



# Commvault® Education Services

Commvault  
Professional

Advanced

Lab Activity Guide

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## COMMVAULT® PROFESSIONAL ADVANCED COURSE LAB ACTIVITY GUIDE

### COMMVAULT® PROFESSIONAL ADVANCED

The labs presented in this guide are designed to give you flexibility in completion. You may review the lab goals and explore on your own, or you may refer to the step by step directions to complete each lab. The labs are designed to be completed at the conclusion of each module to reinforce the information presented.



## Accessing the CVLab Environment

Please follow the instructions below to access the CVLab environment:

<h3>Customer Login</h3> <input type="text"/> <input type="password"/> <input type="checkbox"/> Keep me logged in <a href="#">Forgot your password?</a> <input type="button" value="Login"/> <input type="button" value="Cancel"/> Don't have an account? <a href="#">Create One</a>	<h3>External Login</h3> <input type="button" value="Partners"/> <input type="button" value="Commvault Employees"/>
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- Login to your Education Advantage Profile from <https://ea.Commvault.com>, to access your course materials and virtual lab environment.

Commvault Labs Lab 45625 Launch Pad

COMMVAULT PROFESSIONAL LAB

Expiration Usage Remaining 7 days from now unlimited

EA-2019-CS running  
Connect Start Restart Stop Refresh

EA-2019-MA running  
Connect Start Restart Stop Refresh

EA-2019-HV running  
Connect Start Restart Stop Refresh

## Log in to the Virtual Lab Machines

1. From your account in Education Advantage, navigate to the **Courses Scheduled** tab.
2. Select this (Current course) course from the list.
3. From the virtual Classroom screen.
4. Click the link for CVLab V11. This will open popup window, the launchpad. Do not close this window, it is needed open for lab access.
5. From the launchpad, power on the virtual machines in the following order. Wait for the status of the virtual machine to be at a **“running”** state before starting the next virtual machine. If any or all virtual machines are not running press **Start**, to start each one.
  - a. EA-2019-MA
  - b. EA-2019-CS
  - c. EA-2019-HV
6. Click the Connect **Connect** button for ea-2019-cs to download the RDP file that will access the virtual machine.  
**Note: Some systems may only download a link and not start the RDP program. Click on the downloaded link to open RDP application and accept the security warning to continue.**
7. From The security popup window, enter the following credentials:
  - a. **Username:** company\student (Should be prepopulated)
  - b. **Password:** student



# Module 1 – Deployment




## Lab 1-1 Accessing the CommCell® Console

In this lab, you will logon to the CommCell® Console. The goals for the lab are:

- Access the ea-2019-cs virtual machine.
- Log in to the CommCell® Console.

If you are familiar with the Commvault CommCell Console, you may access the Console on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Accessing the CommCell Console

1. From the taskbar, launch the CommCell Console  Note that the CommCell console is also available from the Windows start menu under Commvault.
2. From the Connect to CommCell popup window, log in using the following credentials:
  - a. **Username:** admin
  - b. **Password:** admin
3. You will now be logged in to the CommCell Console.

## Lab 1-2 CommCell® Console Components

In this lab, you will access and view the CommCell Console Components. The goals for the lab are:

- View the features of the CommCell Console Toolbar.
- View the features of the CommCell Console Browser window.
- View the features of the CommCell Console Browser summary window.

- View the features of the CommCell Console Job Summary window.
- View the features of the CommCell Console Event Viewer window.

If you are familiar with the CommCell Console, you may access the Console on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### The CommCell Console Toolbar

1. Log in to the CommCell Console using the login information from the previous lab and navigate to the **tab menu** section at the top of the screen.
2. Note on the **Home** tab the Items Web Console, Command Center, Health Status, and SLA Status, when selected will open in a web browser in a separate window.
3. Click through the other tabs to see the available options.

### The CommCell Console Browser Window

1. Log in to the CommCell Console using the login information from the previous lab and navigate to the **CommCell Browser** window.
2. Expand **Client Computers | ea-2019-cs | File System | defaultbackupset** in the **browser** section. Note that as you expand each level, the contents from that level are viewed in the Browser Summary window. Subclients are only viewed in the Browser Summary window.
3. Click the **Agents** view at the bottom of the Browser section. Note that they are arranged in containers by agent type, then listing the installed servers.
4. Click the **CommCell Browser** at the bottom of the Browser section to return to the CommCell Browser view.

### The Content/Summary Window

1. From the **CommCell** Browser window, click on the top entity.
2. In the window frame next to the CommCell Browser, you will see three tabs. By default, the first tab on the left is the **Browser Summary** window. **Note:** these windows may not always be in this order.
3. Click to highlight the Browser summary window (default content view) and note the information listed as it is the same containers listed in the browser section.
4. Click the **Client Computers** Entity in the **CommCell Browser** window and watch the display change in the **Summary** tab. This gives an overview of base information about each client.
5. At the bottom left of the Browser Summary window, click the **Summary View** tab. This view gives general overview of clients in the CommCell.
6. Note that at the top of the window under the tab are links to each level of the path you have selected. Click the link for the top level (ea-2019-cs) and it will take you back to that point.

### The Job Controller Window

1. In the window next to the CommCell Browser, you will see several tabs. Click to highlight the **Job Controller** window and note the information listed. If there are jobs running you will see summary information about each job listed.
2. In the top bar of the Job Summary window is a section titled **Views** Click the **+** next to the views dropdown list to create a filter.
3. In the **Add Filter** window, enter the following information:
  - a. **Name:** VSA Backups
  - b. **Filtering Criteria:**
    - i. **Select a Column:** Agent Type
    - ii. **Condition:** contains
    - iii. **Value(s):** Virtual Server (From dropdown list)
  - c. Click **Add to List** button.
  - d. Make sure the radio button is selected for **Match rows that contain ALL of the criteria.**
  - e. Click **OK** to create the filter.
4. Click the **filters drop-down list** and select **Show All Jobs** to return to the default view.
5. In the bottom left of the Job Summary window are **Pause** and **Play** buttons. The Pause button simply pauses the refresh for the Job Summary window. The Play button resumes refresh.

**NOTE:** Pausing the Job Controller window does not pause the jobs themselves. It merely pauses the refresh of the window.

### The Event Viewer Window

1. In the window next to the CommCell Browser, you will see several tabs.
2. Click to highlight the **Event Viewer** window and note any information listed. Notice there are two sub tabs in the Event Viewer window, **Focused Events** and **All Events**. Click on the **All Events** tab to view all available events.
3. From the All Events view, right click anywhere in the window and select **Search Events** menu option.
4. From the Events Selection popup window, select and enter the following information:
  - a. **Create a search query:** Select the **Severity** tab
  - b. **Select the type(s) of events to be viewed:** Deselect Major so that only Critical is checked
  - c. **Save this search query as:** Check the box.
  - d. Check the box next to **Save this query as:** and name the query Critical Events
5. Click **OK** to save the query. This will save and run the query. This will display a popup window with the selected Event types.
6. View the listed events and click the Close button with close the window and return to the Event Window.
7. Once completed, you can run the query by right clicking anywhere in the window and selecting **Search Events** then selecting the query from the drop-down list.

8. Change the view back to Focused Events, and in the top right of the Event Viewer window is a section titled **Focused Events in the Last:** Click the **up and down** arrows to increase or decrease the number of days of events shown. Click **Refresh** to refresh the window.



### Lab 1-3 Customizing the CommCell® Console

In this lab, you will customize the CommCell® Console. The goals for the lab are:

- Hide the CommCell Browser.
- Move tabbed windows.
- Float tabbed windows.
- Add and remove fields in the Job Controller.
- View job details in the Job Summary window.
- Run a Job and change job status.
- Change the job status update interval.
- Modify the Job Controller retention time.

If you are familiar with Managing the CommCell Console, you may work through the lab goals on your own. If you are new to Commvault, you can follow the step by step directions listed below.



#### Hide the CommCell Browser

1. Navigate to the CommCell Browser window. At the top of the Browser window, click the Pin . This will hide the CommCell Browser window on the left side of the screen.
2. Move the mouse over the CommCell Browser tab to expand the screen out and click the Pin  to re-pin the CommCell Browser window.



#### Move Tabbed Windows

1. Navigate to the section of the CommCell Console with the Browser Summary, Job Controller and Event Viewer tabs.
2. Click and drag the Job Controller tab to the first position on the left.
3. Click and drag the Job Controller tab back to its original position.

#### Float Windows



1. Navigate to the section of the CommCell Console with the Browser Summary, Job Controller and Event Viewer tabs.
2. Click the job Controller Tab to change to that view.
3. In the top right of the Job Controller window, click the Float  option to float the window in the foreground.
4. Click the Float  option from the Job Controller window to move the window back to its tabbed position. Note that the Job controller is now in a different position. Click and drag the tab to the center position.

## Full Screen Windows

1. Navigate to the section of the CommCell Console with the Browser Summary, Job Controller and Event Viewer tabs.
2. Click the job Controller Tab to change to that view.
3. In the top right of the Job controller window, click the Full Screen (full)  option to expand the window to full screen.
4. Click the Full Screen (tabbed)  option from the Job Controller window to move the window back to its tabbed position. Note that the Job controller is now in the third position. Click and drag the tab to the center position.

**NOTE:** You can unpin any of the tabs from this section the same way that you did for the CommCell Browser. Unpinning will move the tab to the left of the Console. Mouseover will expand the tab out and it can be repinned.

## Add, Resize and Remove fields

1. Navigate to the section of the CommCell Console with the Browser Summary, Job Controller and Event Viewer tabs.
2. Click the **Job Controller** tab to change to that view.
3. In the top of the **Job Controller** window, note the fields listed. During a job, these fields are populated with job information.
4. Click the line separating **Client Co...** and **Agent Type** (you should see a double-sided arrow) and drag to the right to expand the field.
5. To add a field, click the double arrow  to access the dropdown list of options.
6. Select Choose columns and then **Schedule Policy Name**. Click out of the dropdown menu to close it.
7. Click and Drag the new column **Schedule Police Name** and place it between the Phase and Storage Policy fields. Click the line between Schedule Policy Name and Storage Policy and drag to the right to expand the field column size.
8. To delete a field, click the double arrow  to access the dropdown list of options.
9. Select Choose columns and then deselect **Schedule Policy Name**. Click out of the dropdown menu to close it.

## View Job Details

1. From the CommCell Browser window, expand the Client Computer Container then highlight the **ea-2019-cs** client and navigate to the **File System** then **defaultbackupset** then **Mission Critical** subclient.
2. Right click **Mission Critical** subclient and select Backup.
3. Set the Backup type to **Full** and job initiation to **Immediate**.
4. Click **OK** to start the backup job.
5. Navigate to the **Job Controller** tab.
6. Right click the Mission Critical backup job and select **Detail...** to view the job details. Note the information presented in each tab of the **Backup Job Details For job ID:xxxx**. Click **OK** to close the window.

### Change job Status – Single job Control

1. From the CommCell Browser window, expand the Client Computer Container then highlight the **ea-2019-cs** client and navigate to the **File System | defaultbackupset | Mission Critical subclient**.
3. Right click **Mission Critical** subclient and select **Backup**.
4. Set the Backup type to **Full** and job initiation to **Immediate**.
5. Navigate to the **Job Controller** tab.
6. Right click the Mission Critical backup job and select Suspend to suspend the job. Click **Yes** from the Warning popup window.

**Note:** If the job is still in the Job Controller tab, you may right click the job and select **Resubmit Job**. Leave the job settings the same and Click **OK** to run the same job again

### Change Job Status – Multi-Job control

1. Navigate to the **Job Controller** tab.
2. Right click the previously suspended Mission Critical backup job and select Multi-job control.
3. From the Multi-job Control Dialog window, enter the following information:
  - a. **Action:** Click the Resume radio button.
  - b. **Selection:** All Jobs
4. Click **OK** to resume the job. You will see the job immediately resume.

### Modify the Job Controller retention Time

1. On the Ribbon Bar menu at the top of the CommCell Console, select the **Tools** tab.
2. From the **Tools** ribbon bar, select **User Preferences**.
3. From the **User Preferences** popup window, select the **Jobs** tab.
4. Under the **Status retention in Job Controller of killed/Failed/Completed Jobs** section, change the **Retention Time (Secs)** value to **1500**. This will set the job retention time in the **Job Controller** window from 5 to 15 minutes.
5. Click **OK** to set the retention value and close the popup window.

### Changing the job Update Status Interval

1. On the Ribbon Bar menu at the top of the CommCell Console, select the **Configuration** tab.
2. From the **Tools** ribbon bar, select **Job Management**.
3. From the **Job Management** popup window, select the **Job Updates** tab.

4. Under the **Job Update Interval** section, Scroll and highlight to select **Windows File System**. Change the **Protection (Mins)** value to **2**. This will set the job updates in the Job controller window to either 2 minutes, or the next checkpoint in the job.
5. Click **OK** to close the window and set the Job Update interval value.

### Set Event Log Retention

1. On the Ribbon Bar menu at the top of the CommCell Console, select the **Tools** tab.
2. From the **Tools** ribbon bar, select **User Preferences**.
3. From the **User Preferences** popup window, select the **Event Filter** tab.
4. Deselect the checkbox **Use Global Settings**. Enter the following information:
  - a. **Maximum number of events in Event Viewer:** 300
  - b. **Maximum number of days in Event Viewer:** 5
  - c. This will set the total number of viewed events from the event log to 300 events or 5 days of events.
5. Click **OK** to save the event log retention settings.

### At the end of this lab, you will have completed the following:

- Hide the CommCell Browser.
- Move Tabbed Windows.
- Float Windows.
- Full Screen Windows.
- Add, Resize and Remove fields.
- View Job Details.
- Change job Status – Single job Control.
- Change Job Status – Multi-Job control.
- Modify the Job Controller retention Time.
- Changing the job Update Status Interval.
- Set Event Log Retention.





# CommServe® Server Installation



## Lab 1-4 CommServe® Server Post Installation Tasks

Once the CommServe Server is installed, you can complete post installation tasks in the CommCell® Console. In this lab, you will complete the following tasks:

- Configure the Software cache.
- Configure a Remote Software Cache.
- Populate the Software Cache.
- View or modify Automatic Update Schedules.
- Install Updates.
- Enable Private Metrics Reporting.
- Configure Email Settings.

If you are familiar with the Commvault CommCell® Console, you may configure post installation tasks on your own. If you are new to Commvault, you can follow the step-by-step directions listed below.

### Configure the Software cache

1. On the Ribbon Bar menu at the top of the CommCell Console, select the **Tools** tab.
2. From the **Tools** ribbon bar, select **Add/Remove Software**.
3. From the **Add/Remove Software** drop-down list, select **Software Cache Configuration**.
4. From the **CommServe Software Cache** tab, note the location of the Software Cache. The cache can be moved by changing the cache location and copying the contents to the new location.

**NOTE: If you move and manually copy the software cache contents you must perform a “Commit Cache” operation before the cache can be used for push install.**

5. Click the **Cache Details** button to view the current contents of the cache. Click **OK** to close the Cache Details window.
6. To delete the cache contents, click the **Delete Cache Contents** button.
  - a. Select the **Delete All** checkbox then click the **Delete** button.
  - b. Type **Delete** in the Delete Cache Contents Confirm popup box.
  - c. Click **OK** on the Selected cache operation was successful popup window.
7. Click **OK** when you are finished to close the window.

### Configure a Remote Software Cache

1. On the Ribbon Bar menu at the top of the CommCell Console, select the **Tools** tab.
2. From the **Tools** ribbon bar, select **Add/Remove Software**.
3. From the **Add/Remove Software** dropdown list, select **Software Cache Configuration**.
4. From the **Software Cache Configuration** popup window, Click the **Remote Software Cache** tab.
5. From the **Remote Software Cache** tab, click **Add** to add a remote cache.
6. From the **Configure Remote Software Cache** popup window, enter the following information:
  - a. **Computer:** ea-2019-ma (From dropdown list)
  - b. **Enable Remote Software Cache:** Checked
  - c. **Please Specify Cache Directory:** Click Browse
    - i. Navigate to J:
    - ii. Click **New Folder** and name the folder **SoftwareCache**, click **OK** to continue.
    - iii. Select (Highlight) the new folder **SoftwareCache** and click **OK** to set it as the remote cache location
  - d. Click the **Configure Packages to Sync** button.
  - e. From the **Configure Packages to Sync** popup window, select **Customize Packages**.
  - f. In the lower section of the popup complete the following information:
    - i. **Select OS** box, use the dropdown menu and select **Windows(x64)**.
    - ii. Click In the next box and check box under:
      1. **Microsoft Windows:** select **File System, File System Core**.
      2. **Server:** select **MediaAgent**.
      3. **Virtualization:** select **Virtual Server, VSA Guest Customization**.
    - iii. Click **OK** to save selection from **Configure Packages to Sync** window.
  - g. Click **OK** in the Configure Remote software Cache window to create the cache.
7. Click **OK** to save and close the **Software Cache Configuration** window.

**NOTE:** You may also click the **Add/Remove Clients** button to add specific clients or groups to be updated using this cache. This will override the **CommServe Cache** default setting.

### Populate the Software Cache

1. In the **Ribbon Bar** menu at the top of the CommCell Console, select the **Tools** tab.
2. From the **Tools** ribbon bar, select **Add/Remove Software**.
3. From the **Add/Remove Software** dropdown list, select **Download Software**.
4. From the **Download and Sync Cache Options** popup window, Click the **Service Pack** radio button and select the following information from the dropdown lists:
  - a. **Feature Release:** 11.24
  - b. **Maintenance Release:** 7
5. Click **OK** to start the download.
6. Click the **Job Controller** tab to view the download progress.

### View or modify Automatic Update Schedules

1. In the CommCell Browser window, select the top entity in the tree, Right Click on the CommCell root (**ea-2019-cs**). From the menu select **View** and then **Schedules**.
2. From the **Schedules** tab that opens, locate and select **System Created Download Software**.
3. Right Click on **System Created Download Software** and select **Edit**.
4. In the **Download and Sync Cache Options** popup window, change the time to 6:00 pm.
5. Click **OK** to set the schedule time.
6. Click the **X** on the **Schedules** tab to close the tab.

### Install Updates

**Note:** Wait for the download of the updates to complete before you continue.

1. In the CommCell Browser window, navigate to **Client Computer Groups**.
2. Expand **Client Computer Groups** and right click on the **Infrastructure** group. Select **All Tasks**, then **Add/Remove Software**, then **Update Software**.
3. From the **Update Software Options** popup window, leave the default settings and click **OK** to start the update.
4. From the warning popup window Click **OK** to acknowledge the commcell update warning.
5. Click the **Job Controller** tab to view the install progress.
6. Locate the Install Updates job, right click on the task and from the menu select **Detail...**
7. From the **Install Updates Job Details** popup window, click on the **Client Status** tab to view details.
8. Click **OK** to close the job details window.

**NOTE:** In this lab, the hotfix install will complete successfully with the status "Already updated". This is because we haven't downloaded any new Hotfix packs. **Also, some of the clients that are currently offline may show as failed to update.**

### Enable Private Metrics Reporting

1. In the **Ribbon Bar** menu at the top of the CommCell Console, select the **Home** tab.
2. From the **Home** ribbon bar, select **Control Panel**.
3. From the **Monitoring** section, select **Private Metrics Reporting**.
4. From the **Private Metrics Reporting** popup window **General** tab, enter the following information:
  - a. **CommCell diagnostics and Usage: Click the Checkbox and check** - Health check, Activity, Audit
  - b. **Chargeback:** leave unchecked
  - c. **Metrics Server URL:** `http://ea-2019-cs.company.com/webconsole/`
5. View the options in the **Configuration** tab. Leave the default settings in these tabs.
6. Navigate back to the **General** tab and click the **Upload Now** button to upload metrics information.
7. If prompted, Click **Yes** to save changes and upload now.
8. Click OK to exit the Private Metrics Reporting window.
9. From the **Monitoring** section, select **Private Metrics Reporting**.
10. Note that the last collection and upload times are now listed (This may take a few minutes). Click **OK** to save the configuration and exit the popup window.
11. Click the **X** in the top right corner of the **Control Panel** window to exit.

### Configure Email Settings

1. Log in to the CommCell Console.
2. In the **Ribbon Bar** menu at the top of the CommCell Console, select the **Home** tab.
3. From the **Home** ribbon bar, select **Control Panel**.
4. From the **Maintenance** section of the Control Panel, select **Email, Web, and FTP Server**.
5. From the **Email, Web, and FTP Server** popup window **E-Mail Server** tab, enter the following information:

**Server Information**

  - a. **Mail Server:** EA-2019-EXCH
  - b. **Mail Server Port:** 25
  - c. **Mail server size limit (MB):** 5.0

**Sender Information**

  - a. **Sender Name:** Commserve
  - b. **Sender Address:** cvadmin@company.com
7. Click **OK** to set the Email server information and close the **Email, Web, and FTP Server** popup window.

### At the end of this lab you will have completed the following items:

- Configured the Software cache.
- Configured and updated a Remote Software Cache.
- Populated the Software Cache.
- Viewed and modified Automatic Update Schedules.

- Installed Updates.
- Enabled Private Metrics Reporting and uploaded Metrics information.
- Configured Email Settings.

## Lab 1-5 CommServe® Server Maintenance

An integral part of managing a CommCell is running maintenance functions and potentially, CommServe Server recovery. In this lab, you will complete the following tasks:

- Log in to the CommCell Console.
- Run dbmaintenance from the command line.
- Execute the dbmaintenance workflow from the CommCell Console.
- Recover the CommServe Server Database.
- Customize the Command Center layout.

If you are familiar with the Commvault CommCell® Console, you may run maintenance routines and CommCell recovery on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Database Maintenance using DBMaintenance (Command Line)



1. Log into the ea-2019-cs virtual machine.
2. Click the windows Icon and navigate to **Windows System**. Expand the Windows System section and right click **Command Prompt**. Select **More** then **Run as administrator**.
3. Click **Yes** from the User Account control screen.
4. In the command prompt, type in **dbmaintenance** and review the maintenance options.
5. Type in **dbmaintenance -recommended** to run the dbmaintenance function with the recommended settings.
6. View the information on consistency check and index reorganization and defragmentation.
7. Close the Command prompt when the maintenance task is complete.

### Database Maintenance using DBMaintenance (Workflow)

1. Log into the CommCell Console.
2. In the CommCell Browser, navigate to and click the **Workflows** entity.
3. From the list of workflows in the **Browser Summary** window, right click on the **DBMaintenance** workflow and select **All Tasks** then **Execute**.
4. From the **DBMaintenance Options** popup window, navigate to the **type\*** dropdown list and select **Recommended**.
5. Click **OK** to run the dbmaintenance workflow. (the default job initiation is to run immediately)
6. Click the **Job Controller** tab to view the job progress.

### CommServe Recovery Assistant

1. In the **CommCell Browser** section, navigate to and click the **ea-2019-cs** root entity.

2. Right click on **ea-2019-cs** and select **All Tasks**, then **Disaster Recovery Backup**.
3. From the **Disaster Recovery Options** popup window, select **Full**. Leave all databases selected and click **OK** to start the DR backup.
4. Click the **Job Controller** tab to monitor the DR backup job.
5. Once the DR Backup job completes. Click the **X** in the top right of the CommCell Console to close it.
6. Open windows **File Explorer** and navigate to **\\ea-2019-ma\CSDR**.
7. Select to the most recent **SET\_xxx** folder (The date/Time of the job you just ran) and copy the folder to **This PC\Documents. (on ea-2019-cs)**
8. From the **File Explorer**, navigate to **C:\Program Files\Commvault\ContentStore\Base**.
9. From the base directory, locate the program **CSRecoveryAssistant.exe** and execute it.
10. You may be prompted by User Access Control screen, Click **Yes**.
11. From the **CommServe Recovery Assistant** screen, select **Recovery/Production** and click **Next**.
12. To enter the database dump folder, click **Browse** and browse to **This PC\Documents\Set\_xxx**. Click **OK** to select folder, then Click **Next** to continue.
13. View the Database files and log files paths. We haven't changed the path so this will remain as default. Click **Next**.
14. View the summary of options selected and click **Start Recovery**. This will take several minutes to run through the recovery process.
15. Once the recovery is complete (All green checks) click **Next**.
16. License file is not needed for post recovery so click **Next**.
17. From the **CommServe recovery completed successfully!!** screen, click **Finish** to complete the recovery.
18. From the Windows Taskbar at the bottom of the screen, click the Process Manager Icon  to open the Commvault Process Manager. Click Yes on the User Account Control screen.
19. From the Process Manager, click the Services Tab. Highlight and click the Green Start  button at the bottom of the screen.
20. Once all the services have started, close the **Process Manager** and log into the CommCell console.

**NOTE: After a CommServe recovery, a DR Backup will run automatically.**

**At the end of this lab you will have completed the following items:**

- Configured and run DBMaintenance from the command line.
- Configured and run DBMaintenance from a workflow.
- Perform a CommServe recovery.



# MediaAgent Installation

## Lab 1-6 MediaAgent Installation

Installing MediaAgents is an important part of CommCell deployment and function. MediaAgents must be installed and configured before Libraries are created. In this lab, you will complete the following tasks:

- Log in to the CommCell® Console.
- Install MediaAgent software.
- Configure the Index directory.
- Set throttling rules.
- Mark a MediaAgent offline for maintenance.

If you are familiar with the Commvault CommCell® Console, you may Install and configure MediaAgents on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Push Install for the MediaAgent Software

1. From your CVLab Launchpad window, verify that the **EA-2019-HV** virtual machine is running.
2. Log in to the CommCell Console.
3. In the Ribbon Bar menu at the top of the CommCell Console, select the **Tools** tab.
4. From the **Tools** ribbon bar, click on **Add/Remove Software** and select **Install Software** from the menu.
5. From the **Install wizard** screen, click Next.

6. From the **Select the computer's operating system** screen, Select **Windows** and click **Next**.
7. From the **Select how to discover the computers for installing the software screen**, select **Manually select computers** and click **Next**.
8. From the **Enter the hostnames of the computers** screen, click in the white space under Please enter the names of the computers, one per line, type ea-2019-hv
9. Click **Next**.
10. From the **Select Software Cache** window, leave the default setting and click **Next**.
11. From the Enter Account Information window, enter the following information:
  - a. **User Name:** company\student
  - b. **Password:** student
  - c. **Confirm Password:** student
12. Click **Next** to continue.
13. From the **Select Package(s) to Install** window, check the box for the **MediaAgent package** and click **Next**.
14. From the **Enter Recommended Settings for the Selected software** page, leave Client Groups and Storage policy blank. Click **Next**.
15. From the **Enter Additional Install Options** window, review the available options, leave default settings, and click **Next**.
16. From the **Optional Settings** window, review the available settings. Leave the settings on default and click **Next**.
17. From the **Network Route Configuration** window, review the available options, leave default settings, and click **Next**.
18. From the **Please Select When To Run The Job** window, leave the default setting (**Immediate**) and click **Next**.
19. From the **Summary** window, review the selected install options and click **Finish** to start the installation.
20. Click the **Job Controller** tab to monitor the install progress.

### Configure the Index Directory and Change the Index Location

1. In the CommCell Browser window, click to expand the **Storage Resources**, then expand **MediaAgents** container.
2. Right click on **ea-2016-hv** and select **Properties** from the menu.
3. From the **MediaAgent Properties for ea-2016-hv**, click the **Catalog** tab.
4. From the **Catalog** tab, change the Index Directory to **D:\Indexcache**.
5. Click **OK** to change the index location and return to the CommCell Console.

**NOTE:** After changing the index location, the system will copy the index to the new location. You will see it run as a job in the Job controller.

### Set Network Throttling Rules

1. In the CommCell Browser window, click to expand the **Storage Resources**, then expand **MediaAgents**.
2. Right click on **ea-2016-hv** and select **Properties**.
3. From the **MediaAgent Properties for ea-2016-hv**, click the **Network Throttle** tab.



4. Check the box **Enable Network Throttling**. And enter the following information:
  - a. **Remote clients or client Group**: Check the box for Laptop Clients.
  - b. **All clients share allocation bandwidth**: Checked
  - c. **Throttling Schedule**: Click **Add** and add the following information:
    - i. **Days of week**: Monday – Friday (From Throttling Rule dropdown list)
    - ii. **Time Interval**: Whole Day
    - iii. **Throttling Rate**: Throttle Relative to Bandwidth, Check both send and receive boxes
    - iv. Click **OK** to set the throttling rule
5. From the MediaAgent Properties for ea-2016-hv, Click **OK** to save the throttling rule and return to the CommCell Console

### Mark MediaAgent Offline for Maintenance

1. In the CommCell Browser window, click to expand the **Storage Resources**, then expand **MediaAgents**.
2. Right click on **ea-2016-hv** and select **Properties**.
3. From the **MediaAgent Properties for ea-2016-hv**, click the **Control** tab.
4. From the **Control** tab, Check the box **Mark MediaAgent Offline for Maintenance**.
5. Click **OK** to close window and return to the CommCell Console.

**NOTE:** The Icon for ea-2016-hv will change in the CommCell Browser to indicate that the MediaAgent is offline.

### At the end of this lab you will have completed the following items:

- Installed MediaAgent software.
- Configured an Index location for a MediaAgent.
- Configured Network Throttling rules for clients connecting to a MediaAgent.
- Marked a MediaAgent offline for maintenance.

# Agent Installation

## Lab 1-7 Agent Installation

Like the MediaAgent installation, installing client agents on new servers is a vital component of daily operations in a CommCell. In this lab, you will complete the following tasks:

- Log in to the CommCell® Console.
- Install and Agent on a client using and interactive installation.

If you are familiar with the Commvault installation process, you may run the installations on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Interactive Installation

1. From your CVLab Launchpad window, verify that the **EA-2019-HV** virtual machine is running.
2. Click on the download icon to connect to the **EA-2019-HV** VM.
3. Login to the **EA-2019-HV** system using the following credentials:
  - a. **User Name:** company\student (Pre-populated)
  - b. **Password:** student

4. On the EA-2019-HV server, click on the Windows Start icon to open the Start Menu. Then select the Windows File Explorer tile and navigate to path \\ea-2019-cs\SW\CVMedia\11.0.0\SP24\_3589820\_R952\Windows and double-click **Setup.exe**.
5. Select **Yes** to the pop-up window for User Account Control to allow the install to run.
6. When the Commvault® Setup wizard appears, Click the default option for English and click > to continue.
7. Check the checkbox next to "I Agree" to accept terms in the license agreement and click > to continue.
8. At the **Choose the Installation type** screen, accept the default of **Install packages on this computer** and click > to continue.
9. From the **Install Option** Screen, select the **Add Packages** option and click > to continue.
10. From the Select Packages screen, select **Virtualization** on the left of the screen, then click the box next to **Virtual Server**. Click > to continue.
11. Review settings for the **Installation Summary** screen, then click > to continue. The installation will begin.
12. When the install is completed, click **Finish** from the Success screen.

**At the end of this lab you will have completed the following items:**

- Installed Agent software using an interactive installation.



## Lab 1-8 Encryption

In this lab you will configure Encryption to be applied in line with the data stream. Inline encryption is configured in two areas. The first is to enable it in the advanced properties of the Client system, then verify the encryption settings at the subclient level. In this lab, you will complete the following tasks:

- Log in to the CommCell® Console.
- Configure In-Line encryption.
- Configure copy-based encryption.
- Configure Hardware encryption.
- Set a Media Password for the CommCell and a Storage Policy.

If you are familiar with the Commvault CommCell® Console, you may configure encryption on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### In-Line Encryption

1. In the CommCell® Browser, expand **Client Computers**.
2. Right-click on **ea-2019-cs** and select **Properties**.
3. In the **Client Computer Properties for ea-2019-cs** dialog box, click the **Advanced** button.
4. Select the **Encryption** tab and select the **Encrypt Data with the following settings** radio-button. Enter the following information:
  - a. **Data Encryption Algorithm:**
    - i. **Cipher:** From the drop-down box select **AES (Rijndael)**.

- ii. **Key Length:** From the drop-down box, select **256**.
  - b. **Direct Media Access (External Restore Tools):** Via Media Password
5. Click **OK** to save encryption settings to the Advanced Client Properties.
6. Click **OK** to close the Properties page.

### Configure Subclient Encryption Options

1. In the CommCell Browser, expand **Client Computers** then **ea-2019-cs, File System, defaultbackupset**.
2. Right-click on the **default** subclient and select **Properties**.
3. Click the **Advanced** button.
4. In the **General** tab from the **Encryption** sub tab ensure the default encryption option is set to **Network and Media (Agent Side)**. If it is not, change the settings to **Network and Media (Agent Side)**.
5. Click **OK** to exit the **Advanced Subclient Properties** page.
6. Click the **Storage Device** tab and select **Basic Disk (MA)** from the **Storage Policy** drop-down list.
7. Click **OK** to exit the Main Properties page.

### Offline (Copy Based) Encryption

1. In the CommCell Browser, expand **Policies**, then **Storage Policies**, then **Basic Disk (MA)**.
2. Right-click on **Basic Disk (MA)** and select **All Tasks** then **Create New Copy**.
3. Select/Enter the following information for the new secondary copy wizard. Select **Next** after each section:
4. From the **Copy Details** window:
  - a. **Copy Name:** Daily Offsite Copy
    - i. **Storage Pools:** Click Add, then select **Disk**
      1. **Storage pool name:** Daily Offsite DASH Pool then **Next >**
      2. **Configure Storage:**
        - a. **Create Local:** Select ea-2019-ma from dropdown list
        - b. **Path:** Browse and enter the following:
          - i. Select Drive E:
          - ii. Click the **New Folder** button
          - iii. Enter the folder name **ProdVol-2**, then click **OK**
          - iv. **Highlight the new folder ProdVol-2, then click OK to close the Browse for Metada Directory window.**
        3. Click **Next >**
        4. **Enable Deduplication on Storage Pool:** Check Enable Deduplication Box (Default) and enter the following:
          - a. **Number of Partitions:** 1
          - b. **Choose Path (Partition 1):**
            - i. **MediaAgent:** ea-2019-ma
            - ii. **Partition Path:** Browse to H:
              1. Click New folder, name it **DashpoolDDB**. **Highlight the new folder DashPoolDDB**, then click **OK**
            - iii. Click **OK** to create DDB Directory
          - c. Click **OK** to create the Partition Path

5. Click **Next >**
  6. **Software Encryption:** Check the box and enter the following:
    - a. **Cipher:** Blowfish
    - b. **Key length:** 128
  7. Click **Next >**.
  8. **Client Group:** Leave blank and click **Next >**.
  9. Review Selections and click **Finish**.
- b. From the **Copy Details** window, select the newly created **Daily Offsite DASH Pool** from the dropdown list and click **Next >**.
  - c. From the Retention Rules window, leave the default retention 30 days and 1 cycle. Click **Next >**
  - d. From the copy Policy window, Deselect **All backups** under **Backup Selection** and leave the default for **Backups on and After**. Leave all other setting on their defaults.
  - e. Click **Finish** to create the encrypted Secondary Copy.

## Hardware Encryption

1. In the CommCell Browser, expand **Policies**, then **Storage Policies**, then **Basic Disk (MA)**.
2. Right-click on **Basic Disk (MA)** and select **All Tasks** then **Create New Copy**.
3. From the **Copy Details** window:
  - a. **Copy Name:** Monthly Tape Copy
    - i. **Storage Pools:** Click Add, then select **Tape**
      1. **Storage pool name:** Monthly Offsite Tape Pool then **Next >**
      2. **Configure Storage:**
        - a. **Storage Name:** Commvault Scalar i6000 x
      3. **Select the default MediaAgent and drive pool:**
        - a. **MediaAgent:** ea-2019-ma
          - i. **Drive Pool:** DrivePool(ea-2019-ma)x
          - ii. Click **Next >**
          - iii. **Scratch Pool:** Default Scratch
          - iv. Click **Next >**
      4. **Enter the streams and retention criteria:**
        - a. **Number of Device Streams:** 6
        - b. **Primary Copy's Aging Rules:** 30 Days, 1 Cycle
        - c. Click **Next >**
      5. **Advanced Settings:**
        - a. **Hardware Compression:** Enabled
        - b. **Encryption Settings:** Check box and enter the following:
          - i. **Hardware Encryption:** Enable check box
      6. Click **Next >**
      7. **Review your Selections:** Click **Finish**.
    - b. From the **Copy Details** window, select the newly created **Monthly Offsite Tape Pool** from the dropdown list and click **Next >**.
    - c. From the Retention Rules window, leave the default retention 30 cycles and 1 day. Click **Next >**
    - d. From the copy Policy window, Enter the following:
      - i. **Selective Copy:** Leave at default **Monthly Fulls** and for each time period copy the **First Full**
      - ii. Deselect **All backups** under **Backup Selection** and leave the default for **Backups on and After**. Leave all other setting on their defaults.
    - e. Click **Finish** to create the encrypted Secondary Copy.

## Setting a Media Password - CommCell

1. In the **Ribbon Bar** menu at the top of the CommCell Console, select the **Home** tab.

2. From the **Home** ribbon bar, select **Control Panel**.
3. From the **CommCell** section of the Control Panel, select **System**.
4. From the **System** window, select the **Change Password** tab.
5. From the Change Password tab, **check** the box for Change media Password, and enter the following information:
  - a. **Enter New Media Password:** commvault
  - b. **Confirm New Media Password:** commvault
  - c. **Enter Old Media Password:** Leave blank
6. Click **OK** to set the password in the system properties.
7. Click the **X** in the Control Panel screen to exit and return.

### Setting a Media Password – Storage Policy

1. Log in to the CommCell® Console.
2. From the CommCell Browser section, expand **Storage Policies**.
3. Right click **Basic Disk (MA)** and select **Properties**.
4. From the Storage Policy Properties: Basic disk (MA) window, click the **Advanced** tab.
5. Check the box to **Enable Storage Policy Level Media Password** and enter the following information:
  - a. Check box to enable **Change Media** Password
  - b. Enter **New Media Password:** Student!23
  - c. **Confirm New Media Password:** Student!23
  - d. **Enter Old Media Password:** Leave blank
6. Click **OK** to set the password on the storage policy. This will override the CommCell level password for this policy.

### At the end of this lab you will have completed the following items:

- Logged in to the CommCell Console.
- Configured In-Line encryption.
- Configured copy-based encryption.
- Configured Hardware encryption.
- Set a Media Password for the CommCell and a Storage Policy.



# Module 2 – Storage Advanced Configurations



# Disk Libraries

## Lab 2-1 Configuring Disk Library Advanced Options

Once the Disk libraries are created, you can begin to configure storage options. In this lab you will complete the following tasks:

- Log in to the CommCell® Console.
- Set a low space watermark.
- Configure mount Path Usage.
- Set Threshold for Managed Disk Space.
- Hide a Decommissioned Disk Library.
- Set Space Allocation for a Mount Path.
- Run Mount Path Validation.
- Move a Mount Path.
- Run Disk Library Maintenance.

If you are familiar with the Commvault CommCell Console Library configuration, you may configure Libraries on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Configure mount Path Usage

1. Log in to the CommCell Console.
2. From the **CommCell Browser** section, expand **Storage Resources**.
3. Expand **Libraries** and right click **Basic Disk (MA)** and select **Properties**.

4. From the **Library Properties for Basic disk (MA)** window, click the **Mount Paths** tab.
5. Note the default option to **Spill and fill mount paths**. Change the Mount Path Usage to **Fill and Spill**.

### Set Library Free Space Threshold and Threshold for Managed disk space

6. Click on the **Space Management** tab.
7. From the **Space Thresholds** section, change the **Warning Watermark to 20%**. Change the **Low watermark to 10%**.
8. From the **Thresholds for Managed Disk Space** section, change the **Start aging when data occupied on disk is setting to 90%**. Change the **Start aging when data occupied on disk is setting to 75%**.
9. Click **OK** to retain the settings and close the Properties window.

**NOTE-** This setting for Thresholds for Managed Disk Space only applies to libraries not using deduplication.

### Set Space Allocation for a Mount Path

10. Expand the **Basic Disk (MA)** library and right click the **[ea-2019-ma] D:\Vol1...** mount path and select **Properties**.
11. Click the **Allocation Policy** tab.
12. Under the **Space Allocation** section, select **Do not consume more than** (radio button) and set the space to **20GB**.
13. Click **OK** to set the space allocation settings.

### Hide a Decommissioned Disk Library

1. Right click the **Basic Disk (MA)** library and select Properties.
2. From the **General** tab, check the box for the **Hide Library** option. This disables and hides the library.
3. Click **OK** to close the Properties window.
4. From the **Ribbon Bar** menu at the top of the CommCell console, click the **Storage** tab.
5. From the **Storage** tab, select the **Media Management** option.
6. From the **Media Management Configuration** window, **Service configuration** tab, scroll to the **Show Hidden Libraries** parameter and change the value to **1**. Hidden libraries will now show in the Libraries view, though still disabled. If the library does not show, click to highlight the **Libraries** entity and use **F5** to refresh.
7. Click **OK** to close the **Media Management Configuration** window and set the configuration.
8. Right click the **Basic Disk (MA)** library and select Properties.
9. From the **General** tab, uncheck the box for the **Hide Library** option.
10. Click **OK** to close the Properties window.

### Run Mount Path Validation

1. Expand the **Basic Disk (MA)** library.

2. Right click the [ea-2019-ma]D:\Vol1... Mount path and select **Validate Mount Path**.
3. From the **Validate Mount Path** popup window, change the **File count** option to **2**. Click **Ok** to start the Mount Path validation job (this will take several minutes to run). The window will close and when the test is complete there will be a popup on the screen with the results.
4. When the result window appears, view the details, then click **OK** to close the popup window.

### Move a Mount Path

5. Expand the **Basic Disk (MA)** library.
6. Right click the [ea-2019-ma]D:\Vol1... mount path and select **Move Mount Path**.
7. From the **Move Mount Path** popup window, enter the following information:
  - a. **Select Source MediaAgent:** Leave default
  - b. **Source Path:** Leave default
  - c. **Destination Path, MediaAgent:** ea-2019-ma
  - d. **Local Path (Radio button):** E:\
8. Click **OK** to move the Mount Path.
9. Click the **Job Controller** tab to view the progress for the job.
10. From the CommCell Browser, Highlight the **Libraries** entity and use **F5** on your keyboard to refresh the libraries. Expand **Basic Disk (MA)** and note the new location for the mount path.

### Run Disk Library Maintenance

11. Right click the **Basic Disk (MA)** library and select **Disk Library Maintenance**.
12. From the **Disk library Maintenance** window, check the box for **Analysis** for Mount Path E:
13. Click **OK** to Run the maintenance task. This will indicate how fragmented the Mount Path(s) are. You can run the **Library and Drive Report** for results.

### At the end of this lab you will have completed the following items:

- Set a low space watermark.
- Configured mount Path Usage.
- Set a Threshold for Managed Disk Space
- Hide a Decommissioned Disk Library.
- Set Space Allocation for a Mount Path.
- Run Mount Path Validation.
- Moved a Mount Path.
- Run Disk Library Maintenance.



# Deduplication

## Lab 2-2 Configure Global Deduplication with Partitions

A global deduplication policy can accept data from multiple Storage Policies allowing deduplication across policies by sharing a common deduplication building block. In this lab you will complete the following tasks:

- Log in to the CommCell® Console.
- Create a Disk Library.
- Create a Global Deduplication Policy.
- Configure an operation Window for pruning.
- Configure and run a Dedupe Data Verification job.

If you are familiar with the Commvault CommCell® Console and deduplication policy configuration, you may create and configure policies on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Add a Disk Library

1. In the CommCell® Browser window, expand **Storage Resources**. Right-click on the **Libraries** entity and select **Add** then **Disk Library...**
2. From the **Add Disk Library** popup window, enter the following information:
  - a. **Name:** 20TB NAS
  - b. **MediaAgent:** ea-2019-ma (Dropdown list)

3. Select Network Path and click the **Credential** drop-down list.
4. Click the **Create New** button in the drop-down list.
5. From the **Create user** credential window, enter the following information:
  - a. **Credential name:** MountpathAccess
  - b. **User Name:** company\student
  - c. **Password:** student
  - d. **Owner:** Master
  - e. **Description:** Account for share access
  - f. Click **OK** from the **Create user credential** dialog box to create the user credential.
  - g. **Folder:** \\ea-2019-ma\Vol1
6. Click **OK** to save and create the library. The **20TB NAS** library appears in the **Libraries** list.

### Create a Global Deduplication Policy

1. In the CommCell® Browser, expand the **Storage Resources** entity.
2. Right-click **Deduplication Engines** and select **New Global Deduplication Policy**.
3. From the **Create Global Deduplication Policy Wizard**, Select/Enter the following information. Click **Next** after each section is complete:
  - a. **Name:** Global Deduplication Policy
  - b. **Library:** 20TB NAS
  - c. **MediaAgent:** ea-2019-ma
  - d. **Number of Partitions:** 2
    - i. **Partition Information Partition 1: Click Choose Path**
      1. **MediaAgent:** ea-2019-ma
      2. **Partition Path:** Click Browse, and navigate to Drive G: Click New folder
        - a. Enter the name **GlobalDDB-P1** then click **OK**
      3. Highlight the folder **GlobalDDB-P1**. Click **OK** to create the folder/path
      4. Click **OK** in the Partition Path screen to set the path for Partition 1
    - ii. **Partition Information Partition 2: Click Choose Path**
      1. **MediaAgent:** ea-2019-cs
      2. **Partition Path:** Click Browse, and navigate to Drive F: Click New folder
        - a. Enter the name **GlobalDDB-P2** then click **OK**
      3. Highlight the folder **GlobalDDB-P2**. Click **OK** to create the folder/path
      4. Click **OK** in the Partition Path screen to set the path for Partition 2
      5. Click **Next** to continue the wizard
  - e. **Software Encryption:** keep the default settings and click **Next** to continue.

4. Review the selections and click **Finish** to create the Global Deduplication Policy

**NOTE: The global Deduplication policy is listed under Storage Resources | Storage Pools.**

### Configure Operation Window for Physical Pruning of Aged Data

1. In the CommCell® Browser, expand the **Storage Resources** then **MediaAgents**.
2. Right-click the **ea-2019-ma** MediaAgent and select **All Tasks** then **Blackout Window**.
3. Click **Add** and enter the following information: (the software works on a 12-hour clock, you must configure a schedule up until 11:59 and a second schedule to start the next day.)
  - a. **Name:** Data Pruning
  - b. **Operations:** Data Pruning (Checkbox)
  - c. **Do not run intervals:** Click Add
    - i. **Days of week:** Monday – Friday
    - ii. **Do not run time interval:** Start 8:00 pm, End 11:59 pm
    - iii. Click **OK** to save to save the Time Interval
  - d. **Do not run intervals:** Click Add
    - i. **Days of week:** Monday – Friday
    - ii. **Do not run time interval:** Start 12:00 am, End 07:00 am
    - iii. Click **OK** to save the Time Interval
4. Click **OK** to save the Operation Rule Details.
5. Click **Close** to exit the Operation Window screen.

### Run Dedupe Verification and Edit the Schedule

1. In the CommCell® Browser, expand the **Storage Resources** then **Deduplication Engines**.
2. Expand **Global Deduplication Policy/Primary\_Global**.
3. Right click **Global Deduplication Policy\_Files\_xx** and select **All Tasks** then **Run Data Verification**.
4. From the **popup** window, view the default settings and click **OK** to start the verification job.

### At the end of this lab you will have completed the following items:

- Created a Disk Library.
- Created a Global Deduplication Policy.
- Configured an operation Window for pruning.
- Configured and run a Dedupe Data Verification job.



## Lab 2-3 Sharing a Tape Library

In many Commvault environments, tape is still used to manage offsite data storage and compliance copies. Often these tape libraries are SAN attached and shared by multiple MediaAgents. In this lab you will complete the following tasks:

- Log in to the CommCell Console.
- Share a Tape Library.

If you are familiar with the Commvault CommCell® Console, you may create and configure storage on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Share a Tape Library using Expert Storage Configuration

1. In the CommCell® tabs section select the **Storage** tab and click **Expert Storage Configuration**
2. In the **Select MediaAgents** window, select **ea-2019-ma**, and **ea-2019-cs**. click the **Add** button to include both MediaAgents and click **OK** to close the window.
3. Click **OK** to close the **Information** window.
4. Click the **Start** button in the lower left of the **Expert Storage Configuration** window and select **Detect/Configure Devices...** from the list.
5. In the **Detect Library** window, make sure that Automatically Create DDS Drivepools is selected. Leave the rest of the default settings under Device Type and click **OK** to scan for devices.
6. When the scan completes, click **OK** to close the Information popup. Expand the **Log** and note that the library scanned the same drives connected to all selected MediaAgents (Dynamic Shared Library). Click **Close** to close the Log window.
7. In the Libraries tab of Expert Storage Configuration, **Right click** the CommVault Scalar i6000 x library and

select **Configure** from the list.

8. In the Configuration popup, select **Library and all drives** and click **OK** to configure the library.
9. On the **Discover Media Options** window accept the default media type and click **OK** to continue.
10. The new shared tape library is now configured, Click **Start** and select **Exit** from the list to close the Expert Storage Configuration tool.
11. In the **CommCell Browser** window, expand **Storage Resources** then **Libraries**. The newly configured library (Commvault Scalar i6000 x) will appear.

## Lab 2-4 Tape Library Advanced Options

In many Commvault environments, tape is still used to manage offsite data storage and compliance copies. Often these tape libraries are SAN attached and shared by multiple MediaAgents. In this lab you will complete the following tasks:

- Log in to the CommCell® Console.
- Configure Virtual Mail slots.
- Configure Appendable media.
- Reset Containers and export locations.
- Configuring Auto-Cleaning.
- Set Overwrite Media options.

If you are familiar with the Commvault CommCell® Console, you may create and configure storage on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Configuring Virtual Mail Slots

1. From the CommCell Browser, expand **Storage Resources** then **Libraries**.
2. Right click on **Commvault Scalar i6000 x** and select **Properties**.
3. From the **Library Properties for Commvault Scalar i6000 x** window click the **Media** tab.
4. Check the box for **Virtual Mail Slot for Export**. Enter the following information:
  - a. **Starts from Slot:** 45
  - b. **Select Direction:** And UP

### Configuring Appendable Media

5. From the **Media** tab, ensure that the **Mark Media Appendable** option is checked.
6. Change the **Use Appendable media within** to **30 day(s) of its last write time**.

### Reset Container and Export Location for Returning Tapes

7. From the **Media** tab, **When Assigned Media Re-Appears in Library** section, check the boxes **Reset container** and **Reset export location**.

### Configuring Auto-Cleaning

8. From the **Drive** tab, **Enable Auto-Cleaning** section, enter the following information:
  - a. **On sense code:** check box
  - b. **Cleaning thresholds exceed:** Leave unchecked
  - c. **Wait:** 5 day(s) after last cleaning
  - d. **Continue using drive even if it needs cleaning, during restore:** Leave unchecked



**Set Overwrite Media options**

9. From the **Media Usage** tab, Overwrite Media section, enter the following information:
  - a. **When content verification fails:** Check box
    - i. **Click OK in the popup box to acknowledge the read error warning.**
  - b. **When it is from different CommCell:** Check box
  - c. **Prevent use of tapes from a different backup vendor:** Leave unchecked
10. Click OK to close the **Library Properties for Commvault Scalar i6000 x** window.

**At the end of this lab you will have completed the following items:**

- Configure Virtual Mail slots.
- Configure Appendable media.
- Reset Containers and export locations.
- Configuring Auto-Cleaning.
- Set Overwrite Media options.



# Tape Media Management



## Lab 2-5 Configuring Tape Media Management

In many organizations, tape is still used to back up remote sites, and for offsite data storage for compliance. In this lab you will complete the following tasks:

- Log in to the CommCell® Console.
- Configure spare media watermarks.
- Create a spare media pool.
- Configure and assign barcode patterns.
- Export Tapes.
- Prevent Tapes from Being Exported.
- Define Export Locations.
- Delete a Tape.
- Run Tape Verification.
- Mark Media Bad.
- Configuring a VaultTracker® Export Policy.
- Configuring a VaultTracker® Due Back Policy.

If you are familiar with the Commvault CommCell® Console, you may create and configure storage on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Create a spare Media Pool

1. From the CommCell Browser, expand **Storage Resources** then **Libraries**.
2. Expand **Commvault Scalar i6000 x** then **Media By Groups**.
3. Right Click **Media By Groups** and select **New Media Group** then **Spare Media Group**.
4. From the New Media Group window, enter the following information:
  - a) **Group Name:** Alternate Scratch
  - b) **Priority:** Low
  - c) **Watermark for Spare Media in the Pool:**
    1. **Low:** 5
    2. **High:** Leave default setting
  - d) **Spare media Selection Criteria:** Use most reused first
  - e) **Default Media Type:** Virtual Tape

### Configuring and Assigning Barcode Patterns

1. From the CommCell Console tab menu, select the **Storage** tab and click **Media Management**.
2. From the **Media Management Configuration** window, click the **BarCode Patterns** tab.
3. Under Add/Edit/Remove Pattern, click Add.
4. From the Barcode Pattern window, enter the following information:
  - a. **Barcode Patter Name:** Alternate Tapes
  - b. **Range:** Check box
    - i. **From:** CV0046WW
    - ii. **To:** CV0056WW
  - c. Click **OK** to create the barcode pattern
5. Click **OK** from the Media Management Configuration window to close it.
6. From the CommCell Browser window, Expand **Storage Resources**, then **Libraries**.
7. Expand **Commvault Scalar i6000 x** then **Media By Groups**.
8. Right click **alternate Scratch** and select **Properties**.
9. From the **Spare Group Properties** window, select the **Barcode Patterns** tab.
10. From the **Available Patterns** section, select **Alternate Tapes** and click Add to move it to the Selected Patterns window.
11. Click **OK** to set the Barcode Pattern.

### Export Tapes

1. From the CommCell Browser, expand **Storage Resources** then **Libraries**.
2. Expand **Commvault Scalar i6000 x** then **Media By Groups**.
3. Select the **Default Scratch** group and from the Browser Summary window, right click on Tape **100002WW** and select **All Tasks** then **Export**.

4. From the **Export Media** popup window, check the box for **New Outside Storage Location**. In the box, Enter **DataCenter Storage** for location.
5. Click **OK** to set the location and move the tape to the I/E port (Mail Slot). Read the **Export Media** popup message and click **OK** to continue.
6. From **Media By Groups**, Select the **I/E Ports** entity. The tape 100002WW will be in one of the slots ready to be removed from the library.

### Prevent Tapes from Being Exported

1. From the CommCell Browser, expand **Storage Resources** then **Libraries**.
2. Expand **Commvault Scalar i6000 x** then **Media By Groups**.
3. Select the **Default Scratch** group and from the Browser Summary window, right click on Tape **100009WW** and select **Options** then **Prevent Export**.
4. Click **OK** on the Confirm popup message.
5. From the Prevent Export popup window, Select Infinite for the Expiration date, and click **OK** to prevent the tape from being exported. Note that the Icon for the tape changes to indicated that export is prevented.

### Define Export Locations

1. From the CommCell Browser, expand **Storage Resources** then **Locations**.
2. Right click **Locations** and select **New Location**.
3. From the Export Location Details popup window, enter the following information.
  - a) **Location:** Offsite storage Facility
  - b) **Type:** Stationary
  - c) **Description:** Tape storage facility
4. Click **OK** to create the Location.

### Delete a Tape

1. From the CommCell Browser, expand **Storage Resources** then **Libraries**.
2. Expand **Commvault Scalar i6000 x** then **Media By Groups**.
3. Select the **Default Scratch** group and from the Browser Summary window, right click on Tape **100002WW** and select **All Tasks** then **Delete**.
4. Click **Yes** on the Confirm Delete popup message.

### Run Tape Verification

1. From the CommCell Browser, expand **Storage Resources** then **Libraries**.
2. Expand **Commvault Scalar i6000 x** then **Media By Groups**.
3. Select the **Default Scratch** group and from the Browser Summary window, right click on Tape **100003WW** and select **All Tasks** then **Verify Media**.

4. Click **OK** on the **Verify Media** popup message. Note the message stating that the tape does not have a valid media label. Media labels are written the first time that a tape is mounted for a write operation.

### Mark Media Bad

1. From the CommCell Browser, expand **Storage Resources** then **Libraries**.
2. Expand **Commvault Scalar i6000 x** then **Media By Groups**.
3. Select the **Default Scratch** group and from the Browser Summary window, right click on Tape **100003WW** and select **Options** then **Mark Media Bad**.
4. From **Media By Groups**, Select **Retired Media**. The bad tape will be listed in the group.

### Configuring a VaultTracker® Export Policy (Optional)

1. From the CommCell Browser, expand **Policies**.
2. Right click **Vault Tracker Policies** and select **New Tracking Policy**.
3. From the **Creation of Vault Tracker policy** wizard, Enter the following information. Click **Next** when you have completed each screen:
  - a) **Enter Policy name and description:**
    1. **Policy Name:** Weekly exports
  - b) **Select the policy type:** Export Media
  - c) **Select the level of Storage Policy copy management:** Select all
  - d) **Select the source locations:** Select Libraries
  - e) **Select the media status:**
    1. **Assigned Media:** Active, Appendable, Full
    2. **And exists in:** Check box
    3. **Media Groups:** All
  - f) **Select the criteria:**
    1. **Backup level:** Check box, Select Include radio button
    2. **Time Selection:** Check box
      1. **Select:** Last Write, By Range older than 10 days
    3. **Limit media count for export:** move 5 media
  - g) **Select movement destination and tracking:**
    1. **Track Transit:** Check box, Type Local Courier
    2. **Destination:** Select Export, select Offsite Storage Facility for dropdown list
  - h) **Review the summary:** Review options and click Next.
  - i) **Create a schedule now for this policy:** Yes
  - j) **Enter Schedule Name and its options:**

1. **Frequency:** Weekly
  2. **Schedule Name:** Weekly Export Policy
  3. **Start Time:** 9:00 AM
  4. **On these days:** Check box for Monday
4. Click **Finish** to create the tracking policy.

### Configuring a VaultTracker® Due Back Policy (Optional)

5. From the CommCell Browser, expand **Policies**.
6. Right click **Vault Tracker Policies** and select **New Tracking Policy**.
7. From the **Creation of Vault Tracker policy** wizard, Enter the following information. Click next when you have completed each screen:
  - a) **Enter Policy name and description:**
    1. **Policy Name:** Weekly Due Back
  - b) **Select the policy type:** Due back for reuse
  - c) **Select the level of Storage Policy copy management:** Select all
  - d) **Select the source locations:** Select Libraries
  - e) **Select the criteria:**
    1. **Limit media count for due back:** Leave unchecked
  - f) **Select movement destination and tracking:**
    1. **Track Transit:** Check box, Type Local Courier
    2. **Destination:** Select Library, select Commvault Scalar i6000 x from dropdown list
  - g) **Review the summary:** Review options and click Next.
  - h) **Create a schedule now for this policy:** Yes
  - i) **Enter Schedule Name and its options:**
    1. **Frequency:** Weekly
    2. **Schedule Name:** Weekly Due Back Policy
    3. **Start Time:** 9:00 AM
    4. **On these days:** Check box for Friday
8. Click **Finish** to create the tracking policy.

### At the end of this lab you will have completed the following items:

- Logged in to the CommCell™ Console.
- Configured spare media watermarks.
- Created a spare media pool.

- Configured and assigned barcode patterns.
- Exported Tapes.
- Prevented Tapes from Being Exported.
- Defined Export Locations.
- Deleted a Tape.
- Run Tape Verification.
- Marked Media Bad.
- Configured a VaultTracker® Export Policy.
- Configured a VaultTracker® Due Back Policy.

# Module 3 – Storage Policies

## MODULE 3 – STORAGE POLICIES

### Lab 3-1 Creating Storage Policies

Once your storage is configured you can begin creating Storage Policies. Storage Policies provide a data path and retention for the selected subclient data. In this lab you will complete the following tasks:

- Log in to the CommCell® Console.
- Create a Deduplicated Storage Policy.
- Create a Synchronous copy.
- Create a Selective copy.

If you are familiar with the Commvault CommCell® Console, you may create and manage Storage Policies on your own. If you are new to Commvault, you can follow the step by step directions listed below.

#### To create a Deduplicated Storage Policy

1. In the CommCell® Browser, expand **Policies**.
2. Right-click **Storage Policies** and select **New Storage Policy**.
3. From the Create Storage Policy Wizard, enter the following information. Click **Next** when you have completed each screen:
  - a. **Storage Policy type:** Data Protection and Archiving
  - b. **Storage Policy Name:** Dedupe Data
  - c. **Select Storage Pool:** Select Global Deduplication Policy
  - d. **Enter the streams and retention criteria:** Leave default settings



- e. **Review your selections:** Click **Finish** to create the policy
4. Review the Summary window and click **Finish** to complete the setup of a Deduplication Enabled Storage Policy.
5. In the CommCell® Browser, expand **Client computers | ea-2019-cs | File System | defaultBackupset**.
6. In the **Browser Summary** window, right click on **default** subclient and select **properties**.
7. In the Subclient Properties of default window, click the **Storage Device** tab.
8. From the Storage Policy section click the drop-down list and select the **Dedupe Data** storage policy.
9. Click **OK** to set the policy and close the properties window.

### Create a Synchronous copy

1. In the CommCell® Browser, expand **Policies** then **Storage Policies**.
2. Right-click on **Dedupe Data** storage policy and from the menu select **All Tasks > Create New Copy**.
3. From the Copy Properties (Storage Policy: Basic Disk (MA)) window, enter the following information:
  - a. **Copy Details Window:**
    - i. **Copy Name:** Secondary Offsite copy
    - ii. **Storage Pool:** Daily Offsite DASH Pool
  - b. **Retention Rules Window:**
    - i. **Retain For:** 60 Days and 2 Cycles
  - c. **Copy Policy Window:**
    - i. **Selective Copy:** Leave deselected
    - ii. **Backup Selection:** Deselect All backups.
    - iii. **Backups on and After:** Select the first day of the current month
4. Click **Finish** to save the new Synchronous Secondary copy.

### Create a Selective copy

1. In the CommCell® Browser, expand **Policies**.
2. Right-click on the **Dedupe Disk** storage policy. From the menu select **All Tasks** then **Create New Copy**. The Copy Properties dialog box appears.
3. From the **Copy Details** window, enter the following information:
  - a. **General Window:**
    - i. **Copy Name:** Selective Monthly Offsite copy
    - ii. **Storage Pools:** **Monthly Offsite** pool
  - b. **Retention Rules Window:**
    - i. **Override Retention:** Check Box
      1. **Retain For:** 365 Days and 12 Cycles
  - c. **Selective Copy Window:**

- i. **Automatically select full backups at frequency:** Monthly Fulls
    - ii. **For monthly Full rule, the month starts on:** 1
    - iii. **For each time period copy the:** First full backup
  - d. **Copy Policy Window:**
    - i. **Selective Copy:** Check Box
      1. **Select Full Backups at Frequency:** Monthly Fulls
      2. **For each Time Period Copy the:** First Full
    - ii. **Backup Selection:** Deselect All backups.
      1. **Backups on and After:** Select the First Friday of the current month
    - iii. **Source Copy:** Check box
      1. **Specify Source for Auxiliary Copy:** Secondary Offsite Copy
4. Click **Finish** to save the new Selective Secondary copy.

**At the end of this lab you will have completed the following items:**

- Logged in to the CommCell® Console.
- Created a Deduplicated Storage Policy.
- Created a Synchronous copy.
- Created a Selective copy.
- Created a DASH Copy.

### Lab 3-2 Configuring Auxiliary Copy

In this lab you will complete the following tasks:

- Log in to the CommCell® Console.
- Configure an Auxiliary copy job.

If you are familiar with the Commvault CommCell™ Console, you may create and Auxiliary copies on your own. If you are new to Commvault, you can follow the step by step directions listed below.

#### Configure an Auxiliary copy job

1. In the CommCell® Browser, expand **Policies** then **Storage Policies**.
2. Right-click on **Basic Disk (MA)** storage policy and from the menu select **All Tasks** then **Run Auxiliary Copy**.
3. From the Auxiliary Copy Job Options, enter the following information:
  - a. **General Tab:**
    - i. **Select Source MediaAgent:** <ANY MEDIAAGENT>
    - ii. **Copy Selection:** Select a Copy – Select Offsite Copy from the dropdown list
    - iii. **Number of Readers:** Allow Maximum

- b. **Job Initiation Tab:** Run Immediate
2. Click **OK** to start the Auxiliary copy job.

**At the end of this lab you will have completed the following items:**

- Logged in to the CommCell® Console.
- Configured an Auxiliary copy job.

### Lab 3-3 Storage Policy Tasks

In this lab you will complete the following tasks:

- Log in to the CommCell® Console.
- View Jobs in a storage policy copy.
- Change retention on a job.
- Manually delete a job.
- Disable and delete a Storage Policy.

If you are familiar with the Commvault CommCell™ Console, you may manage Storage Policies and users on your own. If you are new to Commvault, you can follow the step by step directions listed below.

#### View jobs in a Storage Policy Copy

1. In the CommCell® Browser, expand **Policies** then **Storage Policies**.
2. Expand **Basic Disk (MA)** storage policy and right click on **Primary** copy. select **View** then **Jobs**.
3. Uncheck the box for **Time Range** and click **OK** to see list of jobs.

#### Change Job Retention

4. From the **Jobs for Storage Policy-...** tab, right click on an available job for the **Mission Critical** subclient backup and select **Retain Job**.
5. From the **Manual Retention End Time for Job xx** window, click the Radio button **Add** and select **30 day(s) to the Retention Until date. Click okay to save the retention settings.**

Note that the Icon has changed indicating the job has been manually retained

6. From the **Jobs for Storage Policy-...** tab, right click the **Mission Critical** subclient backup from step 4 and select **Change Retention**.
7. From the Manual Retention End Time for Job XX, select **Do Not Retain Job**.
8. Click **OK**.

#### Delete a job from a Storage Policy copy

9. Right click on the **Mission Critical** backup job and select **Delete Job**.
10. From the **Delete Job** popup window, under **Do you want dependent jobs to be computed?** select **Yes. (Recommended)**
11. Click **OK** from the Delete Job window to delete the job. From the subsequent **Delete Job** popup window click **OK** to verify the deletion of any dependent jobs.

12. From the **Enter confirmation text** popup window, type **erase and reuse media** and click **OK** to complete the job deletion.

### Disable a Storage Policy for Backup

1. In the CommCell® Browser, expand **Policies** then **Storage Policies**.
2. Right click **Dedupe Data** storage policy and select **Properties**. From the **Storage Policy Properties: Dedupe Data** window, select the **Associated Subclients** tab.
3. Click the **Re-associate All** button on the bottom right of the screen.
4. From the **Re-Associate Subclient(s)** popup window, select **Basic Disk (MA)** and click **OK**.
5. Click **OK** to re-associate subclients.
6. Right click **Dedupe Data** storage policy and select **Properties**. From the **Storage Policy Properties: Dedupe Data** window, select the **General** tab.
7. Check the box next to **Hide and Disable Storage Policy for Backups**. Click **OK** on the verification information window.
8. Click **OK** to hide the storage policy.

### Show disabled storage Policies

1. From the tab menu at the top of the CommCell console, click the **Storage** tab.
2. From the **Storage** tab, select the **Media Management** option.
3. From the **Media Management Configuration** window, **Service configuration** tab, scroll to the **Show Storage Policies Disabled for Backup** parameter and change the value to **1**. Hidden Storage Policies will now show in the Storage Policies view, though still disabled.
4. Click **OK** to close the Media Management Configuration window and set the configuration. You will see the storage policy again after going to the Storage Policies container and pressing F5 to refresh.
5. Right click the **Dedupe Data** storage policy and select **Properties**.
6. From the General tab, note that the policy is still disabled.
7. Click **OK** to close the Properties window.

### Delete a Storage Policy

1. In the CommCell® Browser, expand **Policies** then **Storage Policies**.
2. Right click **Dedupe Data** storage policy and select **All Tasks** then **Delete**. Click Yes on the confirm Delete popup box.
3. From the **enter Confirmation text** popup window, type **erase and reuse media**. Click **OK** to complete the storage policy deletion.

At the end of this lab you will have completed the following items:

- Logged in to the CommCell® Console.

- Viewed Jobs in a storage policy copy.
- Changed retention on a job.
- Manually deleted a job.
- Disabled and deleted a Storage Policy.

## Module 4 – Monitoring

The title card features a light blue background with a dark blue footer. On the left and right sides, there are faint, red-outlined wireframe cubes. The main text 'CommCell® Console Tools' is centered in a large, bold, dark blue serif font. The footer contains the Commvault logo and tagline 'Be ready' on the left, and a copyright notice on the right.

# CommCell® Console Tools

## Lab 4-1 CommCell® Console Tools

CommCell Console tools provide a way of monitoring your environment for potential issues. In this lab you will complete the following tasks:

- Log in to the CommCell® Console.
- View Deduplication Engine views.

If you are familiar with the Commvault CommCell® console, you may Access views on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Deduplication Engine Views

1. In the CommCell® Browser, expand **Storage Resources** then **Deduplication Engines**.
2. Expand **Dedupe Data** Global Deduplication Policy, then **Global Deduplication Policy\_Files\_xx**.
3. Select **[ea-2019-ma] G:\GlobalDDB-P1...**
4. The Properties section displays information about the DDB partition including information on the last DDB backup time.
5. This view also displays the response time of the database for queries and inserts.
6. Additional information of the **deduplication partition** including graphs and statistics can be viewed in the details pane.
6. The Graph displays unique and secondary blocks. Includes pending delete records.

**At the end of this lab you will have completed the following items:**

- Log in to the CommCell™ Console.
- View Deduplication Engine views.
- Configure Metrics reporting



## Lab 4-2 Create and Manage Alerts

In this lab you will complete the following tasks:

- Log in to the CommCell® Console.
- View and enable existing alerts.
- Create alert with Email notification.
- Create alert with Console notification.

If you are familiar with the Commvault CommCell® Console, you may create and manage copies on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### View and Enable Alerts

1. From the CommCell® Console's Ribbon bar click the **Home** ribbon tab then **Alert**.
2. Scroll to view all of the available pre-built alerts.
3. From the **Alerts** Window, navigate to the **Data Aging is disabled for the last *n* days** alert. Click the **check box** in the status column to enable the alert or click the **Enable** button.

### Add an Alert with Email Notification

1. In the Alerts dialog box click **Add** and configure a new alert using the following information. Click **Next** as you complete each page:
  - a. **General Information:**
    - i. **Display Name:** Required updates



- ii. **Category:** Software Updates
    - iii. **Type:** Upgrade Client
  - b. **Entities Selection:**
    - i. **Select:** All clients
  - c. **Threshold and Notification Criteria Selection:** Leave default Selections
  - d. **Notification Type(s) Selection:**
    - i. **Email Tab:** Check box Select [Email] for notification
    - ii. Review additional options
  - e. **Token Criteria Selection:** Leave default
  - f. **User(s) and Group(s) Selection:**
    - i. **To:** admin
    - ii. **Sender Name:** Commserve
    - iii. **Sender Address:** Cvadmin@company.com
  - g. **Security:** Leave default
  - h. **Summary:** View alert information and click **Finish**.
2. The new Required Updates alert appears in the Alerts dialog box list.
3. Click **OK** to exit.

#### Add an Alert with Console Notification

4. In the Alerts dialog box click **Add** and configure a new alert using the following information. Click **Next** as you complete each page:
  - a. **General Information:**
    - i. **Display Name:** Phase Failure
    - ii. **Category:** Job Management
    - iii. **Type:** Data Protection
  - b. **Entities Selection:**
    - i. **Agent Type:** Leave default
    - ii. **Association:** Check the box for Client Group **Infrastructure**
  - c. **Threshold and Notification Criteria Selection:**
    - i. **Check Box:** Alert every 2 attempts (Phase Failure)
  - d. **Notification Type(s) Selection:**
    - i. **Console alerts Tab:** Check box Select [Console Alerts] for notification
  - e. **Token Criteria Selection:**

- i. **Select the following rules:** STORAGE POLICIES USED, and Equals, then type **CommServeDR** in the blank field
  - f. **User(s) and Group(s) Selection:**
    - i. **To:** Leave default
  - g. **Security:** Leave Defaults
  - h. **Summary:** View alert information and click **Finish**.
5. The new Phase failure alert appears in the Alerts dialog box list.
  6. Click **OK** to exit.

**At the end of this lab you will have completed the following items:**

- Logged in to the CommCell® Console.
- Viewed and enabled existing alerts.
- Created alert with Email notification.
- Created alert with Console notification.



# CommCell® Console Reports



## Lab 4-3 Configure CommCell® Console Reports

Reporting is a very important part of monitoring your CommCell's health. In this lab you will complete the following tasks:

- Log in to the CommCell® Console.
- Create and run a Job Summary report.
- Create and Schedule a Data Retention Forecast and Compliance report.
- Create and Save a CommCell Configuration report.

If you are familiar with the Commvault CommCell® console, you may create and manage reports on your own. If you are new to Commvault, you can follow the step by step directions listed below.

### Create and Run a Report

1. From the CommCell® Console Ribbon bar click the **Reports** tab and select **Job Summary**.
2. Click the **Job Summary (CommCell Console)** entry and enter the following information:
  - a. **General Tab:**
    - i. **Select:** Backup (Radio button) and select Backup from the dropdown list
  - b. **Computers:**
    - i. **Keep Default:** All computers, all agents
  - c. **MediaAgents:**
    - i. **Include all MediaAgents:** Leave default
  - d. **Storage Policies:** Check to include all policies

- e. **Selection:**
    - i. **Diagnostic:** Failure Reason
    - ii. **Contents:** Failed Objects
    - iii. **Storage:** MediaAgents
  - f. **Options:**
    - i. **Backup Types:** All
    - ii. **Job Status:** Deselect **All**, Check **Failed, Completed**
  - g. **Time Range:** Last 3 Days
  - h. **Output:**
    - i. **Output format:** HTML
3. At the bottom of the Report Selection dialog box, click on **Run**. After a few moments, the **Backup Job Summary Report** appears. (If an error pops up stating “No data was found for the selected criteria” it means there were no failures for the time period selected)
  4. View the report then close the browser to complete this activity.
  5. Close the **Report Selection** page.

### Create a report and Schedule

1. On the CommCell® Console Ribbon bar, select the **Reports** tab.
2. From the **Other Reports** icon, use the drop-down menu and select **Forecast**. The Report Selection dialog box appears with the **Data Retention Forecast and Compliance** report highlighted.
3. Review the available options for this report and when finished, click on the **Schedule** button. The “Schedule Details” dialog box appears.
4. Configure the report using the following information:
  - a. **Schedule Pattern:**
    - i. **Schedule Name:** Weekly forecast
    - ii. **Select:** Weekly, Friday, 8:00 AM
  - b. **Report Details:**
    - i. **Deselect:** Show prunable data
    - ii. **Select:** Show unprunable data
  - c. **Notification:**
    - i. **Available Users:** Admin, Master. Use the > to move each to the Users to be notified column
5. Click **OK** to schedule the report. Click **OK** on the information – Report Scheduled Successfully window.
6. In the Report Selection dialog box click **Close** to exit the dialog box.

### Create a Report and Save as a Custom Report

1. From the CommCell® Console Ribbon bar, select the **Reports** tab and then **Other Reports**.
2. Select **Configuration** from the pull-down menu. The Report Selection dialog box appears.
3. Configure the report using the following information:
  - a. **General:**
    - i. **Verify Selection:** CommCell, Alerts, User/User Groups
  - b. **MediaAgent:**
    - i. **MediaAgents:** Include All MediaAgents
4. At the bottom of the Report Selection dialog box, click on **Save As**. The Save As dialog box appears.
5. In the Save As dialog box enter "**New CommCell Report**" as the report name.
6. Click **OK** to save the report.
7. A pop-up dialog box appears noting the report was saved successfully. Click **OK**.
8. In the Report Selection dialog box click **Close** to exit the dialog box.
9. In the CommCell® Browser, expand **Reports** then **My Reports**.
10. Select **General**. In the Summary window the saved "New CommCell Report" configuration report will be listed.
11. Right-click on the new report and select **Run Immediately**. After a moment, the CommCell Configuration Report will appear.
12. Review the report.
13. Close the browser to complete this activity.

### At the end of this lab you will have completed the following items:

- Logged in to the CommCell® Console.
- Created and run a Job Summary report.
- Created and Scheduled a Data Retention Forecast and Compliance report.
- Created and Saved a CommCell Configuration report.

**You have completed the labs for the Commvault Professional Advanced course. Congratulations!**