

easyRAID[®] NAS

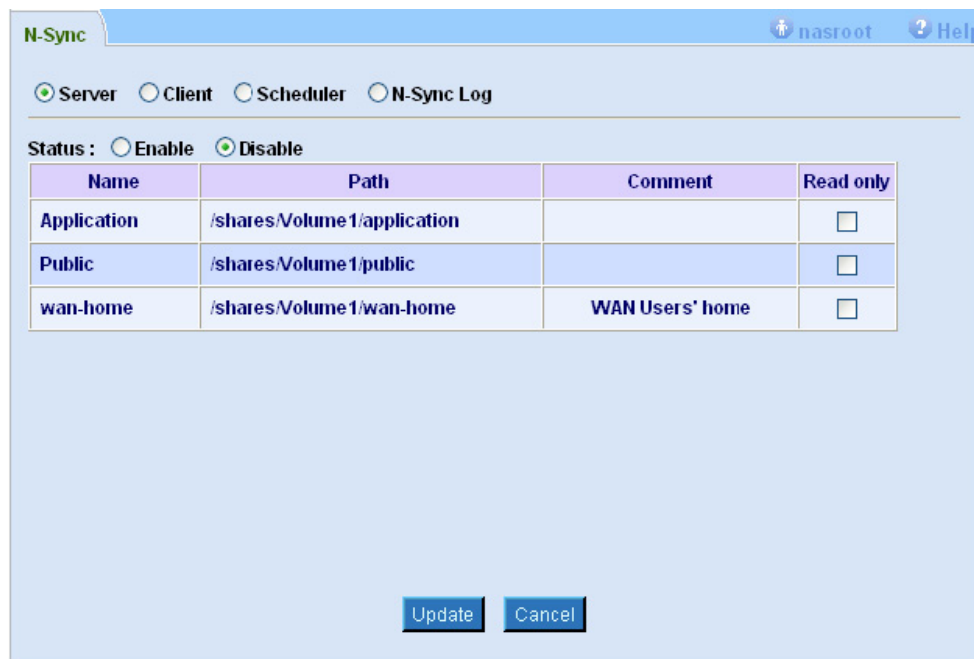
the easy-to-use NAS-Solution

easyRAID N-Sync User Guide

easyRAID N-Sync User Guide

N-Sync is a share level replication utility based on rsync tool. Like rsync, N-Sync's client-server architecture makes replication of files/folders easier from local share to remote share and vice versa (from source to destination). An enabled/disabled switch for N-Sync server could be set by administrator to choose to export N-Sync modules to clients or not. Administrator could also choose to replicate shares immediately or by scheduler. N-Sync setup has provided four N-Sync utilities (**Server, Client, Scheduler and N-Sync log**). Please refer the figure below for each utility's illustrate.

Server:

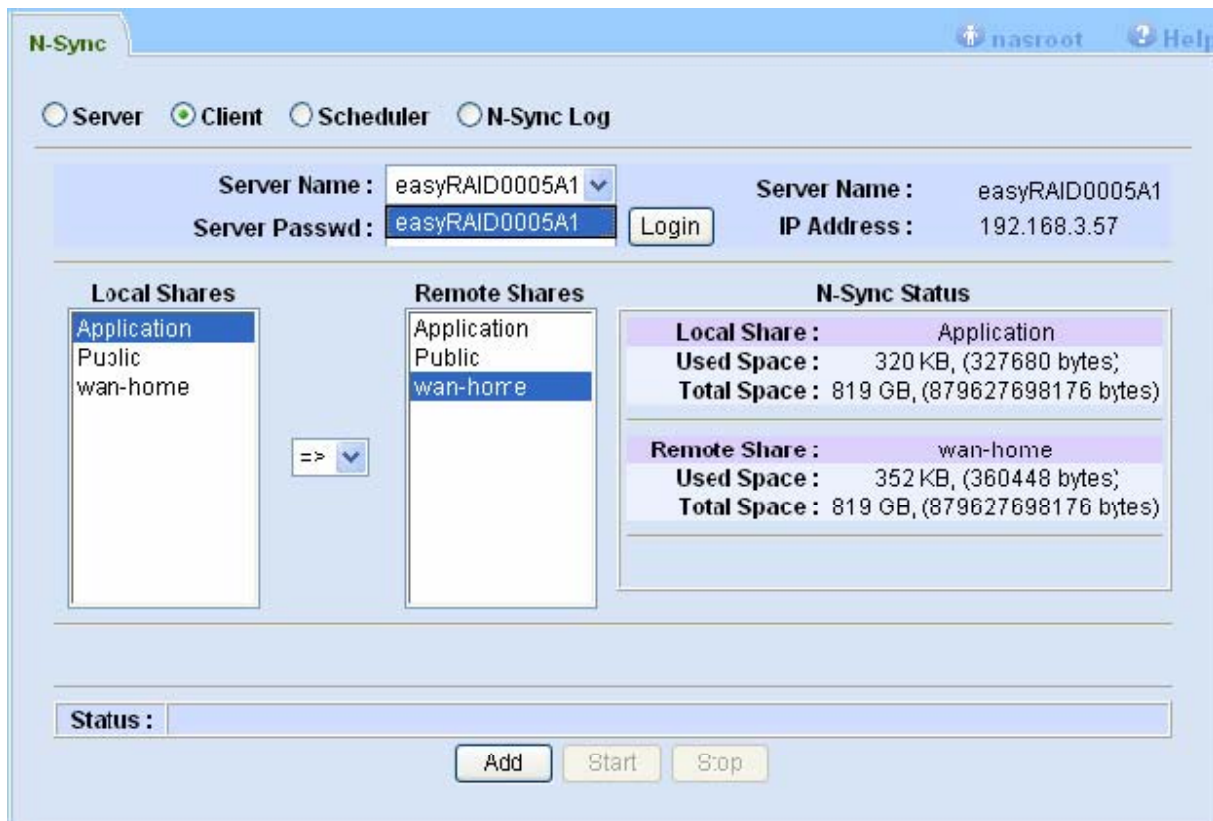


An N-Sync server exports share modules to the remote N-Sync client to be replicated through rsync protocol. Because of using rsync protocol, any client that uses rsync tool is able to replicate shares from N-Sync server.

- **Enable** : Enable N-Sync Server. (Only the server which is enabled will be shown in N-Sync client server list.)
- **Disable** : Disable N-Sync Server.
- **Name** : Share name of the system that is exported by N-Sync server.
- **Path** : Share path of the system.
- **Comment** : Comment of the share.

- **Read only** : Checked for exporting as read only module to the remote N-Sync/rsync client.
- **Update** : Update changes that are just made.
- **Cancel** : Cancel the changes.

Client:



An N-Sync client is an rsync based utility that allows administrator to replicate files/folders between local share and remote N-Sync share.

- **Server Name (list)** : N-Sync servers which are available in LAN.
- **Server Passwd** : Password of remote N-Sync server.
- **Login** : Connect to the selected N-Sync server and authenticate with server password.
- **Server Name** : Remote N-Sync server to which we are currently connected.
- **IP Address** : IP address of the remote N-Sync server.
- **Local Shares (list)** : Local shares.
- **Sync-OP** : Synchronize operations including synchronize from local share to remote share (=>) and from remote share to local share (<=).

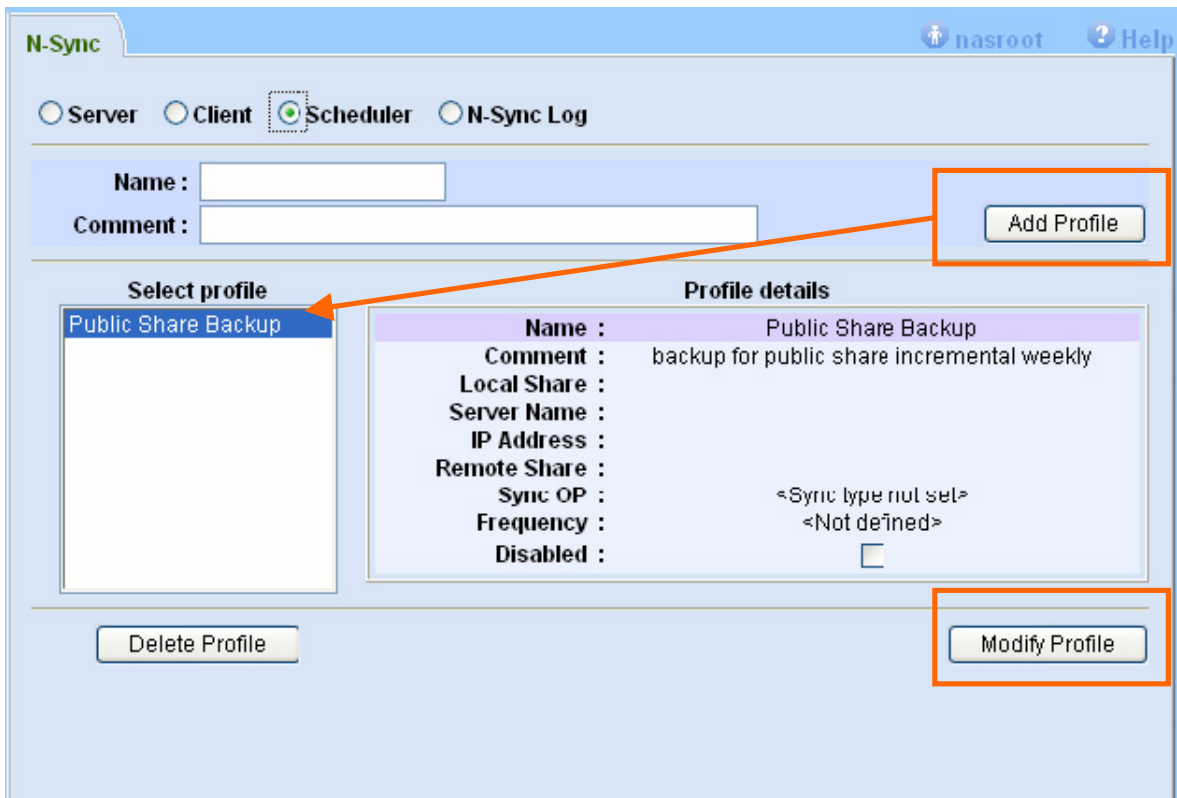
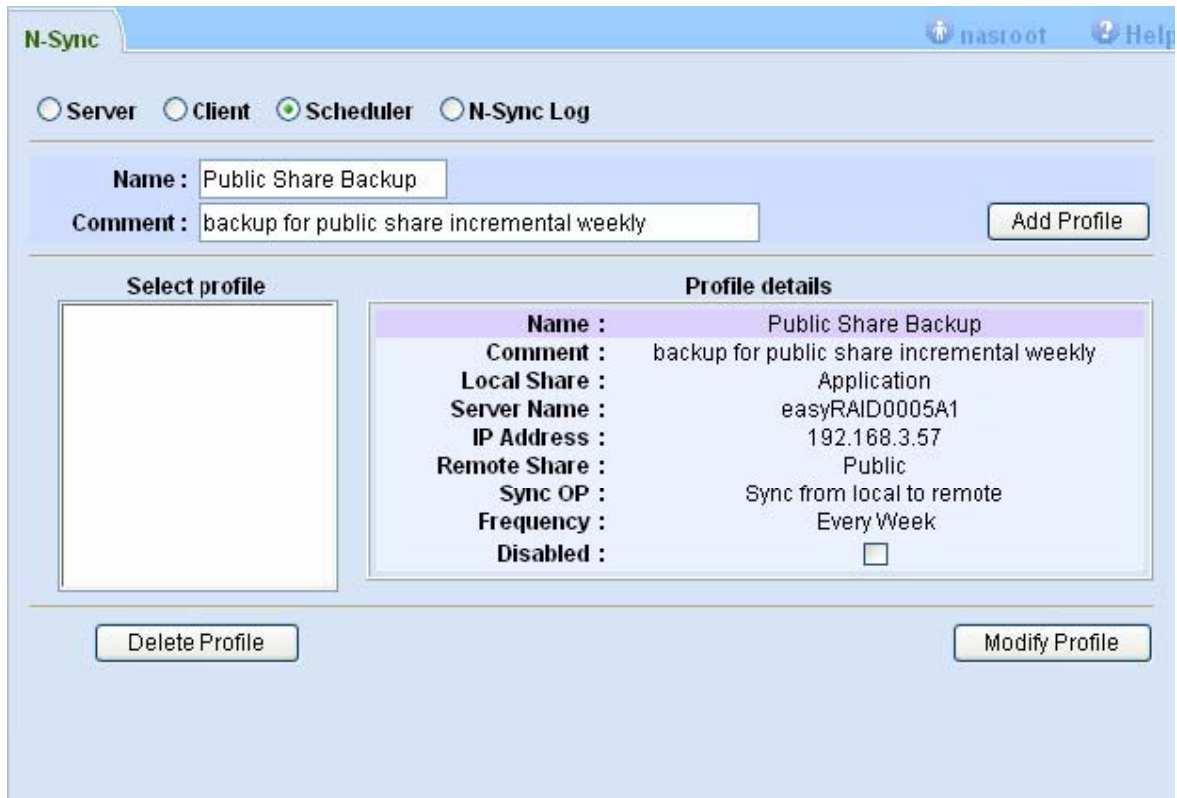
- **Remote Shares (list) :** Remote shares.
- **N-Sync Status :** Statistic of selected local share and remote share.
- **Used Space :** Space currently used by files/folders.
- **Total Space :** Total space of the share.
- **Status :** N-Sync status, messages, or returned error codes of N-Sync client.
- **Add :** Add Sync-Job.
- **Start :** Start the Sync-Job that is just added.
- **Stop :** Stop the Sync-Job which is running.

Scheduler:

An N-Sync scheduler periodically runs N-Sync jobs that are described by Profiles. A profile includes profile name, profile comment and descriptions of the N-Sync job including local share, remote N-Sync server, server IP, remote share of N-Sync server, Sync OP, schedule frequency and enable/disable states of the profile. Administrator can create a new profile, delete a profile or modify a profile. There are four modification steps of a profile when administrator wants to change the configurations of the selected profile.

Create new profile:

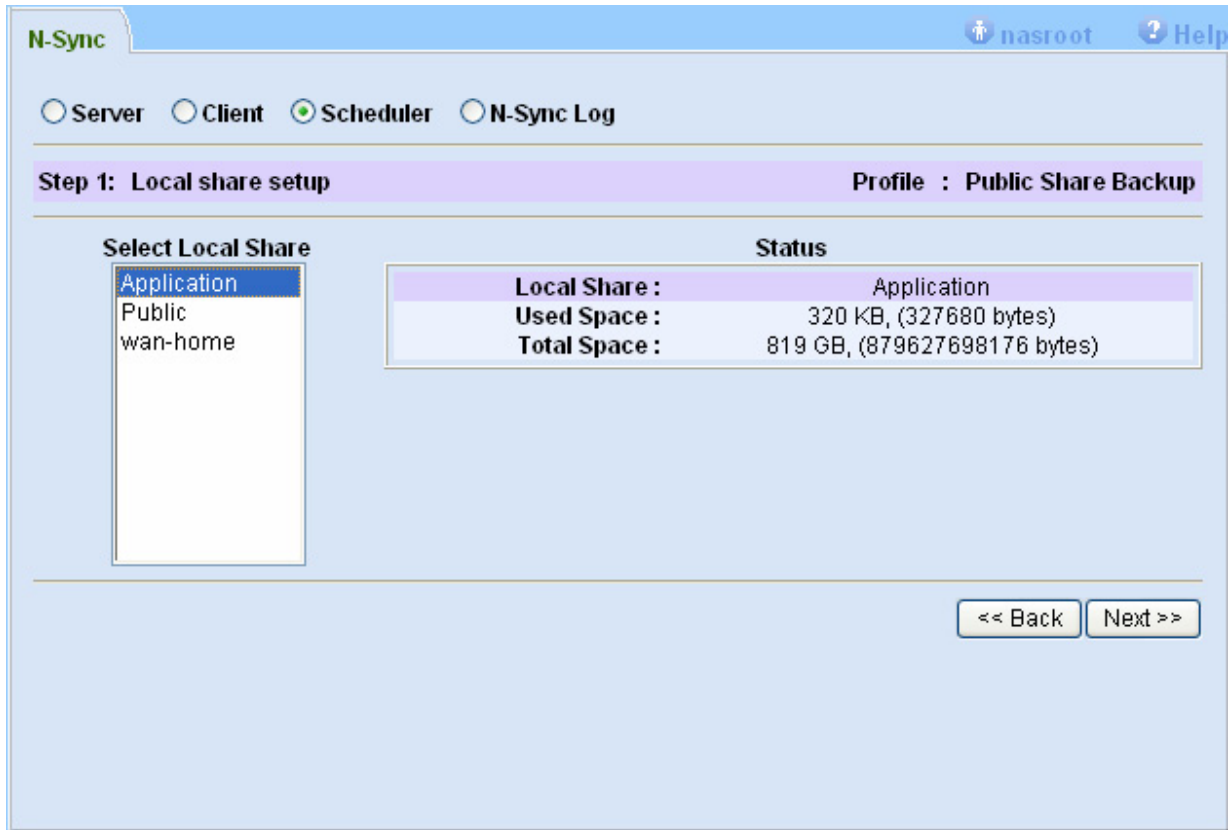
- **Name :** New profile name.
- **Comment :** Profile comment of new profile.
- **Add Profile :** Click “Add profile” to initial the profile creation.



For the new profile create, user will need to select it and choose “Modify Profile” to complete the setting. Please refer the figures next site for each step.

Step1. Local Share Setup

Please select target share from “Select Local Shares” box.



Step1. Local Share Setup figure

Step2. Remote Share Setup

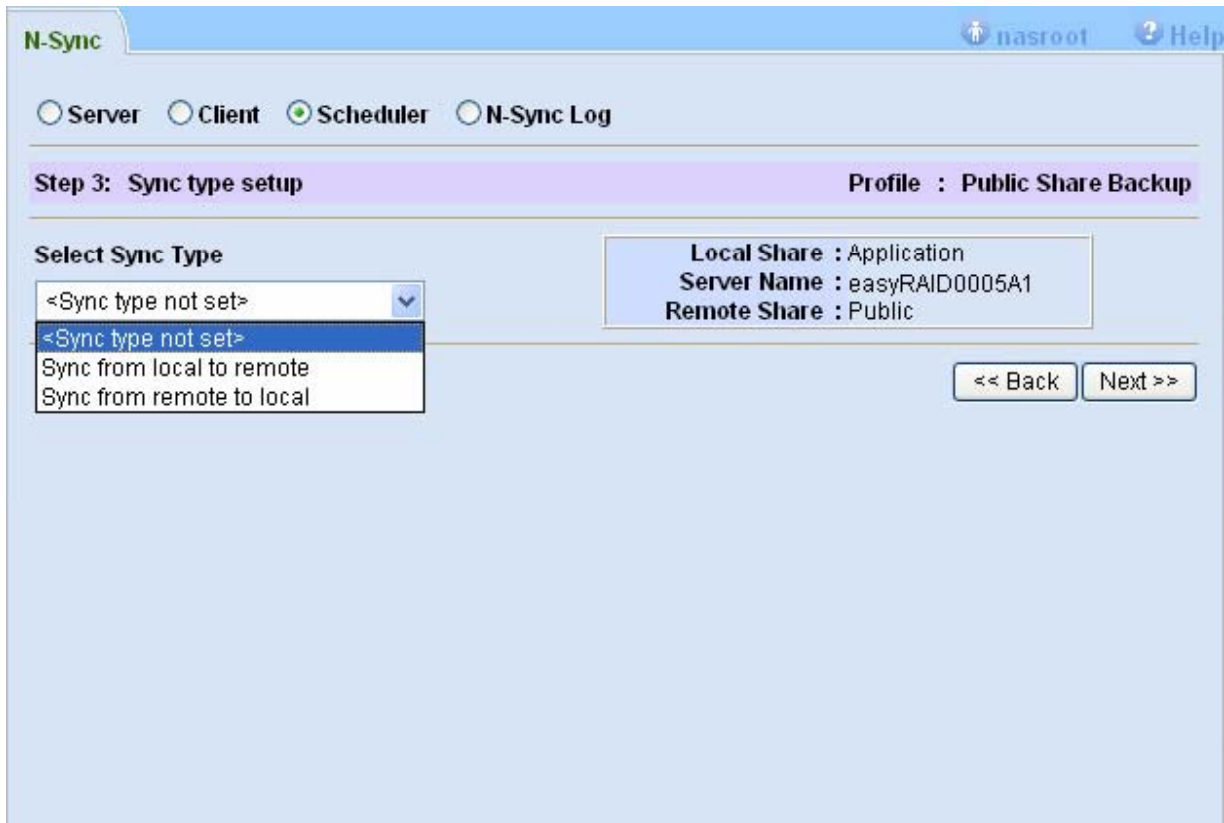
Login to available N-Sync server first then from “Select Remote Share” box to choose desire share for synchronize.

The screenshot shows the N-Sync web interface. At the top, there are navigation tabs: **Server**, **Client**, **Scheduler** (selected), and **N-Sync Log**. The main heading is **Step 2: Remote share setup**, with a sub-heading **Profile : Public Share Backup**. Below this, there are input fields for **Server Name** (a dropdown menu showing 'easyRAID000128'), **Server Passwd** (a text box with 'easyRAID000128' and 'easyRAID0005A1' visible), and a **Login** button. To the right, there are labels for **Server Name**, **IP Address**, and **Remote Share**. Below the login section, there is a **Select Remote Share** area with an empty box, and a **Status** area with a table showing **Remote Share**, **Used Space**, and **Total Space**. At the bottom right, there are **<< Back** and **Next >>** buttons.

Step2. Remote Share Setup

Step3. Sync type Setup

N-Sync is capable for admin to choose the synchronize direction Local to remote or remote to local.



Step3. Sync Type Setup

Step4. Schedule Setup

Admin can choose the different synchronize frequency according to its requirement.

The screenshot shows the N-Sync Scheduler configuration window. At the top, there are tabs for 'Server', 'Client', 'Scheduler' (which is selected), and 'N-Sync Log'. Below the tabs, the window title is 'Step 4: Schedule setup' and the profile is 'Public Share Backup'. Under the 'Frequency' section, there are five radio button options: 'Every Month', 'Every Week' (which is selected), 'Every Day', 'Every Few Hours', and 'Run Once'. To the right of these options is a 'Day of the Week' dropdown menu currently set to 'Sun', with a list of days (Sun, Mon, Tue, Wed, Thu, Fri, Sat) visible. Below the frequency options is a 'Start Time' field set to '0:00'. At the bottom right, there are two buttons: '<< Back' and 'Finish >>'. The window title bar shows 'N-Sync' on the left and 'nasroot' and 'Help' on the right.

Step4. Schedule Setup



Display of Profile information when setting complete

Modify profile:

Highlight the profile from “Select profile Box” then click on “Modify Profile” button and system will lead you go through each setting for desire of change.

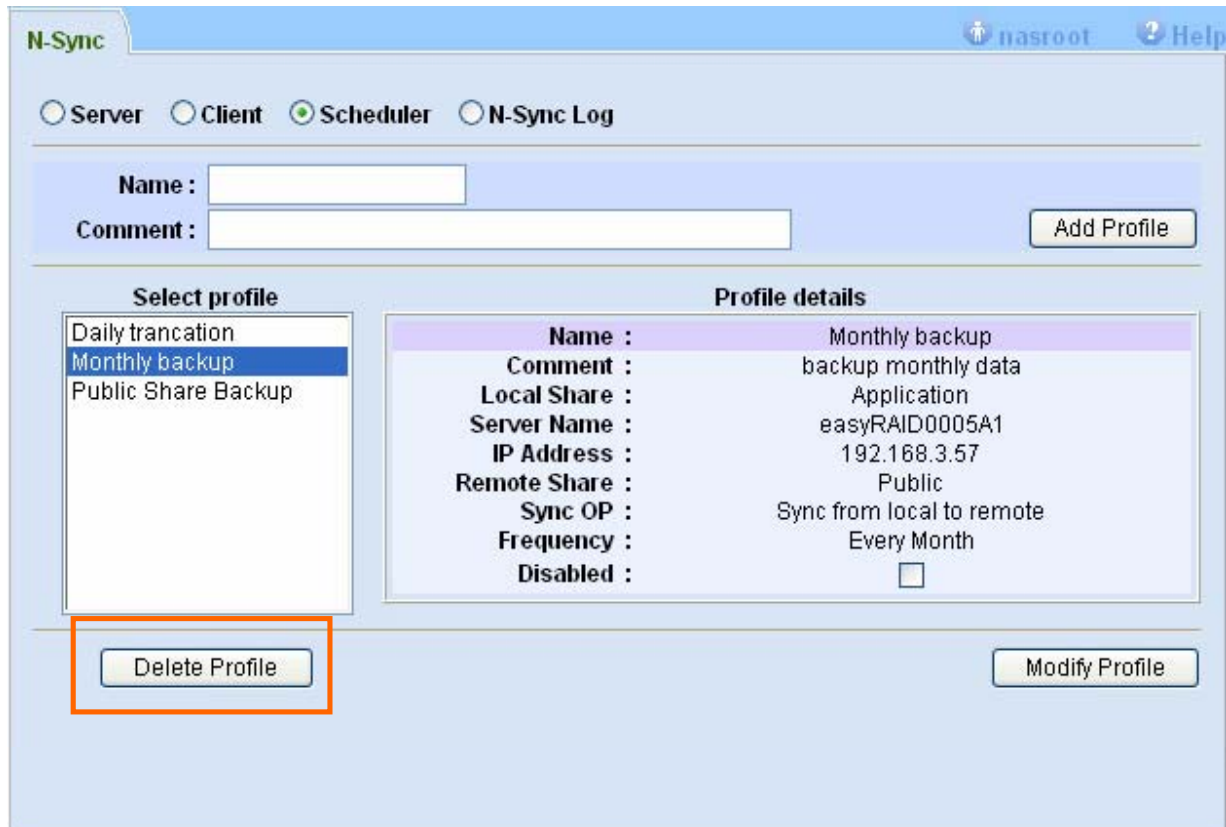
The screenshot shows the N-Sync Scheduler interface. At the top, there are radio buttons for 'Server', 'Client', 'Scheduler' (selected), and 'N-Sync Log'. Below this, there are input fields for 'Name' and 'Comment', and an 'Add Profile' button. The main area is divided into two sections: 'Select profile' and 'Profile details'. The 'Select profile' section contains a list box with three items: 'Daily truncation', 'Monthly backup' (highlighted), and 'Public Share Backup'. The 'Profile details' section shows the following information:

Name :	Monthly backup
Comment :	backup monthly data
Local Share :	Application
Server Name :	easyRAID0005A1
IP Address :	192.168.3.57
Remote Share :	Public
Sync OP :	Sync from local to remote
Frequency :	Every Month
Disabled :	<input type="checkbox"/>

At the bottom, there are two buttons: 'Delete Profile' and 'Modify Profile'. The 'Modify Profile' button is highlighted with an orange box.

Delete profile:

Highlight the profile from “Select profile Box” then click on “Delete Profile” button to delete selected profile.



Disable profile:

Highlight the profile from “Select profile Box” then checked on “Disabled” from Profile details.

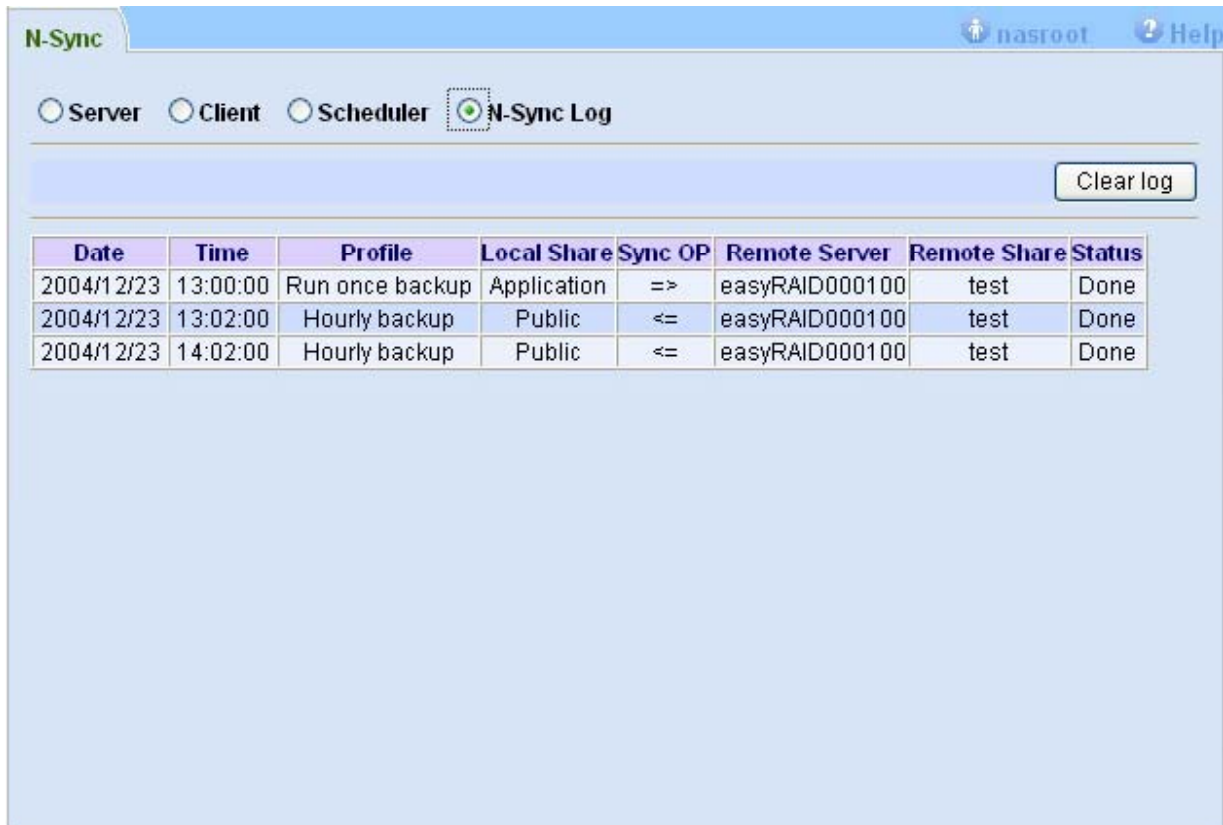
The screenshot shows the N-Sync Scheduler interface. At the top, there are radio buttons for 'Server', 'Client', 'Scheduler' (selected), and 'N-Sync Log'. Below this, there are input fields for 'Name' and 'Comment', and an 'Add Profile' button. The main area is divided into two sections: 'Select profile' and 'Profile details'. In the 'Select profile' section, a list contains 'Daily truncation', 'Monthly backup' (highlighted), and 'Public Share Backup'. The 'Profile details' section shows the following information for the selected profile:

Name :	Monthly backup
Comment :	backup monthly data
Local Share :	Application
Server Name :	easyRAID0005A1
IP Address :	192.168.3.57
Remote Share :	Public
Sync OP :	Sync from local to remote
Frequency :	Every Month
Disabled :	<input checked="" type="checkbox"/>

At the bottom of the interface, there are buttons for 'Delete Profile' and 'Modify Profile'.

N-Sync Log

N-Sync log will keep records of N-Sync job which is activated from N-Sync Client of N-Sync Scheduler.



The screenshot shows the N-Sync Log window with the following interface elements:

- Navigation tabs: Server, Client, Scheduler, N-Sync Log
- Buttons: Clear log
- Table with columns: Date, Time, Profile, Local Share, Sync OP, Remote Server, Remote Share, Status

Date	Time	Profile	Local Share	Sync OP	Remote Server	Remote Share	Status
2004/12/23	13:00:00	Run once backup	Application	=>	easyRAID000100	test	Done
2004/12/23	13:02:00	Hourly backup	Public	<=	easyRAID000100	test	Done
2004/12/23	14:02:00	Hourly backup	Public	<=	easyRAID000100	test	Done

- **Date** : Start date of the N-Sync job.
- **Time** : Start time of the N-Sync job.
- **Profile** : Profile name. If the log entry is generated from N-Sync Client, this field will be replaced by '---'.
- **Local Share** : Local share name of the N-Sync job.
- **Sync OP** : Synchronization operation of the N-Sync job.
- **Remote Server** : Remote server name of the N-Sync job.
- **Remote Share** : Remote share name of the N-Sync job.
- **Status** : Status of the N-Sync job. A successful N-Sync job has "Done" status. A failed N-Sync job is represented by a number marked in red, which is the N-Sync error code. Please refer to the following list for the definition of each error code:
 - 1 : Syntax or usage error.
 - 2 : Protocol incompatibility.
 - 3 : Errors selecting input/output files, dirs.

- 4 : Requested action not supported: an attempt was made to manipulate 64-bit file on a platform that cannot support them; or an option was specified that is supported by the client and not by the server.
- 5 : Error starting client-server protocol.
- 10 : Error in socket I/O.
- 11 : Error in file I/O.
- 12 : Error in rsync protocol data stream.
- 13 : Errors with program diagnostics.
- 14 : Error in IPC code.
- 20 : Received SIGUSR1 or SIGINT.
- 21 : Some error returned by waitpid().
- 22 : Error allocating core memory buffers.
- 23 : Partial transfer due to error.
- 24 : Partial transfer due to vanished source files.
- 30 : Timeout in data send/receive.

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