

Open Source Network Management Solution

Contributed by hakimkt
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An open-source network management solution that will bring cheer to a Network Administrator Managing each and every single node in a network manually is a very difficult and tedious task for any Network Administrator. So, to automate these processes many company developed variety of NMS (Network Management Solutions) like IBM's Tivoli and HP's OpenView. But the problem with these solutions are that they are expensive and can be adopted only by big companies. But what about a medium-sized company with a few hundred computers but a very complex infrastructure? Enter an open source alternative, OpenNMS. Managing each and every single node in a network manually is a very difficult and tedious task for any Network Administrator. So, to automate these processes many company developed variety of NMS (Network Management Solutions) like IBM's Tivoli and HP's OpenView. But the problem with these solutions are that they are expensive and can be adopted only by big companies. But what about a medium-sized company with a few hundred computers but a very complex infrastructure? Enter an open source alternative, OpenNMS

OpenNMS or the open-source Network Management Solution is a Linux-based software that works on SNMP (Simple Network Management Protocol) to trace and check the performance of a given group of nodes like network devices (routers and switches) and PCs in a network, and actively monitor and acknowledge the services provided over the network. This package is written almost in Java and it uses XML to store the configuration data. This makes it very portable.

For front-end, it has a Web-interface that can be accessed through Tomcat from anywhere in the network.

Pre-installation requirements
We tested OpenNMS on a PCQLinux 8.0 work- station with PostgreSQL, JDK 1.4 and Tomcat4 also installed. We'll assume that your system has JDK 1.4 and Tomcat 4 already installed and configured properly, for the purpose of OpenNMS. Refer to

PCQuest September 2002 (or visit www.pcquest.com/content/search/showarticle.asp?arid=38577&way=search) for more information on installing Tomcat.

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To begin installation, you have to first make your PCQLinux 8.0 box compatible for OpenNMS. For that, first download and install the packages (rrdtool, sharutils and metamail) one after another from <http://public.planetmirror.com/pub/opennms/releases/latest/linux-i386-redhat-8/>

to your home directory, and issue the following command.
#rpm -ivh rrdtool-1.0.35-0.onms.1.i386.rpm
#rpm -ivh sharutils-4.2.1-7.i386.rpm
#rpm -ivh metamail-2.7-25.i386.rpm

Now check if your PostgreSQL Server is running or not by the following commands
#/etc/init.d/postgresql status

They should return "running". If not, issue the following command to start it up
#/etc/init.d/postgresql start

Now start your Tomcat4 up by issuing
#/etc/init.d/tomcat start

Installing OpenNMS
Known issue If at the time of installing the opennms-1.1.1-1 RPM you get an INDENT error, it means that a user other than "postgres" is not allowed to connect to the database as indent and OpenNMS (the package) is trying to connect to the database as a new user "opennms". So the easiest way to get around it is by modify the file

"/var/lib/pgsql/data/pg_hba.conf" and removing the "host" symbol before the following lines in it
local all trust host all 127.0.0.1

255.255.255.255 trust To install it, first download the two files (opennms-1.1.1-1.i386.rpm and opennms-webapp-1.1.1-1.i386.rpm) from the above-mentioned site to your home directory. And issue these

commands.
#rpm -ivh opennms-1.1.1-1.i386.rpm
#rpm -ivh opennms-webapp-1.1.1-1.i386.rpm

It will install OpenNMS and automatically create the database in the PostgreSQL server. Running OpenNMS To run OpenNMS through Tomcat, you have to create a Context for it. To do so open the

file /var/tomcat4/conf/server.xml and add the following lines just above the "Tomcat Examples Context" and restart Tomcat with the

command
#/etc/init.d/tomcat4 restart

Now open the file /opt/OpenNMS/etc/discovery-configuration.xml and add your network range on which OpenNMS will keep a watch. For example
192.168.1.1 192.168.1.254

and then cd to /opt/OpenNMS/bin and issue the command to start

OpenNMS #sh opennms.sh startUsing OpenNMSTo use OpenNMS, open any browser and type in the address: 127.0.0.1:8080/opennms in the address bar and hit enter. You can also access through your Network address from any other PC in the network. It will prompt you for Authentication. Issue the Default username and password of OpenNMS (admin/admin) and you will be directed to the OpenNMS main page. From here onwards, things are self-explanatory. For more information on OpenNMS visit <http://OpenNMS.org>HakimKThakimkt@yahoo.com