB file which can be downloaded here: <a href="http://downloads.serverscheck.com/sensors/sensorgateway.mib">http://downloads.serverscheck.com/sensors/sensorgateway.mib</a>

SERVERSCHECK Device Info   or Status Sensor Status   Id Type Name   Value Range   Range Alarm   IternalTemp Temp.   Undefined1 26.13 °C									ing	monitor	server roon	-
or Status Id Type Name Current Varning Down Repeat Email SNMP Del Id Type Name Current Value Range Alarm Email SNMP Del IternalTemp Temp. Undefined1 26.13 °C ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	Device Info								SCHECK	ERS	SERV	5
Id Type Name Current Warning Down Repeat Alarm Email SNMP Det Trap Det InternalTemp Temp. Undefined 1 26.13 °C ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	Sensor Status											
Id Type Name Current Value Warning Range Down Range Repeat Alarm Email Trap NMP   iternalTemp Temp. Undefined1 26.13 °C ~<	User Security Settings									US	sor Stat	Ser
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Update Refresh Support	Support	24. 14				( Caracteria	esh	Refr	Updati			_
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To enable SNMP, connect to the SensorGateway and click on the **SNMP** menu option

You need now to enable the SNMP Agent (default port for this UDP 161). If you want to use a different community string, then you can change the value too.

server room monitoring	Sensor Menu	
SERVERSCHECK	Device Info	-
	Sensor Status	ē - 1
SNMP Settings	User Security Settings	
Epoble SNAR Agent 1	Network	
SNMP Agent Port: 161	Email Alert	
	SNTP	
SNMP NMS IP: 192.168.11.64	SNMP	
SNMP NMS Port: 162	Support	
102	Firmware Update	_
Read Community Enable	Reboot	
public		
private		
Submit Reset		
© Copyright 2010 ServersCheck   Under license fro	m Siebensense Pte Ltd.	

Click on the **Submit** button when done.

SNMP is now enabled on the sensor.

# 3. Integrating with Cacti

A default Cacti installation will work with the ServersCheck SNMP & PoE sensors out the box.

In order to integrate the sensors with Cacti, you need to do following:

- a) Add the sensor as a new device
- b) Configure graphs for the sensor
  - 3.1. Adding the sensor as a new device

Click on the Console tab and then on Create devices

console graphs								
Create	You are now logged into Cacti. You can follow these basic steps to get started.							
New Graphs	Create devices for network							
Management	Create graphs for your new devices							
Graph Management	View your new graphs							
Graph Trees								
Data Sources								
Devices								
Collection Methods								
Data Queries								

#### In the following window click on the Add link

console gra	phs				N/			L	11	
Console -> Devices								Logged	in as adm	in (Logout)
Create	Devices								Q.	Add
New Graphs	Type: Any	- Status:	Any	▼ Search:		R	ws per Page:	30 👻	Go	Clear
Management									·	
Graph Management	<< Previous			Showing Ro	ws 1 to 1 of	1 [1]			11	Next >>
Graph Trees	_		Dat	5	Event		Current	Average		
Data Sources	Description**	ID G	iraphs So	urces Statu:	Count	Hostname	(ms)	(ms)	Availa	ability 📃
Devices	localhost	2 0	0	Unkno	wn O	localhost	0	0	100	
Collection Methods	<< Previous			Showing Ro	ws 1 to 1 of	1 [ <b>1</b> ]			1	Next >>
Data Queries Data Input Methods	4				c	Choose an action	Delete			Go

#### V console graphs Console -> Devices -> (Edit) Logged in as admin (Logout) Devices [new] Create New Graphs neral Host Opt Management Description Give this host a meaningful description. Sensor1 Graph Management Hostname Fully qualified hostname or IP address for this device. Graph Trees Data Sources Host Template choose what type of host, host template this is. The host template will govern Generic SNMP-enabled Host + what kinds of data should be gathered from this type of host. Devices Collection Methods Disable Host Data Queries Disable Host Check this box to disable all checks for this host. Availability/Reachability Options Data Input Methods Downed Device Detection The method Cacti will use to determine if a host is available for polling. NOTE: It is recommended that, at a minimum, SNMP always be selected. Graph Templates SNMP • Host Templates Ping Timeout Value The timeout value to use for host ICMP and UDP pinging. This host SNMP timeout value applies for SNMP pings. Data Templates 400 Import Templates Ping Retry Count After an initial failure, the number of ping retries Cacti will attempt before Export Templates 2 failing. Configuration Settings SNMP Version Choose the SNMP version for this device. Utiliti Version 2 -System Utilities SNMP Community SNMP read community for this device. public User Management Logout User SNMP Port Enter the UDP port number to use for SNMP (default is 161). 161 SNMP Timeout The maximum number of milliseconds Cacti will wait for an SNMP response (does not work with php-snmp support). 500 Maximum OID's Per Get Request Specified the number of OID's that can be obtained in a single SNMP Get request. 10 Additional Options

Enter a name for the sensor in the **Description** field

The Hostname can either be the IP address or domain name of the sensor

As a Host Template select Generic SNMP-enabled Host

To avoid false positives, we recommend setting the Ping Retry Count to 2 or higher

Other parameters should not be changed from default values.

Click on the Create button

#### Save Successful.

Sensor1 (demo.serverscheck.info) SNMP Information System:Temperature & Sensor Gateway Uptime: 4808859 (0 days, 13 hours, 21 minutes) Hostname: Sensor Gateway: SC-TS01 Location: Europe Data Center Contact: http://www.serverscheck.com

\*Create Graphs for this Host \*Data Source List \*Graph List

#### 3.2. Adding the graphs to the device

#### Click on the **Create Graphs for this Host** link

Select "Generic OID Template" and click on the **Create** button

			100 St. 100 St. 10
Console -> Create New G	raphs	Logged in as a	Jmin (Logo
Create New Craphs	Sensor1 (demo.serverscheck.info) Generic SNMP-enabled Host		
New Graphs Management Graph Management	Host: Sensor1 (demo.serverscheck.info) V Graph Types: All	*Edit this Hos *Create New H	st ost
Graph Trees	Graph Templates		
ata Sources	Graph Template Name		1
Jevices Collection Methods	Create: SNMP - Generic OID Template 👻		
Data Queries	Data Query [SNMP - Interface Statistics]		1
Data Input Methods	This data query returned 0 rows, perhaps there was a problem executing this data query. You can run this data query	in debug mode to get more info	ormation.
emplates	L Select a graph type:	In/Out Bits	
Braph Templates	-	ing out Dito	
Data Templates	-	Cancel	Create
Import /Exmort		Connect	Corcuto

The sensor has 3 OID's that are important for Cacti:

- 1.3.6.1.4.1.17095.3.2.0 reading from built-in temperature sensor
- 1.3.6.1.4.1.17095.3.6.0 reading from external probe (temperature, flooding, airflow, power failure, fuel level)
- 1.3.6.1.4.1.17095.3.10.0 reading from the external probe (humidity)

In this example we are going to use OID 1.3.6.1.4.1.17095.3.2.0 This is the value for the builtin temperature sensor in the Sensor Gateway

console gra	phs		
Console -> Create New G	raphs -> Create Graphs from Data Query		Logged in as admin (Logout)
Create	Create Graph from 'SNMP - Generic OID Template'		
New Graphs	Graph [Template: SNMP - Generic OID Template]		
Management Graph Management	Title (title) The name that is printed on the graph.	host_description  - Temperature	
Graph Trees	The label vertically printed to the left of the graph.	°C	
Data Sources	Graph Items [Template: SNMP - Generic OID Template]		
Devices Collection Methods	Legend Color The color to use for the legend.	F5F800	
Data Queries Data Input Methods	Legend Text Text that will be displayed on the legend for this graph item.	Temperature	
Templates	Data Source [Template: SNMP - Generic OID Template]		
Graph Templates Host Templates Data Templates	Name       Choose a name for this data source.       Maximum Value [snmp_oid]	host_description  - Temperature	
Import/Export Import Templates	Data Source Type [snmp_oid] How data is represented in the RRA.	GAUGE -	
Export Templates	Custom Data [Template: SNMP - Generic OID Template]		
Configuration Settings Utilities	OID	1.3.6.1.4.1.17095.3.2.0	
System Utilities			Cancel Create

All fields can be left to their default value except for the OID.

Fill in the correct OID and click on the **Create** button.