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This document describes the necessary steps to have NetVoyant polling a BlueCoat ProxySG, collecting data and provide reporting. The Goal is to get Memory Utilization into NetQoS NetVoyant. I did use SGOS 5.5.3.1, NetQoS NetVoyant 7.1.21 & NetQoS Performance Center 6.1.158

Configure BlueCoat Proxy to enable SNMP Access

Under MAINTENANCE -> SNMP you can enable different or all Versions and redefine Communities.

SNMP General	SNMPv1-v2c Communities	SNMPv1-v2c Traps	SNMPv3 Users	SNMPv3 Traps	1 1
Enable SNMPv1	▼ Enable SNMPv2c	□ Enable SNMPv3			

There is one disabled SNMP listener defined by default on the BlueCoat ProxySG, which you can delete or enable, as needed. You can even secure, what IP Addresses are allowed to contact the device

You can also add additional SNMP services and listeners. Although you can configure traps and informs to go out if all the SNMP listeners are deleted or disabled, configuring SNMP listeners sets up the UDP ports the ProxySG uses to listen for SNMP commands. The service ports set up for *listening* to SNMP requests are independent of the trap or inform addresses and ports specified for *sending* traps.

Statistics Config	guration Maintena	nce			Health: <u>OK</u>
General Identification	Management Services		2		f
Clock	Name	Service	Proxy IP	Port	Enabled
Archive	HTTPS-Console	HTTPS Console	<all></all>	8082	V
Network	SSH-Console	SSH Console	<all></all>	22	V
ADN	HTTP-Console	HTTP Console	<all></all>	8081	
Services	SNMP	SNMP	<all></all>	161	
Browy Bervices					
Provedling					
Proxy Settings	ļ				
Bandwidth Mgmt.	New		Edit		Delete
Content Filtering					
Authentication	Preview	Apply		Revert	Help
External Services	Unsaved changes, pres	s "Apply" to save ch	anges		

You need to enable SNMP under SERVICES -> MANGEMENT SERVICES. After enabling SNMP, NetVoyant is able to contact this BlueCoat Proxy via SNMP





This Technical Tip or TechNote is provided as information only. I cannot make any guarantee, either explicit or implied, as to its accuracy to specific system installations / configurations. Readers should consult each Vendor for further information or support.

Although I believe the information provided in this document to be occurate at the time of writing, I reserve the right to modify, update, retract or otherwise change the information contained within for and without notice. This technote has been created after studying the material and / or practical evaluation by myself. All liability for use of the information presented here remains with the user For NetVoyant to poll and transform data from a MIB that is currently not configured, three main steps must be performed:

- The MIB must be compiled this gives NetVoyant the definition of the MIB, where to find particular pieces of data, what data-type the data uses, and so on.
- At least on Dataset must be created the Datasets actually tell NetVoyant what to poll, how to mathematically or logically transform the data, and also contains other configuration information about the polling of the MIB
- At least one View must be created The Views are the graphs and tables that display the data in the web GUI. Without the Views, NetVoyant will collect the data but have no way of displaying it.

Compiling the MIB

I have downloaded the complete set of MIBs for the current version; I'm running on my private ProxySG. Private MIBs can usually be obtained from the manufacturer, in this case directly from BlueCoat.

Efficiency	Device		
[Identification		 Statistics	
Appliance Name:	ProxySG-210	CPU Utilization:	2%
IP Address:	192.168.10.151	Memory Utilization:	41%
Serial Number:	04080633375	Concurrent Users:	3
Software Version	SG 5.5.3.1	ADN:	Disabled
Release ID:	46382	ProxyClient:	Client Manager Disabled

I do have a couple of private MIBs and I need to figure out what MIB to be used and where dependencies are related

Name	Туре	Size
BLUECOAT-MIB	Text Document	3 KB
BLUECOAT-SG-ATTACK-MIB	Text Document	5 KB
BLUECOAT-SG-DISK-MIB	Text Document	7 KB
BLUECOAT-SG-HEALTHCHECK-MIB	Text Document	3 KB
BLUECOAT-SG-HEALTHMONITOR-MIB	Text Document	3 KB
BLUECOAT-SG-POLICY-MIB	Text Document	3 KB
BLUECOAT-SG-PROXY-MIB	Text Document	25 KB
BLUECOAT-SG-SENSOR-MIB	Text Document	10 KB
BLUECOAT-SG-USAGE-MIB	Text Document	6 KB
BLUECOAT-SG-WCCP-MIB	Text Document	6 KB











In order to know if the MIB contains the objects desired, it must be inspected. The BLUECOAT-SG-PROXY-MIB has the object needed for the CPU utilization.

```
sgProxyCpuBusyPerCent OBJECT-TYPE
SYNTAX Gauge32
UNITS "Percentage"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The busy CPU time as a percentage, averaged over
one minute."
::= { sgProxyCpu 7 }
```

Also, not to forget the check IMPORTS as well, to satisfy dependencies.

```
BLUECOAT-SG-PROXY-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-IDENTITY, OBJECT-TYPE, Counter64, Gauge32

FROM SNMPv2-SMI

DisplayString

FROM SNMPv2-TC

blueCoatMgmt

FROM BLUECOAT-MIB;
```

From the IMPORTS, I see that BLUECOAT-MIB needs to be compiled as well. Compile the MIB by clicking FILE -> NEW -> MIB in the NetVoyant console. Add the MIB and any dependencies. SNMPv2-SMI and SNMPv3-TC is already loaded (to be verified at the MIB view). Only BLUECOAT-MIB as a dependency will need to be added.



Next, click on OK and have the compiler doing it's job. You should see the new MIBs added at the end of the tree. If you get this error, than you added MIBs in the wrong order. First always add the dependencies!



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When done, you could do a RAW Poll using the integrated MIB Browser. The return is 4 % - Remember the Object-Type?

sgProxyCpuBusyPerCent	OBJECT-TYPE
SYNTAX	Gauge32
UNITS	"Percentage"
MAX-ACCESS	read-only
STATUS	current
DESCRIPTION	"The busy CPU time as a percentage, averaged over
	one minute."
::= { sgProxyC	Cpu 7 }

BLUECOAT_SG_PROXY_MIB.sgProxyCpu	
Data Help	
Polling Interval (sec): 1 📑 🔿 🕸 🕨 🔤 🎒 🧖	
BusyPerCent	
1 4	
N Switch Expert PALKETEER	Net@oS.
	IL NETWORK®
NOVEIIS EMEA Security+" Certified WAN ACCELERATION PROFESSIO	INSTRUMENTS

Creating a Dataset

To create a Dataset, NetVoyant has a Wizard to help you. Click on **FILE** -> **NEW** -> **DATASET** and the Wizard starts.



Choose the desired MIB Table. This will be needed to create the dataset. In this case, I have used BLUECOAT_SG_PROXY_MIB



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Dataset Wizard			<u>_ ×</u>
		MBs	
Selecting a MIB for a			
Custom Dataset		BRIDGE MIB	
Custom Dataset A Management Information Base (MIB) is a file that describes types of data that SNMP pollers (like NetVoyant) can gather from devices using SNMP. NetVoyant recognizes many MIBs at installation. However, if you want NetVoyant to recognize a new type of SNMP data, you can compile additional MIBs into NetVoyant. NetVoyant organizes the data that it collects from your managed devices according to datasets. NetVoyant correlates each dataset with a table defined in a MIB. NetVoyant stores any data that it gathers from a MIB table in a poll table in the correlated dataset.		BRIDGE_MIB REDPOINT_MIB NETVOYANT_MIB SINMPOL_SCHEMA CISC0_SNI CISC0_TC CISC0_TC CISC0_MEMORY_POOL_MIB CISC0_STACK_MIB HOST_RESOURCES_MIB CISC0_FRAME_RELAY_MIB HCR.MON_MIB CISC0_CONFIG_COPY_MIB SINMP_FRAMEWORK_MIB P_BRIDGE_MIB CISC0_CLASS_BASED_QOS_MIB CISC0_CLASS_BASED_QOS_MIB CISC0_CLASS_BASED_QOS_MIB CISC0_TIMBAR_PROTOCOL_DISCOVERY_MIB NGreporter_MIB NGAnomalyDetectorTrap_MIB BLUECOAT_MIB NAAdd	*
For your custom dataset, select one of the	•		
Select one of the	_	< Back Next >	Cancel

Click on Next and fill in some information.

🔍 Dataset Wizard				_ 🗆 🗵
	Data Set			
Configuring a Custom	Name:	cpu1min		
Dataset	Description:	Proxy SG CPU Utilitzation		
Enter the parameters in the	Model:			
Configuration Wizard to configure basic parameters for a dataset	Poll Event Severity:	Minor		
such as the description of the dataset. You can also enable or	Poll Event Category:	Threshold		
and configure how the NetVoyant	Data Validation Severity:	Warning 💌		
dataset.	Polling Notification Limit:	1		
From the list of MIB Tables at the bottom of the Dataset Wizard,	Auto-Enable Rule:	Always 💌		
select the MIB table upon which you want to base this dataset.	Discovery Rule:	All		
NetVoyant gathers data for this dataset from this MIB table on	Storage Requirement:			
devices that support the MIB table.	Poll Instance Name:			
	Poll Instance Description:			
	Poll Instance Expiration (days); 28 🛨		
		MIB Tables		
	BLUECOAT_SG_PROXY_MIB.s	gProxyConfig		
	BLUECOAT_SG_PROXY_MIB.s	gProxyCpu		
	BLUECOAT_SG_PROXY_MIB.	gProxyCache aBroxyMemory		
	BLUECOAT_SG_PROXY_MIB	gProxyMemory aProxyHttpCliept		
	BLUECOAT SG PROXY MIB &	aProxyHttpServer		
	BLUECOAT SG PROXY MIB.	aProxyHttpConnections		
	REFECCAT SE DOOYV MIR	nDrovyHttnDesnonseTime		•
	,	<	Back Next >	Cancel











Click on NEXT and then on ADD Highlight the OID (sgProxyCpuBusyPerCent) and double click

🍭 Add Exp	ression							×
Name:	cpu1min						OIDs	SYNTAX
Description:	ggProyuCnuE		+				sgProxyCpuUpTime	Counter64
	ogreoxyoput	Jubyreroen	0				sgProxyCpuBusyTime	Counter64
							sgProxyCpuIdleTime	Counter64
							sgProxyCpuUpTimeSin	Counter64
							sgProxyCpuBusyTime	Counter64
Operators:							sgProxyCpuIdleTimeSi	Counter64
+	-	*	/	()		sgProxyCpuBusyPerCent	Gauge32
>	<	>=	<=	AND	OR		sgProxyCpuIdlePerCent	Gauge32
IF	THEN	ELSE	MIN(MAX(BASELINE(
THRESHOL	D(VALUE	WEIGHT(
Aduance	455-1							
Auvance	<u> </u>							
Expression I	Definition:							
sgProxy	CpuBusyPer(Cent						
				-	1		1	
			OK	Clear		Apply Help		

Click on the **Advanced** button

Q Add Exp	pression								×	
Name:	cpu1min						OIDs	SYNTAX		
Description:	sgProxyCpuBus	yPerCent					sgProxyCpuUpTime sgProxyCpuBusyTime sgProxyCpuIdleTime sgProxyCpuUpTimeSin	Counter64 Counter64 Counter64 . Counter64		@ Expression Options
Operators:	· .						sgProxyCpuBusyTime	Counter64		E
+	-	*	1	()		sgProxyCpuBusyPerC	Gauge32		I Minimum
>	<	>=	<=	AND	OR		sgProxyCpuldlePerCent	Gauge32		Maximum
IF	THEN	ELSE	MIN(MAX(BASELINE(
THREEMOL	UC VALUE(WEIGHT(Average
Advance	ed >>								+→	Standard Deviation
Expression	Definition:								_	_
sgProxyC	CpuBusyPerCent									Coefficient of Variation
										Percentile 95
			ок	Clear Ca	ancel Ap	ly Hel	,			OK Cancel Help

This will finish the Expression to the dataset.

Expressions for Data	aset: cpu1min
Name	Expression
cpu1min	sgProxyCpuBusyPerCent

Next, we need to define the frequency for that polling. Click on Next and Add



Name:	
Description:	ProxySG CPU Utilization
Polling Interval:	15 Mins
Rollup Interval:	1 Hour
Poll Instances:	Enable on Discovery C Enable Manually
Poll Enabled:	
Poll Concurrency % (0-100):	
Poll Concurrency % (0-100):	p 🚆

You can accept the default values or change on your specific requirements.

Γ	Poll Group List	dataset: cpu1min				
	Name	Polling Interval	Auto-enable P	Polling Enabled	Polling Concurr	Rollups
	归 cpu1min	🚱 15 Mins			0	1 Hour

That's it for the dataset creation. You will be asked at the end, if you want to enable polling for this dataset. Click on **YES**

Now you will want to test discovery and support of your new dataset. To do this, you will need to go back to the Group tab, select a target device, right click on the device and select Rediscover.

Before new dataset

After new dataset



Creating a View

NetVoyant's Custom View Editor allows you to create new views and to edit existing views. While most NetVoyant views are editable with the Custom View Editor, there are some, such as the gauge style views, that are not editable. Under the Reports tab, double click on the default report context displayed

NetVoyant Console File Edit View Loos Tools Help		<u>- ×</u>
ra / NetVoyart Povices Bandwidth Management Fier Fier Fier Fier Prevals Polaes Povy Polaes Povy Polaes Povy Polaes Povy PovySS CPU Utilization Povy PovySS CPU Utilization Povy PovySS Second	Details Alarms Reports Customize Report Links ProceSis CPU Utilization	-
Group Config MIBs Services	Display Reload Help	

This will open the new Report Template of ProxySG CPU Utilitzation.

Suction - Windows In	ternet Explorer	
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Eile Edit View Favorites Iools Help		
😪 🏟 🔏 NetVoyant: ProxySG CPU Utilization		🟠 👻 🔜 👻 📴 🗛 🖓 T <u>o</u> ols 🕶 🎇
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Netvoyant		Search Q
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-	Copyright (c) 1999-2009 NetQoS, Inc. All rights	s reserved.
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		Blue Coat

This will start the Custom View Wizard

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Custo	m Vie	w Wizar	d Step	1:Choose	e Name an	d Type			Next	»
View Detaile	Name: d Proxy S	G CPU Statis	tics							
Proxy	SG CF	U Utilitzat	tion Vi	ew Types:						1
Detai	l View -	Calendar								
View	Descrit	ntion:								
This vie	ew displa	rys detailed v	alues for	a specific poll	instance as a ti	me-sequen	ce.		A]
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Type a *View Name*, choose a *View Type*, choose a *Category* or leave default and click on **Next** At Step 2, you define the Style and the Options

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ame and	Туре	St	yle and	Options	Metrics	Data / Expressions	Summary / Save
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usto	m Viev	w Wizaro	d Step	Axis	e And Options		« Back Next »
	ne		-Y	Axis — Axis — Title: Auto-Scal	CPU Util (%) Percent (%, Thousand %	ó,) T	
O st	acked Ba	ır Chart	Fo	2nd Y-Ax oter:	is		
© si	acked Ar	ea Chart		Resoluti	on (Resolution)	<<	Resolution 💌
Ота	able						
							« Back Next »



You could add a title for the X-Axis and Y-Axis. I only added *CPU Util (%)* for the Y-Axis and Percent for the Auto-Scale. I also added a Footer called "*Resolution:"* and chosen Resolution from the Pull-Down Menue

Click on Next and select the previously created dataset ProxySG CPU Utilitzation (cpu1min)



Click on **Next** In Step 4, Data Expressions and Settings are required. Click on Add



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	n View Wi	izaru - mir	ndows Ir	nternet Explo	orer			
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	Add Exp Express Display Hidden: Color:	sion Wet	Typicall Automat	y used for ord	iering on a non-displayabl	I Choose an e e field, such as the total of in	xpression n/out volume.	. •
	Add Exp Express Display Hidden: Color:	sion Web	Typicall Automa	iy used for ord	lering on a non-displayabl	e field, such as the total of in	xpression n/out volume.	ncel
http://r	Add Exp Express Display Hidden: Color:	Sion Web	Typicall Automa	iy used for ord tic	lering on a non-displayabl	Choose an e Choose an e field, such as the total of in OK	xpression	ncel
http://r	Add Exp Express Display Hidden: Color:	sion Web	Typical Automa	ialog	lering on a non-displayab) iv/nqWidgets/Poller/Edit/E	Choose an e e field, such as the total of in OK ExpressionDialog SLocal in	xpression n/out volume. Ca	ncel

cpu1min should be the choice in this example. You leave the display name or change it with a different name

Expression:	cpu1min << cpu1min 💌
Display Name:	cpu1min
Hidden:	Typically used for ordering on a non-displayable field, such as the total of in/out volume.
Color:	Automatic
	OK Cancel

Exp	oressions						
	Name	Express	ion			Color	
۲	cpu1min	cpu1min	l i				
			Add	Change	Remove	Raise	Lower

Finally you the option to review. Click on Save and you are done



Final View



If you want to get the view into NetQoS Performance Center, please request NPC Integration Setup Files from CA Support.

