

# Week #9 – Backups

## Overview of the week's objectives

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This week's material will introduce various tools allowing a Linux system administration to implement given backup policies. Given the need to back up data locally or over a network, you will be able to evaluate popular backup technologies, select an appropriate backup tool, and configure it for regular backup purposes using a Linux script.

## TODO List

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*Please refer to all previous “Week's Overview PDFs” for details / advice relating to, or concerning, each of the tasks detailed in the remainder of this overview. While we focus on instructions specific to this week's material herein, previous instructions still apply.*

Learning Activity			Time in hours		Points
			Expected	Spent	
Reading Assignments	O3L7	Studying Guides & Videos	2		
Practice Assignments	O3L7-PQ	Taking Practice Quizzes	1		
	W9-PA	Working on PAs & Participating to PA forums	5		
Graded Assignments	W9-GQ	Taking Graded Quiz	1		2
	W9-DF	Participating to Discussion forums	3		1
			<b>12</b>		<b>3</b>

## Task #1 – Study & Practice

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*Refer to “Week #2’s Overview PDF” and/or all previous “Week’s Overview PDFs” for detailed instructions on how to use [online module guides](#), [practice quizzes](#) and our [support forum](#) while working on this task.*

## Task #2 – Practice Assignments

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*Refer to “Week #2’s Overview PDF” and/or all previous “Week’s Overview PDFs” for detailed instructions applying to all Practice Assignments.*

### Question #1

We are going to assume that your Linux system has a backup partition mounted over the network from a server. The backup partition is accessed through the `/mnt/backups/` folder just like you would access any folder on your system.

Write a script allowing you to `tar` then `zip` the whole `/home/` folder and archive it in `/mnt/backups/` under a name reflecting the date of the backup; e.g. **home.2011.08.24**. We will assume this script of yours will be executed with `sudo` privileges.

### Question #2

Research the syntax and features of the `rsync` tool. Replace the usage of `tar` and `gzip` in the previous script by `rsync` in order to copy a snapshot of `/home/` to a folder in `/mnt/backups/` which name will reflect the date it was taken; e.g. `/mnt/backups/home.2011.08.24/`

### Question #3

Research how to make either script run every Monday of every week using the `crontab` system.

## Task #3 – Discussion Forums

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*Refer to “Week #2’s Overview PDF” and/or all previous “Week’s Overview PDFs” for detailed instructions applying to all discussion forums assignments.*

### Topic #1 – W9DF – Backup Technologies

Using the internet, research at least two backup technologies. The following are just a few examples to give you a better idea of what we mean by “backup technologies” in this assignment.

- Backups to tapes vs. backups to disks, typically a SAN featuring slower speed disks

- Backups based on “snapshots” of the disk state vs. archives of its data. Generally such backups are stored on another SAN featuring slower speed disks
- Multi-tier storage solutions which automatically migrate data from fast disks arrays, to lower ones, to tapes, based on usage frequency.

For each of the technologies you will have researched, provide a summary of its specificities, the references you used, a fictive scenario which illustrates when such technology would be the best fit.

## **Task #4 – Graded quizzes**

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*Refer to “Week #2’s Overview PDF” and/or all previous “Week’s Overview PDFs” for detailed instructions applying to all graded quizzes.*