

Troubleshoot BroadWorks SNMP Availability Report Failure

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Introduction

This document describes the configuration to properly align the Network Function Managers (NFM) SNMP service availability with the managed nodes.

Prerequisites

Cisco recommends that you have a knowledge of these topics:

- Linux SNMP configuration
- CLI configuration for for the BroadWorks servers

Requirements

Network Function Manager

The NFM has been defined with a IP Address range for the SNMP variables to be defined for, or the individual node requirements have been set from the NFM Portal. To validate the SNMP configuration navigate to **nfPortal > Network Monitoring > Open Console > Configure OpenNMS (admin dropdown) > Configure SNMP Community Names by IP Address**.

The configured SNMP information is maintained on the Primary and Standby Network Monitoring NFM in `/usr/local/opennms/opennms_base/etc/snmp-config.xml`.

In the example, provided you can see that there are 2 ranges with unique write communities, and one specific IP defined with a unique read and write community string. The information in this file must match what is defined in the managed node.

```
/usr/local/opennms/opennms_base/etc/snmp-config.xml <snmp-config
xmlns="http://xmlns.opennms.org/xsd/config/snmp" max-vars-per-pdu="1" version="v2c" read-
community="public" timeout="3000" retry="1" port="8001"> <definition write-community="public"
```

```
port="8001"> <range begin="10.201.207.5" end="10.201.207.250"/> </definition> <definition write-
community="notPublic"> <range begin="10.201.210.5" end="10.201.210.255"/> </definition>
<definition write-community="hamBurger" read-community="hamBurger">
<specific>10.201.191.220</specific> </definition> </snmp-config>
```

Managed Node

Adjust the default BroadWorks SNMP community strings "public" to what is required in your environment.

```
ADP_CLI/Interface/SNMP/Agent> get port = 8001 encoding = ISO-8859-1 readCommunity = hamBurger
writeCommunity = hamBurger trapCommunity = public trapSourceAddress = 10.201.191.220 disableV2 =
false hostMibII = false
```

Dependant on your base Operating Systems (OS) SNMP configuration, you must update the community string needed for the BroadWorks agent to proxy the incoming requests. You can use a text editor like vi to adjust the values

in **/usr/local/broadworks/bw_base/conf/BWSnmpProxy.conf** to match the OS **/etc/snmp/snmpd.conf** string. In the example provided, you can see the alignment for the **BWSnmpProxy.conf** and **snmpd.conf** community string for 'hotDogs'.

```
/usr/local/broadworks/bw_base/conf/BWSnmpProxy.conf <SNMP_PROXY> <MASTER_AGENT> <NAME>BroadWorks
Master SNMP Agent</NAME> <DESCRIPTION>Configuration MIB</DESCRIPTION>
<TRAP_LISTENING_PORT>20162</TRAP_LISTENING_PORT> <STATUS>On</STATUS>
<CLI>ConfigurationManagement</CLI> <OID>.1.3.6.1.4.1.6431.1.1.5</OID>
<MIB>/usr/local/broadworks/bw_base/conf/BroadworksConfiguration.mib</MIB>
<CLI_VISIBLE>True</CLI_VISIBLE> </MASTER_AGENT> <SUB_AGENT> <NAME>LicenseManager</NAME>
<DESCRIPTION>LicenseManager MIB</DESCRIPTION> <HOST></HOST> <PORT></PORT>
<OID>.1.3.6.1.4.1.6431.1.1.6</OID> <CLI>LicenseManager</CLI> <STATUS>ON</STATUS> <START></START>
<STOP></STOP> <MIB>/usr/local/broadworks/bw_base/conf/BW-LicenseManager.mib</MIB>
<COMMUNITY></COMMUNITY> <CLI_VISIBLE>True</CLI_VISIBLE> </SUB_AGENT> <SUB_AGENT> <NAME>Net-
Snmp</NAME> <DESCRIPTION>Linux MIB-II sub agent</DESCRIPTION> <HOST>localhost</HOST>
<PORT>161</PORT> <OID>.1.3.6.1.2.1</OID> <CLI>Mib-II</CLI> <STATUS>ON</STATUS> <START></START>
<STOP></STOP> <MIB>/usr/local/broadworks/bw_base/conf/mibII.mib</MIB>
<COMMUNITY>hotDogs</COMMUNITY> <CLI_VISIBLE>True</CLI_VISIBLE> </SUB_AGENT> <SUB_AGENT>
<NAME>Net-Snmp-Ucd</NAME> <DESCRIPTION>Linux UCD-SNMP sub agent</DESCRIPTION>
<HOST>localhost</HOST> <PORT>161</PORT> <OID>.1.3.6.1.4.1.2021</OID> <CLI>UCD-SNMP</CLI>
<STATUS>ON</STATUS> <START></START> <STOP></STOP> <MIB>/usr/local/broadworks/bw_base/conf/UCD-
SNMP-MIB.mib</MIB> <COMMUNITY>hotDogs</COMMUNITY> <CLI_VISIBLE>True</CLI_VISIBLE> </SUB_AGENT>
<SUB_AGENT> <NAME>HostResources</NAME> <DESCRIPTION>Linux HOST-RESOURCES sub agent</DESCRIPTION>
<HOST>localhost</HOST> <PORT>161</PORT> <OID>.1.3.6.1.2.1.25</OID> <CLI>HostResources</CLI>
<STATUS>ON</STATUS> <START></START> <STOP></STOP> <MIB>/usr/local/broadworks/bw_base/conf/HOST-
RESOURCES-MIB.mib</MIB> <COMMUNITY>hotDogs</COMMUNITY> <CLI_VISIBLE>True</CLI_VISIBLE>
</SUB_AGENT> </SNMP_PROXY>
```

```
/etc/snmp/snmpd.conf com2sec notConfigUser default hotDogs group notConfigGroup v1 notConfigUser
group notConfigGroup v2c notConfigUser view systemview included .1.3.6.1.2.1 access
notConfigGroup "" any noauth exact systemview none none syslocation <support_location_URL>
syscontact <support_email_address> dontLogTCPWrappersConnects yes disk / 10000 view systemview
included .1.3.6.1.4.1.2021 sysdescr BroadWorks Application Delivery Platform sysobjectid
.1.3.6.1.4.1.6431.1.1.8.1.29 view systemview included .1.3.6.1.4.1.6431.1.1.11 pass_persist
.1.3.6.1.4.1.6431.1.1.11 /usr/local/perl/perl_base/bin/perl
/usr/local/broadworks/bw_base/sbin/system-mib.pl pass .1.3.6.1.2.1.55
/usr/local/perl/perl_base/bin/perl /usr/local/broadworks/bw_base/bin/ipv6-mib.pl
```

Additional Checks and Information to Collect and Update in your SR

If the NFM still shows the service availability down for the managed node, this information can be collected then provided to TAC with your SR.

NFM

```
$ tech-support > /export/home/bwadmin/$(date +%Y-%m-%d)_`hostname`_tech-support.txt
```

- attach file generated in /export/home/bwadmin/

```
$ cat /usr/local/opennms/opennms_base/etc/snmp-config.xml >  
/export/home/bwadmin/$(date +%Y-%m-%d)_`hostname`_snmp-config.xml
```

- attach file generated in /export/home/bwadmin/

```
$ /usr/local/netsnmp/netsnmp_base/bin/snmpget -v2c -c <community_name>  
<managed_node_IP>:8001 SNMPv2-MIB::sysDescr.0
```

- attach output to SR

```
$ /usr/local/netsnmp/netsnmp_base/bin/snmpget -v2c -c <community_name>  
<managed_node_IP>:161 SNMPv2-MIB::sysDescr.0
```

- attach output to SR

Managed Node

```
$ tech-support > /export/home/bwadmin/$(date +%Y-%m-%d)_`hostname`_tech-support.txt
```

- attach file generated in /export/home/bwadmin/

```
$ cat /etc/snmp/snmpd.conf |grep -v ^# > /export/home/bwadmin/`hostname`_snmpd.conf
```

- attach file generated in /export/home/bwadmin/

```
$ cat /usr/local/broadworks/bw_base/conf/BWSnmpProxy.conf >  
/export/home/bwadmin/`hostname`_BWSnmpProxy.conf  
$ cat /usr/local/broadworks/bw_base/conf/netsnmpd.conf >  
/export/home/bwadmin/`hostname`_netsnmpd.conf
```

```
$ /usr/local/netsnmp/netsnmp_base/bin/snmpget -v2c -c <community_name>  
<managed_node_IP>:8001 SNMPv2-MIB::sysDescr.0
```

- attach output to SR

```
$ /usr/local/netsnmp/netsnmp_base/bin/snmpget -v2c -c <community_name>  
<managed_node_IP>:161 SNMPv2-MIB::sysDescr.0
```

- attach output to SR