justSAMit

SNMP HOWTO

Build 2.2.0.31

2019-12-09

This is the official HOWTO on using JustSAMit to update Other Assets using SNMP

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Introduction

SNMP (Simple Network Management Protocol) is a computer network protocol that's supported by many devices to allow you to monitor and/or control them.

justSAMit currently only supports the monitoring of existing assets via SNMP. Auto-discovery is not supported. The assets have to already be added to justSAMit either manually one by one or bulk imported using the CI import wizard.

For example, you may have printers already added as Other Assets to justSAMit and you would now like to monitor their page counts and toner status/levels. First you will need to find out if the printers support SNMP and what the relevant SNMP OIDs (object identifiers) are for page counts and toner levels. To do so you may have to refer to the printer manufacturer and/or their website/documentation. SNMP OIDs are usually in a format similar to 1.3.6.1.x.x.x.x (where x are numbers).

Once you have confirmed SNMP support and what SNMP OIDs to use and enabled SNMP support on those printers (if not enabled by default), you can then login to justSAMit and add/set the required attribute (Management IP) and desired attributes (page counts, toner levels) for the printers using the SNMP Configuration section.

After that Scan Agents need to be installed on machines that can talk to those printers using SNMP.

SNMP Configuration

SNMP configuration for an Asset

Login and go to Other Assets and pick a Configuration Item that you wish to perform SNMP Scanning on. Next click on [⚙ SNMP Configuration]. Then you should see the following configuration panel.

SNMP Configuration

SNMP Configuration

The IP Address Attribute must be specified for SNMP queries to be enabled. Scan Agents need to be installed to perform the SNMP queries.

Name	Value	Comment (Edit)
IP Address Attribute	Management IP	Attribute storing the IP Address for SNMP queries
Default Error Delay		The default number of seconds to wait before retrying an asset after errors. 300 if blank.
Default PreDelay		The default number of milliseconds to wait before SNMP queries. 1000 if blank.
Default Retries		The default maximum number of SNMP query retries. 3 if blank.
Default Retry Delay		The default number of seconds to wait before SNMP query retries. 60 if blank.
Default SNMP Community String		public will be used if blank
Default SNMP Version		1 will be used if blank
SNMP Community String Attribute		Attribute storing the SNMP Community string to use

To enable SNMP querying of assets by the Scan Agents the *IP Address Attribute* **MUST** be configured and specified. For example if the attribute that contains the IP address for each Printer is called "Management IP" then enter Management IP as the value for IP Address Attribute.

Attribute Configuration

Attribute Configuration

If OID Attribute is not specified or its value for the asset is blank, Default OID will be used.

Attribute Name	Default OID	OID Attribute	Comment (Edit)
Management IP			
Manufacturer			
Model	1.3.6.1.2.1.1.1.0		
OID-PageCount A4 Black			
OID-PageCount A4 Color			
PageCount A4 Black	1.3.6.1.4.1.1602.1.11.1.3.1.4.108	OID-PageCount A4 Black	
PageCount A4 Color	1.3.6.1.4.1.1602.1.11.1.3.1.4.123	OID-PageCount A4 Color	
Purchase Date			
Serial Number			
Toner Black	1.3.6.1.2.1.43.11.1.1.9.1.1		
Toner Cyan	1.3.6.1.2.1.43.11.1.1.9.1.2		
Toner Magenta	1.3.6.1.2.1.43.11.1.1.9.1.3		
Toner Yellow	1.3.6.1.2.1.43.11.1.1.9.1.4		
Uptime	1.3.6.1.2.1.1.3.0		

Next specify the *Default OIDs* for each Attribute to be updated via SNMP.

You can also specify an *OID Attribute* which stores the alternative OID to use if a different OID is to be used for that asset. This can be necessary if the asset is a different model or type.

Currently SNMP queries are only done once a day for each query-able attribute.

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Installation

Scan Agents

The Scan Agents do the actual SNMP queries on the assets. You will need to install a Scan Agent on a PC that has SNMP network access to the assets to be scanned.

A Scan Agent can also be used to scan the machine it is installed on- this is called a Local Scan. The scan results are similar to those from a normal justSAMit Agent.

Download Scan Agents

To download the Scan Agent go to Administration, Scan Agents and Download Scan Agents

Download Scan Agents

Scan Agents can perform SNMP queries and also locally scan the machines they are installed on.

Platform	Action	Download	Version	Size	SHA256	Interval	LocalScan Schedule
Windows	Rebuild	ScanAgent.msi	0.0.0.27	6,750,208 bytes	2a7cea252c90e5c6d13c03e5f128937aaf33ab44b6f68fbfb6c6d4e43da5b6b8	240	at 10:30, 12:30 or 16:30 daily

On this page you can build and download the Scan Agent installer.

Click on the Build/Rebuild button to build the installer.

Click on the file name to download the installer.

If a new version of the agent is available the build button may show a different version number from the version available to be downloaded. You can either download the existing version or click on the Build button to replace the existing version with a new build.

The SHA256 text is the hash that uniquely identifies the installer file. This hash can change after a rebuild even for the same version.

Scan Agent Settings

You can configure the Local Scan Schedule here. If enabled, a Local Scan is done when the Scan Agent contacts the server and the scheduled time has passed AND the scheduled time is later than the time the last scan was done. If no scheduled times are specified the Scan Agent will do a scan once a day. The polling interval is how often the Scan Agent contacts the justSAMit cloud server. The default polling interval is 240 minutes.

Click the Save button to save the settings.

Scan Agent List

ID	Name	Serial Number	Version	Remote Address	IPv4	IPv6	Last Discovered Date	First Discovered Date
2	jsicentral-svc	8782-8147-0843-6174-3787-8046-74	0.0.0.28	10.243.1.171	10.243.1.171		3/12/2019 4:10:19 PM	26/11/2019 6:26:58 PM
3	winxpprojsi	8439-7187-0078-7411-8153-0243-12	0.0.0.28	10.222.1.11	10.222.1.11		3/12/2019 4:12:28 PM	28/11/2019 5:37:47 PM

This shows the known Scan Agents and some information.

Scan Agent Tasks

	Scan Agent Tasks						
Only up to 500 most recent tasks shown				Invert search: ☐	Search: lab		🔍

TaskStart	TaskEnd	SessionID	AgentID	AgentName	AgentCommand	TaskStatus	AgentResponse
2019-12-03 15:12:26.367	2019-12-03 15:12:27.943	109	3	winxpprojsi	snmpget: Printers: ISA Lab Canon-1: 192.168.1.36: Uptime: 1.3.6.1.2.1.1.3.0	OK	21 days, 01:30:39.24
2019-12-03 15:12:24.733	2019-12-03 15:12:26.223	108	3	winxpprojsi	snmpget: Printers: ISA Lab Canon-1: 192.168.1.36: Toner Yellow: 1.3.6.1.2.1.43.11.1.1.9.1.4	OK	6840
2019-12-03 15:12:23.033	2019-12-03 15:12:24.617	107	3	winxpprojsi	snmpget: Printers: ISA Lab Canon-1: 192.168.1.36: Toner Magenta: 1.3.6.1.2.1.43.11.1.1.9.1.3	OK	6912
2019-12-03 15:12:21.473	2019-12-03 15:12:22.927	106	3	winxpprojsi	snmpget: Printers: ISA Lab Canon-1: 192.168.1.36: Toner Cyan: 1.3.6.1.2.1.43.11.1.1.9.1.2	OK	6768
2019-12-03 15:12:19.880	2019-12-03 15:12:21.347	105	3	winxpprojsi	snmpget: Printers: ISA Lab Canon-1: 192.168.1.36: Toner Black: 1.3.6.1.2.1.43.11.1.1.9.1.1	OK	7896
2019-12-03 15:12:13.180	2019-12-03 15:12:19.773	104	3	winxpprojsi	snmpget: Printers: ISA Lab Canon-1: 192.168.1.36: Model: 1.3.6.1.2.1.1.1.0	OK	Canon iR-ADV C5051 /P
2019-12-03 14:14:26.360	2019-12-03 14:14:27.810	97	3	winxpprojsi	snmpget: Printers: ISA Lab Canon-1: 192.168.1.36: PageCount A4 Color: 1.3.6.1.4.1.1602.1.11.1.3.1.4.123	OK	279281
2019-12-03 14:14:24.803	2019-12-03 14:14:26.253	96	3	winxpprojsi	snmpget: Printers: ISA Lab Canon-1: 192.168.1.36: PageCount A4 Black: 1.3.6.1.4.1.1602.1.11.1.3.1.4.108	OK	506253
2019-12-02 14:13:17.993	2019-12-02 14:13:19.380	88	3	winxpprojsi	snmpget: Printers: ISA Lab Canon-1: 192.168.1.36: PageCount A4 Color: 1.3.6.1.4.1.1602.1.11.1.3.1.4.123	OK	279261
2019-12-02 14:13:16.373	2019-12-02 14:13:17.900	87	3	winxpprojsi	snmpget: Printers: ISA Lab Canon-1: 192.168.1.36: PageCount A4 Black: 1.3.6.1.4.1.1602.1.11.1.3.1.4.108	OK	506195

This is a list of recent Agent tasks. This can be used for troubleshooting Scan Agent and SNMP query issues.

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Example Screenshots

Following are some screenshots

CI > Printers

Assets of Printers

[+] Add New Asset   [⚙] Edit Attribute   [+] Edit Details   [⚙] History Track   [⚙] SNMP Configuration

3 records [icons]   Search [   ] 🔍 ▼

	Name	Uptime	Description	Management IP	PageCount A4 Black	PageCount A4 Color	Toner Black	Toner Cyan	Toner Magenta	Toner Yellow	DateLastModified	DateCreated
☐	ISA Lab Canon-1	26 days, 04:31:51.81	Canon iR-ADV C5051 /P	192.168.1.36	506326	279285	7896	6768	6912	6840	6/12/2019 4:23:26 PM	6/12/2019 4:23:14 PM
☐	ISA Pantry Canon-1	2 days, 04:04:22.30	Canon iR-ADV C5250 /P	192.168.1.34	63873	11915	56	70	68	68	6/12/2019 4:22:58 PM	6/12/2019 4:22:34 PM

CI > Printers > ISA Lab Canon-1

Details of ISA Lab Canon-1

[Delete] [Edit] [Save]

Attribute Name	Attribute Value	Last Scan Start	Status	Last Scan Message
Name	ISA Lab Canon-1	--	--	--
Manufacturer	Canon	--	--	--
Model	iR-ADV C5051	--	--	--
Purchase Date		--	--	--
DPI	600x600	--	--	--
Serial Number		--	--	--
Maximum paper size	A3	--	--	--
ppm	45	--	--	--
Management IP	192.168.1.36	--	--	--
Description	Canon iR-ADV C5051 /P	2019-12-08 18:13:37	OK	
PageCount A4 Black	506326	2019-12-08 18:13:38	OK	
PageCount A4 Color	279285	2019-12-08 18:13:39	OK	
Toner Black	7896	2019-12-08 18:13:40	OK	
Toner Cyan	6768	2019-12-08 18:13:41	OK	
Toner Magenta	6912	2019-12-08 18:13:43	OK	
Toner Yellow	6840	2019-12-08 18:13:44	OK	
OID-PageCount A4 Black		--		
OID-PageCount A4 Color		--		
Uptime	26 days, 04:31:51.81	2019-12-08 18:13:45	OK	
Date Created	6/12/2019 4:23:14 PM			

Agent: winxpprojsi
Serial No: 8439-7187-0078-7411-8153-0243-12
Agent Version: 0.0.0.28
Remote Address: 211.24.111.74
IPv4: 10.222.1.11
IPv6:
Scan End: 2019-12-08 18:13:44

Historical Changes of ISA Lab Canon-1

You are currently filtering by search [✗ Reset]

3 records [icons]   Search [pagecount] 🔍 ▼

	Name	Department	Location	Attribute	Previous Value	Current Value	Change Date	Component	User ID	User Name
☐	ISA Lab Canon-1	Unassigned	Unassigned	PageCount A4 Black	506318	506326	7/12/2019 6:13:39 PM	4|Printers		
☐	ISA Lab Canon-1	Unassigned	Unassigned	PageCount A4 Color		279285	6/12/2019 4:40:13 PM	4|Printers		
☐	ISA Lab Canon-1	Unassigned	Unassigned	PageCount A4 Black		506318	6/12/2019 4:40:12 PM	4|Printers		