VMware vSphere: Optimize and Scale [V5.5]

Class Configuration Sheet – Student B

Your instructor will assign you a Cloud Labs username during class. Fill out the details in the fields below for easy reference.

Your Global Knowledge Cloud Labs platform credentials

Cloud Labs Username:	_____@gklabs	*This is the account you will use when connecting to the*
		Global Knowledge Cloud Labs platform from your
Cloud Labs Password:	_____	*classroom. Your instructor will provide you with an*
		account.

Your credentials to access your assigned lab equipment

Assigned desktop system name	**Student 2 Desktop**	*Shortcuts to the desktop systems for you and your partner*
		are automatically created on your desktop.
Your Desktop system username	vclass\studentb	*This is the account you will use to access your Student*
		Desktop once you have connected to the Cloud Labs
Your Desktop system password	vmware1!	*platform.*

Connecting to the Cloud Labs Platform

Open Internet Explorer and browse to https://gw1.labs.globalknowledge.net and login using your assigned **Cloud Labs** user account that your instructor provided to you (NB You *must* login using the username@domain format as shown in the table).

On the Remote Desktop configuration screen, click the **Connect** button. If any warning dialog appear, ignore by clicking **Connect**

On the first **Windows Security** dialog screen, enter your **Cloud Labs** credentials again, remembering to use the same username@domain format.

You may be prompted again by the **Windows Security** dialog screen to re-enter your credentials, this is because your connection needs to authenticate to two different systems (the RD Gateway and the Remote Desktop session host).   If you are prompted again, re-enter your **Cloud Labs** credentials.

Accessing your assigned Lab Systems

Once you have connected to the Cloud Labs platform using your assigned credentials above, a **Welcome Screen** is displayed and will automatically finish the preparation of your lab equipment (if necessary). Once the automated preparation completes, the wizard will create shortcut icons to the Student Desktop systems available in your lab kit. Your assigned student desktop system is named **Student 2 Desktop**. The remaining shortcut on your desktop is for your partner's desktop system. **Do NOT** access your partner's system unless told to do so in the Lab Guide or if your instructor has permitted it.

If required, you can manage your assigned Virtual Training Pod by opening Internet Explorer and logging into the vCloud Director Interface using your **Cloud Labs** User credentials. The vCloud Director user interface provides console and power management capabilities to your Virtual Machines. You can login to vCloud Director by visiting https://cloud.gklabs.net/cloud/org/vmwarelabs from within your **Student Desktop** system.   Use your **Cloud Labs** credential to login to vCloud Director, but *do not* include the **@gklabs** domain. Always consult with your lab partner before making any changes that could affect your vApp workspace!

Lab 1 – Using VMware vSphere Management Assistant

Preparing for the Lab

Standard lab password	vmware1!
vSphere administrator username	administrator@vsphere.local
VMware® vCenter™ Server Standard™ 5.x license key	Licenses can be obtained from http://extras.gklabs.net/vSphere-
VMware vSphere® Enterprise Plus Edition™ 5.x license key	Licenses/eval-licenses.txt
vSphere Management Assistant administrator username	vi-admin
vCenter Server FQDN	vc02.vclass.local
ESXi FQDN	esxi02.vclass.local
NTP Server address	172.20.10.1
VMX file path	/vmfs/volumes/Shared/Win01-B/Win01-B.vmx

Task 1: Log in to the Control Center Desktop

You and your lab partner have each been provided with a personal desktop instead of a shared "Control Center" system. Throughout the labs, when asked to connect to a *Control Center System*, use the **Student Desktop #** RDP shortcuts provided for you.

Task 2: License the vCenter Server System and the ESXi host

NOTE

Firefox has deliberately not been installed on this environment. Throughout the labs, when asked to use Firefox, use Internet Explorer instead.

Lab 2 – VMware Monitoring Tools

Preparing for the Lab

vSphere administrator username	administrator@vsphere.local
Standard lab password	vmware1!
vSphere Management Assistant username	vi-admin
ESXi FQDN	esxi02.vclass.local
Your student designation	StudentB

Task 2: Start database activity in a Virtual Machine

NOTE

The graphical desktop has been removed from the Linux VMs in order to improve performance. Whenever asked to open a terminal window, simply ignore this and perform all tasks as written from the CLI.

Task 8: Use Windows Performance Monitor to display captured statistics

Use the following steps to configure Performance Monitor in Windows Server 2008 R2:

   a. Select **Performance Monitor** from the left-hand menu tree, then right click anywhere in the graph area and select **Properties**.
   b. Click the **Source** tab.
   c. In the **Data source** panel, click **Log files**. Click **Add**.
   d. Navigate to the desktop and open the CSV file.
   e. Click the **Data** tab.

f.   In the **Counters** panel, select all the values and click **Remove**.

g.   Click **Add**.

h.   In the **Available Counters** list for your ESXi host, scroll down and expand **Vcpu**, then select the **%Ready** and **%Used** counters. Hold the CTRL key to select both counters.

i.   In the search field under **Instances of selected object**, enter the name of your Powered-On Linux01 VM and click **Search**. Select the Instance that relates to your Linux VMs vCPU, then click **Add >>**

Instance example:

15931:Linux01:41028:vmx-vcpu-0:Linux01

j.   Click **OK**. The Performance Monitor Properties dialog box is displayed.

k.   Verify that the counters that you selected appear in the **Data** tab. Click **OK**.

Resume the lab from Task 8, Step 8.

Lab 3 – VMware vSphere Distributed Switches

Preparing for the Lab

VMware vSphere® administrator username	administrator@vsphere.local
Standard lab password	vmware1!
Production network DHCP range	172.20.110.100 – 172.20.110.199

Task 2: Power on a Virtual Machine and test network connectivity

Step 2b: The domain controller is actually configured on 172.20.10.10, and not .5 as shown in the lab guide.

Lab 4 – Port Mirroring

Preparing for the Lab

VMware vSphere® administrator username	administrator@vsphere.local
Standard lab password	vmware1!

Lab 5 – Monitoring Network Performance

Preparing for the Lab

VMware vSphere® administrator username	administrator@vsphere.local
vSphere Management Assistant administrator username	vi-admin
Standard lab password	vmware1!
ESXi FQDN	esxi02.vclass.local
Production network DHCP range	172.20.110.100 – 172.20.110.199

Preparing for the Lab

vSphere Management Assistant administrator username	vi-admin
Standard lab password	vmware1!
ESXi FQDN	esxi02.vclass.local
VMX folder path	/vmfs/volumes/Shared/Win01-B/
VMX file path	Win01-B.vmx

Task 3: Use the grep command to examine VMX network settings

Step 4: The 00:50:56 MAC address prefix is actually reserved for statically assigned MAC addresses. The VMs in the lab use automatically generated MAC addresses which are in the 00:0C:29 prefix. Both prefixes are allocated to VMware, Inc.

Lab 7 – Policy Based Storage

Preparing for the Lab

VMware vSphere® administrator username	administrator@vsphere.local
Standard lab password	vmware1!

Lab 8 – Managing Datastore Clusters

Preparing for the Lab

VMware vSphere® administrator username	administrator@vsphere.local
Standard lab password	vmware1!

Lab 9 – Monitoring Storage Performance

Preparing for the Lab

VMware vSphere® administrator username	administrator@vsphere.local
Standard lab password	vmware1!

Lab 10 – Command-Line Storage Management

Preparing for the Lab

vSphere administrator username	administrator@vsphere.local
vSphere Management Assistant administrator username	vi-admin
Standard lab password	vmware1!
ESXi FQDN	esxi02.vclass.local
ESXi local datastore name	Local02

Preparing for the Lab

vSphere administrator username	administrator@vsphere.local
vSphere Management Assistant administrator username	vi-admin
Standard lab password	vmware1!
ESXi FQDN	esxi02.vclass.local
ESXi Local datastore name	Local02

Task 6: Generate CPU Contention

NOTE

The CPU-HOG VMs have been modified so that the CPU Burn-In tool automatically starts when the vApp is powered on. As a result, you can skip steps 5 and 6!

Preparing for the Lab

vSphere administrator username	administrator@vsphere.local
vSphere Management Assistant administrator username	vi-admin
Standard lab password	vmware1!
ESXi FQDN	esxi02.vclass.local
ESXi Local datastore name	Local02

Task 8: Start a memory test on each RAM-HOG Workload

NOTE

The RAM-HOG VMs have been modified so that the memtest tool automatically starts when the vApp is powered on. As a result, you can skip steps 5 and 6!

Task 1: Generate database activity in the Test Virtual Machine

NOTE

Step 4:   Press ALT+F2 to open a second console. Switch between consoles using ALT+F[1-2] combos.

Task 9: Check for guest operating system paging in each Virtual Machine

NOTE

Step 5c: The vmstat table headings are automatically re-drawn once they are no longer visible. If you cannot see the table headings, simply wait a few moments and they should re-appear. If you wish to scroll back through the output to the top, push **Scroll Lock** and then use **Shift+PageUp** and **Shift+PageDown** to scroll through the console log. Push Scroll Lock again once you have finished.

Lab 15 – Diagnosing VMware vSphere HA Cluster Resource Issues

Preparing for the Lab

VMware vSphere® administrator username	administrator@vsphere.local
Standard lab password	vmware1!
ESXi FQDN	esxi02.vclass.local
Team vSphere Web Client URL	https://vc01.vclass.local:9443/vsphere-client

Lab 16 – Host Profiles

Preparing for the Lab

VMware vSphere® administrator username	administrator@vsphere.local
Standard lab password	vmware1!
Host profile export name	StudentB-Profile.vpf

Lab 17 – Using VMware vSphere PowerCLI

Preparing for the Lab

vCenter Server FQDN	vc02.vclass.local
ESXi FQDN	esxi02.vclass.local
vSphere administrator username	administrator@vsphere.local
Standard lab password	vmware1!

Preparing for the Lab

VMware vSphere® administrator username	administrator@vsphere.local
Standard lab password	vmware1!
vCenter Server system fully qualified domain name (FQDN)	vc01.vclass.local
Student designation	Student B
vCenter Server IP address	172.20.10.94
Auto Deploy DHCP scope name	Scope [172.20.10.0] Management Network
Auto Deploy reservation IP	172.20.10.251

Task 8: Configure DHCP

Step 6: A shortcut to the DHCP management tool has been created on your desktop. Ignore Steps 6 and 7!

Task 11: Prepare to Monitor ESXi Bootup During the AutoDeploy process

To access the console of your ESXi hosts, perform the following steps.

1. From your Desktop System, open Internet Explorer and navigate to https://cloud.gklabs.net/cloud/org/vmwarelabs

2. Login using your **Cloud Labs** username and password that you recorded on the first page of this Class Configuration Sheet, but do not include the @gklabs domain. For instance, if your username is w0101-student1-1@gklabs, input only w0101-student1-1.

3. Continue with the lab, starting from Task 11, Step 6.

Ignore any future tasks or steps that ask you to restore RDP connections to a Control Center VM!