OpenNMS 101

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Module 9: Page Sequence Monitor

Page Sequence Monitor (PSM)

- OpenNMS has a range of monitors, from the simple: ICMP and TCP, to the complex, the PSM and Selenium.

- The Page Sequence Monitor allows for in-depth monitoring of websites and applications.

- You modify the default monitor with a "page-sequence" parameter which lists a series of pages that the monitor should access

Exercise #9: OpenNMS PSM

- Create the PSM-based `OpenNMS-Login` service detector
- Add it to the `localhost` node
- Note monitoring status
- Add a monitor to the existing Class polling package and insure monitoring is occurring
- Cause an outage
- Restore the outage

Edit Default Foreign Source

Navigate to Configure → Manage Provisioning Requisitions →
Edit Default FS

Add OpenNMS-Login Service
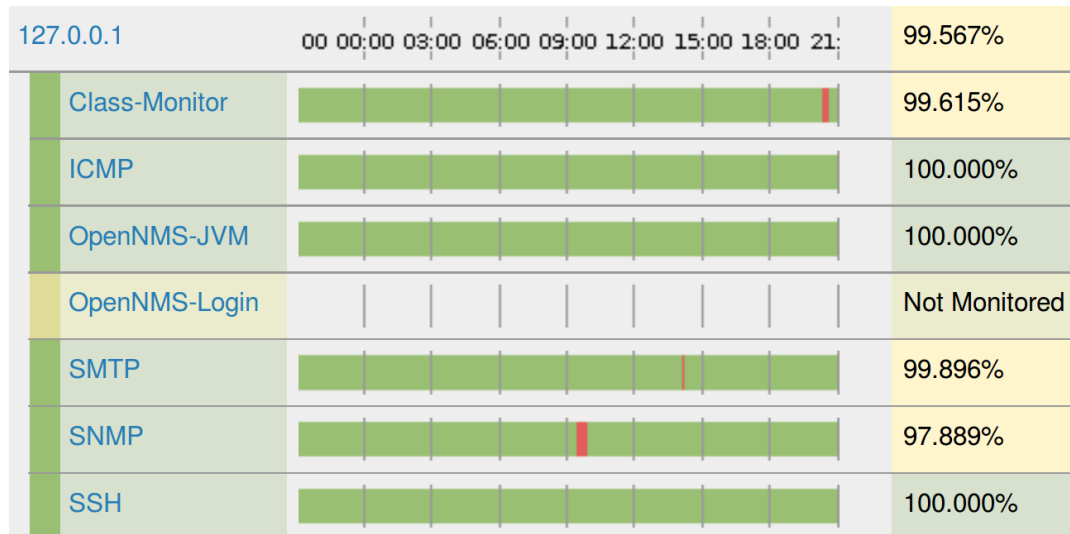
- Add the new PSM Detector with port and url
- Save the detector
- Save changes to the Default FS
- Rescan localhost

127.0.0.1	00 00:00 03:00 06:00 09:00 12:00 15:00 18:00 21:	99.567%
Class-Monitor		99.615%
ICMP		100.000%
OpenNMS-JVM		100.000%
OpenNMS-Login		Not Monitored
SMTP		99.896%
SNMP		97.889%
SSH		100.000%

Create a Monitor Service

```xml
<service name="OpenNMS-Login" interval="30000" user-defined="true" status="on">
  <parameter key="retry" value="1"/>
  <parameter key="timeout" value="5000"/>
  <parameter key="rrd-repository" value="/usr/share/opennms/share/rrd/response"/>
  <parameter key="ds-name" value="opennmslogin"/>
  <parameter key="page-sequence">
    <page-sequence>
      <page path="/opennms/index.jsp" port="8980" successMatch="Password" virtual-host="${nodelabel}" />
      <page path="/opennms/j_spring_security_check"  port="8980" method="POST" virtual-host="${nodelabel}" >
        <parameter key="j_username" value="admin"/>
        <parameter key="j_password" value="admin"/>
      </page>
      <page path="/opennms/index.jsp" port="8980" successMatch="Log Out" virtual-host="${nodelabel}" />
      <page path="/opennms/event/index" port="8980"
            successMatch="Event Queries" virtual-host="${nodelabel}" />
      <page path="/opennms/j_spring_security_logout" port="8980"
            successMatch="input_j_username" virtual-host="${nodelabel}" />
    </page-sequence>
  </parameter>
</service>


<monitor service="OpenNMS-Login" class-name="org.opennms.netmgt.poller.monitors.PageSequenceMonitor"/>
```

Update poller-configuration.xml

- cd /opt/opennms/etc
- Run

  wget -N http://www.opennms.org/Training/Config/Exercise%209/poller-configuration.xml

- Restart OpenNMS

  systemctl restart opennms

Might Fail on Restart

```
# systemctl restart opennms
```

Recent Events			
284	12/6/16 21:11:41	Normal	The OpenNMS-Login outage on interface 192.168.122.1 has been cleared. Service is restored.
283	12/6/16 21:11:37	Normal	The OpenNMS-Login outage on interface 127.0.0.1 has been cleared. Service is restored.
282	12/6/16 21:11:31	Normal	The OpenNMS-Login outage on interface 10.0.2.15 has been cleared. Service is restored.
265	12/6/16 21:10:57	Minor	OpenNMS-Login outage identified on interface 192.168.122.1 with reason code: Connection refused.
264	12/6/16 21:10:56	Minor	OpenNMS-Login outage identified on interface 127.0.0.1 with reason code: Connection refused.

Test the New Monitor

Change the "admin" password from "admin"

Note Event, Alarm and Notice

| 287 | 12/6/16 21:14:43 | | Minor | OpenNMS-Login outage identified on interface 127.0.0.1 with reason code: Failed to find 'Log Out' in page content at http://127.0.0.1:8980/opennms/index.jsp. |

| ☐ | | 35 | localhost ⊞ ⊟ | 2 | Dec 6, 2016 9:14:43 PM ◁ ▷ | OpenNMS-Login outage identified on interface 127.0.0.1 with reason code: Failed to find 'Log Out' in page content at http://127.0.0.1:8980/opennms /index.jsp. |

| ☐ | 18 | 287 | | Minor | Dec 6, 2016 9:14:43 PM | | | localhost ⊞ ⊟ | 127.0.0.1 ⊞ | OpenNMS-Login ⊞ |
| | | | | | The OpenNMS-Login service poll on interface localhost (127.0.0.1) on node localhost failed at Tuesday, December 6, 2016 9:14:43 PM EST. | | | | | |