

**Note**

1. Rename all the files with the naming convention as “Capstone-Project-1-<first\_name.last\_name>” as PDF document and upload it on the URL provided by RPS.
2. Upload only PDF documents with the specific name as mentioned above.
3. **Its compulsory to attempt 3 projects.**

### **Project Task 1: -**

**Objective:** Create a domain controller using domain name as <your-name>.training and create a shared NFS folder (c:\sharables) on domain controller machine with read-only permissions and access this folder on the member machine.

#### **Setup:**

- Use VMWare workstation 17 or above to create a windows server 2016 as domain controller with a custom LAN Segment names as "Wipro-network".
- Provide static IP as 192.168.10.10/24 with loopback DNS address & perform post-installation configuration.
- Install the required role and promote the server to domain controller.
- On DC, create a group using name "dcadmins" and add 2 users in it with the 'domain admins' permissions.
- Install another windows server 2016 (as GUI) with the name "Member01" and domain join this member to domain controller & verify.
- Create a new directory as "c:\sharable" on domain controller with read-only & list permission to a group called "dcadmins" and verify the access from the "Member01" machine.
- Create few files under "c:\sharable" and try accessing and modifying them on the member machine using the users created under "dcadmin" group.

#### **Project deliverables:**

- Document (take snapshots) installation of both domain controller and member01 machine.
  - Document (take snapshots) the post-installation setup & domain controller promotion.
  - Document (take snapshots) NFS sharing and accessing the data.
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### **Project Task 2: -**

**Objective:** Install CentOS 7 server (*after installation GUI must be present*). Attach 3 disks of 5GB each & create 2 LVMs from these disks of 7GB (/lvm1) and 8GB (/lvm2) with XFS and EXT4 file systems respectively and verify. Install the following RPM packages using the package manager of your choice using single command.

- VSFTPD
- PHP
- System-Config-Kickstart
- finger.

Start "YES" process and use TOP command to kill this process.

#### **Setup:**

- Use VMWare workstation 17 or above to create a new CentOS 7 using **text-mode installation.**
- Change your linux server name to "LNX-SVR-01" using NMTUI command. Change the IP address on linux to 192.168.10.10/24.
- Install the packages using YUM package manager.
- Use appropriate commands to start and kill the 'yes' process and verify.

#### **Project deliverables:**

- Create document (take snapshots) installation of linux server.
  - Create document (take snapshots) of LVM creation.
  - Create document (take snapshots) of installation of packages using YUM command.
  - Create document (take snapshots) of all process related commands.
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### **Project Task 3: -**

#### **Objective:**

Use domain controller machine to create 10 users in bulk using custom made powershell script and store users with an organizational unit (training) and verify. While creation of users, ensure that you provide the password for users and user account must be enabled and must change password at first time log on. Attach 2 HDD (of 5GB each) on the member01 and create RAID 0 using these HDDs and verify.

#### **Setup:**

- Use existing domain environment to create users in bulk & verify it by login in to the member01 machine using random user.
- You can take help from official Microsoft powershell cmdlet page.
- Ensure that you have appropriate permissions to login.
- Create RAID 0 & verify on Member01.

#### **Project deliverables:**

- Create document (take snapshots) script.
  - Create document (take snapshots) of bulk user creation.
  - Create document (take snapshots) of user logging in to member server.
  - Create document (take snapshots) of Raid 0.
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### **Project Task 4: -**

#### **Objective:**

Use Cisco packet tracer and implement static routing and OSPF routing using 3 routers.

#### **Setup:**

- Use existing install cisco packet tracer within the cloud labs & perform the following
  - o Static routing using 3 routers.
  - o OSPF using 3 routers.
- Use ping commands for both setups to verify is its working.

#### **Project deliverables:**

- Create document (take snapshots) Static routing.
  - Create document (take snapshots) of OSPF configuration using 3 routers.
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### **Project Task 5: -**

#### **Objective:**

Ensure that you have a windows-based domain environment (with a DC & Member). Create a group policy and apply it on the all the computers that are domain joined. This policy basically applies the same wallpaper in all the computers within the domain.

#### **Setup:**

- Install 2 server or 1 server & 1 client.
- Make 1 of them as domain controller
- On DC, create a group policy & apply it on the OU.
- Verify the wallpaper on member machine (GUI).

#### **Project deliverables:**

- Create document (take snapshots) of group policy creation.
  - Create document (take snapshots) of group policy getting applied and wallpaper on Member01.
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## **Project Task 6: -**

### **Objective:**

Use MySQL workbench and create an employee database. Create a table empdetails (emp\_id, Name, Age, Salary, Position). Create another table emplocation (emp\_id, location). Create primary key & foreign key in the tables accordingly and perform CRUD operation on the table. Use joins to display “**emp\_id, Name, Age, Salary, location**” using primary key & foreign key concept.

### **Setup:**

- Use existing MySQL workbench setup.
- Create a database.
- Create 2 tables in it & verify.
- Insert data (according to your wish) & verify.
- Display (emp\_id, Name, Age, Salary, location) as a single output.

### **Project deliverables:**

- Create document (take snapshots) of creating database & table.
- Create document (take snapshots) of joined table as output