

Nimsoft to APM Field Pack Installation

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Requirements & Installation Notes

PAGE 1

- Must be deployed to a robot connected to primary hub
 - Doesn't mean on primary hub machine, just a robot machine connected to primary hub
 - Required so that all QOS messages from primary and any secondary hubs can be processed
- NisBridge is required for reporting Alarms
 - This is enabled in most Nimsoft deployments
 - Check settings in NAS probe if you are not sure
- Depends on the DAP probe
 - DAP probe is required and part of the UMP deployment
 - You must know the address of the DAP probe
 - Example: /nimdomain/primaryhub/nimump01/dap
- Tested on NMS 6.5 & 7.0, Windows robots & SQL Server 2008R2.
 - Should work fine on NMS 6.x & 7.0, Windows & Linux robots, and all Nimsoft supported databases.
- Probe includes EPAgent v 9.1.1.1 jar
 - Should work with any v8/9 version of EPAgent

Requirements & Installation Notes

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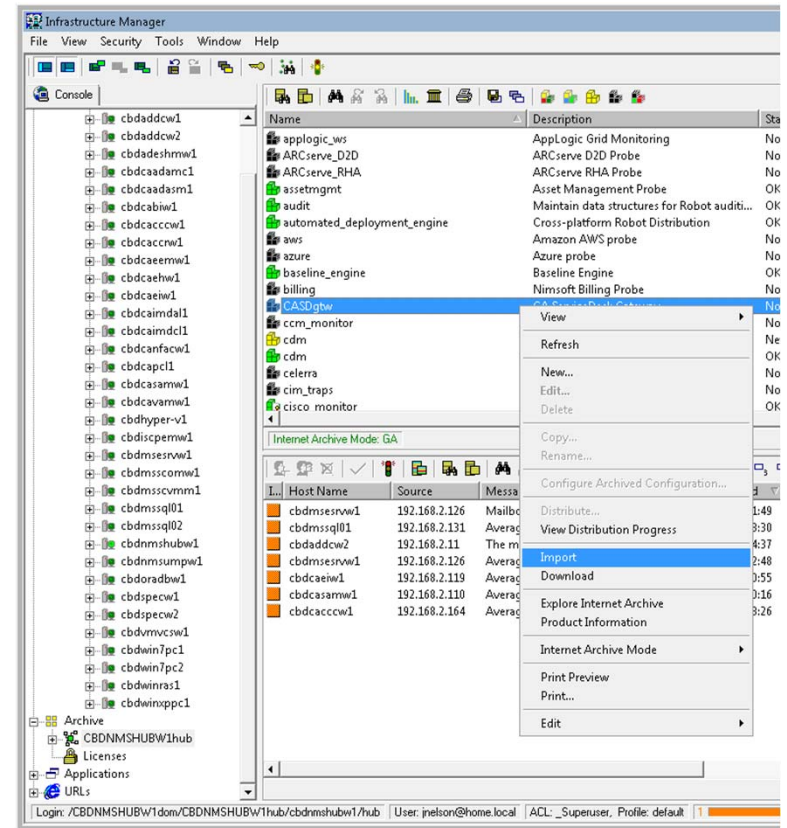
- Probe footprint extremely small
 - Will run fine on minimum robot machine requirements.
- The probe distribution package includes the probe archive file and a typeviewer xml file. This file is named:
 - apm-probe-{version}-dist.zip
- The actual APM Probe archive file is contained within the probe distribution package. This file is named:
 - apm_{version}.zip

Installation Overview

1. Import the APM Probe into the Nimsoft Archive
2. Deploy probe to a robot running on the primary hub
 - Probe will not start upon deployment
 - Probe will deploy jdk package if not already deployed
3. Set DAP probe address in probe configuration
4. Set other options in probe configuration
 - Limit probe to specified origins or hosts
 - Change metric expiration or alarm polling intervals
5. Specify EM host/port in IntroscopeEPAgent.properties
6. Enable/disable probes in qos.properties
7. Install APM EM Components (typeviewers)
8. Start probe

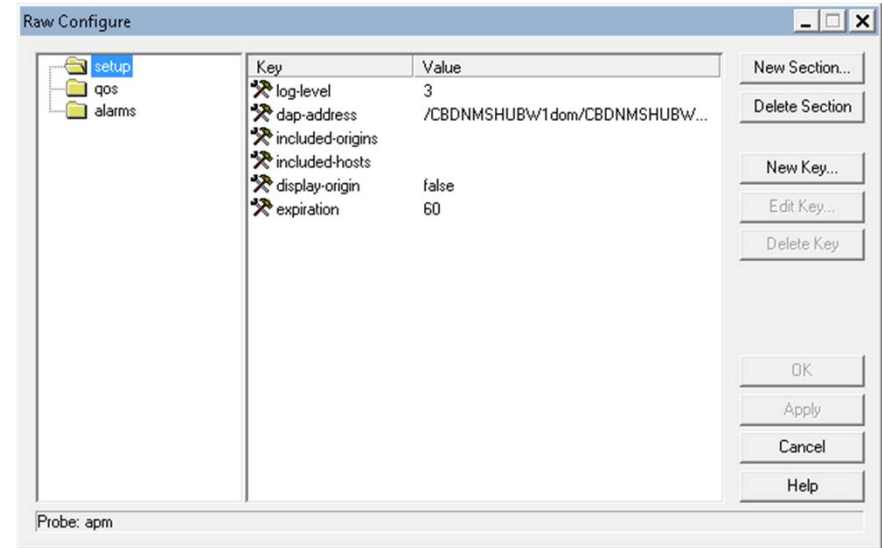
Steps 1-2: Import probe package into Nimsoft archive & deploy probe to robot

1. Login to the Nimsoft Infrastructure Manager and select the archive node
2. Right click in the probe archive list and select “import”
3. Select the APM Probe archive (zip) file
 - File name is *apm_{version}.zip*
4. APM probe will now be listed in archive
5. Deploy APM probe to robot by dragging APM probe from archive to target robot
 - APM Probe must be deployed to a robot connected to primary hub
 - APM Probe will not start by default on initial deployment



Steps 3-4: Set DAP probe address and any other options in probe configuration

1. Double click on the deployed APM probe to open the “Raw Configure” probe configuration window
2. Set the “dap-address” to the address of the DAP probe in your environment
 - ex: /nimdomain/primaryhub/nimump01/dap
3. Adjust any other desired items in the probe configuration
 - See the next slide for details on each setting
4. Click “OK” to apply the changes



APM Probe Configuration Settings

PAGE 1

- setup
 - **log-level** (default: 3): level of logging detail (1: error, 2: warn, 3: info, 4+: debug)
 - **dap-address**: Nimsoft address of the DAP probe
 - **included-origins**: comma separated list of origins – any QOS metric or alarm from an origin in this list will be reported, others will be ignored; case-insensitive
 - if blank, QOS metrics and alarms for all origins will be reported
 - **included-hosts**: comma separated list of hosts – any QOS metric or alarm from a host in this list will be reported, others will be ignored; case-insensitive
 - if blank, QOS metrics and alarms for all hosts will be reported
 - **display-origin** (default: false): display the origin as part of the metric path in APM
 - **expiration** (default: 60): time period in minutes before a metric with no new value reported will be considered expired; after expiration, the metric will no longer be reported

APM Probe Configuration Settings

PAGE 2

- qos
 - **enabled** (default: true): whether or not the probe will collect QOS metrics
- alarms
 - **enabled** (default: true): whether or not the probe will collect alarms
 - **interval** (default: 60): time period in seconds to collect current alarms
 - **excluded-subsystems** (default: controller): comma separated list of alarm subsystems – any alarm from a subsystem in this list will be ignored

APM Probe Configuration Settings

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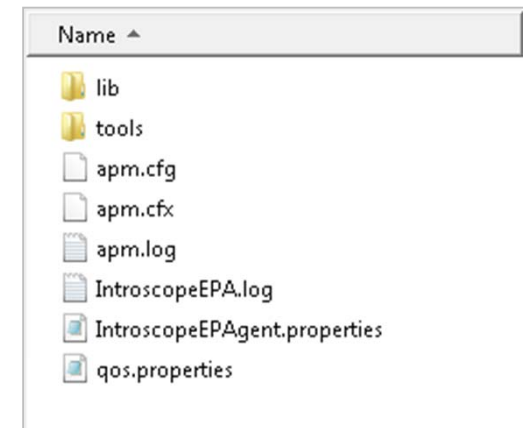
The following configuration settings are not present in the probe configuration by default. You can add them to override the default behavior.

Most deployments WILL NOT require these.

- setup
 - **maxrows** (default: 100): number of rows to return from a single DAP probe callback
 - **maxrequests** (default: 10): number of DAP probe callbacks to make for a single request such as `getQosDefinitions`, `getActiveAlarms`, `getHostData`.
 - Example: Using default values, a single `getActiveAlarms` request will make 10 DAP requests retrieving 100 rows at a time, or up to 1000 total rows. If there are more than 1000 rows, you will see a warning message in the probe log and you will need to adjust the `maxrows` and `maxrequests` property to avoid data loss.

Steps 5-6: Set EM host/port & enable/disable probes

1. Specify the EM host/port in the standard IntroscopeEPAgent.properties file
 - This file will be located on the machine the APM probe was deployed to at the following location:
<nimsoft_home>\probes\application\apm
 - See the APM documentation for more information on IntroscopeEPAgent.properties
2. Enable/disable any probes in the qos.properties file
 - This file will be at the same location as the IntroscopeEPAgent.properties file in the previous step
 - See the next slide for details on this file



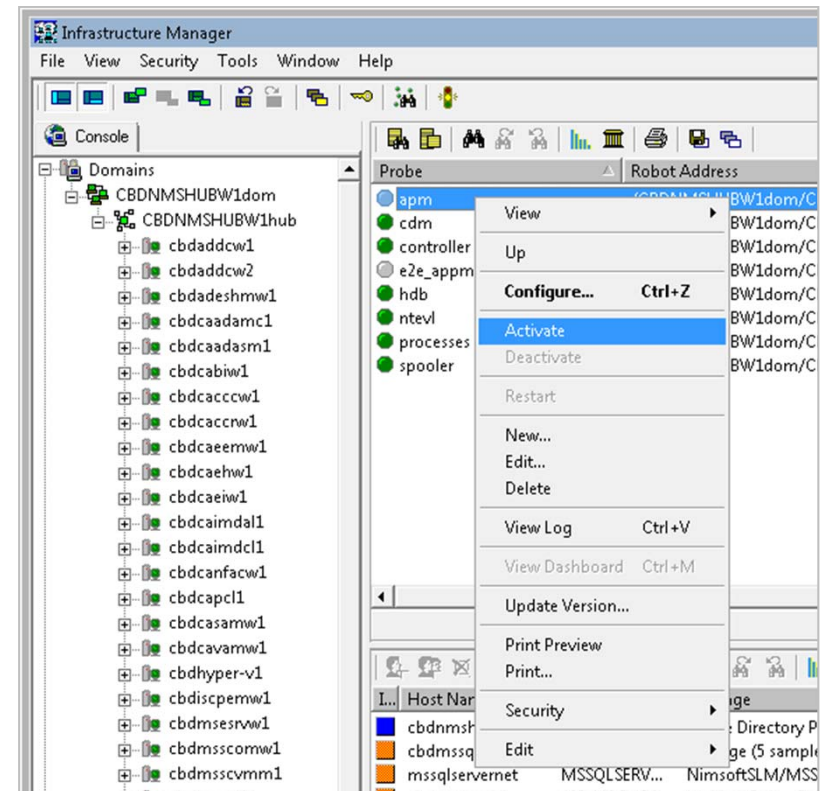
QOS Configuration Settings

- qos.properties file
 - a “probe group” is defined for each probe
 - to disable the collection of QOS metrics for a probe, comment out the probe group entry for that probe
 - use a “#” at the beginning of the line
 - to enable the collection of QOS metrics for a probe, un-comment the probe group entry for that probe
 - See the [QOS Configuration](#) section to add/remove QOS metrics for a probe, or add additional probes

```
#
# qos.properties
#
# This file defines all probes and corresponding qos metrics
# For a qos metric to be reported, the probe must be defined
# the qos metric must have a format defined below.
#
# Note: changing probe group values and/or metric formats
#
# Probe Groups - A probe must be defined in a group to be
# to categorize metrics in APM.
#
probe.group.adevl=Active Directory
probe.group.ad_server=Active Directory
probe.group.cdn=Servers
probe.group.cisco_monitor=Cisco Devices
probe.group.dns_response=DNS Responses
probe.group.e2e_appmon=Application Responses
probe.group.exchange_monitor=Exchange
probe.group.interface_traffic=Network Interfaces
probe.group.ldap_response=LDAP Responses
probe.group.net_connect=Network Connectivity
probe.group.ntevl=Servers
probe.group.ntservices=Servers
probe.group.oracle=Databases|Oracle
probe.group.processes=Servers
probe.group.rsp=Servers
probe.group.sql_response=SQL Responses
probe.group.sqlserver=Databases|SQL Server
probe.group.url_response=URL Responses
probe.group.vmware=Servers
```

Steps 7-8: Install EM Components & Start Probe

1. (Optional) Install the included typeviewers xml file on the APM Enterprise Manager
 - See the APM documentation for more information
 - This will require an EM restart
2. Start the APM Probe by right clicking on it in the Infrastructure Manager and selecting “Activate”
3. Nimsoft data should now be reporting to the Enterprise Manager
 - If the APM probe does not start, or you don’t see Nimsoft data being reported to the Enterprise Manager, view the probe logs by right clicking on the probe in the Infrastructure Manager and select “View Log”



APM Probe QOS Configuration

How to Add New Probes & QOS Metrics

How to Add New QOS Metrics for an Existing Probe

How to Change the Format of Metrics

APM Probe QOS Configuration

- The APM Probe uses the probes & metrics defined in the qos.properties file to determine what QOS metrics to report to the EM
- In order to collect metrics for a given probe, a probe group and all QOS metrics for a given probe must be defined. For example, to add the “ica_response” probe:
 - Add probe group property: *probe.group.ica_response=Citrix XenApp*
 - The “Citrix XenApp” value for this property is used to organize the metric in the APM Investigator
- Now you must define a format property for each QOS metrics of the ica_response probe. This property is used to define which metrics for a given probe will be reported to the EM as well as the format of the metric.
 - Add format property: *format.{probe name}.{QOS name}=format string*
 - Example: *format.ica_response.QOS_ICA_CONNECT={host}/{target}:ICA Connect (ms)*
- See the qos.properties file for more information on probe group and format properties

APM Probe QOS Configuration

COMMAND LINE TOOLS

- To help with the adding and modifying of entries in the qos.properties file, two command line tools are included with the APM probe
- qosUtil.bat/sh
 - Run this utility to list all QOS metrics (by probe) that currently exist within the Nimsoft database but are not defined in qos.properties.
 - This utility will output the format properties using the default format value from the Nimsoft QOS definition. Copy the output of this utility and paste into qos.properties.
 - You may also want to clean up or make modifications to the default format values listed by this utility. For example:
 - shorten any long metric descriptions
 - remove any unnecessary units such as '(count)', '(procs)', etc...
 - If the metrics are for a new probe, don't forget to add the probe group property for the probe.

APM Probe QOS Configuration

COMMAND LINE TOOLS, CONTINUED...

- console.bat/sh: This utility is essentially the same as running the APM probe, but rather than reporting metrics to the EM, it just reports them to standard out.
 - This utility is very helpful in verifying any changes you made to qos.properties
- Both command line tools are located on the machine the APM probe was deployed to at the following location: <nimsoft_home>\probes\application\apm\tools
- It is recommended that you shut down the APM probe before running either of these command line tools

APM Probe QOS Configuration

- How to add new probes & QOS metrics?
 1. Run the *qosUtil* command line tool to list available probes & metrics
 2. Copy/paste/modify the output into *qos.properties*
 3. Add probe group property for any new probes
 4. Verify the changes with the *console* command line tool
- How to add new QOS metrics for an existing probe?
 1. Run the *qosUtil* command line tool to list available metrics
 2. Copy/paste/modify the output into *qos.properties*
 3. Verify the changes with the *console* command line tool
- How to change the format of metrics?
 1. Modify metric format property (and/or probe group value) in *qos.properties*
 2. Verify the changes with the *console* command line tool
 3. Note: modifying any existing properties may effect the included typeviewers