

Lenovo Upward Integration Module for Zenoss
Service Dynamics SNMP ZenPacks 1.0

February 2015

Troubleshooting Guide

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Chapter 1. Introduction

ZenPack is a plug-in deployed on Zenoss framework to monitor devices. The Lenovo Upward Integration Module for Zenoss delivers two SNMP ZenPacks for monitoring Chassis Management Module (CMM) and Integrated Management Module (IMM) devices.

You can use the troubleshooting and support information provided in this guide to troubleshoot problems with IMM and CMM ZenPacks.

This guide explains about various issues in ZenPacks with details on symptoms, possible causes, and resolving the problem.

Intended audience

The audience for this guide are the network administration engineers at Lenovo customer sites who install, configure, and use Zenoss and ZenPacks.

Conventions used in this guide

Several conventions are used in this publication for special terms, actions, commands, and paths.

This guide uses the following conventions:

Bold

Interface controls (such as, check boxes, push buttons, radio buttons, spin buttons, fields, folders, icons, list boxes, items inside list boxes, multicolumn lists, containers, menu choices, menu names, tabs, property sheets, and labels)

Keywords and parameters in text

Italic

Citations (such as, titles of publications)

Monospace

Examples and code examples

Commands

Message text and prompts addressed to the user

Text that the user must type

Monospace Italic

Variables

Chapter 2. Troubleshooting tasks

This chapter explains the problems along with the steps to resolve those problems.

Timeout error while modeling a device

Normally, the system models devices every 12 hours (720 minutes); however, you can model a device manually.

Symptoms

When you model some device, you encounter a timeout error.

Causes

The value of `zCollectorTimeout` configuration property may be low or the `zSnmp` properties may not be configured correctly.

Resolving the problem

To resolve the problem, perform the following steps:

1. Select the device name in the devices list.
2. Select **Configuration Properties** in the left panel.
3. Increase the value of `zCollectorTimeout` configuration property.

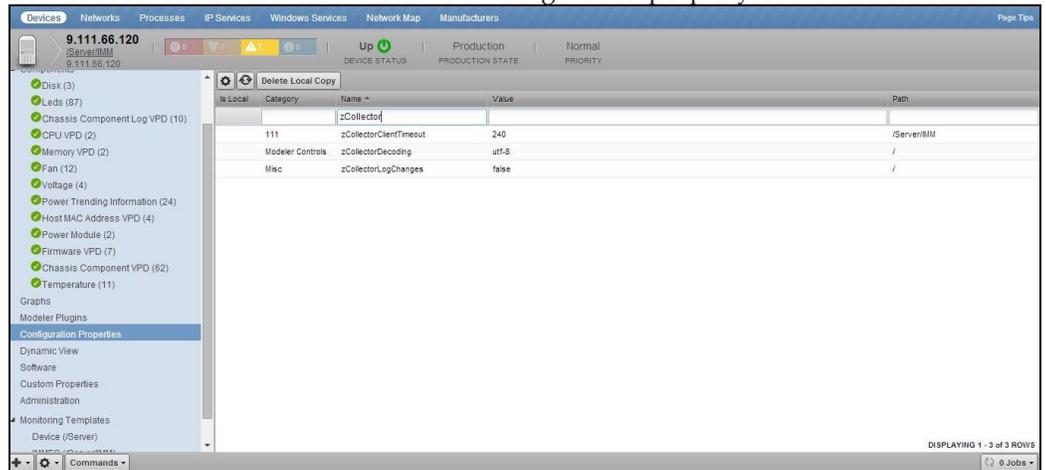


Figure 1: `zCollectorTimeout` value

4. Navigate to **Infrastructure > Device > Configuration Properties** and provide appropriate values for the following properties:
 - `zSnmpSecurityName`
 - `zSnmpPrivType`
 - `zSnmpPrivPassword`

- zSnmpAuthType
- zSnmpAuthPassword
- zSnmpVer

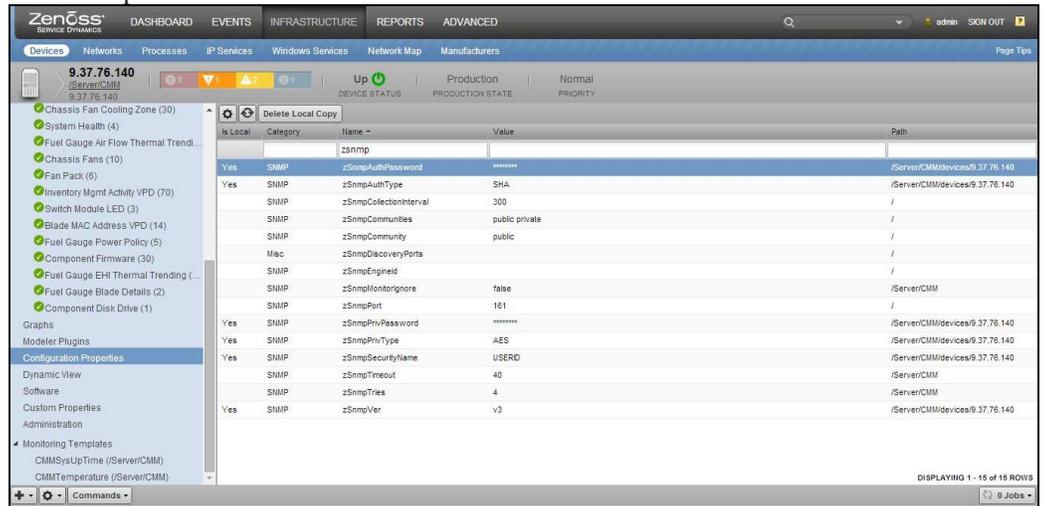


Figure 2: Configuration Properties page

5. Run the snmpwalk command.
6. Re-model the device.

Graphs not generated

You can view the performance graphs for IMM and CMM devices.

The Graphs view shows performance graphs defined for the device. To access graphs, select **Graphs** in the left panel.

Symptoms

The graphs are not generated.

Causes

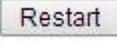
The graphs are not generated due to any of the following causes:

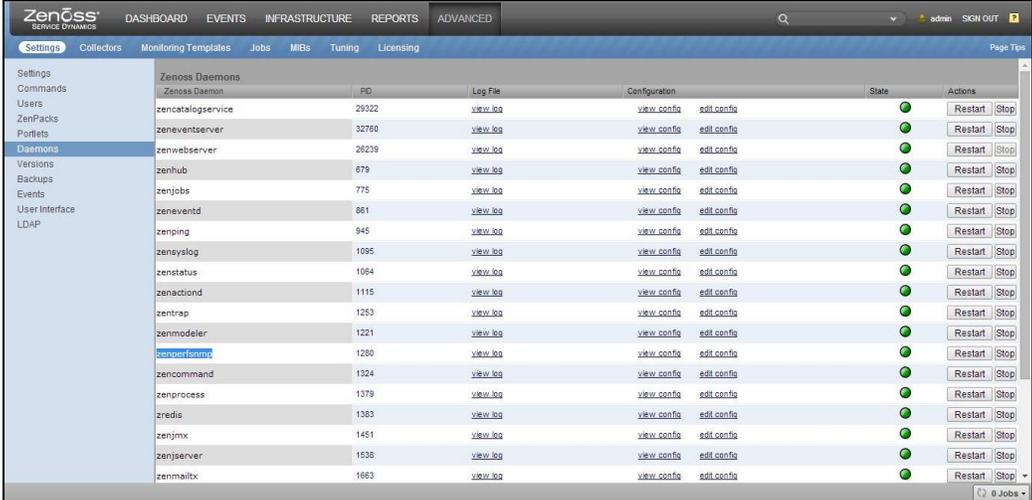
- zenperfsnmp or zencommand may be stopped: In this case, you need to restart the zenperfsnmp or zencommand daemons.
- You may have received Scan stopped error message.

Resolving the problem

To check the status of zenperfsnmp and zencommand daemons, perform the following steps:

1. From the **Navigation** menu, select **Advanced**.
2. Select **Daemons** in the left panel. The browser displays the Zenoss daemons.
3. Check the **State** of zenperfsnmp and zencommand daemons. The **State** must

indicate green , else click the  button to start the daemons.



Zenoss Daemons	PID	Log File	Configuration	State	Actions
Zenoss Daemon		view log	view config		
zencatalogservice	29322	view log	edit config		Restart Stop
zeneventserver	32760	view log	view config	edit config	Restart Stop
zenwebserver	26239	view log	view config	edit config	Restart Stop
zenhub	679	view log	view config	edit config	Restart Stop
zenjobs	775	view log	view config	edit config	Restart Stop
zeneventd	861	view log	view config	edit config	Restart Stop
zenping	945	view log	edit config	edit config	Restart Stop
zensyslog	1095	view log	view config	edit config	Restart Stop
zenstatus	1064	view log	view config	edit config	Restart Stop
zenactiond	1115	view log	edit config	edit config	Restart Stop
zentrap	1253	view log	view config	edit config	Restart Stop
zenmodeler	1221	view log	view config	edit config	Restart Stop
zenperfsnmp	1280	view log	view config	edit config	Restart Stop
zencommand	1324	view log	view config	edit config	Restart Stop
zenprocess	1379	view log	edit config	edit config	Restart Stop
zredis	1363	view log	view config	edit config	Restart Stop
zenjmx	1451	view log	view config	edit config	Restart Stop
zenjservice	1538	view log	view config	edit config	Restart Stop
zenmailbx	1663	view log	view config	edit config	Restart Stop

Figure 3: Daemons state

You can also use the following CLI commands to check the status of zenperfsnmp and zencommand daemons:

```
zenperfsnmp status
zencommand status
```

If the zenperfsnmp or zencommand daemon is not running, use the following commands to start the daemons:

```
zenperfsnmp start
zencommand start
```

Also, the graphs are not generated when you receive the scan stopped event:
Scan stopped; Collection time exceeded interval -
Elapsed time 578.179178 seconds greater than 300
seconds

After the scan time is restored, the following event is generated in closed state
and the graphs are generated:

```
Collection run time restored below interval and the  
pervious scan stopped event is also closed
```

ZenPack version not visible

After you install ZenPacks and restart the Zenoss server, the installed ZenPack becomes visible in the user interface.

Symptoms

After you install ZenPacks, you receive the following message:

```
This pack was just installed, or is missing or  
broken. Please restart Zope.
```

Also, that version of the ZenPack is not visible in the user interface.

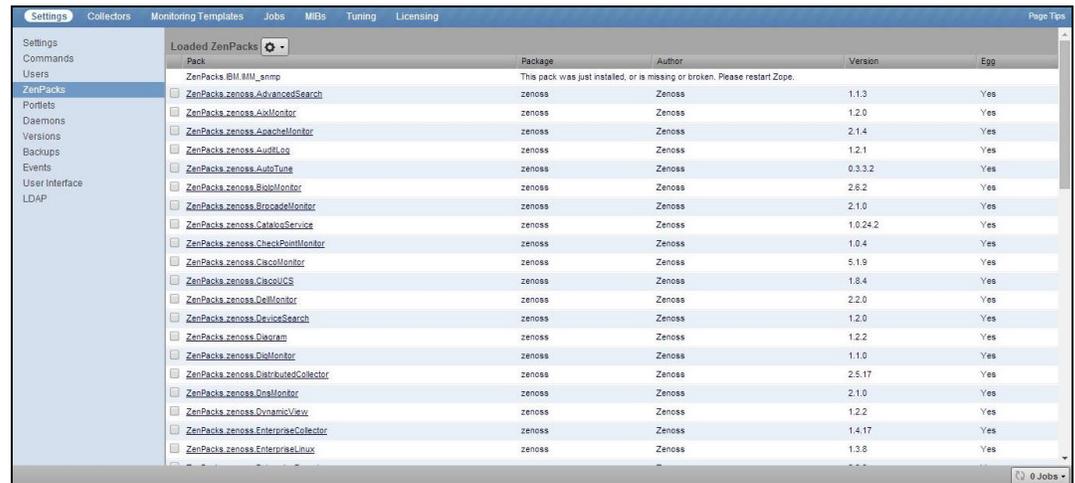


Figure 4: Error message displayed

Causes

You may not have restarted the Zenoss server after the installation of ZenPacks.

Resolving the problem

To restart the Zenoss server from command line, perform the following steps:

1. Log in to the Zenoss server as `zenoss` user.
2. Run the following command to restart Zenoss server from CLI:
`zenoss restart`

To check if the installed ZenPack is visible in the user interface, perform the following steps:

1. Log in to the Zenoss user interface as `admin`.

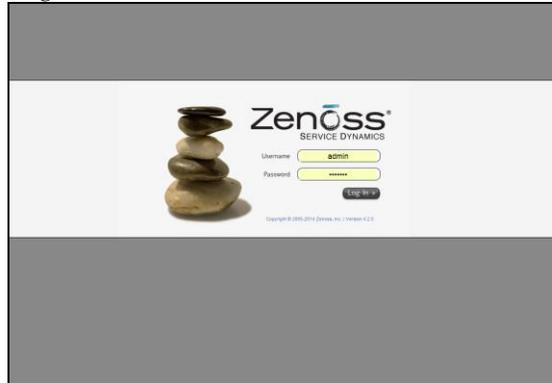


Figure 5: Login page

2. From the navigation menu, select **Advanced > ZenPacks**.

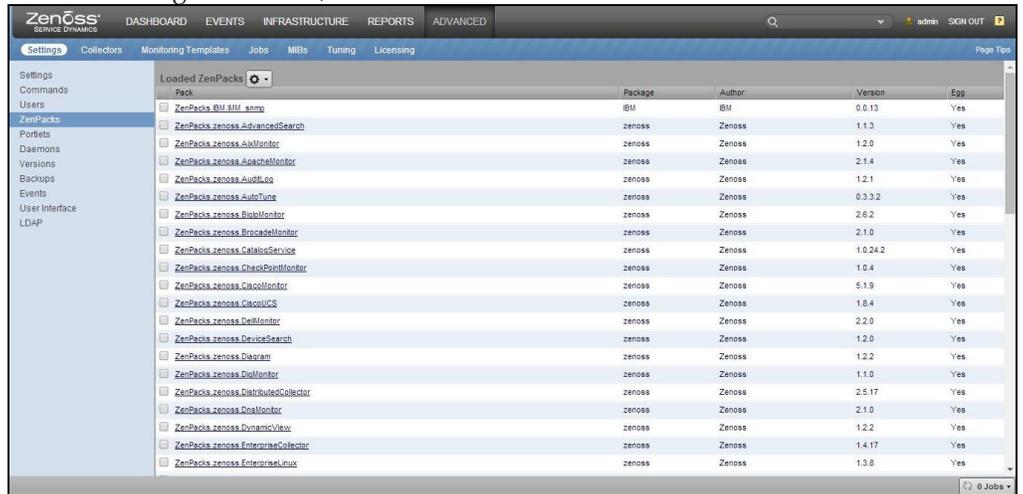


Figure 6: Advanced > ZenPacks page

3. Click the **ZenPacks** tab. The browser displays the installed ZenPacks.

Traps not generated for a device

Devices can be configured to send traps.

Symptoms

For a particular device, traps are not generated.

Causes

For that device, the IP (on which the traps are received) of the server may not be set on the device. Also, the IP on which traps are received may not be accessible.

Resolving the problem

To resolve the issue, perform the following steps:

1. Log in to device.
2. Navigate to Event Recipients page.
3. On the Event Recipients page, provide the IP address in the **Host name or IP address of the SysLog collector** field (to receive events as syslog from device), select the **Enable this recipient** option, and click **OK**.

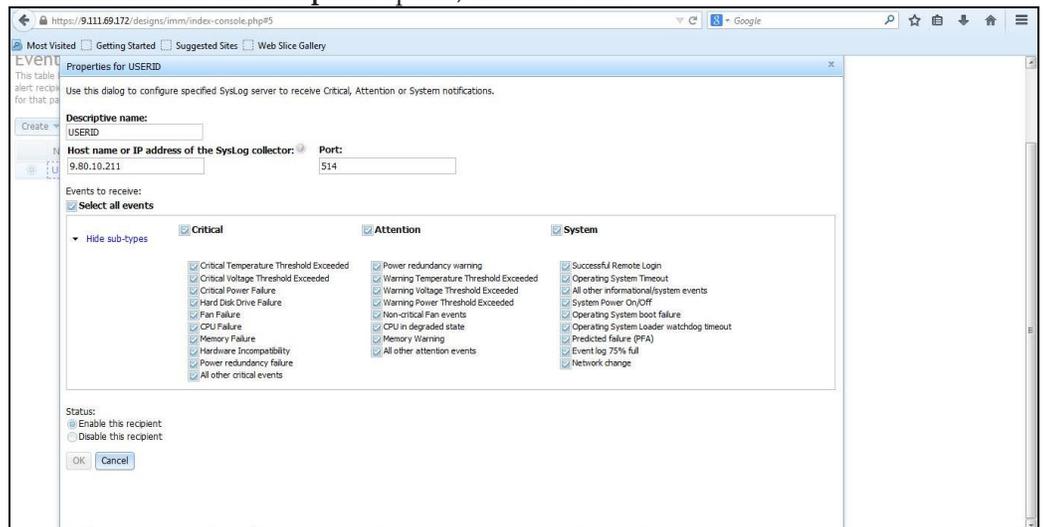


Figure 7: Event Recipients page

4. Navigate to **IMM Management > Network > SNMP** page.
5. For traps with SNMPV1 and SNMPV2C, click the **Communities** tab and provide the IP in the **Set trap destination that also be allowed to query MIB objects** field (to receive events as traps from device using V1 or V2C protocol).

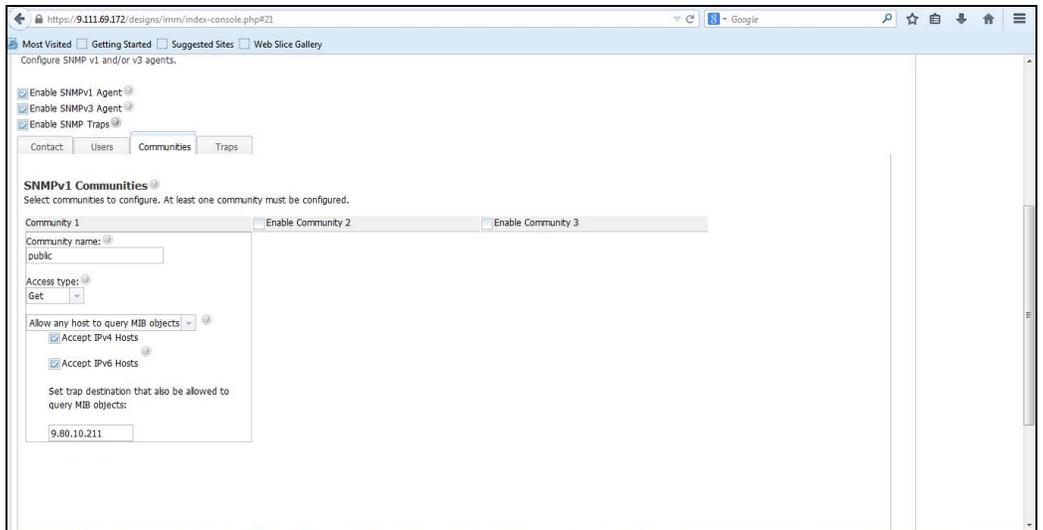


Figure 8: SNMP page

- For SNMPV3 protocol, provide the IP for the required user in the **IP address or host name for traps** field in the Users SNMPV3 Properties page (to receive events as traps using V3).

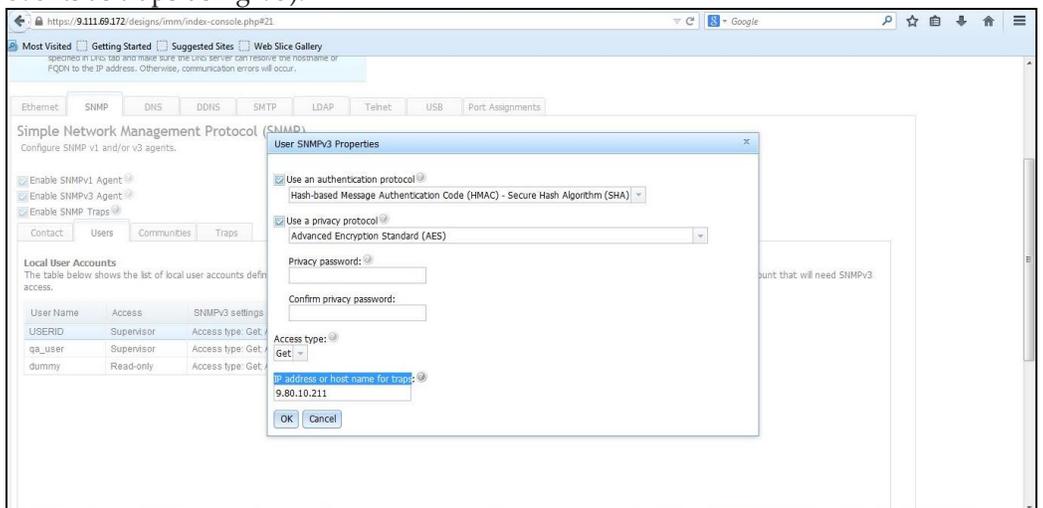


Figure 9: Users SNMPV3 Properties page

After the upgrade of Zenoss server, the Devices page appears blank

From the **Navigation** menu, when you select **Infrastructure**, the Devices page appears. The device details are displayed on the page.

Symptoms

After you have upgraded the Zenoss server, when you navigate to the Devices page, the page appears blank.

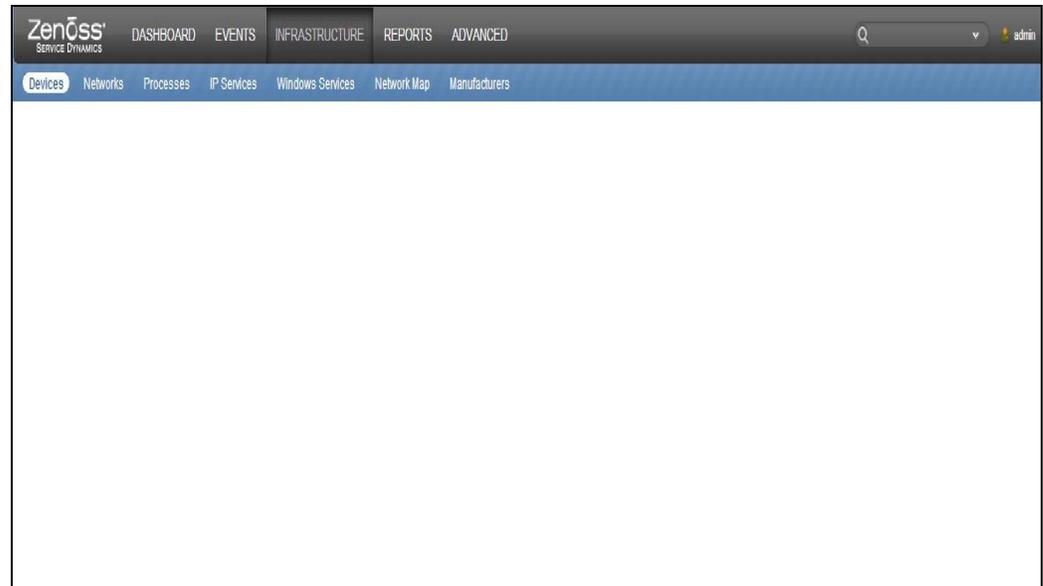


Figure 10: Devices page

Causes

You may not have cleared the cache of the browser. The browser can be Google Chrome, Mozilla Firefox, or Internet Explorer.

Resolving the problem

To clear the cache from Google Chrome, follow these steps:

1. Navigate to **Tools > Developer Tools** from the browser.

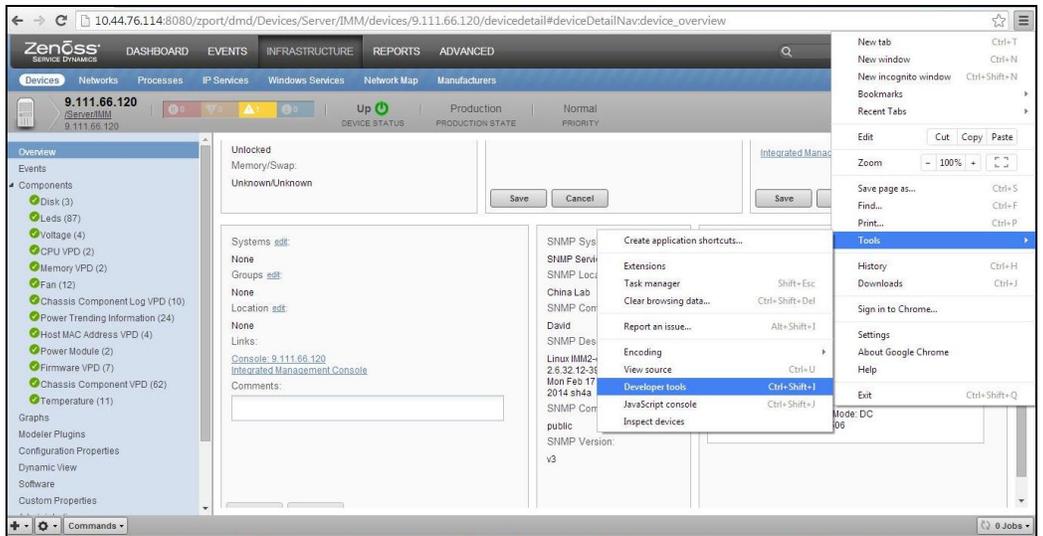


Figure 11: Tools > Developer Tools selected

2. Click the **Settings**  icon.

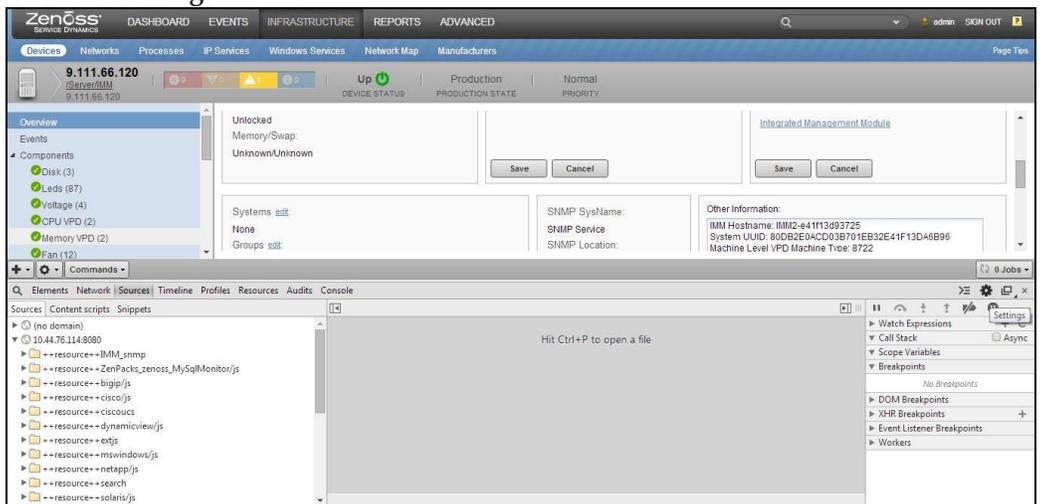


Figure 12: Settings icon clicked

3. In the **General** tab, select the **Disable cache (while DevTools is open)** check box. The cache is cleared.

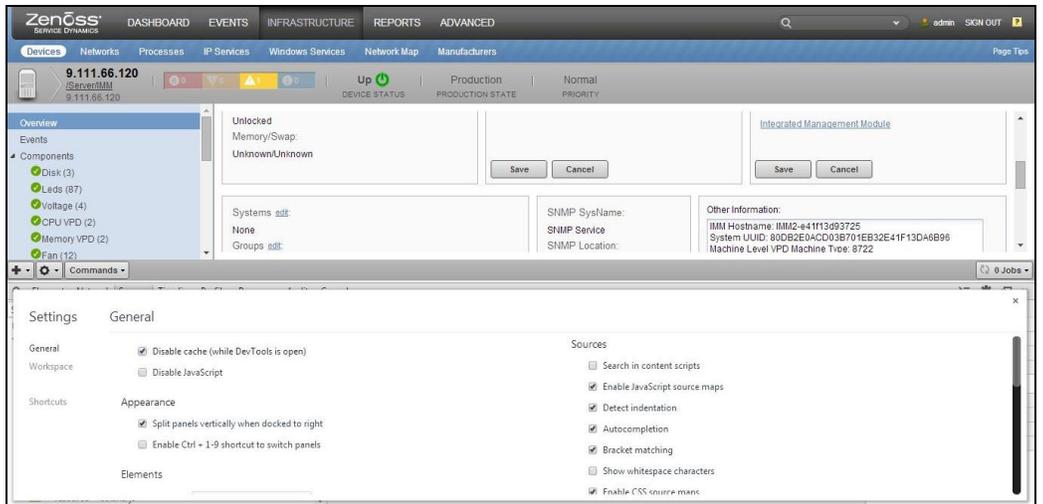


Figure 13: Disable cache (while DevTools is open) check box selected

To clear the cache from Mozilla Firefox, follow these steps:

1. Navigate to **Developer** option from the browser.

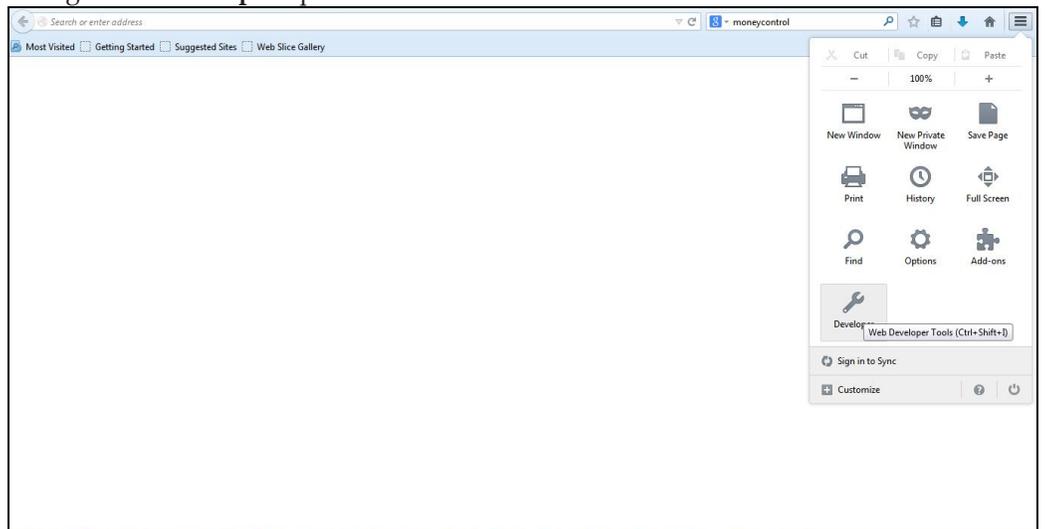


Figure 14: Developer option selected

2. Select the **Toggle Tools** option.

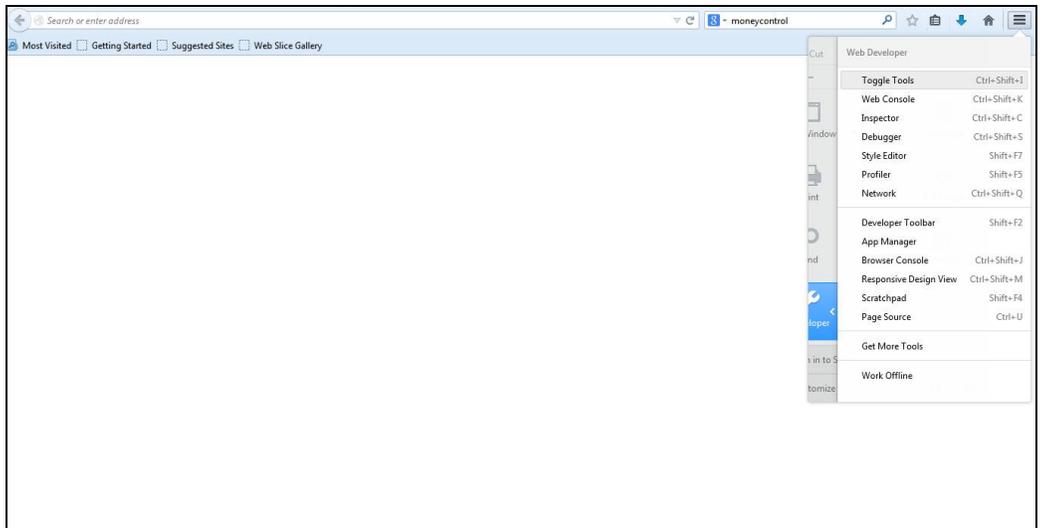


Figure 15: Toggle Tools option selected

3. In the **Toolbox Options** tab, select the **Disable Cache *** option available under **Advanced settings**. The cache is cleared.

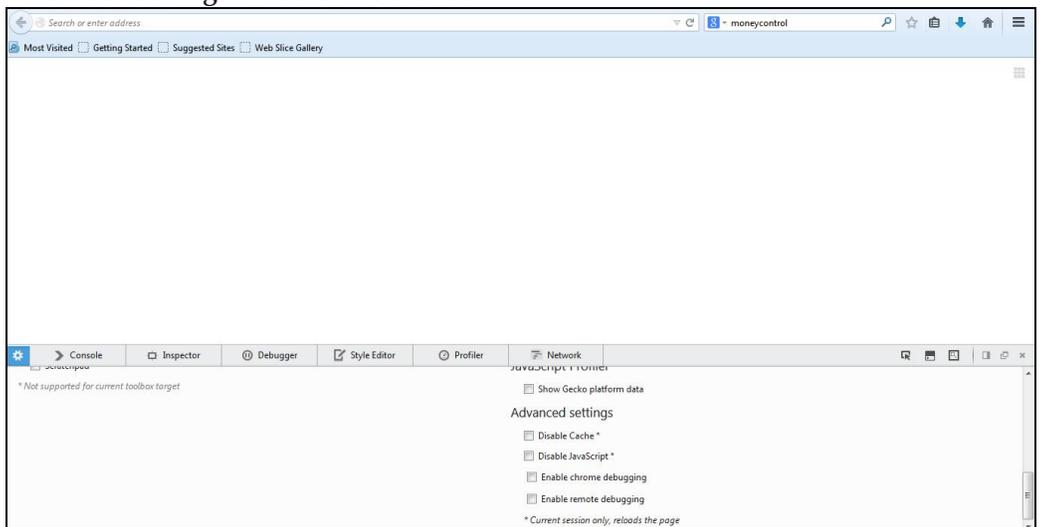


Figure 16: Disable Cache * option

To clear the cache from Internet Explorer, follow these steps:

1. Click the  icon, and then click **F12 Developer Tools** from the menu.

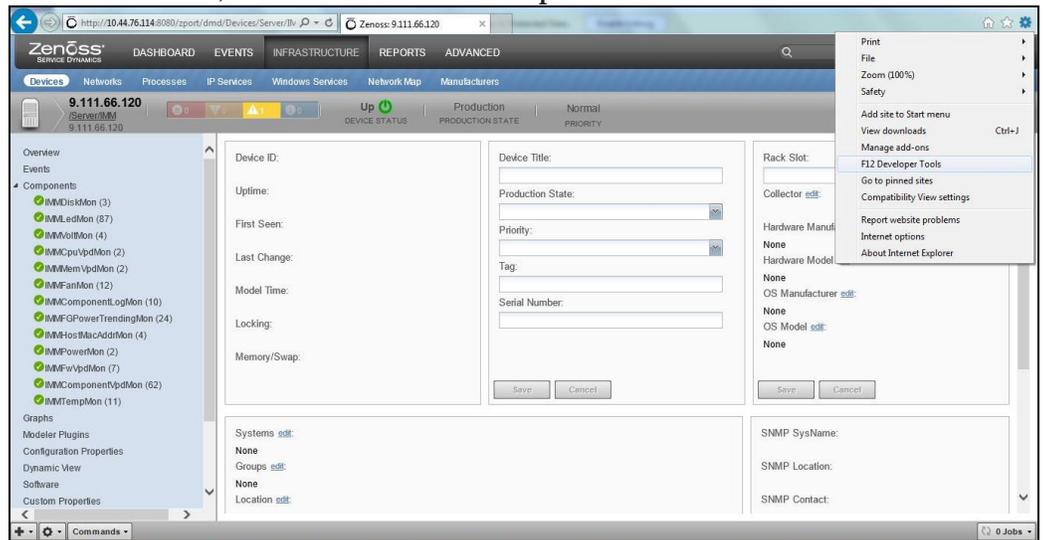


Figure 17: F12 Developer Tools selected

2. Click the **Network** tab and click the **Clear browser cache... (Ctrl+R)**  icon.

The browser cache and all temporary files are deleted.

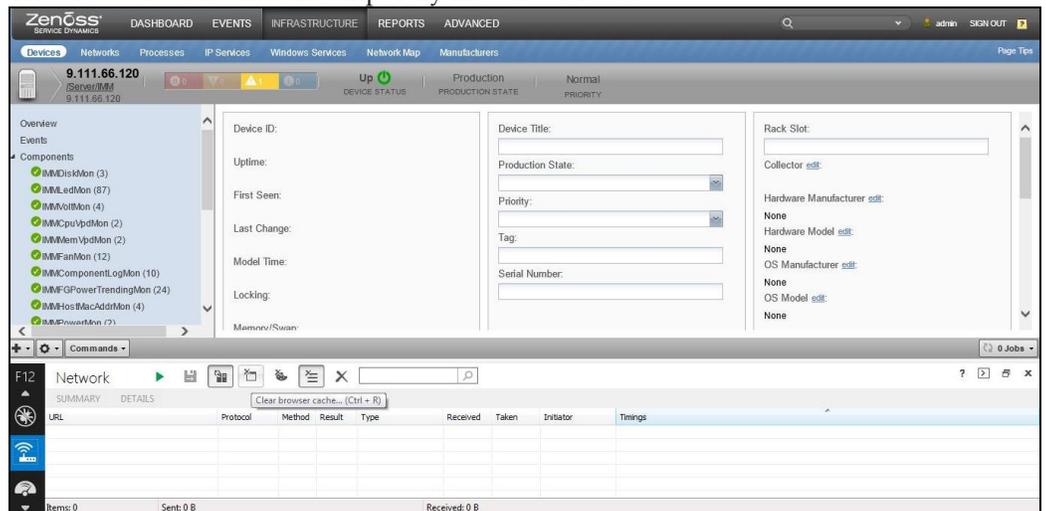


Figure 18: Clear browser cache... (Ctrl+R) option selected

Daemon Processes Down on dashboard

The Daemon Processes Down portlet displays the system information on the dashboard.

Symptoms

On dashboard, in Daemon Processes Down portlet, entries indicate that certain processes are down.

Causes

Some daemons may be down.

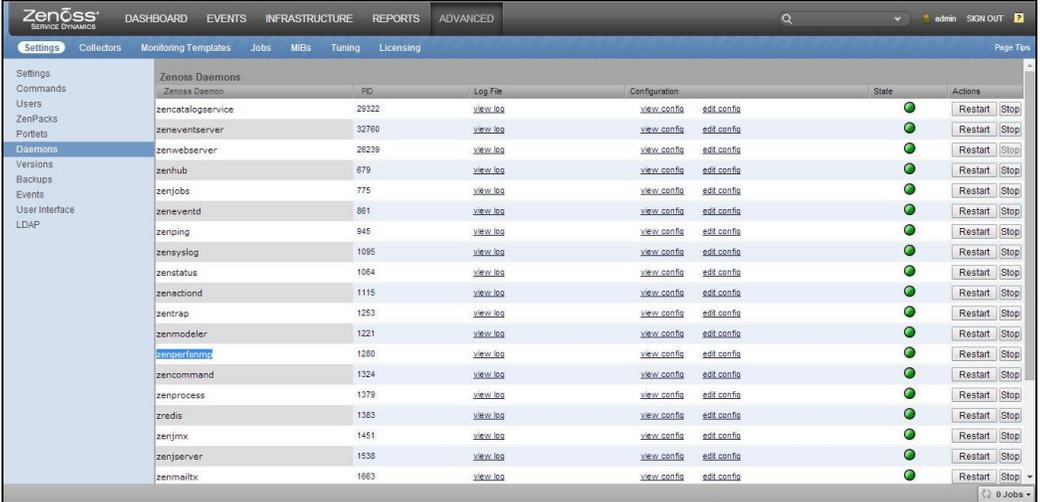
Resolving the problem

To resolve this issue, perform the following steps:

1. From the **Navigation** menu, select **Advanced**.
2. Select **Daemons** in the left panel. The browser displays the Zenoss daemons.
3. Check the **State** of daemons. The **State** must indicate green , else click the

Restart

button to start the daemons.



Zenoss Daemon	PID	Log File	Configuration	State	Actions
zencatalogservice	29322	view log	view config edit config	●	Restart Stop
zeneventserver	32760	view log	view config edit config	●	Restart Stop
zenwebserver	26239	view log	view config edit config	●	Restart Stop
zenhub	679	view log	view config edit config	●	Restart Stop
zenjobs	775	view log	view config edit config	●	Restart Stop
zeneventd	661	view log	view config edit config	●	Restart Stop
zenping	945	view log	view config edit config	●	Restart Stop
zensyslog	1095	view log	view config edit config	●	Restart Stop
zenstatus	1064	view log	view config edit config	●	Restart Stop
zenactiond	1115	view log	view config edit config	●	Restart Stop
zentrap	1253	view log	view config edit config	●	Restart Stop
zenmodeler	1221	view log	view config edit config	●	Restart Stop
zenperformance	1280	view log	view config edit config	●	Restart Stop
zencommand	1324	view log	view config edit config	●	Restart Stop
zenprocess	1379	view log	view config edit config	●	Restart Stop
zredis	1383	view log	view config edit config	●	Restart Stop
zenjmx	1451	view log	view config edit config	●	Restart Stop
zenjservice	1530	view log	view config edit config	●	Restart Stop
zenmailx	1663	view log	view config edit config	●	Restart Stop

Figure 19: Daemons state

You can also use the following CLI command to check the status of daemons:

```
zenoss status
```

If any daemon is not running, use the following command to start that daemon:

```
<daemon name> start
```

Google maps not working

The Google Maps portlet displays the configured locations and configured network connections on the dashboard.

Symptoms

The Google Maps portlet does not display google maps or device locations.

Causes

You may have used the IP address to access the Zenoss user interface.

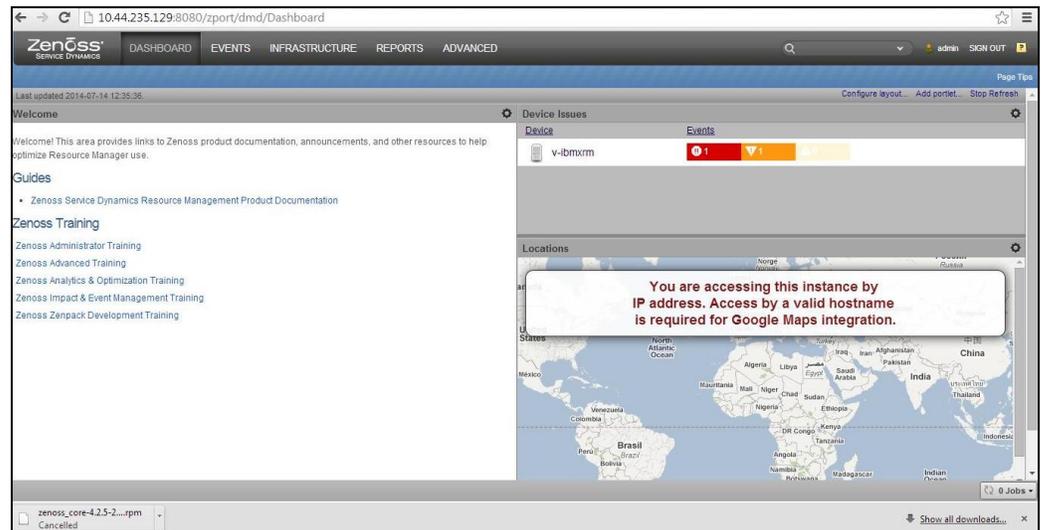


Figure 20: IP address used for accessing the Zenoss user interface

Resolving the problem

To resolve the problem, perform the following step:

- Instead of IP address, use the hostname to access the Zenoss user interface.

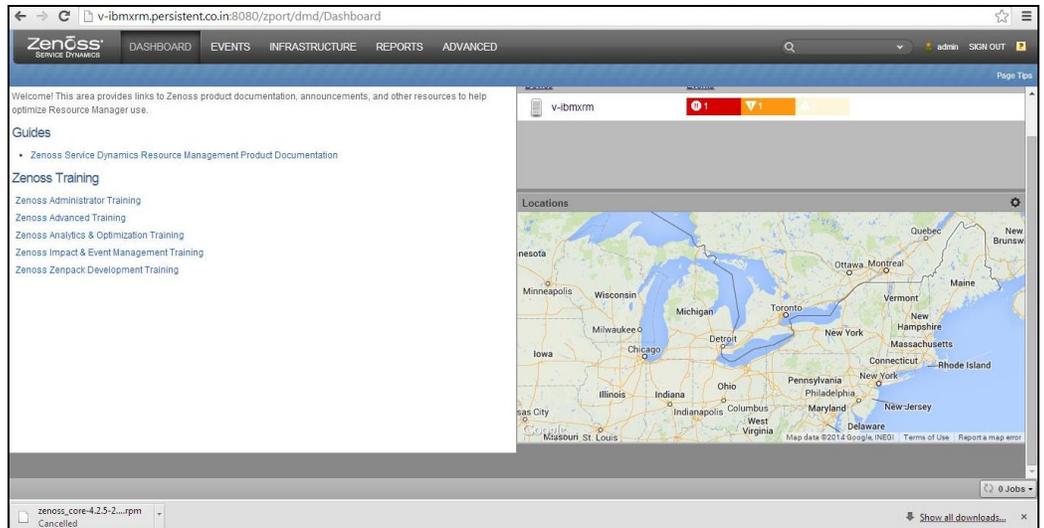


Figure 21: Hostname used for accessing the Zenoss user interface

Cannot run the snmpwalk command for any device

You can run the `snmpwalk` command to test whether a device is running SNMP. If this command does not time out, it indicates that SNMP is installed and working correctly.

Symptoms

You are unable to run the `snmpwalk` command for some device from the user interface and command line.

Causes

This issue may occur due to wrong credentials provided when you run the `snmpwalk` command for that device.

Example 1: You have run the `snmpwalk` command with the following values:

```
$ snmpwalk -v3 -u USERID1 -l AuthPriv -a SHA -A
Passw0rd -x AES -X password 9.37.76.140
1.3.6.1.4.1.2.3.51.2.2.23.1.1
```

You encounter the following error:

```
No log handling enabled - turning on stderr logging
snmpwalk: Unknown user name
```

In this case, the user name is incorrect.

Example 2: You have run the `snmpwalk` command with the following values:

```
$ snmpwalk -v3 -u USERID -l AuthPriv -a SHA -A
Passw0rd1 -x AES -X password 9.37.76.140
1.3.6.1.4.1.2.3.51.2.2.23.1.1
```

You encounter the following error:

```
No log handling enabled - turning on stderr logging
snmpwalk: Authentication failure (incorrect
password, community or key)
```

In this case, the password is incorrect.

Resolving the problem

To resolve the problem, perform the following steps:

1. Select the device name in the devices list.
2. Select **Configuration Properties** in the left panel.
3. Enter the appropriate values for the following properties:
 - zSnmpSecurityName
 - zSnmpPrivType
 - zSnmpPrivPassword
 - zSnmpAuthType
 - zSnmpAuthPassword
 - zSnmpVer

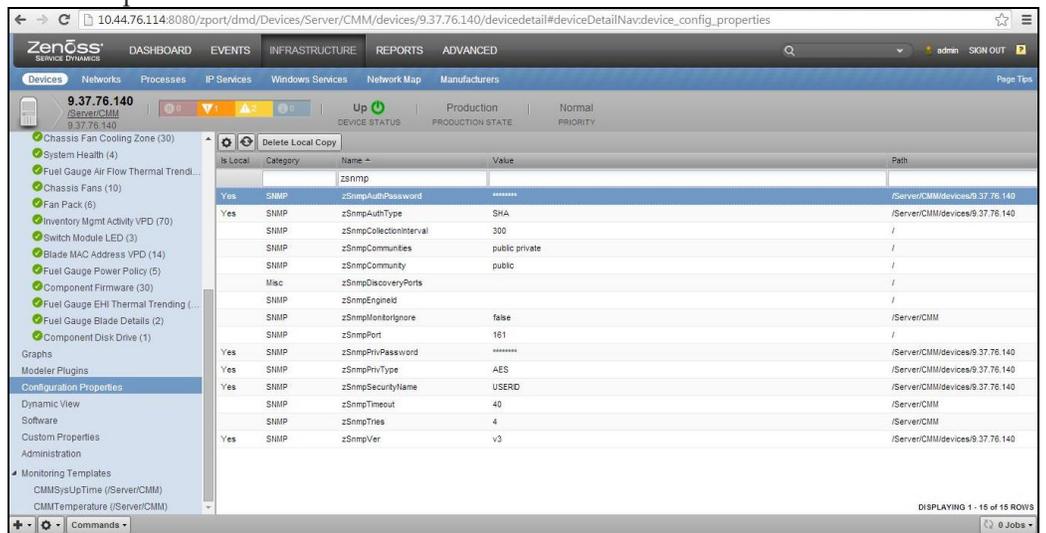


Figure 22: Configuration Properties page

4. Run the `snmpwalk` command.
5. Increase the value of `zCollectorTimeout` configuration property.

No data collected for a modeler for CMM or IMM device

When you run a modeler for IMM or CMM device, the modeler collects the data for the components which you have selected in the modeler plugins on Zenoss user interface. For those components, data is collected from the device.

Symptoms

No data is collected for some modeler for a CMM or IMM device.

Causes

This issue may occur when no data is present for some component on the device. Hence, no data gets fetched from the device.

In this case, while modeling the device, you may get the following message:

```
No data collected from 9.37.76.140 for the
community.snmp.<Plugin name>
```

Also, that component is not available on Zenoss user interface.

Resolving the problem

To resolve the problem, perform the following steps:

1. Log in to device UI and check whether the component is available on the device.
2. If the `snmpwalk` command returns data for that component, then wait for the next scheduled modeler and check whether the component is available after the modeler is run.

No data displayed on Overview page

To view details for a single device, click its name in the device list. The device Overview page appears. The Overview page displays manufacturer, hardware, SNMP, and other information

Symptoms

No data is displayed on the Overview page.

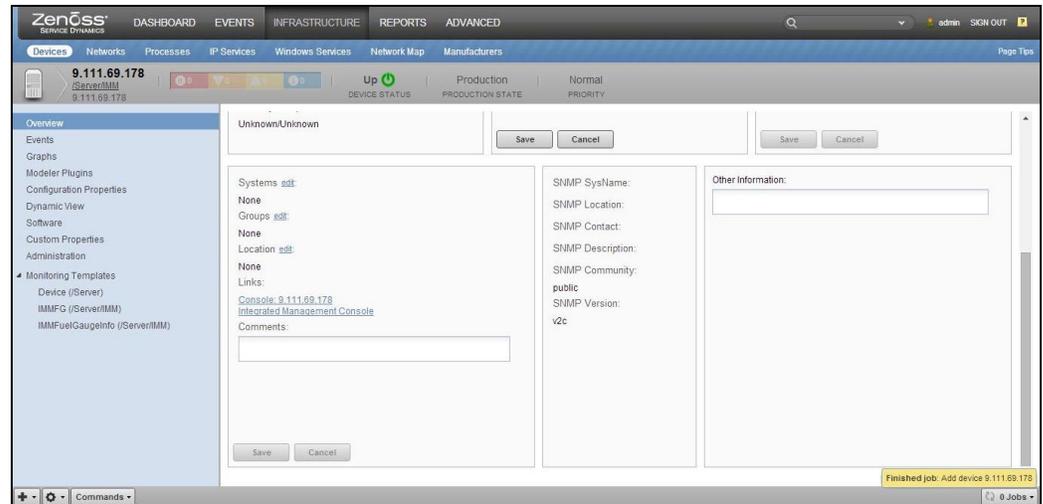


Figure 23: No data displayed on Overview page

Causes

This issue may occur when no modeler is run for a device map.

Resolving the problem

You can run the modeler for device map by using command line or through user interface.

Command line

To resolve the problem, perform the following step:

- Run the modeler for device map by using the following command:
`zenmodeler run --device="<Device IP>" --collect=IMMDeviceMap`

Example:

```
$ zenmodeler run --device="9.111.69.178" --collect=IMMDeviceMap
```

The output is displayed as follows:

```
2014-07-14 19:38:14,229 INFO zen.ZenModeler:
Connecting to localhost:8789
2014-07-14 19:38:14,238 INFO zen.ZenModeler:
Connected to ZenHub
2014-07-14 19:38:15,439 INFO zen.ZenModeler:
Collecting for device 9.111.69.178
2014-07-14 19:38:16,002 INFO zen.ZenModeler:
skipping WMI-based collection, PySamba zenpack not
installed
2014-07-14 19:38:16,014 INFO zen.ZenModeler: No
Python plugins found for 9.111.69.178
2014-07-14 19:38:16,015 INFO zen.ZenModeler: No
command plugins found for 9.111.69.178
2014-07-14 19:38:16,017 INFO zen.ZenModeler: SNMP
collection device 9.111.69.178
2014-07-14 19:38:16,017 INFO zen.ZenModeler:
plugins: community.snmp.IMMDeviceMap
2014-07-14 19:38:16,649 INFO zen.ZenModeler: No
portscan plugins found for 9.111.69.178
2014-07-14 19:38:28,817 INFO zen.SnmpClient: snmp
client finished collection for 9.111.69.178
2014-07-14 19:38:28,817 INFO zen.ZenModeler:
processing community.snmp.IMMDeviceMap for device
9.111.69.178 with snmp version v3
2014-07-14 19:38:28,907 WARNING zen.ZenModeler:
Failed to map -1
2014-07-14 19:38:29,394 INFO zen.ZenModeler: Changes
in configuration applied
2014-07-14 19:38:29,395 INFO zen.ZenModeler: Scan
time: 13.96 seconds
2014-07-14 19:38:29,399 INFO zen.ZenModeler: Daemon
ZenModeler shutting down
```

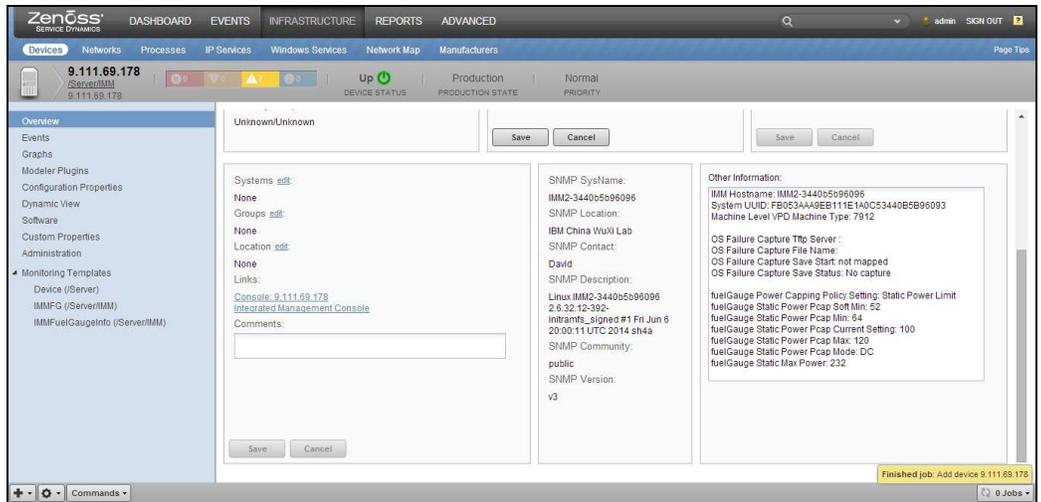


Figure 24: Data displayed in Overview page

User interface

To resolve the problem, perform the following steps:

1. From Zenoss user interface, click **Modeler Plugins** from the left pane.
2. Select **community.snmp.IMMDeviceMap** (for IMM devices) or **community.snmp.CMMDeviceMap** (for CMM devices) and click **Model Device**.

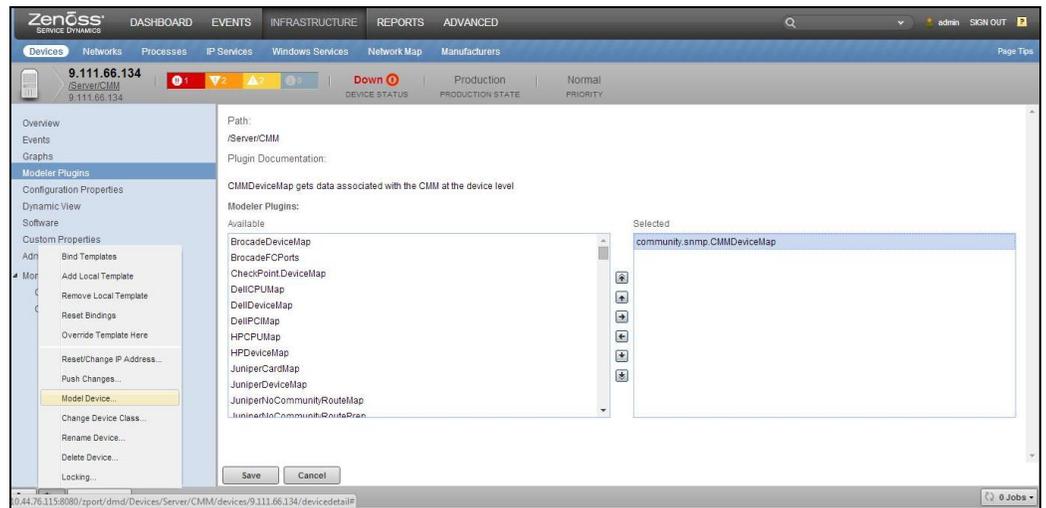


Figure 25: Model Device option

Grid displays lesser data than the data displayed by the snmpwalk command

After a device is modeled, important data is displayed in the inventory grid for the component selected.

Symptoms

Grid displays lesser data compared to the data displayed by the `snmpwalk` command.

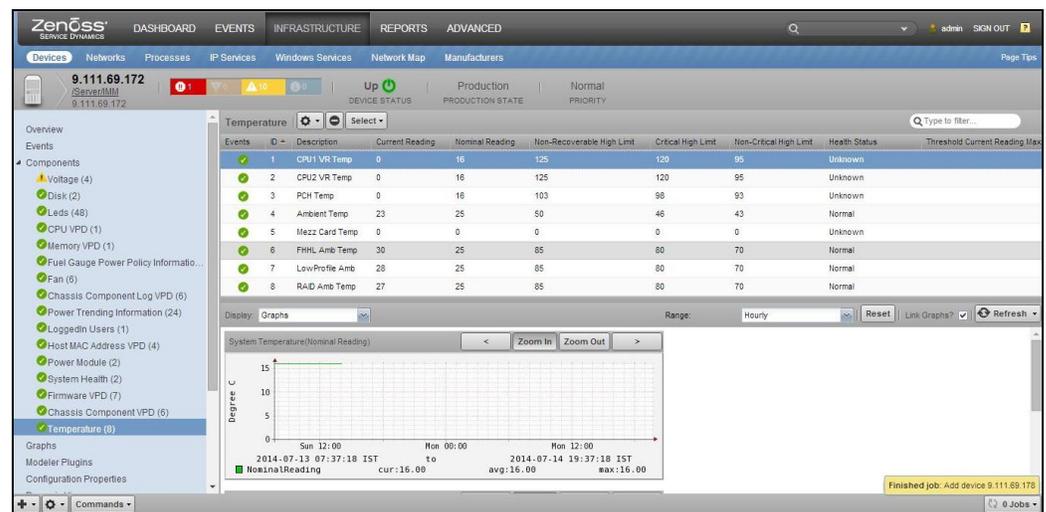


Figure 26: Grid displaying data

Causes

The grid is configured to display only 10 columns.

Resolving the problem

To view the remaining columns, perform the following steps:

1. Click a device name in the list of devices. The device Overview page appears.
2. In the **Display** drop-down list, select **Details**. The Details section displays additional columns which are not displayed in the grid.

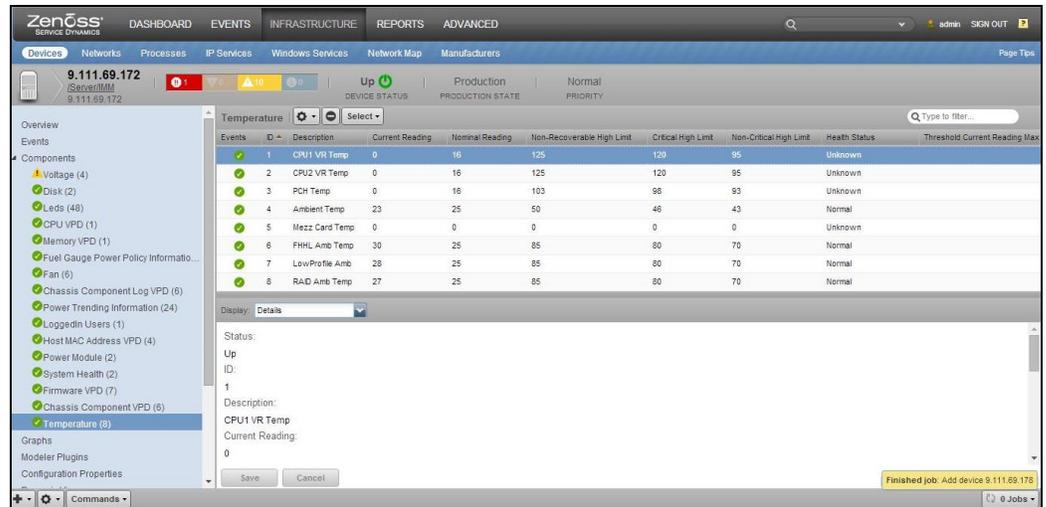


Figure 27: Details section

Device not auto-modeled after a specified time interval

By default, the system remodels each known device every 720 minutes (12 hours).

Symptoms

Device is not auto-modeled after a specified time interval (720 minutes).

Causes

This problem may occur due to timeout issues or due to wrong configuration properties or SNMP settings.

Resolving the problem

In such cases, check `zenmodeler.log` to find the reason of this issue.

To resolve this issue, perform the following steps:

1. Log in to Zenoss CLI.
2. Navigate to the `/opt/zenoss/log/localhost` directory.
3. Run the following command:
`cat zenmodeler.log`
4. Open the log file, check the possible reasons, and take necessary actions.

Modeler may fail if SNMP is not enabled on endpoint

When SNMP properties configured on Zenoss are same as that configured on the device, modeler runs successfully for that endpoint.

Symptoms

Modeler fails with a similar error message:

```
Device <device ip> timed out: are your SNMP settings correct?
```

Causes

This problem may occur because of wrong SNMP settings provided in configurations on the Zenoss server and different SNMP agent activated on the device.

In the following example, V3 is disabled on device. Thus, no data is collected for modeler.

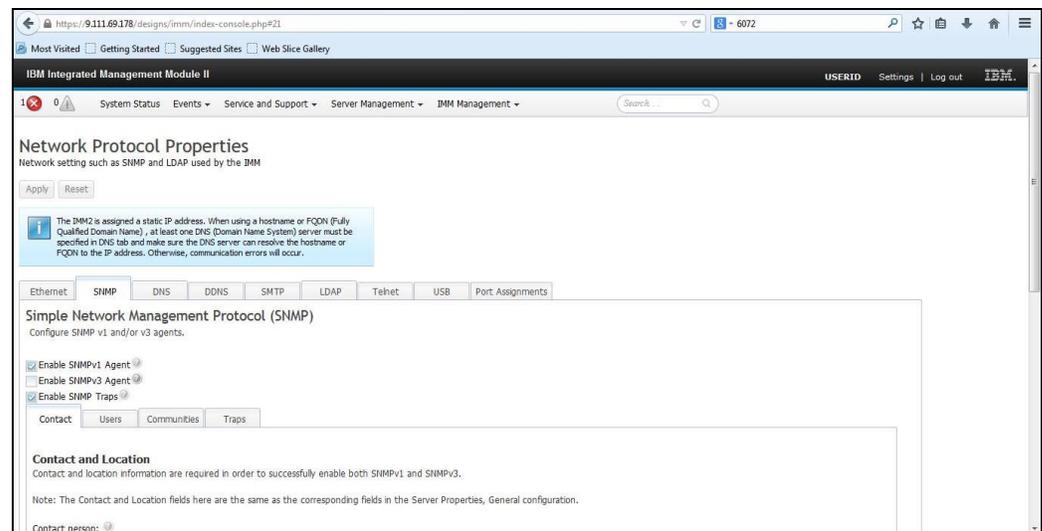


Figure 28: V3 disabled

In this case, no data is displayed in the Components section in the left panel of Zenoss user interface.

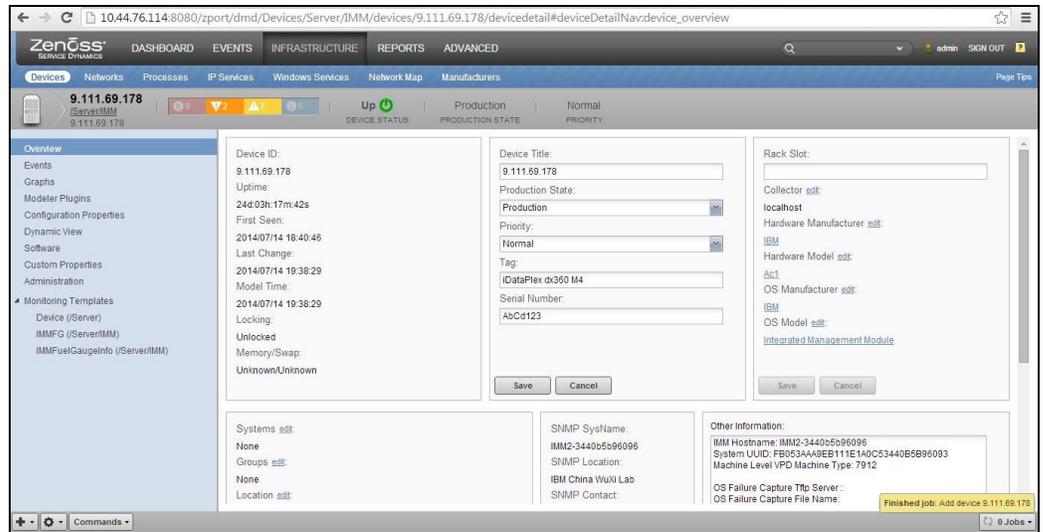


Figure 29: No data displayed in Components section

Resolving the problem

To resolve this issue, perform the following steps:

1. Log in to the device user interface.
2. Activate the suitable SNMP protocol and retry the modeler. For example, SNMPV3 in this case.

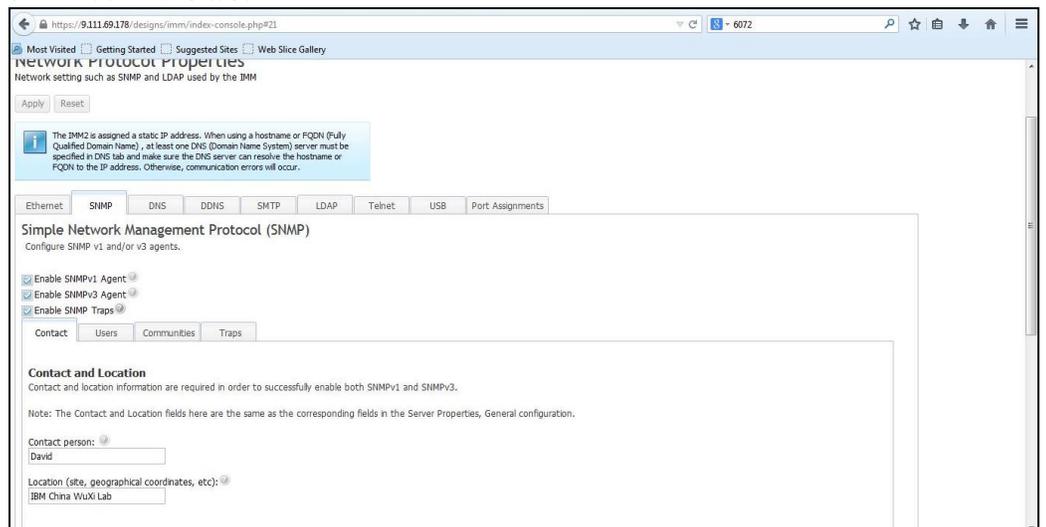


Figure 30: V3 enabled

3. Run the modeler again. Data gets displayed in the Components section in the left panel of Zenoss user interface.

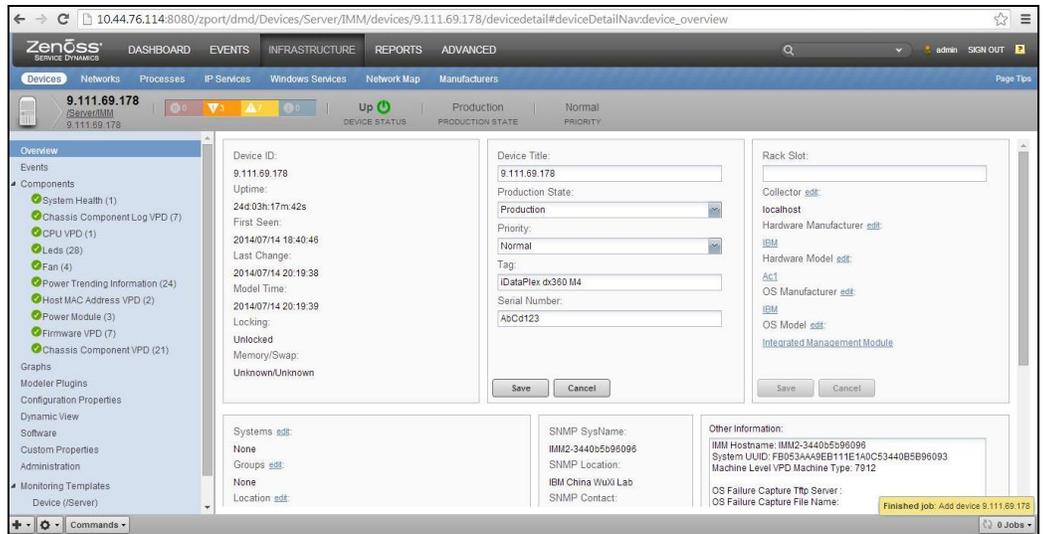


Figure 31: Data is displayed in Components section

No events (traps) generated from a device

To get events (traps) from a device, the SNMP agent must match on Zenoss and device.

Symptoms

No events (traps) are generated from a device.

Causes

This issue may occur due to different SNMP settings on device and on Zenoss user interface.

For example, if SNMPV3 is enabled on a device, then SNMPV3 should be configured on Zenoss user interface under configuration properties for that device.

Resolving the problem

To resolve this issue, perform the following steps:

1. Log in to the device user interface.
2. Check the SNMP agent.

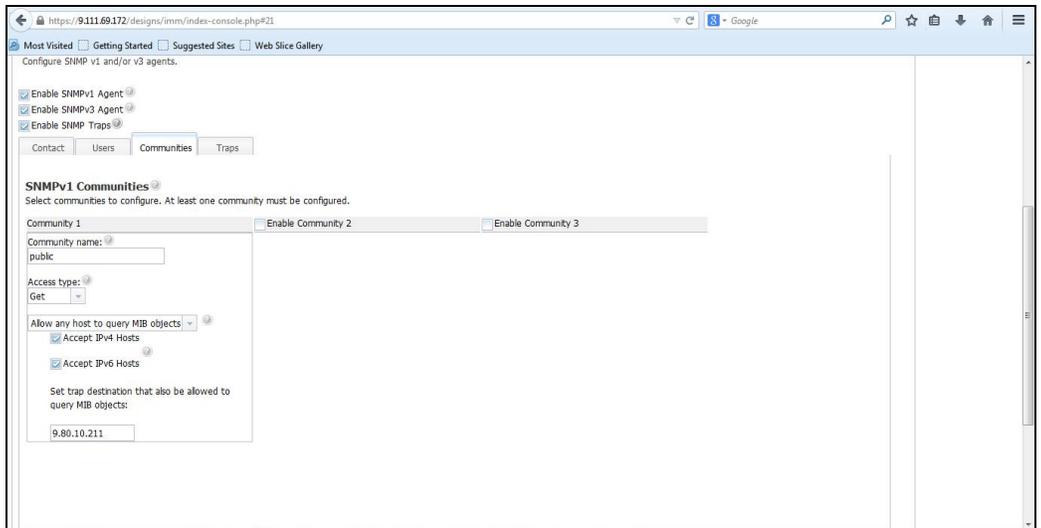


Figure 32: SNMP agent

3. Log in to Zenoss user interface.
4. Select the device name in the devices list.
5. Select **Configuration Properties** in the left panel and check the zSNMP properties.

For SNMPV1 and SNMPV2C, check the zSnmPVer property and enter the same version as that of device. Also, check the zSnmPCommunity property.

For SNMPV3, check and configure the following properties as that of device:

- zSnmPSecurityName
- zSnmPPrivType
- zSnmPPrivPassword
- zSnmPAuthType
- zSnmPAuthPassword
- zSnmPVer

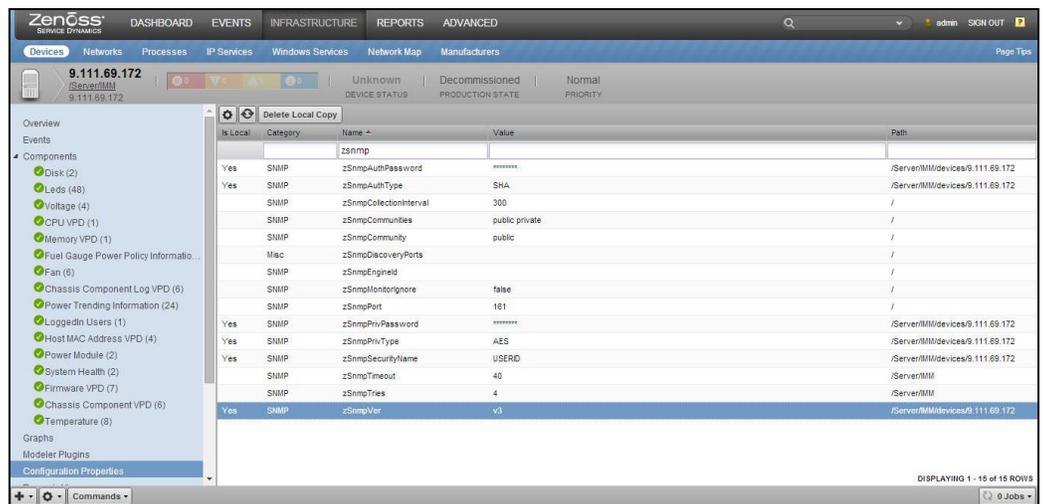


Figure 33: Configuration Properties page

No data displayed on inventory grid and Details section for a CMM component

When you run a modeler on Zenoss server, the data is displayed in grid and Details section.

Symptoms

For some CMM components, when you run the modeler on Zenoss server, no data is displayed in grid and Details section.

Causes

This problem may occur for modelers when database is in inconsistent state.

Workaround

On Zenoss server, whenever you encounter this issue, run the following commands:

- zendmd
- reindex()
- commit()