

*open-e*

ENTERPRISE LEVEL **STORAGE OS**  
for EVERY BUSINESS

## ***Backup to attached Tape Drive using Open-E DSS V6***

**DSS V6**  
DATA STORAGE SOFTWARE

**16 TB**



Easy to use, GUI based management provides performance and security.



Reliable disk based backup and recovery, along with Snapshot capability enable fast and reliable backup and restore.



Easy to implement remote Replication, at block or volume level, enables cost-effective disaster recovery.



IP based storage management combines NAS and iSCSI functionality for centralized storage and storage consolidation.

Software Version: DSS ver. 6.00 up13

Presentation updated: March 2010

[www.open-e.com](http://www.open-e.com)

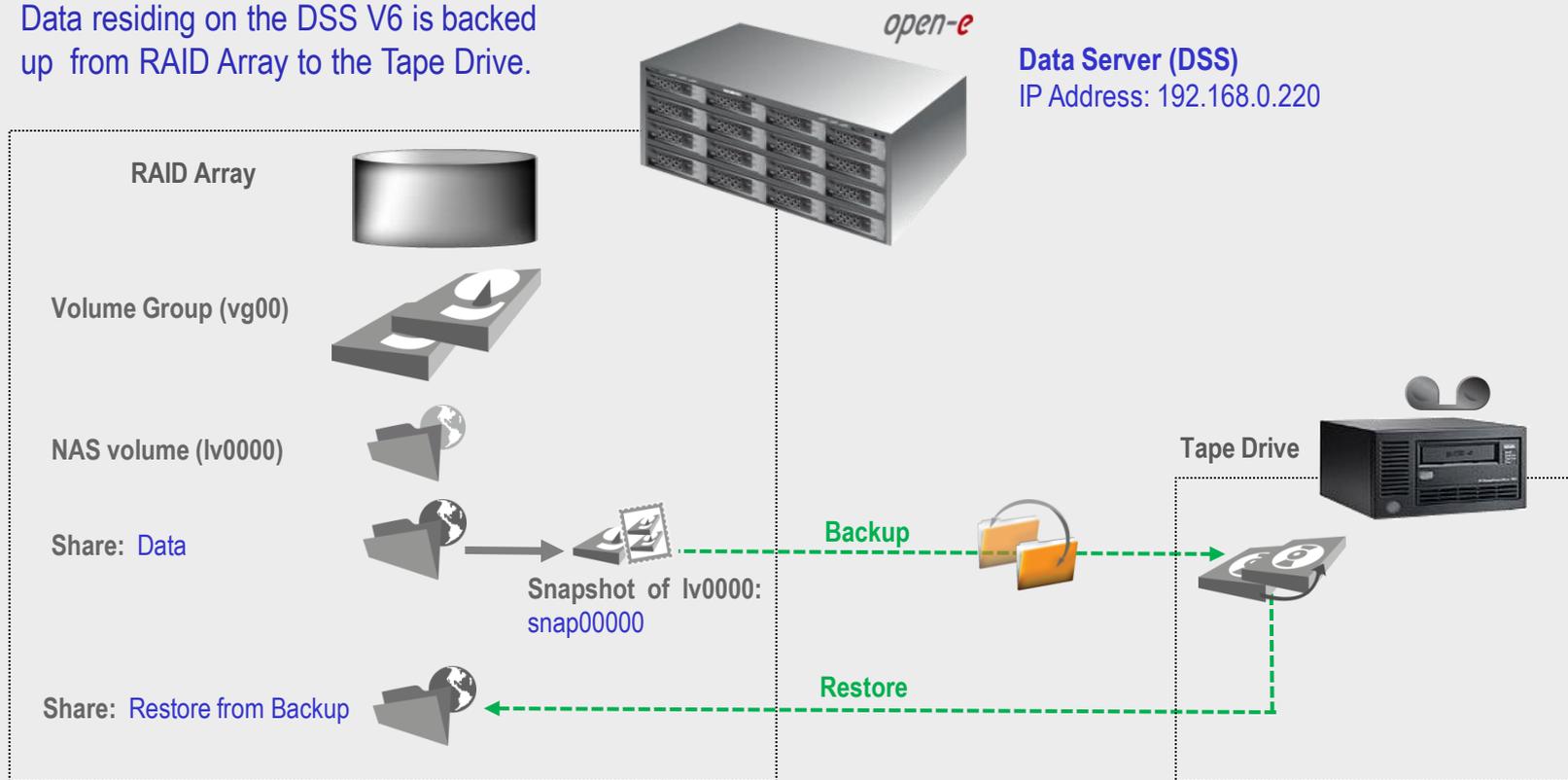
**TO SET UP A BACKUP TO AN ATTACHED TAPE DRIVE, PERFORM THE FOLLOWING STEPS:**

1. Hardware configuration
2. Creating Volume Group, NAS Volume and snapshot
3. Configure the Backup to use with a Tape Drive
4. Create the Restore from Backup

# Backup to attached Tape Drive

## 1. Hardware configuration

Data residing on the DSS V6 is backed up from RAID Array to the Tape Drive.



# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 2. Creating Volume Group, NAS Volume and Snapshot Volume

Under the „CONFIGURATION” tab, select “volume manager” and next Vol. Groups.



Volume Groups (vg00)

In the **Unit manager** add the selected physical units (**Unit S000**) to create a new volume group (in this case, **vg00**) and click **apply** button.

The screenshot shows the open-e web interface with the following elements:

- Header: open-e | ENTERPRISE CLASS STORAGE OS for EVERY BUSINESS | DATA STORAGE SOFTWARE V6
- Navigation: SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP
- Breadcrumbs: You are here: CONFIGURATION > volume manager > Vol. groups
- Left sidebar: Vol. groups (selected), Vol. replication
- Main content area:
  - Unit rescan**: rescan button
  - Unit manager**:

Unit	Size (GB)	Serial number	Status
<input checked="" type="checkbox"/> Unit S000	230.08	N/A	available

Action: new volume group  
Name: vg00

apply button

Please apply changes or press "reload" button to discard
  - Drive identifier**:

Unit	Serial number	Status
<input type="checkbox"/> Unit S000	N/A	

apply button

Event Viewer: [icon]

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# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 2. ... Continue

Volume Groups (vg00)



NAS volume (lv0000)



Select the appropriate **volume group (vg00)** from the list on the left and create a **new NAS volume** of the required size. This logical volume **lv0000** will be the source of the local backup.

After assigning an appropriate amount of space for the NAS volume, click the **apply** button.

The screenshot shows the open-e web interface for configuring storage. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'CONFIGURATION > volume manager > Vol. groups > vg00'. The main content area is divided into two panels: 'Vol. groups' on the left and 'Volume manager' on the right. The 'Vol. groups' panel shows a list with 'vg00' selected. The 'Volume manager' panel displays a table of reserved space and a form for creating a new NAS volume. The table shows reserved space for a pool, snapshots, system, and replication, with 225.03 GB free. The form has 'Action:' set to 'new NAS volume', 'Use volume replication' and 'WORM' checkboxes unchecked, and a slider for size with 'add:' set to '60.00 GB'. An 'apply' button is at the bottom right. A footer bar contains 'Event Viewer' and 'Data Storage Software V6 - All rights reserved'.

System volumes	Size (GB)
Reserved Pool	4.00
Reserved for snapshots	0.00
Reserved for system	1.00
Reserved for replication	0.00
Free	225.03

Action: new NAS volume

Use volume replication

WORM

0 225.03

add: 60.00 GB

apply

Please apply changes or press "reload" button to discard

# Backup to attached Tape Drive



Data Server (DSS)  
IP Address: 192.168.0.220

## 2. ... Continue

Snapshot



To run the local backup process, you must first define a new **Snapshot volume** in the **Volume manager** for the volume to be backed up.

After assigning the appropriate amount of space for the **Snapshot volume**, click the **apply** button.

### Option:

Instead of selecting: „Just create snapshot volume” you can select: „Assign to volume lv0000”. In such case you can skip the next slide.

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: CONFIGURATION > volume manager > Vol. groups > vg00

Vol. groups

vg00

Vol. replication

Volume manager

Info  
Logical volume lv0000 has been created successfully.

Logical Volume	Type	Snap.	Rep.	Init.	Blocksize (bytes)	Size (GB)
lv0000					N/A	60.00
System volumes						Size (GB)
Reserved Pool						4.00
Reserved for snapshots						0.00
Reserved for system						1.00
Reserved for replication						0.00
Free						165.03

Action: new snapshot

Assign to volume: Just create snapshot volume

0 165.03

add: 6.00 GB

apply

Event Viewer: [icon]

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# Backup to attached Tape Drive



Data Server (DSS)  
IP Address: 192.168.0.220

## 2. ... Continue

NAS volume  
(lv0000)



Snapshot

Assign **snap00000** to the logical volume to be backed up (in this example - lv0000) and click the **apply** button.

The screenshot shows the open-e web interface for configuring volume groups. The breadcrumb trail is: CONFIGURATION > volume manager > Vol. groups > vg00. The main content area is divided into two sections: 'Vol. groups' and 'Vol. replication'. The 'Vol. groups' section shows a table with columns for 'Reserved for system', 'Reserved for replication', and 'Free'. The 'Free' column shows 159.03 GB. Below the table is an 'Action:' dropdown menu set to 'new NAS volume'. There are checkboxes for 'Use volume replication' and 'WORM'. A slider bar is visible with '0' on the left and '159.03' on the right. Below the slider is an 'add:' field with '0.00' and 'GB' units. An 'apply' button is at the bottom right of this section. The 'Vol. replication' section shows a 'Snapshot definition' table with columns for 'Name', 'LV', and 'Status'. The table contains one entry: 'snap00000' with 'lv0000' in the 'LV' column and 'unused' in the 'Status' column. An 'apply' button is at the bottom right of this section. A blue arrow points from the text box to the 'apply' button in the 'Snapshot definition' section. The footer of the interface includes 'Event Viewer:' with an envelope icon and 'Data Storage Software V6 - All rights reserved'.

# Backup to attached Tape Drive



Data Server (DSS)  
IP Address: 192.168.0.220

## 3. Configure the Backup to be used with the Tape Drive

Under the “CONFIGURATION” tab, select the “NAS settings” menu.

Local Backup



Check to Use local backup box. Also select, Default share on LV as lv0000, and click the apply button.

### NOTE:

In order to increase safety of the backup to the tape drive, it is recommended to place database on another volume (e.g. lv0001).

The screenshot shows the open-e web interface with the 'CONFIGURATION' tab selected. The 'NAS settings' menu is active. The 'Local backup settings' section is expanded, showing the following options:

- Use local backup
- Select backup database location:
  - Default share on LV: lv0000
  - Other share: <choose share>
- Create database
- Move database

An 'apply' button is located at the bottom right of the 'Local backup settings' section. A blue arrow points from the 'apply' button in the 'Data replication agent' section to the 'apply' button in the 'Local backup settings' section.

# Backup to attached Tape Drive



Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

Under the "CONFIGURATION", select the "NAS resources" and Shares.

Shares: Data



A tree listing of the NAS shared volumes (Shares) will appear on the left side of the DSS V6 web GUI. In the example, a shared volume named **Data** has been created on lv0000.

The screenshot shows the open-e web GUI interface. At the top, there is a navigation bar with tabs for SETUP, CONFIGURATION, MAINTENANCE, STATUS, and HELP. The current page is titled "You are here: CONFIGURATION > NAS resources > Shares". The main content area is divided into several sections: "Shares", "Users", and "Groups". The "Shares" section shows a tree listing of NAS shared volumes, with "1. backup\_db\_lv0000" expanded to show a sub-entry "Data". The "Users" section shows "1. users". The "Groups" section is empty. On the right side, there is a "Create new share" form with fields for Name (Data), Comment, Default path (/lv0000/Data), and Specified path (/). Below the form is an "apply" button and a note: "Please apply changes or press 'reload' button to discard". At the bottom, there is an "ACL (Access control list)" section with tabs for "Browser", "Users & Groups", and "Access Permissions". The "Browser" tab is active, showing a selection field, a filter field, and a list of volumes including "lv0000".

# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

Under the "MAINTENANCE",  
select "backup" menu

Backup pools: Pool02week



In the "Create new pool", enter  
a name for the pool and select  
**Tape retention after**. In this  
example, enter 2 weeks (14  
days) and click on the **create**  
button.

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: MAINTENANCE > backup > Backup pools

Backup pools

Create new pool

Name: Pool02week

Tape retention after: 2 weeks

Use each tape only once

create

Please apply changes or press "reload" button to discard

Backup devices

Tape Drive

Backup tasks

Data replication

Event Viewer: [icon]

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# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

Next, choose **Tape Drive**, in the **Backup devices** tree.

Backup devices: Tape Drive



In „Label new tape”, enter a **Name** for the Tape , and select the **Pool**. In this example choose **Pool02week** and click the **apply** button.

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: MAINTENANCE > backup > Backup devices > Tape Drive

Backup pools

- Pool02week

Backup devices

- Tape Drive

Label new tape

Name:

Pool name:

Limit tape size

**apply**

Please apply changes or press "reload" button to discard

Backup device tapes

**i** Info  
No tapes. To use this device you must label a tape first.

Tape tools

**rewind** **erase** **eject**

Remove backup device

**remove**

Event Viewer:

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# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

After the DSS V6 WEB page has been reloaded, the new Backup device tapes (Tape001) should appear.

Backup devices: Tape001



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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: MAINTENANCE > backup > Backup devices > Tape Drive

Backup pools

- Pool02week

Backup devices

- Tape Drive

Backup tasks

Data replication

Label new tape

Name:

Pool name:

Limit tape size

apply

Backup device tapes

Name	Pool	Status	Used/size	Action
Tape001	Pool02week	Append	0.00kB/(n/a)	

Tape tools

rewind | erase | eject

Remove backup device

remove

Event Viewer:

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# Backup to attached Tape Drive



Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

Next ,select **Backup tasks**. In the “**Create new backup task**” function enter a name for the backup tasks and select the **Logical volume**. In this example choose **lv0000**

Backup tasks: BackupTask001

Next, you must select the shares for the local backup (**Data**). Move the **Available shares** to be used for the local backup to the **Assigned shares** area by clicking  button.

# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

Backup tasks: BackupTask001



In the "Create new backup task" function, select the **Snapshot** volume and select **Store on pool**. In this example, **snap0000** and **Pool02week**

Next, select the backup **Level** (e.g. incremental) check box, **Compress data**, and click the **apply** button.

### NOTE:

Most of the tape devices have internal compression for the data. If your tape device has internal compression, you can skip this option "Compress data".

# Backup to attached Tape Drive



Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

After the DSS V6 WEB page has been reloaded, the new Backup tasks should appear. Next, click **BackupTask001**, in the **Backup tasks** tree.

Backup tasks: BackupTask001

In the "Create new schedule for backup" function, enter a **Comment** for the new schedule and **Select time**. In this example we will use the **Weekly** and check the box for all of days of the week. Select time for the start task (8 pm). Next, click the **apply** button.

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SETUP CONFIGURATION MAINTENANCE STATUS HELP

You are here: MAINTENANCE > backup > Backup tasks > BackupTask001

Backup pools

- Pool02week

Backup devices

- Tape Drive

Backup tasks

- BackupTask001

Data replication

Attribute	Value
Shares:	Data
Pool:	Pool02week
LV:	lv0000
Snapshot:	snap00000
Level:	incremental
Compression:	normal
Full backup every:	off

Create new schedule for backup task

Comment: EveryDayAt8PM

Select time: Weekly

Monday  Saturday  
 Tuesday  Sunday  
 Wednesday  
 Thursday  
 Friday

Start 20 : 00

Every week  
 Every even week  
 Every odd week

apply

Please apply changes or press "reload" button to discard

Event Viewer: [icon]

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# Backup to attached Tape Drive



Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

After clicking  button in the **Backup tasks**, shows the status of the backup tasks.

Backup tasks: BackupTask001



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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: MAINTENANCE > backup > Backup tasks

**Backup pools**

- Pool02week

**Backup devices**

- Tape Drive

**Backup tasks**

- BackupTask001

**Data replication**

Name	Start time	Action
BackupTask001	n/a	  

**last log**

No logs found.

**short description**

shares: Data  
pool: Pool02week  
level: incremental

**Create new backup task**

Name:   
Logical volume:   
Shares for backup:

Available shares:  Assigned shares:

Search:  Search:

Data  
backup\_db\_lv0000

Event Viewer: 

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# Backup to attached Tape Drive



Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

The Backup tasks function shows the backup task running at 8 pm.

Backup tasks: BackupTask001



# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

Under the "STATUS", select "tasks" and Backup

Backup tasks: BackupTask001

Click on the "Runnings tasks" to display detailed information on the current Backup task.

The screenshot shows the open-e web interface with the following elements:

- Header: open-e | ENTERPRISE CLASS STORAGE OS for EVERY BUSINESS | DATA STORAGE SOFTWARE V6
- Navigation: SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP
- Breadcrumbs: You are here: STATUS > tasks > Backup
- Tasks List (Left):
  - Tasks
  - Backup (selected)
  - Restore from backup
  - Data Replication
  - Antivirus
  - Volume Replication
  - Snapshots
- Running tasks (Right):

Name	Type	Start time
BackupTask001	Backup	2010-02-09 20:00:04
- Tasks log (Right):

Time	Name	Type	Status	Action
2010-02-09 20:00:29	BackupTask001	Backup	OK	Started
- Footer: Event Viewer: [icon] | Data Storage Software V6 - All rights reserved

# Backup to attached Tape Drive



Data Server (DSS)  
IP Address: 192.168.0.220

## 3. ... Continue

After the end of the Backup all data from "Data" share are located in „Tape001". Showing us that 3.29 Gb of 60Gb has been backed up.

Backup device: Tape001



The configuration of Backup is now complete.

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: MAINTENANCE > backup > Backup devices > Tape Drive

Backup pools

- Pool02week

Backup devices

- Tape Drive

Backup tasks

- BackupTask001

Data replication

Label new tape

Name:

Pool name:

Limit tape size

apply

Backup device tapes

Name	Pool	Status	Used/size	Action
Tape001	Pool02week	Append	3.29GB/(n/a)	
first written:			2010-02-09 20:00:32	
last written:			2010-02-09 20:14:43	
tape retention:			2 weeks	

Tape tools

rewind | erase | eject

Remove backup device

Event Viewer:

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# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 4. Create a Restore from the Backup

Under the “**CONFIGURATION**” tab, select the “**NAS resources**” menu

Shares: Restore from Backup

In order to execute the Restore, you must create a new share.  
Click **Shares** on the left side of the DSS V6 web GUI. In the example, a shared volume named **Restore from Backup** has been created on **lv0000**.

The screenshot shows the open-e web GUI interface. At the top, there is a navigation bar with tabs for SETUP, CONFIGURATION, MAINTENANCE, STATUS, and HELP. The current page is titled 'You are here: CONFIGURATION > NAS resources > Shares'. On the left side, there are three main sections: 'Shares' (containing '1. backup\_db\_lv0000' and '2. Data'), 'Users' (containing '1. john'), and 'Groups' (containing '1. users'). The 'Shares' section is selected, and the 'Create new share' form is displayed on the right. The form has the following fields: 'Name' (text input with value 'Restore from Backup'), 'Comment' (text area), 'Default path' (dropdown menu with value '/lv0000/Restore from Bac'), and 'Specified path' (text input with value '/'). There is an 'apply' button at the bottom right of the form. Below the form is the 'ACL (Access control list)' section, which includes a 'Browser' tab and a list of items, currently showing 'lv0000'. At the bottom of the page, there is an 'Event Viewer' icon and the text 'Data Storage Software V6 - All rights reserved'.

# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 4. ... Continue

Under the "MAINTENANCE" tab, select the "restore" menu.

Restore task: RestoreTask



In the "Create new restore task", check the box BackupTask001. Enter a name for the Restore tasks name (e.g. RestoreTask), and select the destination share in the Restore to field. In this example, choose Restore from Backup share. Next, click on the apply button.

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: MAINTENANCE > restore

Restore tasks

Create new restore task

Backup tasks search

Task: [dropdown]  
Device: [dropdown]  
File name contain: [text]  
From date: [Day] [Month] [Year]  
To date: [Day] [Month] [Year]

search

Name	Date	Device
<input checked="" type="checkbox"/> BackupTask001	2010-02-09 01:14:27	Tape

Restore task name: [text: RestoreTask]  
Restore to: [dropdown: Restore from Backup]  
Overwrite files:  
 always  
 if newer  
 if older  
 never  
 run imediate after create

apply

Please apply changes or press "reload" button to discard

Event Viewer: [icon]

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# Backup to attached Tape Drive



Data Server (DSS)  
IP Address: 192.168.0.220

## 4. ... Continue

Next, click on the “Restore Task” name

Restore task: RestoreTask



On the “Restore task”, to display detailed information on the current restore task

The screenshot shows the open-e web interface. At the top, there is a navigation menu with 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. Below the menu, the breadcrumb trail reads 'You are here: MAINTENANCE > restore > RestoreTask'. The main content area is divided into two panels. The left panel shows a list of restore tasks, with 'RestoreTask' selected. The right panel displays the configuration for the selected task, including a table of attributes and values, and a 'Remove restore task' section with an information message and a 'remove' button.

Attribute	Value
Backups:	RestoreTask
Destination shares:	Restore from Backup
Device:	Tape
Overwrite files:	always

Remove restore task

**i** Info  
Restore task is running. You must stop this task before you can remove it.

remove

# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 4. ... Continue

Under the "STATUS" tab, select "tasks" and Restore from backup.

Restore tasks: RestoreTask



On the "Runnings tasks" to display detailed information on the current Restore from backup task.

The screenshot shows the open-e web interface with the following elements:

- Header: open-e | ENTERPRISE CLASS STORAGE OS for EVERY BUSINESS | DATA STORAGE SOFTWARE V6
- Navigation: SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP
- Breadcrumbs: You are here: STATUS > tasks > Restore from backup
- Tasks List (Left):
  - Backup
  - Restore from backup** (selected)
  - Data Replication
  - Antivirus
  - Volume Replication
  - Snapshots
- Running tasks (Right):

Name	Type	Start time
RestoreTask	Restore from backup	2010-02-09 20:23:43
- Tasks log (Right):

Time	Name	Type	Status	Action
2010-02-09 20:23:45	RestoreTask	Restore from backup	OK	Started
- Footer: Event Viewer: [icon] | Data Storage Software V6 - All rights reserved

# Backup to attached Tape Drive



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Data Server (DSS)  
IP Address: 192.168.0.220

## 4. ... Continue

After the end of the Restore Backup in "Backup Restore tasks", you can start the task again.

Restore task: [RestoreTask](#)



The screenshot shows the open-e web interface. At the top, there is a navigation bar with 'open-e' logo, 'ENTERPRISE CLASS STORAGE OS for EVERY BUSINESS', and 'DATA STORAGE SOFTWARE V6'. Below this are tabs for 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'MAINTENANCE > restore'. The main content area is divided into two panels. The left panel is titled 'Restore tasks' and contains a single entry 'RestoreTask'. The right panel is titled 'Backup Restore tasks' and contains a table with the following data:

Name	Start time	Action
RestoreTask	n/a	[Play] [Stop] [Close]
<b>last log</b>		
2010-02-09 20:23:45	start	
2010-02-09 20:36:38	stop	
<b>short description</b>		
device:	Tape	
destination share:	Restore from Backup	
jobs:	1	

Below the table is a 'Create new restore task' section with a search form. The search form includes fields for 'Task', 'Device', and 'File name contain'. It also has date pickers for 'From date' and 'To date', each with 'Day', 'Month', and 'Year' dropdowns. A 'search' button is at the bottom right of the search form.

# Backup to attached Tape Drive



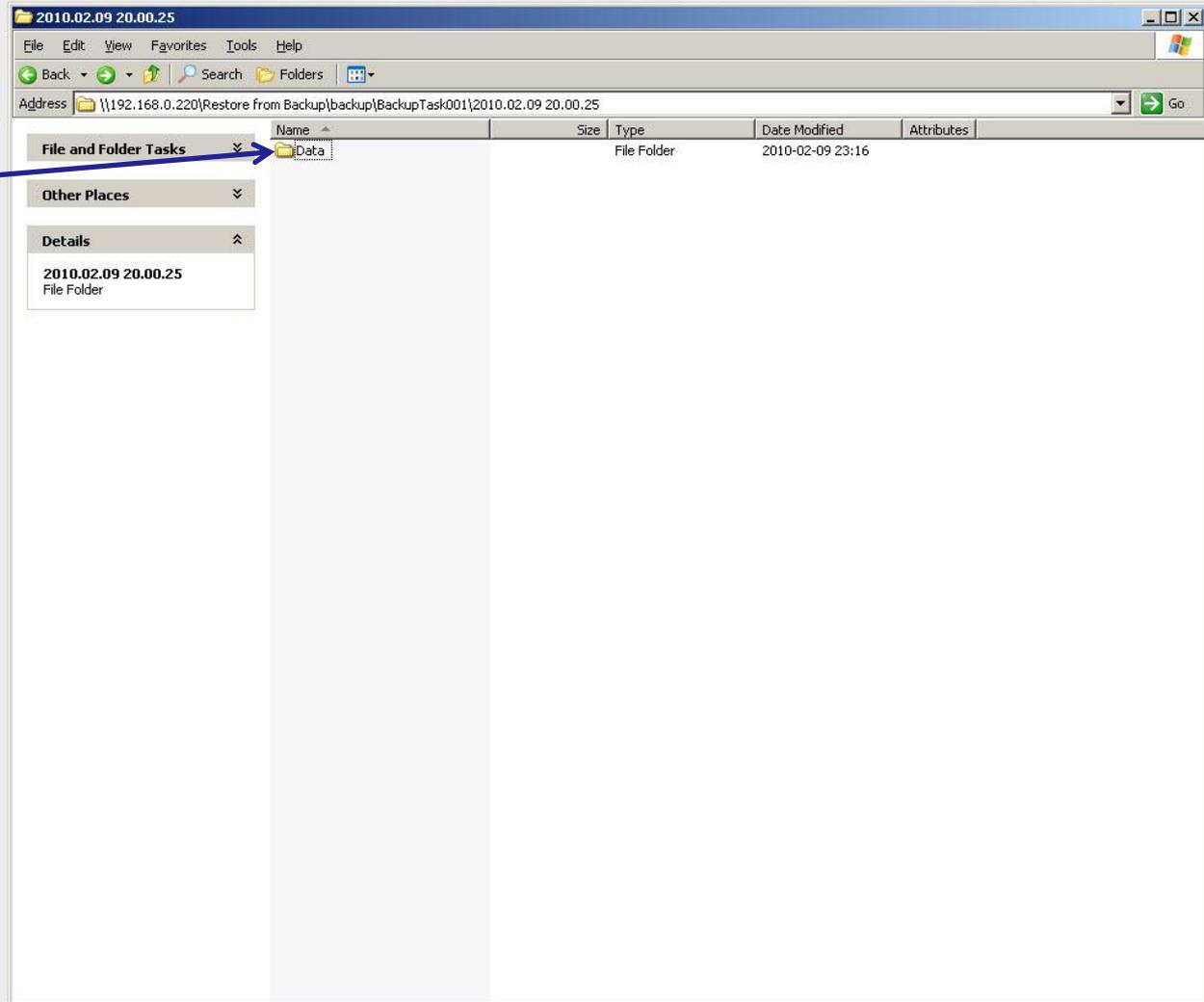
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Data Server (DSS)  
IP Address: 192.168.0.220

## 4. ... Continue

After the end of the Restore from Backup all data from the „Data“ share are available on the “Restore from Backup” share.

Share: Restore from Backup



The configuration of the Restore from Backup is now complete.

Thank you!