

Taking Snapshots using a ReadyNAS[®]

What is a Snapshot?

A snapshot is a read-only image of your share, frozen at the specific time the snapshot was taken. While further changes may be made to the original share, the snapshot will continue to reflect the data contained on the share at the time it was taken.

Snapshots are typically used for intermittent backups throughout the day to supplement full offline backups. As primary storage becomes larger, the time required to complete a full backup can increase beyond offline hours, making them increasingly difficult. However, snapshots do not require systems to be offline, and can therefore be conducted many times throughout the day. Snapshots can also be used as temporary backups. For example, if a file on the NAS device becomes infected with a virus, the uninfected file can be restored from a prior snapshot taken before the attack.

One of the key features of RAIDiator 2 is the ability to use the new incremental backup capability in conjunction with snapshots.

Backup Scenario

For this example, we have two ReadyNAS® storage devices. One, which we'll call "Primary", is used for normal day-to-day file serving. The other, which we'll call "Secondary", is delegated as a backup. Our example will backup snapshots from Primary to Secondary on a daily basis; however we want the ability to restore from up to a week's worth of changes. For simplicity, let's use the share [work] on Primary as the backup source. The backup target will be on Secondary in the share [backup].

Schedule Snapshot

To include the share "work-snap" as a backup source, a snapshot must first be taken on Primary. To do this, we'll need to schedule a snapshot to be taken at a certain time each day.

To setup the snapshot schedule, Primary has the following configuration:

- In the ReadyNAS Console, select Volumes => Volume Settings => Snapshot
- Set the desired Snapshot schedule

The screenshot shows the configuration for a snapshot schedule. It includes a checkbox for "Take snapshot every" set to 24 hours, with a time range from 00:00 to 00:00. All days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat) are checked. There is a "lasting" field set to 1 hour and a "Save" button. Below this, it shows "Next scheduled snapshot: Tuesday 00:00" and a "Take snapshot now" button.

In addition to this schedule, a snapshot can be taken manually at any time by selecting "**Take snapshot now**".

Once the snapshot has been created, the following notice will appear:

The screenshot shows a notification for an active snapshot. It displays "Active snapshot:" with a green dot icon, the date and time "2009 Jul 13 15:24", and "0.04 % of 10 GB used". There are buttons for "Delete snapshot" and "Take snapshot now". Below this, it shows "Next scheduled snapshot: Tuesday 00:00" and another "Take snapshot now" button.

Note that a value must be provided to the "Space reserved for snapshots" option, also located in Volumes => Volume Settings => Snapshot

Create Backup Jobs

- To create the weekly backup jobs, select the **"Add a New Backup Job"** tab
- Select a backup source. In this example we will use the share "work-snap" on Primary

Share: work-snap Host:

Path:

Login: Password:

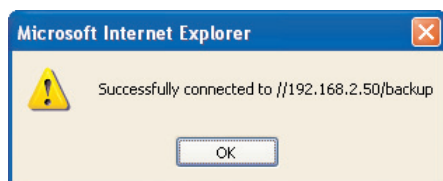
- To configure Secondary as the backup destination, select it from the pull-down menu, then enter its configuration information and your login credentials.

Remote: Windows/NAS (Timestamp) Host:

Path:

Login: Password:



- Select **"Test connection"** to ensure everything is working. If successful, the following will appear:



To create the backup schedule, select the backup schedule and options required. These can be run each day at a specified time to ensure 7 days worth of backups are available at any time.

For the backup option, schedule a full backup the first time the backup is run, then incremental from there on. Alternatively, a full data backup can be run each time.

To test, run a manual backup. If successful, the following will appear:

Enable	Job	Source Destination	When	Status	Logs	
<input checked="" type="checkbox"/>	001	[work-snap] //192.168.2.50/backup	Daily Every 24 hr between 00-23	Completed Mon Jul 13 15:49	 	<input type="button" value="Go"/> <input type="button" value="Delete"/>

Using the backup in conjunction with the "Snapshot schedule" option, will ensure the new snapshots are successfully created on the Primary ReadyNAS and backed-up to the Secondary ReadyNAS.