

1. Edit host netgroups

A "host netgroup" (hence "netgroup") can be compared to a guest list when you are inviting somebody to a party. You have made the guest list to avoid unwanted guests, for instance crooks. In a computer network, the guests are a bit different. They are "Internet hosts", e.g. printers, thin client servers or workstations. If these hosts are on the guest list, they are welcome to do their task on the network. If they are not, they are automatically kept out by the door-keeper.

A netgroup thus keeps track of the guests, or "hosts" in "Internet lingo". It can also keep track of other netgroups, and this adds to simplified administration of e.g. access to the Internet or to a file server. It is much easier to administrate groups of hosts than stating every single host everywhere.

You have to use netgroups correctly to avoid extra administration. It is useless to have for example a netgroup named "workstation-hosts" with 250 different hosts in it. It is better to use sub groups. The workstations could be grouped into "computerlab01-hosts", "computerlab02-hosts" and "teachers-hosts", and these could be subgroups to another netgroup named "workstation-hosts".

In the future skolelinux will probably use netgroups for other various tasks. Today they are used to prevent unwanted guests to the file server.

1.1. The netgroup module

To edit netgroups, you have to use Webmin. The module is named "Edit host netgroups" and is found under the "System"-tab.

Figure 1. Overview of netgroups

Group	Number of hosts	Number of sub groups
<input type="checkbox"/> all-hosts	0	4
<input type="checkbox"/> ltsp-server-hosts	0	0
<input type="checkbox"/> printer-hosts	0	0
<input type="checkbox"/> server-hosts	1	0
<input type="checkbox"/> workstation-hosts	0	0

New group

Name of group

Queue of actions

No actions pending. Remember to come back and save your modifications!

On a newly installed Skolelinux-tjener, the following netgroups are added:

ltsp-server-hosts

All the thin client servers in the network.

printer-hosts

All the printers in the network.

server-hosts

All the servers in the network. This is primarily "tjener", but if you move e.g. the backup service to another host, add that host here.

workstation-hosts

All the groups containing workstations, or all the workstations in a small network.

all-hosts

This group contains no hosts, but all other netgroups.

Naming conventions: Note how all the netgroup names end with "-hosts". This is to make it easier to distinct netgroups from other groups where it should become necessary. We suggest you use the same naming convention.

1.2. Adding hosts to a netgroup

In the overview, click on the netgroup you want to make changes to. A new window appears, showing hosts, sub groups and netgroups available to add as sub groups and an area for adding new hosts.

Figure 2. Adding hosts to a netgroup

The screenshot shows a web interface for managing a netgroup named "computerlab01-hosts". It is divided into several sections:

- Vertsnavn:** A section with the text "Ingen verter i denne gruppa." (No hosts in this group).
- Undergrupper:** A section with the text "Ingen undergrupper lagt til." (No subgroups added) and a button "Fjern markerte undergrupper" (Remove marked subgroups).
- Nettgruppe:** A section with a list of subgroups: "all-hosts", "lisp-server-hosts", "printer-hosts", "server-hosts", and "workstation-hosts". Each has an unchecked checkbox. Below the list is a button "Legg til markerte grupper." (Add marked groups).
- Legg til verter:** A section with the instruction "Oppgi navnet på en vert pr. linje. Merk at du må oppgi *gyldige* vertsnavn/DNS-navn - ikke IP-adresser!" (Specify the name of a host per line. Note that you must specify *valid* hostnames/DNS names - not IP addresses!). Below this is a text area containing the text "dhcp123", "dhcp124", and "dhcp125".
- Below the text area are two checkboxes:
 - Test om vertsnavnene er gyldige. ? (Test if hostnames are valid. ?)
 - Test om vertsnavnene kan brukes av filtjeneren. ? (Test if hostnames can be used by the file server. ?)
- At the bottom is a button "Legg til" (Add).

Enter the name on a line of its own for every host you want to add to the netgroup.

If you check the "Verify validity of hosts"-box, every hostname will be tested and only those valid will be added. Note that this may slow down the process.

If you check the "Make sure the hostnames can be used by the file server"-box, every hostname will be tested and only those usable to the file server will be added. Note that this may slow down the process.

Click on "Add" to add the entered hosts to the netgroup. You will see the same page, now with the new hosts in the list.

Figure 3. New hosts added to the netgroup

The screenshot shows a configuration window titled "computerlab01-hosts". It is divided into three sections:

- Hostname:** A list with three entries: "dhcp123", "dhcp124", and "dhcp125", each with an unchecked checkbox. Below the list is a button labeled "Remove selected hosts".
- Sub groups:** A section with the text "No sub groups added." and a button labeled "Remove selected sub groups".
- Netgroup:** A list with five entries: "all-hosts", "lisp-server-hosts", "printer-hosts", "server-hosts", and "workstation-hosts", each with an unchecked checkbox. Below the list is a button labeled "Add selected groups".

Click on "Back" when you are finished editing the netgroup. Remember to save your changes.

1.3. Saving changes

Return to the overview when you are finished making your changes. Notice the actions in the action queue. When you are done, enter your LDAP-password and click on "Execute actions". The changes are sent to the catalogue server, and you get a new window showing the replies from the server. For every successful action, the server replies "Success".

You can remove actions you regret or made by mistake. Select the actions you want to remove from the queue and click on "Delete selected actions". Actions depending on those removed will not be executed. If you for example remove the action "Add netgroup 'computerlab01-hosts'", the action "Add host(s) (dhcp123, dhcp124, dhcp125)" will not be executed.

Figure 4. Changes are saved

The screenshot shows a window titled "Results of execution" with two lines of text:

- Add netgroup "computerlab01-hosts"... Success
- Add host(s) (dhcp125, dhcp123, dhcp124) to "computerlab01-hosts"... Success

1.4. Adding a new netgroup

Enter the name of the new netgroup in the "Name of group"-textfield in the "New group"-area and click on "Create group". The name has to be between 9 and 40 characters and contain only alphanumeric characters and hyphens.

Figure 5. Adding a new netgroup

Group	Number of hosts	Number of sub groups
<input type="checkbox"/> all-hosts	0	4
<input type="checkbox"/> ltsp-server-hosts	0	0
<input type="checkbox"/> printer-hosts	0	0
<input type="checkbox"/> server-hosts	1	0
<input type="checkbox"/> workstation-hosts	0	0

New group

Queue of actions

No actions pending. Remember to come back and save your modifications!

The new netgroup is now listed together with the other groups.

Figure 6. New group added

Group	Number of hosts	Number of sub groups
<input type="checkbox"/> all-hosts	0	4
<input type="checkbox"/> computerlab01-hosts	0	0
<input type="checkbox"/> Itsp-server-hosts	0	0
<input type="checkbox"/> printer-hosts	0	0
<input type="checkbox"/> server-hosts	1	0
<input type="checkbox"/> workstation-hosts	0	0

New group

Name of group

Queue of actions

Add netgroup "computerlab01-hosts".

?

LDAP-password (root)

1.5. Adding a subgroup

In the overview, click on the group you want to add subgroups to. If you want to add "computerlab01-hosts" as a subgroup to "workstation-hosts", click on "workstation-hosts".

Figure 7. Adding a subgroup

The screenshot shows a window titled "workstation-hosts". It contains three main sections:

- Hostname:** A blue header bar with the text "No hosts are added to this group." below it.
- Sub groups:** A blue header bar with the text "No sub groups added." below it. A button labeled "Remove selected sub groups" is located below this section.
- Netgroup:** A blue header bar followed by a list of netgroups with checkboxes:
 - all-hosts
 - computerlab01-hosts
 - ltsp-server-hosts
 - printer-hosts
 - server-hostsA button labeled "Add selected groups" is located below this list.

Select the group you want to add as a sub group and click on "Add selected groups". The sub groups are now listed as a sub group.

Figure 8. Subgroup added

The screenshot shows the same "workstation-hosts" window. In this state:

- The **Sub groups** section now contains a single entry: computerlab01-hosts.
- The **Netgroup** section is no longer visible.
- The "Remove selected sub groups" button remains below the sub groups list.

Remember to save your changes.

1.6. Deleting a netgroup

In the overview, select the netgroups you want to remove and click on "Delete selected groups".

Remember to save your changes.

1.7. Removing hosts from a netgroup

In the overview, click on the group you want to change. Select the hosts you want to remove and click on "Remove selected hosts".

Remember to save your changes.

1.8. Removing a subgroup

In the overview, click on the group you want to change. Select the sub groups you want to remove and click on "Remove selected sub groups".

Remember to save your changes.