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**C:\Users\karpon\Documents\Real-Status Marketing Collateral\Logos\real-status logo.jpg**

OpenNMS – Install Procedure

Author: Rupert Ogilvie

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Introduction

We’ve picked 1.8.5 (the latest stable version of OpenNMS at time of writing) as the version that we’ll be using for the first release.

All files (except net-snmp) listed in this install are available from Real-Status. See Appendix A for the file list and directory structure.

For more information and advanced installation/configuration options please visit the OpenNMS wiki page: <http://www.opennms.org/wiki/Main_Page>

When following the instructions, the assumption has been made that a 64-bit system is in use. If a 32-bit system is being used, replace any x86\_64 with i386.

This install also assumes that the server is running with more than 6GB of RAM.

Pre-requisites

Centos v5.5 or later 64-bit. Clean install, just base system, no X.

Create an OpenNMS user; you will need to enter the root password when prompted.

>>su -c “useradd opennms”

Log in as this new opennms user and transfer the install directories and files into the **/home/opennms** user directory.

\*Note\* you can run all these commands as root – in which case you can ignore the “su –c”. But it’s best practice not to run commands as root so on your head be it!

Net-SNMP

Net-SNMP contains the “snmpwalk” and “snmpget” commands. These are very useful when troubleshooting collection issues. As before all commands will need root password. Navigate to **/home/opennms/net-snmp** directory.

>>su –c “rpm -Uvh \*.rpm”

Java

OpenNMS is Java based so a good java source is needed. The sun java library is the ideal choice as this java library has been tested with OpenNMS and the INMS server. Navigate to **/home/opennms/java**. First make sure that the file is executable – then run it. You will need to hit enter during the installation when prompted (the default values are correct).

>>su –c “chmod a+x jdk-6u24-linux-x86\_64-rpm.bin”

>>su –c “./jdk-6u24-linux-x86\_64-rpm.bin”

Postgresql

First install the dependencies – navigate to **/home/opennms/postgres/dependencies**

>>su -c “rpm –Uvh libxslt-1.1.17-2.el5\_2.2.x86\_64.rpm”

OpenNMS uses a postgresql database so the complete install is needed.

Navigate back to the **/home/opennms/postgresql** directory

>>su –c “rpm –Uvh \*.rpm”

Run:

>>su – c “/etc/init.d/postgresql initdb”

This creates the initial database and settings.

Copy the files **postgresql.conf** and **pg\_hba.conf** to the **/var/lib/pgsql/data/postgresql.conf** to allow connections:

>>su – c “\cp –f \*.conf /var/lib/pgsqsl/data”

Finally start postgresql.

>> su –c “/etc/init.d/postgresql start”

Installation of OpenNMS

Navigate to the **/home/opennms/misc** directory to install some 3rd party tools ONMS uses.

Jicmp –Java ICMP

>>su –c “rpm –Uvh jicmp-1.0.7-1.x86\_64.rpm”

Libsmi

>> su –c “rpm –Uvh libsmi-0.4.5-2.x86\_64.rpm”

OpenNMS

The OpenNMS install is broken into four components. The first two packages listed below contain the main ONMS install. The webapp package is the http front end which will only be needed if ONMS is to be used as a full NMS solution. Navigate to the **/home/opennms/opennms** directory.

>>su –c “rpm –Uvh opennms-\*.rpm”

OpenNMS configuration files:

There is a pre-configured set of xml files maintained by Real-Status which are designed to ensure that all information for the INMS server is collected as well as including some performance tuning.

Firstly, change the permissions of the opennms directory and files to belong to the opennms user.

>>su –c “chmod –Rf /opt/opennms”

Copy the supplied files in the “**/home/opennms/etc**” directory into **/opt/opennms/etc** to replace the existing files.

>>su –c “\cp –Rf /home/opennms/etc /opt/opennms/etc”

Finalise install:

>>su –c “/opt/opennms/bin/runjava –s”

>>su –c “/opt/opennms/bin/install –discU”

Modify configuration (see OpenNMS Administration.docx)

Iplike

Navigate **to cd /home/opennms/misc**

>>su –c “rpm –Uvh iplike-1.0.7-1.x86\_64.rpm”

SNMPd

The local SNMP daemon is off by default. The file needs to be modified to accommodate the network the server is running in.

>>su –c “vi /etc/snmp/snmpd.conf”

Find the line that looks like:

com2sec notConfigUser default public

And change it to the following where NETWORK/MASK is the local IP network and subnet mask that the server is running on and COMSTRING is the SNMP community string in use on the network (or the one used in the local network if there are several strings in use).

com2sec notConfigUser NEWORK/MASK COMSTRING

Secondly, find the line that looks like this:

View systemview included .1.3.6.1.2

And change it to:

View systemview included .1 80

Start the service with:

>>service snmpd start

Check the configuration with:

>>su –c “snmpwalk –v 2c –c <COMSTRING> <IPADDR> .1.3.6.1.2

This should return a list of information on the local device. If nothing is returned or a timeout occurs then the configuration is wrong.

Firewall configuration

Open ports on firewall to allow OpenNMS access if remote access to these facilities is required:

* 5432 – for postgres
* 8980 – for opennms webapp

Modify **/etc/sysconfig/iptables:**

>>su –c “vi /etc/sysconfig/iptables”

Add these lines before the final REJECT command in the iptables file.

-A RH-Firewall-1-INPUT –p tcp –m tcp --dport 8980 –j ACCEPT

-A RH-Firewall-1-INPUT –p tcp –m tcp --dport 5432 –j ACCEPT

Then restart the firewall daemon from command line:

>>su –c “/etc/init.d/iptables restart”

Configure the new services for automatic start-up:

>>su –c “/sbin/chkconfig --add postgresql”

>>su –c “/sbin/chkconfig –level 2345 postgresql on

>>su –c “/sbin/chkconfig --add opennms”

Start OpenNMS:

>>su –c “/etc/init.d/opennms start”

Monitor the startup log:

>>tail –f /opt/opennms/logs/daemon/output.log

Once OpenNMS has started test the connection by navigating to http://<ip address>:8980/opennms from a remote machine. This address should take you to OpenNMS’ login splash screen.

Appendix A – Files needed for install

Replace ‘x86\_64’ with the appropriate tag for either 32- or 64-bit Linux. This will either be or i386 or x86\_64 respectively. It is assumed you are using 64bit Linux for this document.

**<dir> Java**

* Jdk-6u24-linux-x86\_64.rpm.bin

**<dir> postgres**

* Postgresql-libs-8.4.6-1PGDG.rhel.x86\_64.rpm
* Postgresql-8.4.6-1PGDG.rhel.x86\_64.rpm
* Postgresql-devel-8.4.6-1PGDG.rhel.x86\_64.rpm
* Postgresql-server-8.4.6-1PGDG.rhel.x86\_64.rpm
* **<dir> dependencies**
  + libxslt-1.1.17-2.el5\_2.2.x86\_64.rpm

**<dir> misc**

* iplike-1.0.7-1.x86\_64.rpm
* jicmp-1.0.7-1.x86\_64.rpm
* libsmi-0.4.5-2.x86\_64.rpm

**<dir> opennms**

* Opennms-1.8.5-1.noarch.rpm
* Opennms-core-1.8.5-1.noarch.rpm
* Opennms-remote-poller-1.8.5-1.noarch.rpm
* Opennms-webapp-jetty-1.8.5-1.noarch.rpm

**About Real-Status**

Real-Status is a modelling and visualisation Software Company based in Cambridge, UK.  Utilising sophisticated computer games graphics techniques and knowhow, it creates real-time models of enterprise’s IT infrastructure in 3D and overlays performance and business metrics, so IT managers can take informed and business-led decisions in context.

Real-Status’ software is currently in final testing with multiple customers, and it will be on general release in Q2 2011.  Real-Status’s software models both physical and virtual devices and their relationships, and it aggregates and visualises performance metrics from multiple management tools.

For more information visit [www.real-status.com](http://www.real-status.com/)