



**Multiple Nimsoft Robot
Install on a Linux Server
v1.01**



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How to Install Multiple Nimsoft Robots on a Single Linux Host

Summary Description

This document is designed to describe how to install multiple Nimsoft robots on a single Linux host. This can be useful if you need to run more than one copy of the same probe on a server. An example of this is that you need to monitor 7000 network devices from a single server. The SNMPGet can run approximately 2500 profile in a single instance of the probe; this seems to be a network stack limitation. However CPU and Memory on a normal server is would be able to cope with 3 or 4 times this volume of traffic.

Hardware and Software Required

Hardware

- Multi-Core processor, one for each robot to be install (e.g. Quad core = 4 Robots)
- Memory, minimum 1Gb per processor core (e.g. Quad core = 4Gb Ram or more)
- Network Interface Cards, 1 NIC per robot (e.g. Quad core = 4 NIC's)

Software

- Nimsoft Monitor (This was tested using NM v5.61 installed on Windows 2008 R2)
- Linux with GLIB v2.3 or above (This was tested using Fedora Core 16)

Pre-Install Considerations

- Set static IP addresses for each of the NIC's that are to be used by the all of the robots.
- Before you start the installation it is important to consider the port ranges that are to be used by the Robots, their install folders and robot name.
- This paper was written using Fedora Core 16. The normal RunLevel for Fedora is level 5, however this may vary in other Linux distribution's (3 and 4 are also common). Fedora's start-up scripts are stored in /etc/rc.d/init.d and uses chkconfig command (sysv-rc-conf is another common tool used by other distributions) to list and change what scripts are enabled for which run levels. Please check your Linux documentation for the correct RunLevel and start-up configuration tools.
- In this document I will be using the following configuration for a 4 robot install

	IP Address	Probe Port Range	Install Path	Robot Name
NIC 1	172.26.183.71	48100 to 48199	/opt/nimsoft1	fedora16-1
NIC 2	172.26.183.72	48200 to 48299	/opt/nimsoft2	fedora16-2
NIC 3	172.26.183.73	48300 to 48399	/opt/nimsoft3	fedora16-3
NIC 4	172.26.183.74	48400 to 48499	/opt/nimsoft4	fedora16-4



Robot Installation Process

First Robot Install on Linux Host

1. Install the robot using the normal “nimldr” script, as described in the “Robot Installation from the Nimsoft Archive” section of the “NMS_5.61--Nimsoft Server Installation Guide.pdf” with one exception.
2. When you are asked “Where should NMS be installed?” you should answer “/opt/nimsoft1” as shown below (A copy of the full script can be found in Appendix 1)
 - Where should NMS be installed?
==>[/opt/nimsoft] /opt/nimsoft1
3. We now need to modify the configuration of the newly installed robot. This can be done in the Infrastructure Manager using the “Raw Configure...” option of the Controller Probe of the newly installed robot. This can also be done by stopping the newly installed robot and modifying the Robot.cfg file (/opt/nimsoft1/robot/robot.cfg)
 - The following items need to be modified
 - robotname = fedora16-1
 - robotip = 172.26.183.71
 - first_probe_port = 48100
 - set_qos_source = yes
 - The following items need to be added
 - controller_port = 48100 (Same as the first_probe_port)
 - spooler_port = 48101 (Same as the first_probe_port + 1)
4. Once all the changes have been made restart the robot.
5. In the Infrastructure Manager check that the following probes have the correct port numbers
 - controller = 48100
 - spooler = 48101
 - hdb = 48102
6. Stop the newly installed probe (/opt/nimsoft01/bin/niminit stop)
7. Check that there are no Nimsoft processes running (ps aux | grep nim)
8. Copy the “/etc/rc.d/init.d/nimbus” script to “/etc/rc.d/init.d/nimbus1”



Second Robot Install on Linux Host

1. Install the robot using the normal “nimldr” script, as described in the “Robot Installation from the Nimsoft Archive” section of the “NMS_5.61--Nimsoft Server Installation Guide.pdf” with one exception.
2. When you are asked “Where should NMS be installed?” you should answer “/opt/nimsoft2” as shown below
 - Where should NMS be installed?
==>[/opt/nimsoft] /opt/nimsoft2
3. We now need to modify the configuration of the newly installed robot. This can be done in the Infrastructure Manager using the “Raw Configure...” option of the Controller Probe of the newly installed robot. This can also be done by stopping the newly installed robot and modifying the Robot.cfg file (/opt/nimsoft2/robot/robot.cfg)
 - The following items need to be modified
 - robotname = fedora16-2
 - robotip = 172.26.183.72
 - first_probe_port = 48200
 - set_qos_source = yes
 - The following items need to be added
 - controller_port = 48200 (Same as the first_probe_port)
 - spooler_port = 48201 (Same as the first_probe_port + 1)
4. Once all the changes have been made restart the robot.
5. In the Infrastructure Manager check that the following probes have the correct port numbers
 - controller = 48200
 - spooler = 48201
 - hdb = 48202
6. Stop the newly installed probe (/opt/nimsoft02/bin/niminit stop)
7. Check that there are no Nimsoft processes running (ps aux | grep nim)
8. Copy the “/etc/rc.d/init.d/nimbus” script to “/etc/rc.d/init.d/nimbus2”



Third Robot Install on Linux Host

1. Install the robot using the normal “nimldr” script, as described in the “Robot Installation from the Nimsoft Archive” section of the “NMS_5.61--Nimsoft Server Installation Guide.pdf” with one exception.
2. When you are asked “Where should NMS be installed?” you should answer “/opt/nimsoft3” as shown below
 - Where should NMS be installed?
==>[/opt/nimsoft] /opt/nimsoft3
3. We now need to modify the configuration of the newly installed robot. This can be done in the Infrastructure Manager using the “Raw Configure...” option of the Controller Probe of the newly installed robot. This can also be done by stopping the newly installed robot and modifying the Robot.cfg file (/opt/nimsoft3/robot/robot.cfg)
 - The following items need to be modified
 - robotname = fedora16-3
 - robotip = 172.26.183.73
 - first_probe_port = 48300
 - set_qos_source = yes
 - The following items need to be added
 - controller_port = 48300 (Same as the first_probe_port)
 - spooler_port = 48301 (Same as the first_probe_port + 1)
4. Once all the changes have been made restart the robot.
5. In the Infrastructure Manager check that the following probes have the correct port numbers
 - controller = 48300
 - spooler = 48301
 - hdb = 48302
6. Stop the newly installed probe (/opt/nimsoft03/bin/niminit stop)
7. Check that there are no Nimsoft processes running (ps aux | grep nim)
8. Copy the “/etc/rc.d/init.d/nimbus” script to “/etc/rc.d/init.d/nimbus3”



Last Robot Install on Linux Host

1. Install the robot using the normal “nimldr” script, as described in the “Robot Installation from the Nimsoft Archive” section of the “NMS_5.61--Nimsoft Server Installation Guide.pdf” with one exception.
2. When you are asked “Where should NMS be installed?” you should answer “/opt/nimsoft4” as shown below
 - Where should NMS be installed?
==>[/opt/nimsoft] /opt/nimsoft4
3. We now need to modify the configuration of the newly installed robot. This can be done in the Infrastructure Manager using the “Raw Configure...” option of the Controller Probe of the newly installed robot. This can also be done by stopping the newly installed robot and modifying the Robot.cfg file (/opt/nimsoft4/robot/robot.cfg)
 - The following items need to be modified
 - robotname = fedora16-4
 - robotip = 172.26.183.74
 - first_probe_port = 48400
 - set_qos_source = yes
 - The following items need to be added
 - controller_port = 48400 (Same as the first_probe_port)
 - spooler_port = 48401 (Same as the first_probe_port + 1)
4. Once all the changes have been made restart the robot.
5. In the Infrastructure Manager check that the following probes have the correct port numbers
 - controller = 48400
 - spooler = 48401
 - hdb = 48402
6. Stop the newly installed probe (/opt/nimsoft04/bin/niminit stop)
7. Check that there are no Nimsoft processes running (ps aux | grep nim)
8. Copy the “/etc/rc.d/init.d/nimbus” script to “/etc/rc.d/init.d/nimbus4”



Setup all Nimsoft Robots to Run at Startup

This paper was written using Fedora Core 16. The normal RunLevel for Fedora is level 5, however this may vary in other Linux distribution's (3 and 4 are also common). Fedora's start-up scripts are stored in `/etc/rc.d/init.d` and uses `chkconfig` command (`sysv-rc-conf` is another common tool used by other distributions) to list and change what scripts are enabled for which run levels. Please check your Linux documentation for the correct RunLevel and start-up configuration tools.

Disable and delete the default nimbus start-up script

- `chkconfig nimbus off`
- `rm /etc/rc.d/init.d/nimbus`

Enable the 4 Robot's to run at start-up

- `chkconfig --level 5 nimbus1 on`
- `chkconfig --level 5 nimbus2 on`
- `chkconfig --level 5 nimbus3 on`
- `chkconfig --level 5 nimbus4 on`

Finally double check that all 4 robots are enabled to start at RunLevel 5

- `chkconfig --list`



Appendix 1

This program will help you install NMS on the current system. You will be given a series of questions, default answers are in brackets:

```
query? ==>[default]
```

Pressing Enter directly will use the default value, otherwise you should type in the requested information.

If express installation is specified, the default value will be used automatically.

A log of the installation is found in the file: nimldr.log
WARNING: The temporary files directory is removed after installation!

Where should nimldr store temporary files?

```
==>[/opt/nimsoft/tmp]
```

Beginning Robot installation:

Is this a Cloud installation?

```
==>[no]
```

Do we have the installation file locally?

```
==>[no]
```

Is there a host running a Nimsoft Hub we can query for the installation file?

```
==>[yes]
```

What is the IP address of the host running a Nimsoft Hub?

```
==>[] 172.26.183.55
```

Preparing to search for Archives:

What is the Nimsoft Domain called (*=search)?

```
==>[Nimsoft5dom]
```

What is the Nimsoft Hub called (*=search)?

```
==>[Nimsoft5hub]
```

What is the installation file called?

```
==>[install_LINUX_23_64]
```

Searching for Archives:

```
1 /Nimsoft5dom/Nimsoft5hub/nimsoft5/distsrv
```

We need to log in to NMS to query the Archive

Enter Nimsoft username and password...

```
Username: administrator
```

```
Password:
```

Beginning download of install_LINUX_23_64

```
|
```

Done!

What are we installing? (1=Robot,2=Infrastructure)



```
==>[1]
Extracting files from archive
/opt/nimsoft/tmp//install_LINUX_23_64.zip to temp directory
/opt/nimsoft/tmp/

Where should NMS be installed?
==>[/opt/nimsoft] /opt/nimsoft1

Automatically unregister Robot from Hub on termination?
==>[no]

Should this Robot run in passive mode?
==>[no]

What is this Nimsoft Domain called?
==>[Nimsoft5dom]

Which Nimsoft Hub should this Robot connect to?
==>[Nimsoft5hub]

What is that Nimsoft Hub's IP address?
==>[] 172.26.183.55
Starting NimBUS:

Cleaning up temporary files
Finished Robot installation!
```