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-----PRACTICAL 03-----

❖ Addition and Configuration of vSphere distributed switch.

1. Distributed switches' properties can be explored and edited by right clicking the Region :

The screenshot displays the VMware vSphere Client interface. The top navigation bar shows the user is logged in as Tushar Panchal. The left sidebar contains a tree view of the vSphere environment, with the 'RegionA01-vDS-COMP' distributed switch selected. The main content area shows the 'Properties' tab for this switch, detailing its configuration. A right-hand panel titled 'EDIT THE SWITCH PROPERTIES' is visible, providing additional context and instructions.

Properties

| Category | Property | Value |
|----------|--------------------------|--------------------------|
| General | Name | RegionA01-vDS-COMP |
| General | Manufacturer | VMware, Inc. |
| General | Version | 8.0.0 |
| General | Number of uplinks | 4 |
| General | Number of ports | 520 |
| General | Network I/O Control | Disabled |
| Advanced | MTU | 1500 Bytes |
| Advanced | Multicast filtering mode | IGMP/MLD snooping |
| Advanced | Discovery protocol | Cisco Discovery Protocol |

Next, we will explore the various properties of the switch.

1. Click **Edit**

2. Health check options can be found in Configure tab :

The screenshot shows the VMware Hands-on Labs interface for Lab: Virtualization 101 (HOL-2410-01-SDC). The 'Configure' tab is selected for the 'RegionA01-vDS-COMP' object. The 'Health Check' section is expanded, showing 'VLAN and MTU' and 'Teaming and failover' both set to 'Enabled'. A sidebar on the right contains the following text:

ENABLE OR DISABLE VSPHERE DISTRIBUTED SWITCH HEALTH CHECK IN THE VSPHERE CLIENT

The Distributed Switch Health Check monitors for changes in vSphere Distributed Switch configurations. You must enable vSphere Distributed Switch Health Check to perform checks on Distributed Switch configurations.

Health Check is available on ESXi Distributed Switches and

3. Edit those options and enable health checks for both VLAN and MTU, and Testing and Failover :

The screenshot shows the 'Edit Health Check Settings' dialog box for the 'RegionA01-vDS-COMP' object. The 'VLAN and MTU' and 'Teaming and failover' options are both set to 'Enabled'. The 'OK' button is highlighted. A sidebar on the right contains the following text:

EDIT HEALTH CHECK SETTINGS

Edit Health Check Settings | RegionA01-vDS-COMP x 100

VLAN and MTU

State: Enabled

Interval: 1

Teaming and failover

State: Enabled

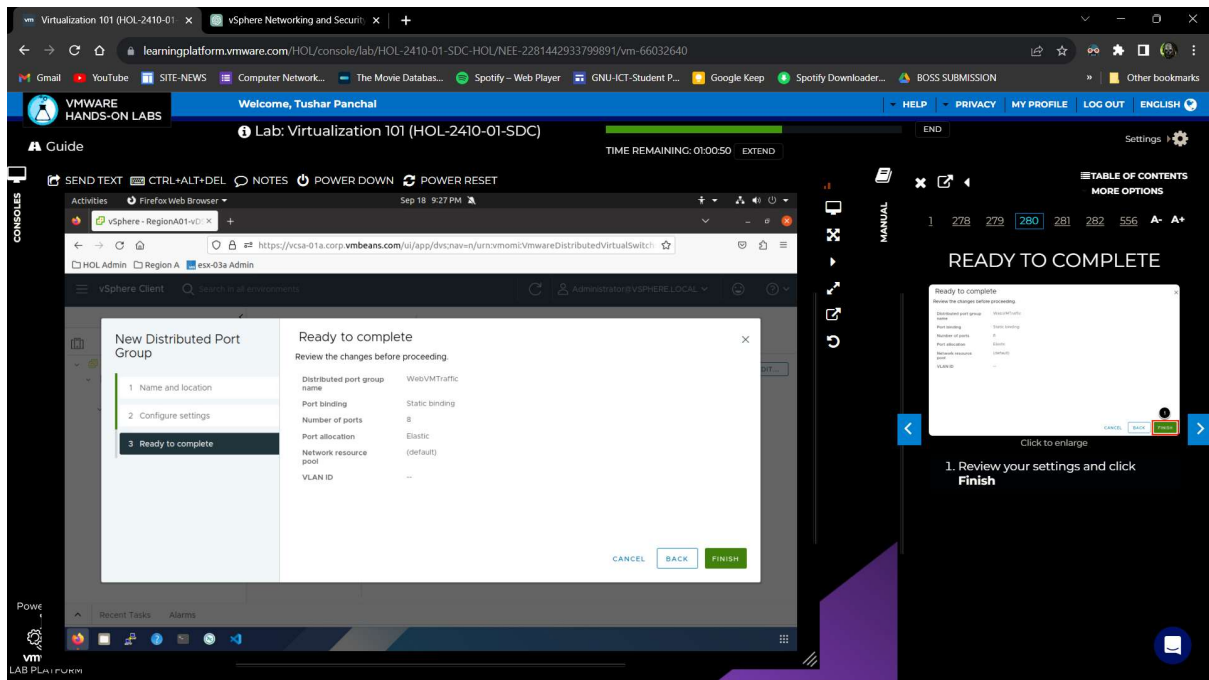
Interval: 1

Buttons: CANCEL, OK

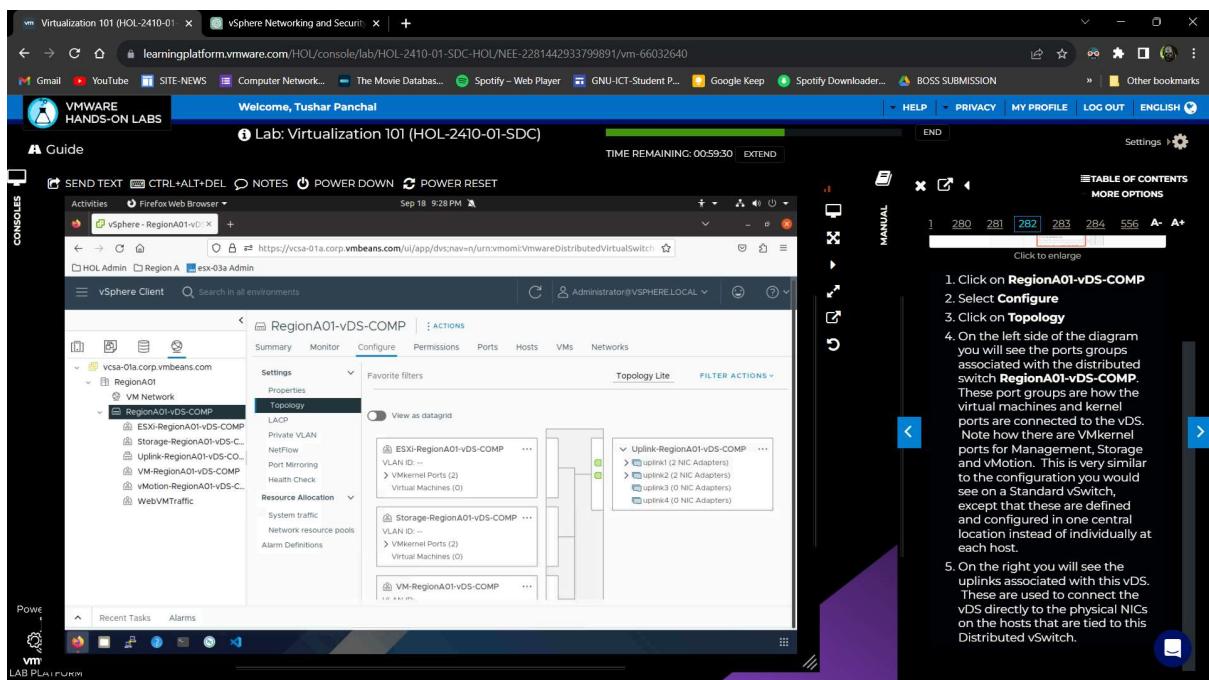
Click to enlarge

1. Select **Enabled** for both
2. Click **OK** button

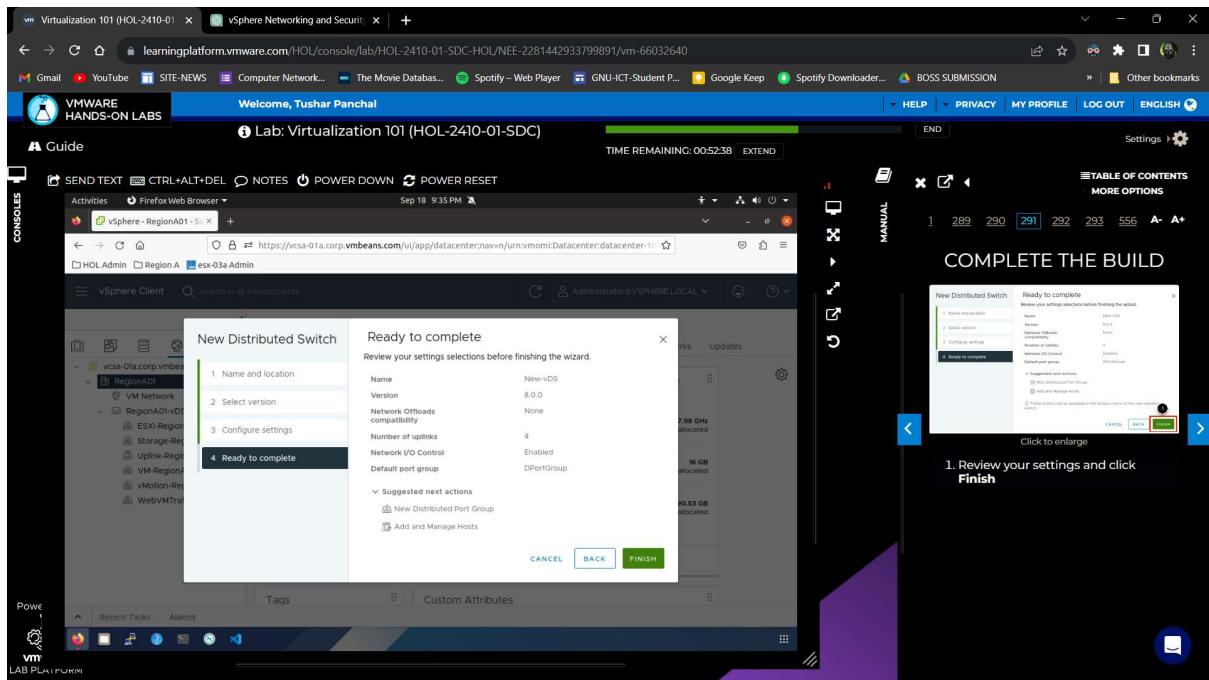
4. Create a new distributed port group with the following configurations :



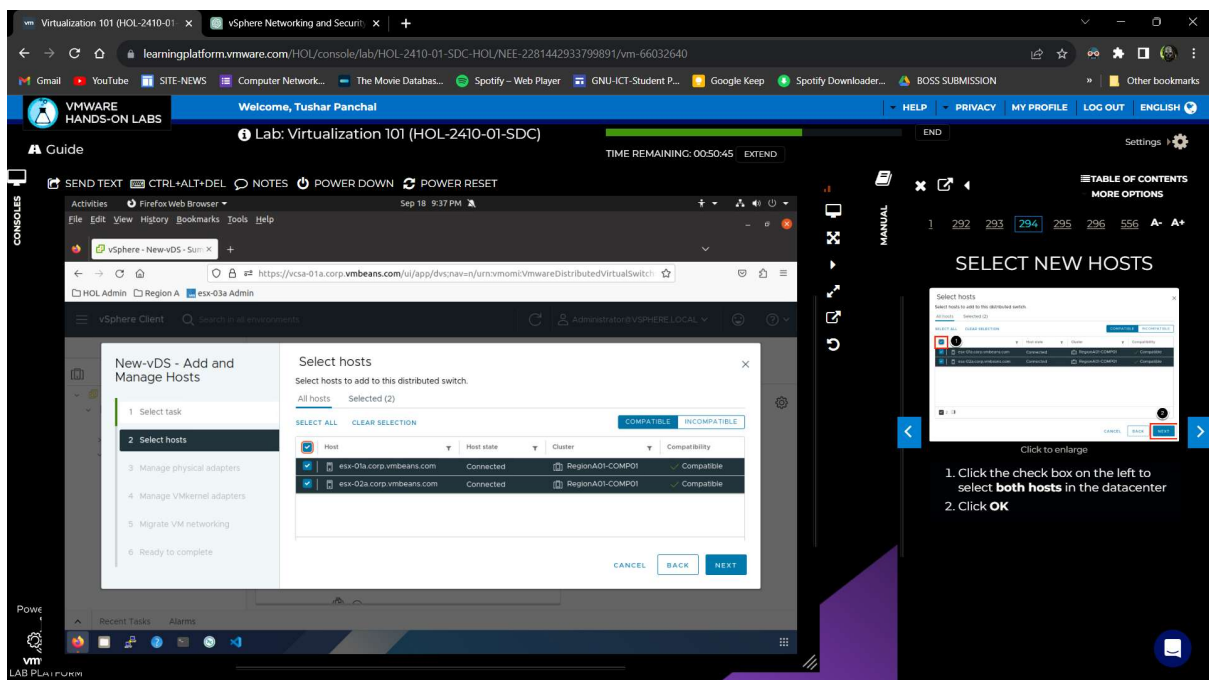
5. Topology configurations can be viewed and edited in the Topology tab :



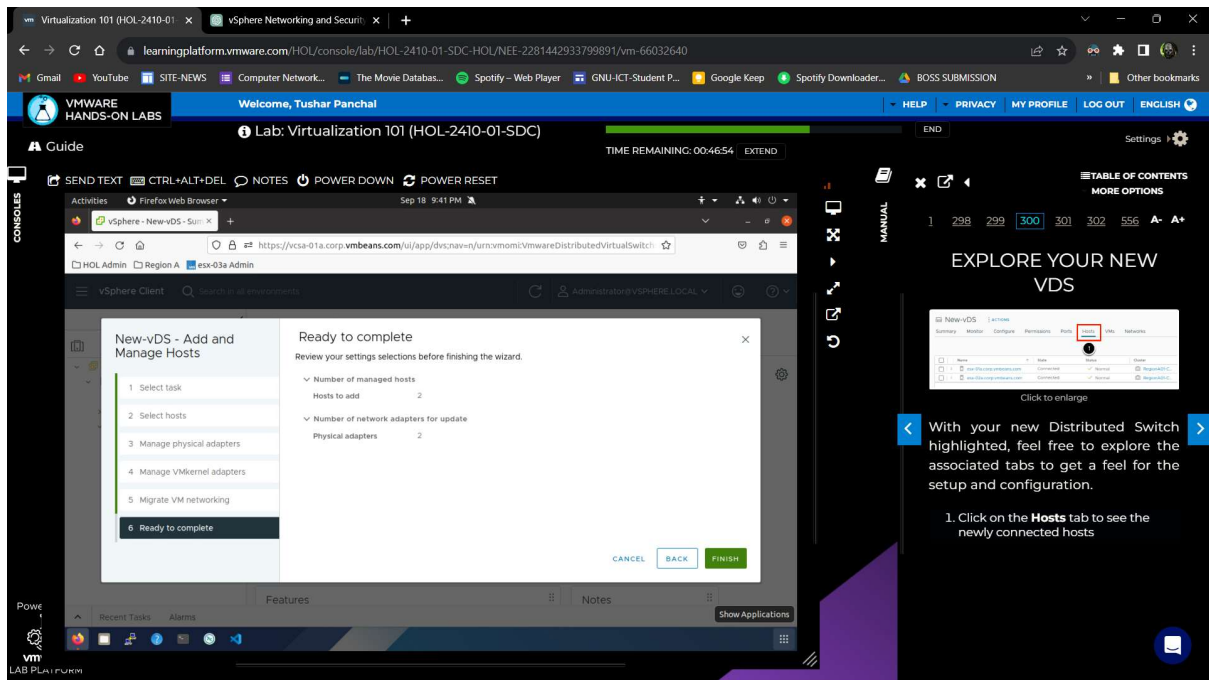
6. Create a new distributed switch with the following configurations :



7. Add hosts in the newly created distributed switch. Select all hosts :



8. Confirm adding hosts with following configurations :



The screenshot shows the VMware Hands-on Labs interface for Lab: Virtualization 101 (HOL-2410-01-SDC). The main window displays the 'New-vDS - Add and Manage Hosts' wizard. The wizard is at the 'Ready to complete' step, showing the following configuration:

- Number of managed hosts: 2
- Number of network adapters for update: 2

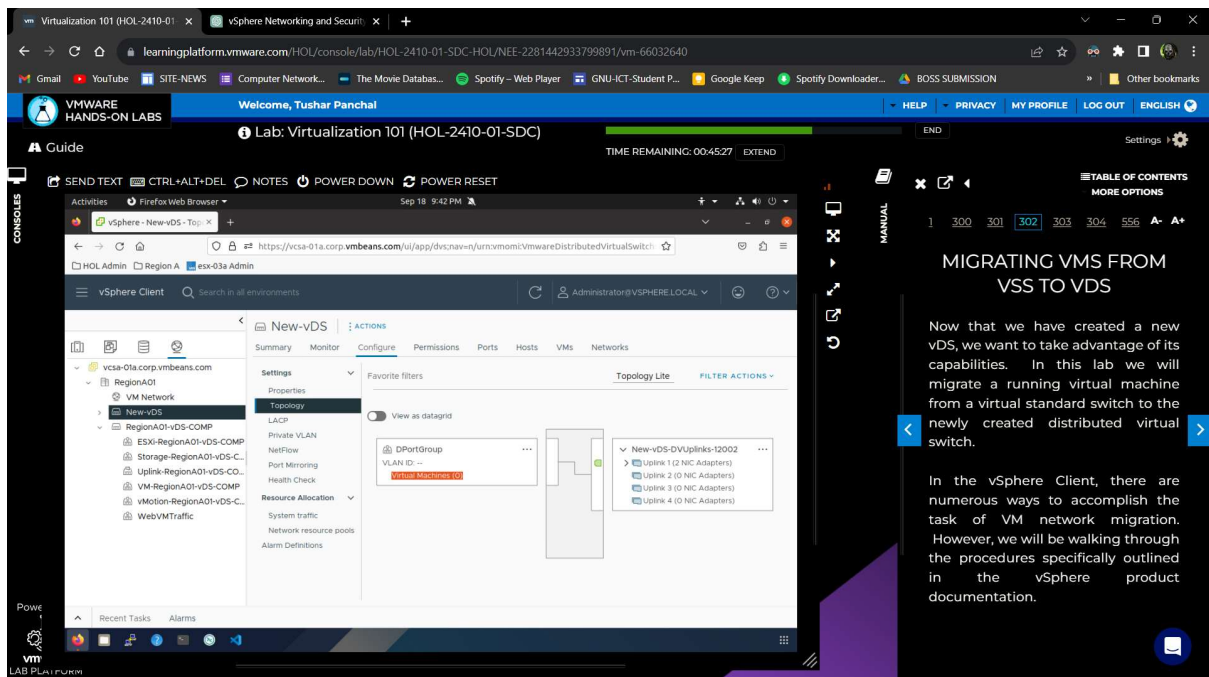
The 'Hosts' tab is highlighted in the sidebar. The 'Ready to complete' dialog box shows the following details:

- Review your settings selections before finishing the wizard.
- Number of managed hosts: 2
- Number of network adapters for update: 2

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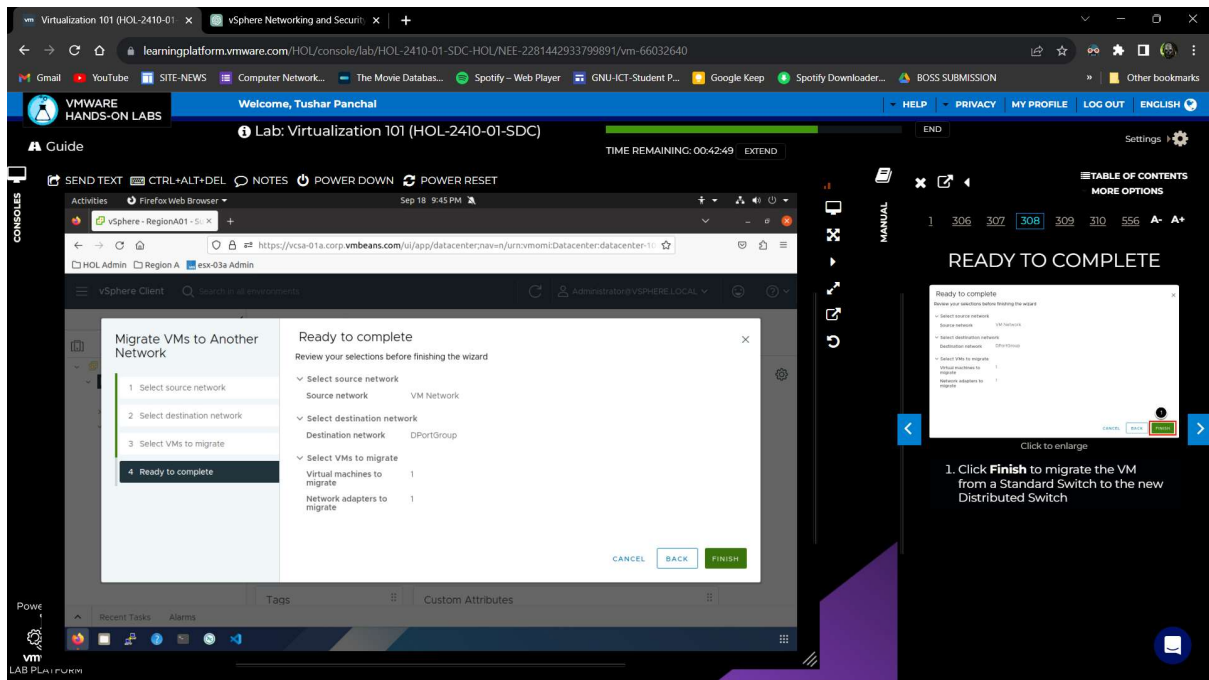
9. As seen, there are no virtual machines :



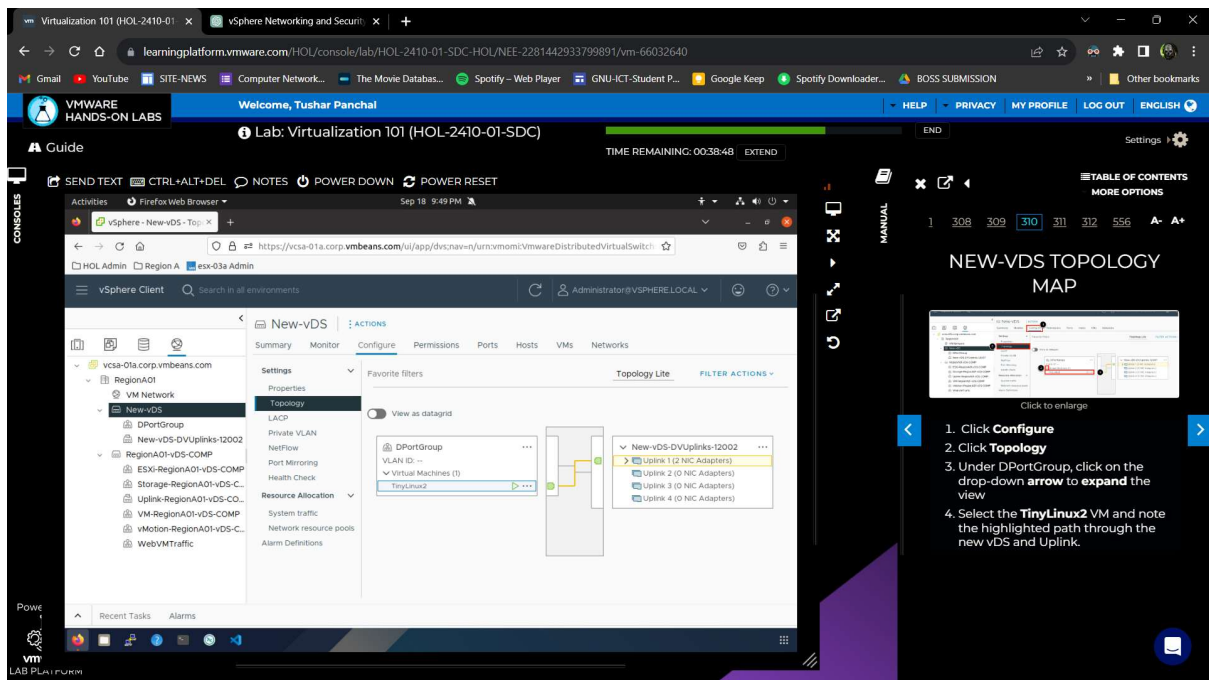
The screenshot shows the VMware Hands-on Labs interface for Lab: Virtualization 101 (HOL-2410-01-SDC). The main window displays the 'New-vDS' configuration page. The 'Hosts' tab is highlighted in the sidebar. The 'Hosts' section shows a list of hosts with no virtual machines listed.

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10. Migrate virtual machine from VM Network to DPort group, in which our new distributed switch is there :



11. Now, as seen, our VM is migrated :



12. Now, create a new distributed switch with given configurations :

The screenshot shows the VMware vSphere Web Client interface. The main window displays the 'New Distributed Switch' wizard. The wizard is at the 'Ready to complete' step. The configuration details are as follows:

| Property | Value |
|--------------------------------|--------------|
| Name | DSwitch |
| Version | 8.0.0 |
| Network Offloads compatibility | None |
| Number of uplinks | 4 |
| Network I/O Control | Enabled |
| Default port group | DPortGroup 1 |

Suggested next actions:

- New Distributed Port Group
- Add and Manage Hosts

A 'Ready to complete' dialog box is also visible on the right side of the screen, showing the same configuration details and a 'Finish' button.

13. Again, add all hosts to it similar to previous switch :

The screenshot shows the VMware vSphere Web Client interface. The main window displays the 'DSwitch - Add and Manage Hosts' wizard. The wizard is at the 'Ready to complete' step. The configuration details are as follows:

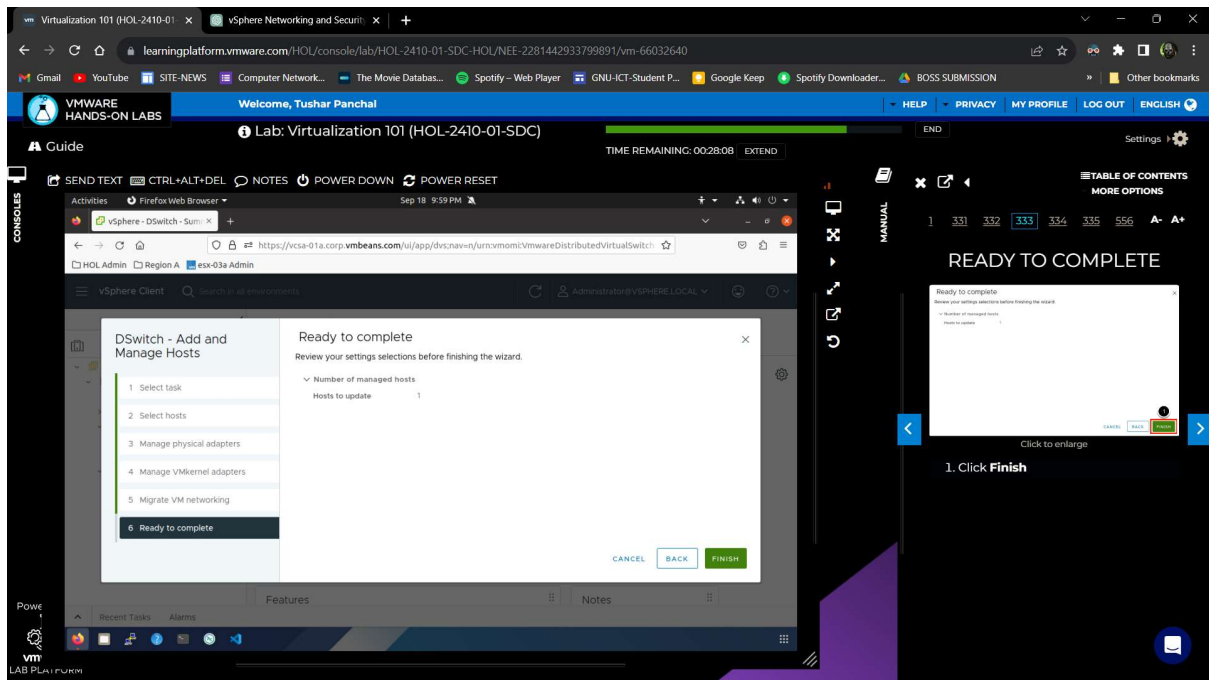
| Property | Value |
|---------------------------------------|-------|
| Number of managed hosts | 2 |
| Number of network adapters for update | 2 |

Suggested next actions:

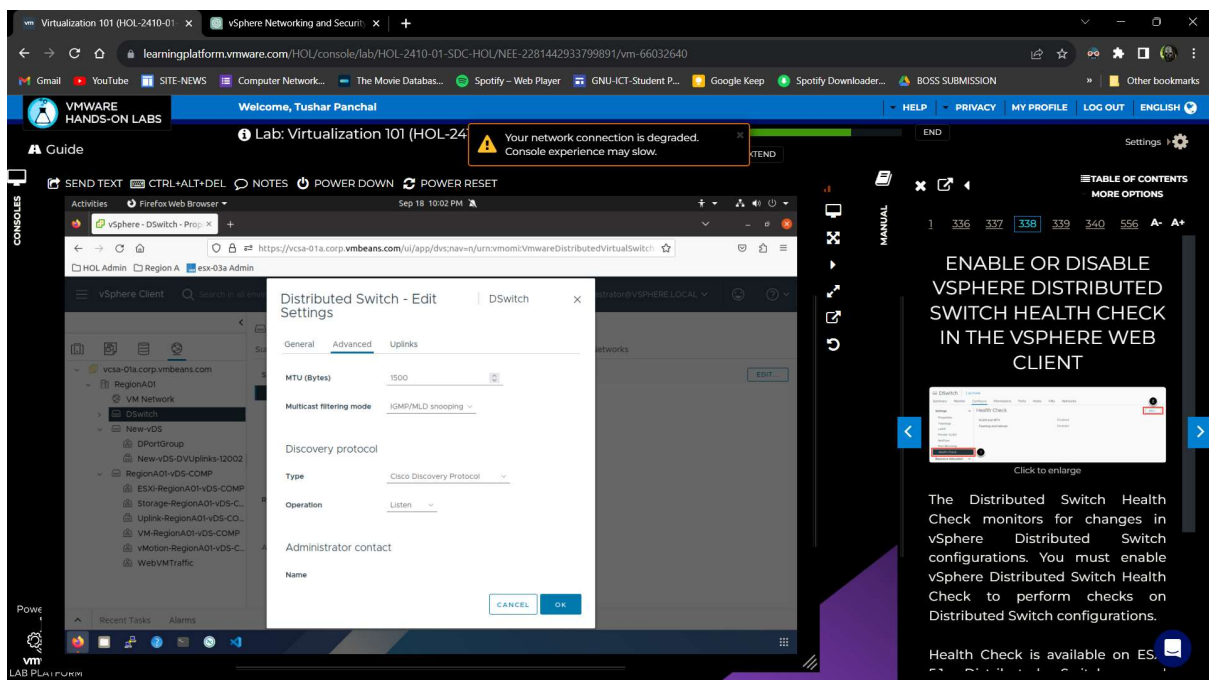
- Add and Manage Hosts
- Edit Hosts

A 'MANAGE HOSTS ON A VSPHERE DISTRIBUTED SWITCH IN THE VSPHERE WEB CLIENT' dialog box is also visible on the right side of the screen, showing the same configuration details and a 'Finish' button.

14. Manage host networking and select hosts of 01 numbered option :



15. The advanced settings of the distributed switches can be found in edit properties tab :



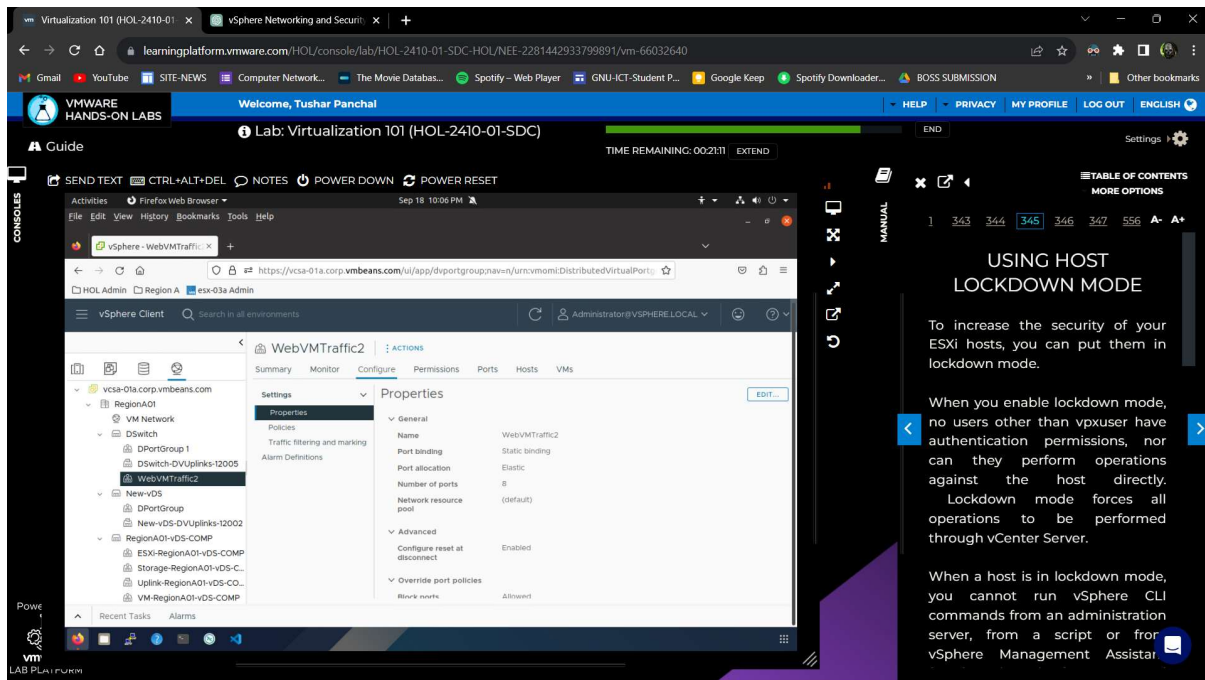
16. Similarly like previous steps, enable health check for the new switch also :

The screenshot shows the VMware vSphere Client interface. The left sidebar displays the navigation tree with 'vSphere Client' selected. The main pane shows the configuration for a 'Distributed Switch' (DSwitch). The 'Health Check' tab is active, showing 'VLAN and MTU' and 'Teaming and failover' settings, both of which are 'Enabled'. The right sidebar contains a 'TABLE OF CONTENTS' with a 'DISTRIBUTED PORT GROUPS' section highlighted. Below this, a text box explains that a distributed port group specifies port configuration options for each member port on a vSphere distributed switch. A list of steps is provided: 1. Right-click the DSwitch in the navigator, 2. Select 'Distributed Port Group' and then click 'New Distributed Port Group'.

17. Create a new port group for the distributed switch with following configurations :

The screenshot shows the VMware vSphere Client interface with the 'New Distributed Port Group' wizard open. The wizard has three steps: 1. Name and location, 2. Configure settings, and 3. Ready to complete. The 'Ready to complete' step is currently selected, showing a summary of the configuration: Distributed port group name: WebVMTrac2, Port binding: Static binding, Number of ports: 8, Port allocation: Elastic (default), Network resource pool: (default), and VLAN ID: --. The 'Ready to complete' screen also includes a 'Review the changes before proceeding' section. The right sidebar shows a 'TABLE OF CONTENTS' with a 'READY TO COMPLETE' section highlighted. Below this, a text box says 'Ready to complete' and 'Review the changes before proceeding'. A list of steps is provided: 1. Review the settings and click 'Finish'.

18. As seen in the screenshot below, distributed group's properties can be seen and edited :



➤ **Conclusion :** In this practical exercise, we delved into the addition and configuration of vSphere Distributed Switches (VDS), a critical component for advanced networking management in a virtualized environment. This practical exercise provided hands-on experience with vSphere Distributed Switches, a powerful tool for managing networking in virtualized environments. By exploring and configuring various properties, port groups, and advanced settings, we gained insight into the versatility and scalability of VDS for handling complex network infrastructures. Understanding and effectively utilizing VDS is essential for optimizing network performance and ensuring the reliability of virtualized environments in the context of VMware vSphere.