

DEPARTMENT FOR OPERATING SYSTEMS

Data Storage Systems

Lab05-NFS and SAMBA configuration

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Introduction

In today's exercise, we'll learn how to install and configure NFS and SAMBA services on CentOS.

Before exercise

1. Read examples of cases.

Tasks

Zadatak

Case study

Company of 450 people needs implementation of storage system.

Based on current estimate system need to store regular files for business data and database system.

File size is now about 3,5 TiB.

Database usage with additional space for usual tasks is 842 GiB.

Expected growth is 10% per year.

Metered values are giving as maximum of 2500 IOPS for file access, while database requires minimum of 4000 IOPS.

Design should provide enough capacity for growth during next 4 years – both for files and database.

IOPS will not have significant growth during these years.

Usual I/O size is 4KB and R/W distribution is 50/50.

We have two types of drives available to use:

- a) SAS 600GB 15k RPM 120MB/sec
- b) SSD 480GB 600MB/sec - 90k IOPS per 4k

Price of SSD 3 times then SAS disk.

RAID controller in RAID1 can utilize split I/O.

You need to design multiple solutions and decide which is better for us.

System needs to allow at least one disk failure without disrupting normal operations.