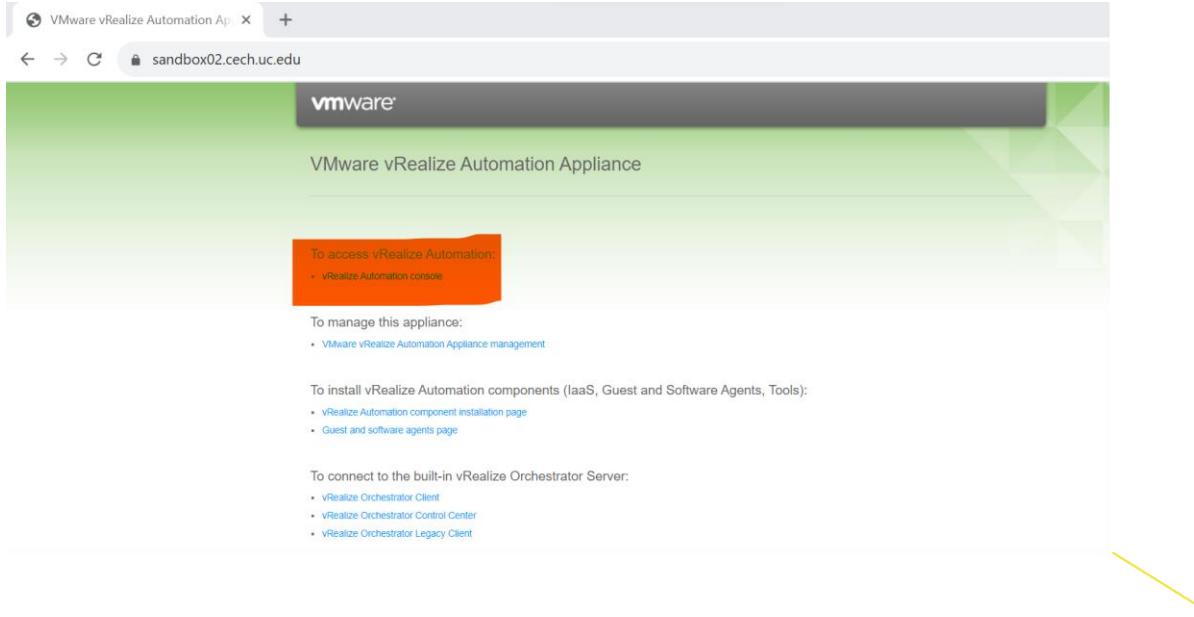
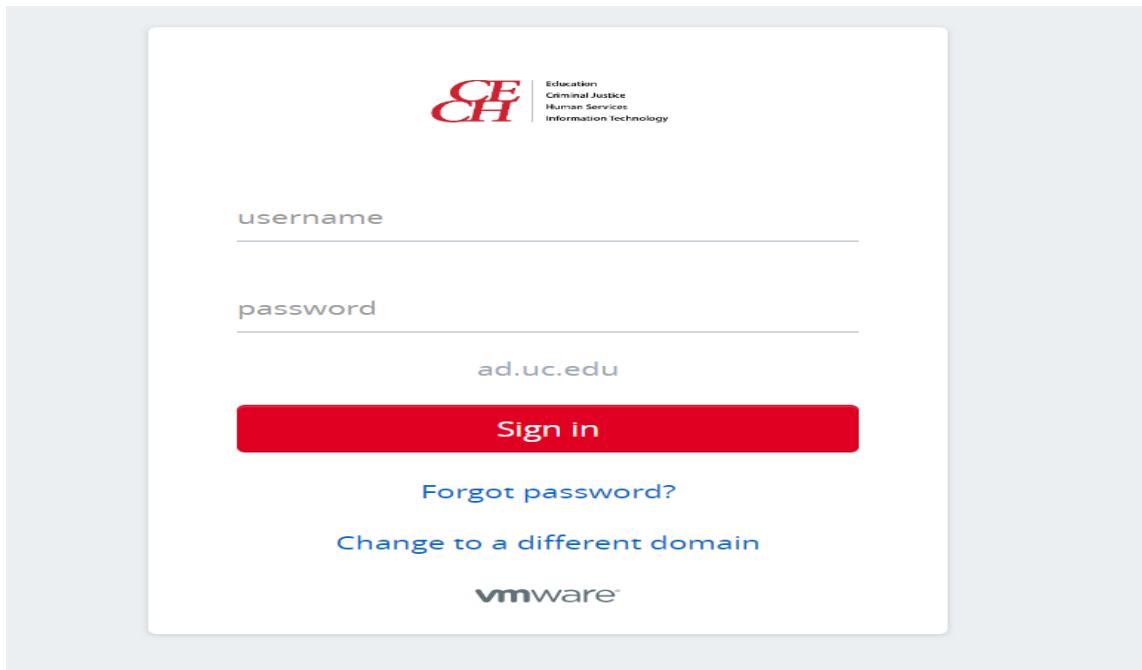


## Environment Setup for OCRI Sandbox

- 1) Go to sandbox using the URL : <https://sandbox02.cech.uc.edu/> and click on the link “vRealize Automation Console”.



- 2) Login to Sandbox using the credentials provided by the instructor.



- 3) After Logging into Sandbox, below screen appears. Click on the “Request” which is highlighted in the below screenshot in the Catalog tab.

The screenshot shows a web browser window titled "CECH Sandbox". The URL is "sandbox02.cech.uc.edu/vcac/#csp.cs.ui.catalog.list". The page header includes the "CECH" logo and the text "Education", "Criminal Justice", "Human Services", and "Information Technology". Below the header, there are tabs for "Catalog", "Deployments", and "Inbox", with "Catalog" being the active tab. A sub-header "Catalog" shows "1 item". A search bar is present with the placeholder "Search for catalog items by name or description". A single catalog item is listed: "Cleveland State Ethical Hacking Kumar". It features a small icon of a person wearing a helmet, the item name, and a description "Cleveland State Hacking VMs". Underneath, it shows "Business group" as "CSU Intro to Ethical Hacking" and "Service" as "CSU Ethical Hacking Kumar". At the bottom of the item card is a yellow button labeled "REQUEST".

4) After clicking on the request, below screen appears.

The screenshot shows a deployment request form for "Cleveland State Ethical Hacking Kumar". The top navigation bar is identical to the previous screenshot, showing the "CECH" logo and the text "Education", "Criminal Justice", "Human Services", and "Information Technology". The "Catalog" tab is active. The main content area shows the item details: "Cleveland State Ethical Hacking Kumar" and "Business group CSU Intro to Ethical Hacking". On the left, there is a sidebar with a tree view under "Cleveland State Ethical Hacking" showing various deployment options: "ClevelandStateUbuntu", "ClevelandStatePBX", "ClevelandStateWinXP", "ClevelandStateKali", "ClevelandMeta", and "ClevelandStateWin7". The right side of the screen contains a "General" tab with fields for "Description" (set to "Cleveland State Hacking VMs") and "Reason for request" (an empty text area). Below these fields is a "Deployments:" dropdown set to "1" with the option "(Select 1-100)". At the bottom of the form are two buttons: "SUBMIT" and "CANCEL".

- 5) Click on the machine instances and see the configuration of each instance. For example, see the configuration of Kali Linux machine in the screenshot below.

The screenshot shows the 'General' tab of the vSphere (vCenter) Machine configuration for 'ClevelandStateKali'. On the left, there's a sidebar with a tree view showing 'Cleveland State Ethical Hac...' and several machine icons. The main panel has tabs for 'General' and 'Storage'. Under 'General', the following settings are visible:

- Instances: 1
- CPUs: 2
- \*Memory (MB): 4096 (with a dropdown menu showing options from 4096 to 8192)
- Storage (GB): 60
- Description: (empty text area)

At the bottom, there are 'SUBMIT' and 'CANCEL' buttons.

- 6) Memory size can be increased by using the up and down arrows. The default provided values would be sufficient for this course.  
7) Check the configurations for all the machine instances. Example for the windows machine instance is shown below.

The screenshot shows the 'General' tab of the vSphere (vCenter) Machine configuration for 'ClevelandStateWin7'. On the left, there's a sidebar with a tree view showing 'Cleveland State Ethical Hac...' and several machine icons. The main panel has tabs for 'General' and 'Storage'. Under 'General', the following settings are visible:

- Instances: 1
- CPUs: 2
- Memory (MB): 4096
- Storage (GB): 60
- Description: (empty text area)

At the bottom, there are 'SUBMIT' and 'CANCEL' buttons.

- 8) Click on the "Submit". It would redirect to "Deployments" page and start deploying it.

- 9) Wait for 20 minutes to finish the 100% deployment.
- 10) Go to the deployments page and verify if the deployment is completed. It would show the deployment status as "Created".

A screenshot of a deployment card. At the top left is a logo of a Viking wearing a horned helmet and holding a sword. To its right is the deployment name: "Cleveland State Ethical Hacking Kumar-56029716". Below the name are two sections: "Cleveland State Hacking VMs" and "Owner: Sheari Rice, Business group: CSU Intro to Ethical Hacking". To the right of the deployment name are three status indicators: "9 Resources" (with a green circle icon), "Created 3 months ago" (highlighted with a yellow box), and two "On" status icons. Below these are two more status icons with the text "7 MORE ▾".

- 11) Once the deployment is done, by default it would create deployment with 9 resources.

A screenshot of a deployment card showing detailed resource information. At the top left is the same Viking logo and deployment name. Below the name are the same owner and business group details. To the right is a "9 Resources" section with a yellow box around it, listing nine resources: CleKali684, CleMeta675, ClePBX264, CleUbuntu686, CleWindows678, CleWinXP680, Edge-ClevelandStateEthic..., OnDemandNAT, and OnDemandNAT\_513-608f... Each resource has a status icon (green circle for CleKali684 and CleMeta675, grey square for others) and an IP address. Below this is a "Created 3 months ago" message, an "Never expires" message, and a "HIDE" link.

- 12) Click on the deployment name to open the deployment.

A screenshot of a deployment card where the deployment name "Cleveland State Ethical Hacking Kumar-56029716" is highlighted with a yellow box. The rest of the card content is identical to the previous screenshot, including the logo, owner information, resource list, and status details.

- 13) By default, deployment will be created with 9 resources with all different machine instances.

The screenshot shows the vRA Catalog interface. At the top, there are tabs for Catalog, Deployments (which is selected), and Inbox. Below the tabs, a back arrow and the deployment name 'Cleveland State Ethical Hacking Kumar-56029716' are displayed. A 'SHOW DETAILS' link is located in the top right corner. The main area is titled 'Components' and lists the following items:

- Cleveland State Ethic... (selected, expanded):
  - CleKali684
  - CleMeta675
  - ClePBX264
  - CleUbuntu686
  - CleWindows678
  - CleWinXP680
  - Edge-ClevelandStateEthic...
  - OnDemandNAT
  - OnDemandNAT\_513-608f...

- 14) To login to any instance click on the down arrow beside the instance name and click on the "Connect to Remote Console". For example, logging to Kali machine instance is shown below.

The screenshot shows the vRA Catalog interface for the 'CleKali684' instance. The 'Components' tab is selected. On the left, a sidebar provides options like 'Connect using VMRC', 'Create Snapshot', 'Install Tools', etc. The 'General' tab is active, showing the following details:

Name:	CleKali684
Component:	ClevelandStateKali
Status:	On
CPU:	2
Memory (MB):	4096
Storage (GB):	60
Description:	Provisioned by VMware vRA

Below the table, more details are listed:  
Owner: rice\_sh@ad.uc.edu  
Blueprint: Cleveland State Ethical Hacking Kumar  
Compute resource: RES\_CLUSTER  
Business group: CSU Intro to Ethical Hacking

- 15) Removing the unwanted instances (as per the lab scenario) is **optional** -To remove the unwanted instances, click on the down arrow beside the instance name and click on the "Unregister", this would remove the instance of that machine from the deployment.

SHOW DETAILS ▾

Components History

Cleveland State Ethical H...

CleMeta873

General Storage Network Security Snapshots

Name: CleMeta873  
Component: ClevelandMeta  
Status: On  
CPUs: 1  
Memory (MB): 512  
Storage (GB): 8  
Description: Provisioned by VMware vRA  
Owner: rice\_sh@ad.uc.edu  
Blueprint: Cleveland State Ethical Hacking Kumar  
Compute resource: RES\_CLUSTER  
Business group: CSU Intro to Ethical Hacking

Connect to Remote Console  
Connect using VMRC  
Create Snapshot  
Install Tools  
Mount CD-ROM  
Power Cycle  
Power Off  
Reboot  
Reconfigure  
Reprovision  
Shutdown  
Suspend  
Unmount CD-ROM  
Unregister

16) It would ask for the confirmation as shown in the screenshot below. Click on the “Submit”.



17) Wait for the few seconds for the process to complete.

◀ Back

Cleveland State Ethical Hacking Kumar-47196827 In Progress

SHOW DETAILS ▾

Components History

Cleveland State Ethic...

CleMeta873

ClePBX459

CleUbuntu884

CleWindows877

CleWinXP879

Edge-ClevelandStateEthic...

OnDemandNAT

OnDemandNAT\_513-ca8a...

VMWare.VirtualCenter.Folder: vRA/CSU\_EH\_Kumar

18) Refresh the deployment by clicking the refresh button on the top right and could see the instance is removed from the deployment.

The screenshot shows the VMware vRealize Automation (VRA) interface. At the top, there are three tabs: Catalog, Deployments (which is selected), and Inbox. A yellow box highlights a success message: "Unregister request has been submitted successfully for CleMeta873". Below the message, there's a back navigation link and a "SHOW DETAILS" button. On the right, there's an "ACTIONS" dropdown with a refresh icon. The main content area displays a deployment named "Cleveland State Ethical Hacking Kumar-47196827". Underneath the deployment name, it says "VMWare VirtualCenter Folder: VRA/CSU\_EH\_Kumar". A "Components" tab is selected, showing a tree view of components under the deployment. The expanded "Cleveland State Ethic..." node lists several VMs: ClePBX459, CleUbuntu884, CleWindows877, CleWinXP879, Edge-ClevelandStateEthic..., OnDemandNAT, and OnDemandNAT\_513-ca8a... A yellow box highlights the "OnDemandNAT" node.

19) The deployment is ready for testing.

20) Please refer this document before starting any scenarios of this course.