Monitoring the Availability of a Device and its Response Time

For System Center Forum readers that might have missed our first blog post of February 4th, this is Jalasoft's second article about Xian Io's functionality in a series of eight. We tried to come up with solutions to problems that most Network Administrators encounter on a daily basis, so our topic selected for this occasion is the monitoring of a device's availability and response time.

Unfortunately, most network problems are caused by a device or computer that is down or due to delays on the response time of network devices; therefore, knowing immediately if any of your machines is not available or is becoming bottlenecked in terms of response time, is one of the most important and basic network administration tasks.

Xian Network Manager Io offers a simple but powerful mechanism to monitor these aspects for all your network devices and computers. This mechanism lets you know immediately if any of your devices went down and also allows you to monitor their response time to prevent any future problems. Let's take a look at the Xian Io for Ops Mgr 07 Device Availability smart management pack (SMP):

Discovering a device:

The Xian Io device availability SMP will let you discover virtually any computer, device, machine or even a website that has its own IP address, just follow these simple steps:

1. Open the Xian console.
2. Go to the 'Device > Add' menu.
3. Select the 'availability' plug-in and then click on the 'OK' button. A discovery rule wizard will be displayed.
4. Click on the 'Parameters' tab.
5. Select if you want to discover just one device or several ones under a subnet or within a network range.
6. Provide the IP address(es) of the device(s) you want to discover.
7. Provide the proper timeout and number of retries parameters.
8. You can leave the 'active rules options' and 'Network Manager Server' tabs with the default values and then click on the 'Finish' button.

To see all your discovered 'availability' devices, simply click on the 'Views' button and then double click on the 'Network > Standard views >Availability' folder.

Configuring the 'ICMP Availability' rule:

Once you have discovered a device, you should add an 'ICMP availability' rule to it. This rule will monitor both the ICMP availability and response time, granting you the possibility of generating independent alerts and counters. This rule may be configured to consider the device "not available" after a number of failed connection retries and consequently generate an alert on Ops Mgr 07. In a similar way, the ICMP availability rule can send an alert to Ops Mgr 07 if the device's response time is

greater than a predefined threshold. Finally, this rule can constantly gather performance counters so you may later generate the proper reports on Ops Mgr 07.

To add and configure this rule simply follow the procedure below:

1. Open the Xian console.
2. Right click on any desired 'availability' device and then click on the 'add rule to execute' context menu option.
3. Select the 'Available rules > General > ICM availability' rule and then click 'OK'. The rule configuration wizard will be displayed.
4. Click on the 'Active rule options' tab and set the maximum number of times Xian will try to contact the device before considering it is down and also provide a specific name for the rule.
5. Click on the 'ICMP availability parameters' tab and:
    a. Check the 'Verify ICMP availability' checkbox and provide the proper max. retries and timeout parameters.
    b. Check the 'Alerts' checkbox and select the severity level of the alert that will be sent to Ops Mgr 07 if the device is not available.
    c. If you also want to collect performance counters to be available on the Ops Mgr 07 console and for reports, you can check the 'Collect ICMP availability counters' checkbox.
    d. Check the 'Consider device not available when it is not accessible through ICMP and disable it' checkbox.
6. Click on the 'ICMP response time parameters' tab and:
    a. Check the 'generate alerts when value is above threshold' checkbox and define the response time threshold and the severity of the alert that will be displayed on the Ops Mgr 07 console if the response time of the device is greater than the defined threshold.
    b. Check the 'Collect response time counters' checkbox if you want to be able to generate the proper response time performance graphs and reports on Ops Mgr 07.
7. Click on the 'Schedule' tab and configure the following:
    a. Normal schedule: You can define the interval of the rule execution (for example 5 minutes)
    b. Not available schedule: If Xian encounters that the device is not available, this rule can run with a different schedule so it will be more accurate determining the moment the device is available again.
8. Click on the 'Finish' button.

After performing these configurations, Xian will monitor the availability and response time of your devices and computers and you will be able to generate reports like the following ones:

Report for Device Availability:
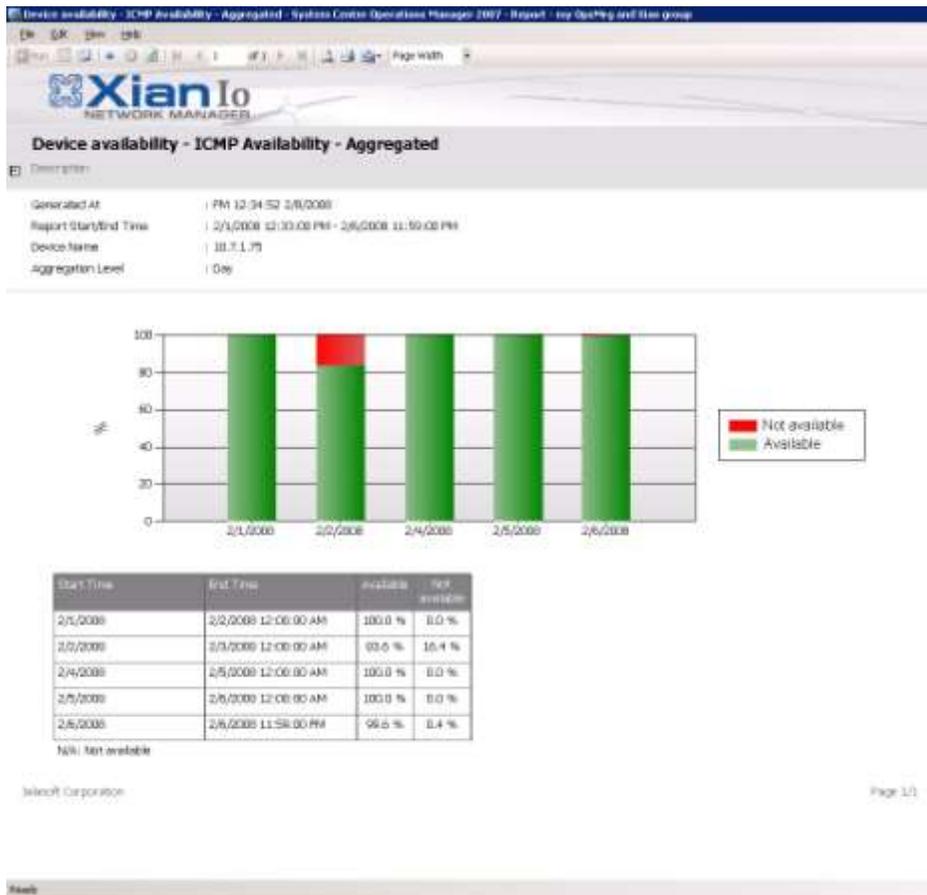
Report for ICMP Response time:

We hope that you find this article helpful. If you have any questions or comments please reply to this post, and we'll make sure to send you an answer as soon as possible. For further information on Xian Io for Ops Mgr 07 please visit our website www.jalasoft.com.