CA NetVoyant

Release Notes

Version 7.1, Service Pack 3

May 2012

CA NetVoyant (NetVoyant) provides SNMP-based performance metrics for managing network infrastructure, devices, and services. Using data collected from devices such as routers, switches, and servers, NetVoyant summarizes and condenses data into easy-to-understand, web-based reports.

These *Release Notes* provide information about the enhancements and open issues in version 7.1, SP3. This information supplements and supersedes information in the Product Documentation.

Why Install this Release?

This release of NetVoyant provides the following enhancement:

- **Addition of the NetVoyant Watchdog service**. The Watchdog service notifies you when NetVoyant services are down, and, when possible, automatically repairs the problem. For more information, see "NetVoyant Watchdog Service" on page 3.
- **Ability to customize the number of ping cycles**. You can configure the number of ping cycles per poll by entering a row in the `general` table (PingCyclesPerPoll). Assign a value, up to 4. The default is two ping cycles. (Defect 26436)

In addition, this release resolves the following issues:

- The search results for IPSLA jitter tests appear twice in the NetVoyant console. (Defect 26196)
- Group/Metrics/Filter Navigation view returns an "Object reference not set" error. (Defect 26224)
- Interface remapping occurs at random. (Defect 26259)
- Data for the "Last Day" time frame is not loaded for some IPSLA reports. (Defect 26324)
- Modified CMQoS class maps are not displayed after a rediscovery. (Defect 26350)
- Choosing a "monthly" custom time period does not work. (Defect 26374)
- ifSpeed calculation is incorrect. (Defect 26377)
- Duplicate interfaces appear in Interface tree. (Defect 26430)
- Poll instances disappear on the poller after discovery. (Defect 26455)
- Custom timeout values are overwritten during an upgrade. (Defect 26509)
- DNS resolution performed on devices that are already discovered. (Defect 26568)
- The NetVoyant installation process does not attempt to stop the Watchdog service. (Defect 26599)
- iorgen.exe does not update all the IO reference fields in the database. (Defect 26677)
- Spelling error in ping log. (Defect 26678)
- Class maps do not appear under Class Maps node. (Defect 26719)
- ifHighSpeed is limited to 1Gb. (Defect 26735)

NetVoyant Watchdog Service

The Watchdog service notifies you when NetVoyant services are down, and, when possible, automatically repairs the problem. When you install this service pack, the Watchdog service is installed in the `<install path>/bin` directory.

- After installing NetVoyant, start and run `nvwatchdog.exe`. The resulting dialog prompts for a page title, login name, and password. Leave the **Page Title** field blank to disable the **Login Name** and **Password** fields.

The Watchdog process performs the following tasks:

- The Watchdog connects to the nms2 database and reads the CA Performance Center email server settings.
- The Watchdog requests an email administrative address and registers as a Windows service.

Note: SMTP failure can prevent the Watchdog service from registering.

- The Watchdog tests the parameters to ensure that email delivery can be accomplished.
- After a reboot, the service is visible in the Control Panel in the Services dialog with a status of "automatic startup."
- Parameters are saved to `\netvoyant\nvwatchdog.xml` so that the Watchdog can raise an alarm even when the mysql-nms2 database fails.
- Testing is automatically performed every two minutes. Testing typically completes in five to ten seconds, and then sits idle until repeated.
- Critical test results generate Sev-1 email notifications. Sev-1 emails are suppressed during the first ten minutes after Watchdog starts.
- Major test results generate Sev-2 email notifications. Sev-2 emails are suppressed during the start-up period, for back-to-back failures (up to an hour), and during the interval following a Sev-1 notification.
- Warning test results generate Sev-3 email notifications, which provide information about poor collecting or reporting performance, such as overruns from software-only hardware limitations.

Upgrade and Installation Information

For information about installing the NetVoyant software or upgrading from an earlier version of NetVoyant, see the *CA NetVoyant Installation and Upgrade Guide*. This guide is available in the CA NetVoyant Bookshelf on the CA Support Online website: http://support.ca.com.

Performance and Scalability

A distributed NetVoyant 7.1 system supports ten pollers, each with 55,000 polled and 140,000 discovered poll instances, for a total of 550,000 polled and 1,400,000 discovered poll instances.

A standalone system supports a poller with 55,000 polled and 140,000 discovered poll instances.

Discovery Performance

In our testing, the average length of time for discovery is 2.5 hours per poller. The initial discovery, including synchronization, is four hours on a distributed system with ten pollers.

Manual (Right-Click) Synchronization Performance

In our testing, we saw the following results when manually forcing a synchronization:

Configuration	Results
One poller	Less than one hour
Two pollers	Less than one hour
Four pollers	Less than one hour and 20 minutes
Six pollers	Less than one hour and 40 minutes
Eight pollers	Less than two hours
Ten pollers	Less than two hours and 20 minutes

Poll Instance Performance

In our testing, we spread the polling instances across multiple datasets. We focused on ifstats, qosclass, and qosred, all of which are known to cause performance and scalability issues. The results for each poller are as follows:

Dataset	Enabled Polling Instances	Discovered Polling Instances
avail	700	700
ciscoMemPool	900	1200
ciscoSwitch	25	25
ciscoSystem	700	700
dsx1near	125	175
dsx3near	250	325
frcircuit	600	675
ifstats	15000	20000
qosclass	5000	10000
qosmatch	5000	10000
qospolice	1000	1500
qosqueue	3000	5000
qosred	20000	60000
qosset	1000	1500
qosts	1000	1500
reach	700	700
Total	**55000**	**114000**

Console Performance

With 120 custom groups configured, we saw the following performance in our testing:

- Using group membership rules, devices were populated in all tiers in less than five seconds.
- Navigating the sub-groups took less than three seconds per group to load. The top groups of routers and switches from the Master took longer, up to 20 seconds.
- The Alarm Profiles Group tier had no problem with rendering or performance.
- During discovery:
  - After the initial load was completed, everything responded within three seconds.
  - The Routers and Switches groups took longer than ten seconds, depending how many devices were already populated.
  - When custom groups were created, browsing during and after discovery took no more than five seconds
  - With 7000+ routers in a group and 250+ switches in a group with many child polling instances, the load took about 20 seconds.
  - Browsing with few devices already in the groups while they were populating took no more than two seconds, with 25 percent of the devices discovered.

Performance Factors

Performance results can vary based on your environment. The following is a sampling of the factors that can affect performance:

- Line latency
- SNMP response delay
- Network loss
- Custom MIBs and datasets
- Number of discovered instances
- Number of enabled instances
- Non-default poll groups, such as one-minute
- Number of poll groups
- Custom software running on the system, such as anti-virus software
- SNMP device and agent mix:
  - The GetNext command requires more requests than the GetBulk command.
  - SNMPv3 adds encryption overhead.

- Number of time filters
- Data retention settings
- Custom hardware and virtual machine settings
- PollQueueLimit settings
- PollConcurrency settings
- Number of groups
- Distribution of poll instances across datasets

Test Configurations

Our test environment for a large distributed NetVoyant system included the following:

Master console	• Dell R610 with 12 GB of memory • Microsoft Windows 2008 R2 • IIS, .NET, and SNMP
Ten pollers	• Dell R610 with 8-12 GB of memory • Microsoft Windows 2008 R2 • IIS, .NET, and SNMP • 55,000 polled and 140,000 discovered poll instances • Seven pollers had added latency of 10-20 ms. • Three pollers had added latency of 100-200 ms.

Our test environment for a small distributed NetVoyant system included the following:

Master console	• Dell R610 with 4 GB of memory • Microsoft Windows 2008 R2 • IIS, .NET, and SNMP
Ten pollers	• One Dell R610 with 4 GB of memory • One DelR610 with 16 GB of memory • Microsoft Windows 2008 R2 • IIS, .NET, and SNMP • 55,000 polled and 140,000 discovered poll instances

Our test environment for a standalone NetVoyant system included the following:

One poller	• One Dell R610 with 2-12 GB of memory • Microsoft Windows 2008 R2 • IIS, .NET, and SNMP • 55,000 polled and 140,000 discovered poll instances

Known Issues and Workarounds

This section describes known issues and suggested workarounds.

Poll instances disappear on the poller after periodic discovery, or interfaces remap at random.

These two issues are accompanied by one or more of the following entries in the log:

a. Unable to compare poll instance (value)
b. Unable to copy (value)
c. Unable to copy pollinst: CORBA exception

Workaround: Ensure that the Master console does not run discovery while pollers are running discovery. NetVoyant 7.1 SP3 resolves a and b, and reduces or eliminates c. (26259 and 26455)

Cannot create two auto-enable rules with the same SNMP requirement but different property requirements.

If you attempt to create an auto-enable rule using an SNMP requirement and property requirement, the SNMP requirement cannot be used in another rule. **Workaround**: You can vary the SNMP requirement by adding an additional item that is always true, or adding additional characters. For example, use IFname = Eth0/0 for one rule and IFname like Eth0/0 in another. (Defect 21930)

The interface volume and interface rate views trend the same, but when switched to a quarterly view the volume trend takes a sharp downturn.

This problem occurs because the volume is a sum of data points in a weekly rollup, and the rate is an average. Therefore, when the rate is trending up, the volume is trending down. When viewing the graphs on a Saturday right before the weekly rollup, these rate would probably look similar, but on a Monday, when the volume only has one day's worth of data, it looks as though there is a discrepancy. **Workaround**: Use a 30-day time period, which should provide the granularity that is needed and does not present the same issue. (Defect 20709)

SNMP profiles are not synced up when added to a poller, which is then connected to Master in a distributed system.

You must back up the SNMP profiles and database *before* you migrate from a standalone system (all-in-one) to a distributed environment. (Defect 21443)

Adding a device in the Device Wizard does not assign the correct poller.

This problem occurs only when you use the Device Wizard to add a device on the Master in a distributed system where the Master also polls. Typically, the Master server does not perform polling. However, it can support the polling of the pollers in some cases. **Workaround**: To ensure that the added device is assigned correctly, add a discovery scope in the NetVoyant console, and then start discovery of the single device by selecting File, New, Device. (Defect 22614)

NetVoyant online Help is not visible on a Windows Server 2008 computer.

The Help panel is blank, and no error message appears. This problem occurs when the operating system for the NetVoyant console computer is Microsoft Windows Server 2008 *and* the computer is not known by Internet Explorer as a trusted site. To add the local computer as a trusted site, click Tools, Internet Options in your browser window. On the Security tab, click the Trusted sites icon, and then click Sites. (Defect 24912)

NetVoyant may stop polling after an upgrade.

After an upgrade to version 7.1, NetVoyant licenses occasionally become invalid, which causes polling to stop. **Workaround**: Contact CA Technical Support to generate a new license. For more information, see "Contact CA Support" on page 10.

Legal Notice

Contact CA Support

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- Online and telephone contact information for technical assistance and customer services.
- Information about user communities and forums.
- Product and documentation downloads.
- Support policies and guidelines.
- Other helpful resources appropriate for your product.