CA Nimsoft Monitor

Probe Guide for iSeries System Statistics Monitoring
sysstat v1.1 series
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## Documentation Changes

This table describes the version history for this document.

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<tr>
<th>Version</th>
<th>Date</th>
<th>What's New?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>December 2013</td>
<td>Documentation on the initial web-based GUI version of the iSeries System Statistics Monitoring probe. (Previous versions of this probe are configured using Infrastructure Manager).</td>
</tr>
</tbody>
</table>
Chapter 1: Overview

The iSeries System Statistics Monitoring probe monitors the iSeries systems statistics. The alarm messages are generated when current system variable values are compared with the sample value. The Quality of Service (QoS) messages on all variables can be directed towards the Nimsoft Monitor Solution.

This section contains the following topics:

- About This Guide (see page 7)
- Related Documentation (see page 7)
- Preconfiguration Requirements (see page 8)

About This Guide

This guide is for the CA Nimsoft Monitor Administrator to help understand the configuration of the iSeries System Statistics Monitoring probe and provides the following information:

- Overview of the iSeries System Statistics Monitoring probe and related documentation for previous probe versions.
- Configuration details of the probe.
- Field information and common procedures for configuring the probe.

Important! Description for the intuitive GUI fields is not included in the document.

Related Documentation

Related Documentation

Documentation for other versions of the sysstat probe

The Release Notes for the sysstat probe

User documentation for the Admin Console

Monitor Metrics Reference Information for CA Nimsoft Probes

(http://docs.nimsoft.com/prodhelp/en_US/Probes/ProbeReference/index.htm)
Preconfiguration Requirements

This section contains the preconfiguration requirements for the iSeries System Statistics Monitoring probe. The probe works only on AS400 systems.

The iSeries System Statistics Monitoring probe has following system requirements:

- RAM: Minimum 2 GB.
  - OOB Configuration requires a RAM of minimum 256 MB.
- Processor: Minimum 3GHz Dual-Core.
  - Supports 32-bit and 64-bit.
- Java Virtual Machine 1.6 or later (installed with NMS 5.0 and above).

Supported Platforms

Refer to the Nimsoft Compatibility Support Matrix for the latest information on supported platforms. See also the Support Matrix for Nimsoft Probes for more information on the sysstat probe.
Chapter 2: Configuration Details

The iSeries System Statistics Monitoring probe is configured to monitor the iSeries System statistics. You can create profiles to monitor the following statistics variables:

**Batch jobs**
- BatchJobsEndedWithPendingPrinterOutput
- BatchJobsEnding
- BatchJobsHeldOnJobQueue
- BatchJobsHeldWhileRunning
- BatchJobsOnHeldJobQueue
- BatchJobsOnUnassignedJobQueue
- BatchJobsRunning
- BatchJobsWaitingForMessages
- BatchJobsWaitingOrScheduled

**User information**
- UsersDisconnected
- UsersSignedOffWithPendingPrinterOutput
- UsersSignedOn
- UsersSuspendedByGroupJobs
- UsersSuspendedBySystemRequest

**Other system status information**
- CurrentUnprotectedStorageUsed
- JobsInSystem
- MaxUnprotectedStorageUsed
- PercPermanentAddresses
- PercProcessingUnitUsed
- PercSystemASPUse
- PercTemporaryAddresses
- SystemASP
- TotalAuxiliaryStorage
Storage Pool variables

A storage Pool variable defines the value for a specified 'Storage Pool'.
- Pool.*MACHINE.Usage
- Pool.*MACHINE.PoolSize
- Pool.*MACHINE.ReservedSize
- Pool.*MACHINE.DatabaseFaults
- Pool.*MACHINE.DatabasePages
- Pool.*MACHINE.NonDatabaseFaults
- Pool.*MACHINE.NonDatabasePages
- Pool.*MACHINE.ActiveToWait
- Pool.*MACHINE.WaitToIneligible
- PoolDefault.Usage
- PoolDefault.PoolSize
- PoolDefault.ReservedSize
- PoolDefault.DatabaseFaults
- PoolDefault.NonDatabaseFaults
- PoolDefault.NonDatabasePages
- PoolDefault.ActiveToWait

This section contains the following topics:

sysstat Node (see page 10)
Configure a Node (see page 12)
Configure Dynamic Alarm Thresholds (see page 13)
Manage Profiles (see page 14)
Delete Profile (see page 14)

sysstat Node

This node lets you view the probe information and configure the setup properties of the iSeries System Statistics Monitoring probe. You can also view the alarms and their properties.

Navigation: sysstat

Set or modify the following values as required:

sysstat > Probe Information

This section provides information about the probe name, probe version, start time of the probe, and the probe vendor.
sysstat > Setup Configuration

This section lets you configure the log properties and define commands to monitor the system statistics.

- **Log Level**: Specifies the detail level of the log file.
  Default: 0-Fatal
- **Log Size (KB)**: Specifies the maximum size of a log file.
  Default: empty
- **Check Interval in Seconds (Perform check each)**: Specifies the time duration before the next log scan for new messages.
  Default: 60

sysstat > Alarm Messages

This section lets you view the messages and their properties.

- **Name**: Indicates the message name which is used to refer to the profile message.
- **Text**: Indicates the message text.
- **Level**: Indicates the message severity level.
- **Subsystem**: Indicates the subsystem_id that the watcher generates.
- **Default**: Indicates whether the message is the default message for this alarm condition. The profiles without alarm messages use default alarm message.

Profiles Node

This node is used to create a monitoring profile. You can create multiple monitoring profiles with different criteria to monitor the statistics variable. The new profiles are displayed as child nodes.

**Note**: This node does not contain any sections or fields.

<Profile Name> Node

This node lets you configure the properties of the monitoring profile. The profile monitors the statistics variables and alert messages, which are generated when the variable value exceeds the specified limiting value.

**Note**: This node is named as **profile name** in the document and is user configurable.

**Navigation**: sysstat > Profiles > **profile name**
Set or modify the following values required:

**profile name > General Configuration**

This section lets you activate the monitoring profile.

- Variable: Specifies the variable that the iSeries System Statistics Monitoring probe monitors.
  Default: Existing
  Note: This field is left empty if the profile name is same as the variable name.

**profile name > Alarm Message**

This section lets you configure the alarm message properties.

- When Value: Specifies the conditional operator for the variable value.
  Default: Never
- Use alarm message: Specifies the alarm message name.
- When Sample Value Exceeds: Specifies that this value has to be less than the variable value otherwise an alarm is issued.
- Actions: Lets you fetch the current variable value.

**profile name > Quality of Service Message**

This section lets you view the QoS message configurations of the monitoring profile.

---

**Configure a Node**

This node provides the information to configure a section within a node.

Each section within the node enables you to configure the properties of the iSeries System Statistics Monitoring probe.
Configure Dynamic Alarm Thresholds

Dynamic thresholds are configured at the QoS metric level in each probe that publishes an alarm for a QoS metric.

**Important!** In order to create dynamic alarm thresholds, you must have the baseline_engine probe version 2.0 installed on the robot and configured.

Follow these steps for each QoS metric where you want to configure dynamic thresholds:

1. Select a node in the tree to view any associated monitors and QoS metrics.
2. Select the monitor you want to modify in the table.
3. Select the Publish Data and Compute Baseline options to enable the Dynamic Alarm Thresholds section of the configuration.
4. Choose a threshold algorithm. There are three algorithms allowed for dynamic alarm thresholds:
   - **Scalar:** Each threshold is a specific value from the computed baseline.
   - **Percent:** Each threshold is a specific percentage of the computed baseline.
   - **Standard Deviation:** Each threshold is a measure of the variation from the computed baseline. A large standard deviation indicates that the data points are far from the computed baseline and a small standard deviation indicates that they are clustered closely around the computed baseline.

   **Important!** To change the subsystem ID, you must have the baseline_engine probe version 2.1 installed on the robot and configured.

5. (Optional) If the Subsystem ID listed in the Subsystem (default) field is not correct for your configuration, enter the correct ID in the Subsystem (override) field.
6. Save your settings.
Manage Profiles

You can add a monitoring profile which is displayed as a child node under the sysstat node.

Follow these steps:
1. Click Options beside the Profiles node.
2. Click Add Profile.
3. Specify profile details in the Add Profile dialog and click Submit.
   Refer to the General Configuration section of the profile name node for field descriptions.
   The profile details are saved.

Delete Profile

You can delete the profile in the iSeries System Statistics Monitoring probe when you no longer want the probe to monitor the system statistics.

Follow these steps:
1. Click Options beside the profile name node.
2. Click Delete.
   The profile is deleted.
Chapter 3: QoS Threshold Metrics

Many Nimsoft Monitor probes ship with default QoS threshold values set. The default threshold values provide an idea of the type of values to be entered in the fields and are not necessarily recommended best practice values. To aid in tuning thresholds and reducing falsepositive alarms, this section describes the QoS metrics and provides the default QoS thresholds.

This section contains the following topics:
- [sysstat Alert Metrics Default Settings](#) (see page 16)

The following table describes the QoS metrics that can be configured using the sysstat probe.

<table>
<thead>
<tr>
<th>Monitor Name</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>QOS_AS400_ACTIVEJOBSINSYSTEM</td>
<td>Jobs</td>
<td>AS400 active jobs in system</td>
</tr>
<tr>
<td>QOS_AS400_BATCHJOBSHELDONJOBQUEUE</td>
<td>Number</td>
<td>AS400 batch jobs held on job queue</td>
</tr>
<tr>
<td>QOS_AS400_BATCHJOBSRUNNING</td>
<td>Number</td>
<td>AS400 batch jobs running</td>
</tr>
<tr>
<td>QOS_AS400_BATCHJOBSWAITINGFORMESSAGES</td>
<td>Number</td>
<td>AS400 batch jobs waiting for messages</td>
</tr>
<tr>
<td>QOS_AS400_CURRENTUNPROTECTEDSTORAGEUSED</td>
<td>Megabyte</td>
<td>AS400 current unprotected storage used</td>
</tr>
<tr>
<td>QOS_AS400_JOBSINSYSTEM</td>
<td>Number</td>
<td>AS400 jobs in system</td>
</tr>
<tr>
<td>QOS_AS400_PERCPERMANENTADDRESSES</td>
<td>%</td>
<td>AS400 permanent addresses</td>
</tr>
<tr>
<td>QOS_AS400_PERCPROCESSINGUNITUSED</td>
<td>%</td>
<td>AS400 processing units used</td>
</tr>
<tr>
<td>QOS_AS400_PERCSYSTEMASPUSED</td>
<td>%</td>
<td>AS400 system ASP used</td>
</tr>
<tr>
<td>QOS_AS400_POOLSIZE</td>
<td>Kilobyte</td>
<td>AS400 pool size</td>
</tr>
<tr>
<td>QOS_AS400_SYSTEMASP</td>
<td>Megabyte</td>
<td>AS400 system ASP</td>
</tr>
<tr>
<td>QOS_AS400_TOTALAUXILIARYSTORAGE</td>
<td>Megabyte</td>
<td>AS400 total auxiliary storage</td>
</tr>
<tr>
<td>QOS_AS400_USERDISCONNECTED</td>
<td>%</td>
<td>AS400 users disconnected</td>
</tr>
<tr>
<td>QOS_AS400_USERSSIGNEDON</td>
<td>%</td>
<td>AS400 users signed on</td>
</tr>
</tbody>
</table>
**sysstat Alert Metrics Default Settings**

This section contains the alert metric default settings for the sysstat probe.

<table>
<thead>
<tr>
<th>QoS Metric</th>
<th>Warning Threshold</th>
<th>Warning Severity</th>
<th>Error Threshold</th>
<th>Error Severity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VarLimitExceeded</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Warning</td>
<td>Variable limit exceeded</td>
</tr>
</tbody>
</table>