

# DAY 3

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## 1 EXAM

### 1.1 CONTENTS

This Test Project proposal consists of the following document/file:

1. TP39\_day3-v1

### 1.2 INTRODUCTION

The competition has a fixed start and finish time. You must decide how to best divide your time.

### 1.3 DESCRIPTION OF PROJECT AND TASKS

You work as an administrator for a large international transport company called "InterTrans". The company needs a secure and redundant connection between their locations in different countries.

A conception already exists and for reasons of economy they don't like to use only Cisco components for the installation. Please install the given configuration.

You'll find additional information as attachment.

### 1.4 PART 1

#### Work Task Server

Note: Please use the default configuration if you are not given the details

Physical Server (NAGIOS):

- Set up the server with the operating system (Debian 5). Ensure that all components are correctly installed
- Create logical drives as follows:
  - LD1 full space of harddisks
- Create partitions as follows: (RAID)
  - / full space of harddisks
- Please configure the server with the settings specified in the appendix
- Create only „root“ user!
- Install the services
  - Install Nagios monitoring software
    - Monitor all Cisco devices
    - Use webinterface with port 80 for monitoring
  - Install NTP server
    - Use time.worldskills.com for time synchronisation

Physical Server (SOFTWARE FIREWALL):

- Set up the server with the operating system (Debian 5 x64)
- Create virtual disk as follows
  - Disk1: 16 GB
- Create partitions as follows

- / 12 GB (Disk1)
- swap 4 GB (Disk1)
- Please configure the server with the settings specified in the appendix
- Create only „root“ user
- Install the services:
  - Install and configure two network interfaces
  - Install Squid proxy server
    - Activate webcache in proxy
    - Use Squid as a transparent proxy

## 1.5 PART 2

### Work Task Network

Note: Please use the default configuration if you are not given the details

- Connect the lan cables based on the appendix network diagram
- Use HSRP gateway on local LAN off routers „WANGW01“ and „WANGW02“
- Cisco router configuration:
  - Enable user authentication via AAA services.
  - Enable SNMP for monitoring device from Nagios server.
  - Use IPSEC VPN Tunnels (VTI) to create VPN between routers
    - Use VTI Tunnel network addresses starting 192.168.255.0
  - Use EIGRP routing for redundancy between network 192.168.50.0/24 and 192.168.52.0/24
- Switch configuration:
  - Configure IP 192.168.50.8 / 24.
  - Enable user authentication AAA services
  - Configure SNMP for monitoring devcie from Nagios server
  - Configure a second switch with the same settings for backup

## 1.6 PART 3

### Work Task Notebook

Note: Please use the default configuration if you are not given the details.

- Use the preinstalled notebook with Windows Vista
- Please configure the notebook with the settings specified in the appendix
- Connect the notebook to the „SWRT01“
- Use the NTP server to synchronization the time
- Create link on desktop to Nagios3 web site

## 2 APPENDIX

### 2.1 Specifications

#### 2.1.1 PHYSICAL SERVER SPECIFICATIONS (MONITOR)

Organization:	internationaltrans
Computer name:	Inttran01
User name:	root
Password:	calgary09
TCP/IP Adress:	192.168.50.32/24

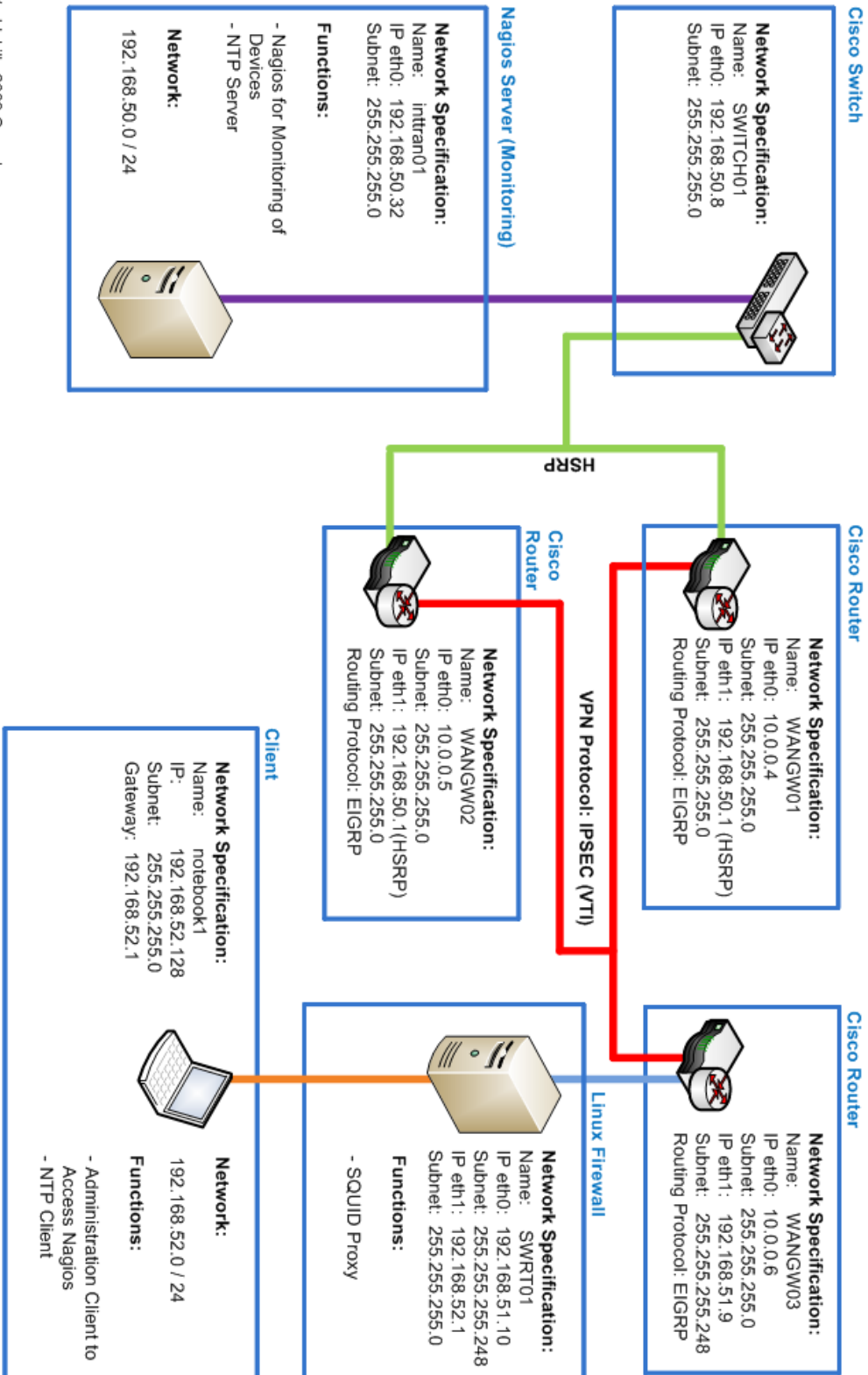
#### 2.1.2 PHYSICAL SERVER SPECIFICATION (FW)

Organization:	internationaltrans
User name:	root
Password:	calgary09
TCP/IP Adress eth0:	192.168.51.10
Subnet eth0:	255.255.255.248
TCP/IP Adress eth1:	192.168.52.1
Subnet eth1:	255.255.255.0

#### 2.1.3 NOTEBOOK SPECIFICATIONS

Organization:	internationaltrans
Computer name:	notebook
Workgroup:	inttrans
User name:	notebook
Password:	notebook
TCP/IP Adress:	192.168.52.128 / 24
Passwort information:	hardware

# day3 – wide area networking appendix a



## 2.1.4 NETWORK DIAGRAM

## 2.2 INSTRUCTIONS

### 2.2.1 INSTRUCTIONS TO THE COMPETITOR

- Do not bring any materials with you to the competition.
- Mobile phones are not to be used.
- Do not disclose any competition material / information to any person during each day's competition.
- Read the whole competition script prior to your starting work.
- Be aware different tasks attract a percentage of the overall mark. Plan your time carefully.

### 2.2.2 EQUIPMENT, MACHINERY, INSTALLATIONS AND MATERIALS REQUIRED

Server:

- 2 x PC - High Powered Desktop, 5 Nics, 160G HD, 4 G RAM, Quadcore

Notebook:

- Notebook assembled OS Windows Vista

Network:

- 2 x Cisco Switch
- 3 x Cisco Router

Additional software:

- Operating System (Server 2008)
- Debian 5
- Drivers for peripherals

Additional equipment: