Lab 14: Working with the Dynamic Template Designer

In this lab, you use the Dynamic Template Designer to create and modify a Dynamic templates.

Lab Exercises

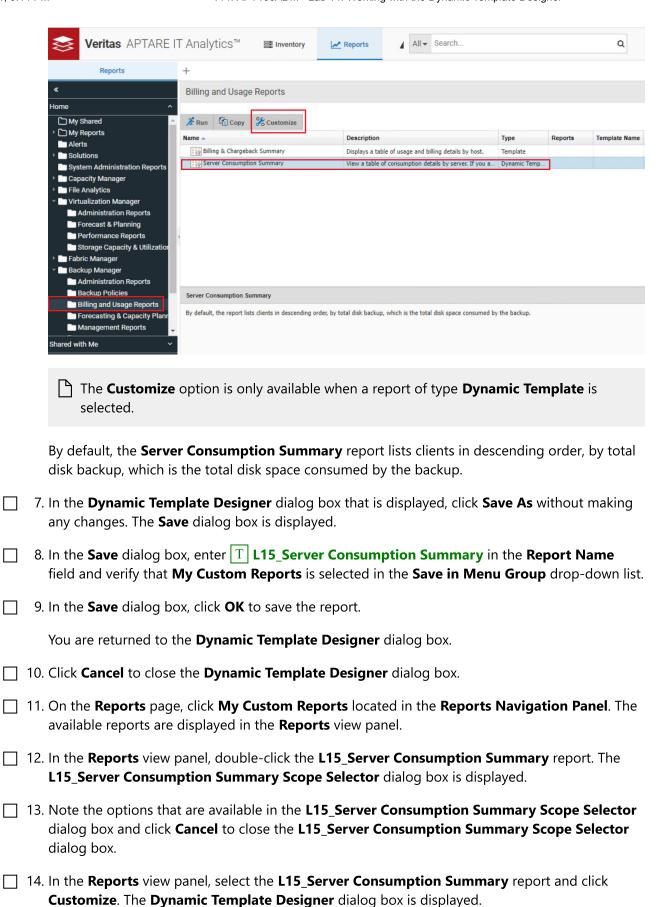
This lab includes the following exercises:

- Exercise A: Modifying an Out-of-the-Box Dynamic Template
- Exercise B: Creating a Dynamic Template
- Exercise C: Configuring a Bar Chart Dynamic Template
- Exercise D: Configuring a Pie Chart Dynamic Template

⚠ It is recommended to use **Google Chrome** to perform the lab exercises. After launching the lab, zoom out the lab browser window to 80% to fit the APTARE Portal interface and view all the tabs within the window.

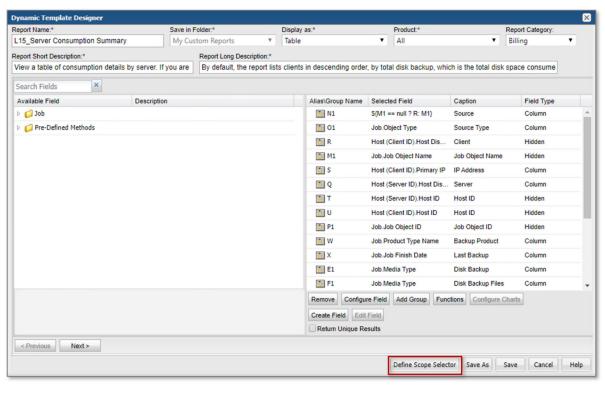
Exercise A: Modifying an Out-of-the-Box Dynamic Template

In th	nis e	exercise, you m	odify an existing Dynamic Templat	e.
	1.	Sign in to the	console system using the crede	entials provided below.
		Username:	T EXAMPLE\Administrator	
		Password:	T P@ssw0rd	
			uble-click the Aptare Portal shorton ple.com system, to launch the AP	•
		When the APT credentials.	ARE IT Analytics Portal login pag	e is displayed, login using the below
		Username	T admin@example.com	
		Password	T P@ssw0rd	
	4.	In the APTARE	IT Analytics Portal, navigate to R	deports.
		-		Billing and Usage Reports located in the are displayed in the Reports view panel.
		-	view panel, select the Server Con illustrated in the following figure.	sumption Summary report and click



15. In the **Dynamic Template Designer** dialog box, click **Define Scope Selector** as illustrated in the

following figure.



16.	In the Scope Selector Components dialog box that is displayed, deselect the Event Type and the Only Parent/Child Jobs components.
17.	In the Scope Selector Components dialog box, select the Job Status and the Job Type Detail components and click OK to return to the Dynamic Template Designer dialog box.
18.	In the Dynamic Template Designer dialog box, click Save to save the template and return to the Reports page.
19.	In the Reports view panel, double-click the L15_Server Consumption Summary report. The L15_Server Consumption Summary Scope Selector dialog box is displayed.
20.	In the L15_Server Consumption Summary Scope Selector dialog box, note that the Job status component has been added and can be used to view only Successful, Warning, Successful or Warning, and Failed events. Also note the Advanced tab is also available.
21.	Click Advanced , the Advanced Options dialog box is displayed.
22.	In the Advanced Options dialog box, note that the Job types component is available and can be used to view only Full Backup jobs performed by Veritas NetBackup servers.
23.	In the Advanced Options dialog box, click Cancel to return to the L15_Server Consumption Summary Scope Selector dialog box.
24.	L15_Server Consumption Summary Scope Selector dialog box, click Cancel to return to the Reports page.
25.	In the Reports view panel, select the L15_Server Consumption Summary report and click Customize . The Dynamic Template Designer dialog box is displayed.
26.	In the Dynamic Template Designer dialog box, select and remove the Source Type , Disk Backup Files , Tape Backup Files , Nbr of Files , Summary Status columns.
	To remove a column select the column and click Remove .

_	After removing the above columns, rename the Disk Backup and the Tape Backup column to Disk Backup Size and Tape Backup Size respectively.
	To rename a column, select the column, click Configure Field , and change the Field Label .
	n the Dynamic Template Designer dialog box, select and hide the Job Object Name , Host ID , ob Object ID , Job ID , and Kilobytes columns.
	To hide a column, select the column, click Configure Field , and select Hidden in the Type drop-down list.
	Deleting all the desired columns might not be possible as other columns might depend on the column being deleted. In such scenarios, the column can be hidden from the report if they are not required.
☐ 29. II	n the Dynamic Template Designer dialog box, click Save to save the template.
Υ	ou are returned to the Reports page.
_	n the Reports view panel, double-click the L15_Server Consumption Summary report. The .15_Server Consumption Summary Scope Selector dialog box is displayed.
_	n the L15_Server Consumption Summary Scope Selector dialog box, select Failed Events in he Job status drop-down list and click Advanced .
_	n the Advanced Options dialog box that is displayed, click Veritas NetBackup and then select full Backup as illustrated in the figure below.

Advanced Options	×
Job types: Select All	
Commvault Simpana	Veritas NetBackup
EMC Avamar	Full Backup — Differential Incr Backup
EMC NetWorker	Cumulative Incr Backup
Generic Backup	Catalog Backup Application Backup
HP Data Protector	Archive Restore
IBM Spectrum Protect (TSM)	Duplication
Oracle Recovery Manager (RMAN)	☐ Vault ☐ Live Update
Rubrik Cloud Data Management	Replication Duplicate
Veeam Backup & Replication	Replication Import Replication (Snapshot)
Veritas Backup Exec	Snapshot
Veritas NetBackup	Snap Index Backup From Snapshot Import (Snapshot) Application State Capture Indexing Index Cleanup Activate Instant Recovery Deactivate Instant Recovery Reactivate Instant Recovery Instant Recovery Instant Recovery Image Cleanup Automatic Schedule RMAN Catalog Lock VM Deployment Instant Access Cloud Snapshot Replication
OK Cancel	

33. In the Advanced Options	dialog box,	click (OK to	return t	to the L15 .	_Server	Consumption
Summary Scope Selecto	r dialog box						

34. In the **L15_Server Consumption Summary Scope Selector** dialog box, click **Generate** without making any other changes to generate the report.

The contents of the L15_Server Consumption Summary report are displayed in a new tab.

The **L15_Server Consumption Summary** report now displays all **Veritas NetBackup** clients that don't have a successful full backup.

35. Close the **L15_Server Consumption Summary** tab.

Go to I	Lab E	xercises
---------	-------	----------

Exercise B: Creating a Dynamic Template

In this exercise, you create a new Dynamic Template using the Dynamic Template Designer.

Sele	cting an Enterprise Object
1	. On the Reports page, right-click My Reports located in the Reports Navigation Panel and click New in the resulting menu to create a new folder.
<u> </u>	. Enter $\boxed{ exttt{T}}$ APT106ADM_L15 as the folder name and press Enter .
	The new folder, APT106ADM_L15 is now displayed in the Reports Navigation Panel under the My Reports folder.
<u> </u>	. In the Reports Navigation Panel , right-click the APT106ADM_L15 folder and in the resulting menu select New Dynamic Template .
<u> </u>	. In the Dynamic Template Designer dialog box that is displayed, select Storage Array and click OK . The Dynamic Template Designer dialog box is displayed.
Conf	iguring General Dynamic Template Designer Components
<u> </u>	. In the Dynamic Template Designer dialog box, enter APT106ADM_Array_Capacity in the Report Name field and verify that APT106ADM_L15 is selected in the Save in Folder dropdown list.
□ 6	. Select Table in the Display as drop-down list and NetApp in the Product drop-down list.
	 The Dynamic Template Designer can be used to create two different versions, starting with the same template: Heterogeneous: The scope selector and fields in the template are designed to select data across multiple vendor products for an enterprise object, such as EMC Symmetrix, Hitachi Data Systems, and IBM SVC arrays. Homogeneous: The scope selector and fields in the template are designed to select data for one specific vendor product, such as NetApp arrays.
☐ 7	. Select Capacity in the Report Category drop-down list and enter List allocated and available capacity of NetApp Arrays in the Report Short Description and in the Report Long Description fields.
	If a Report Category is not selected, report templates are displayed in the Inventory under the heading Uncategorized Report Templates .
	The Report Short Description will appear in search results, enabling users to determine the intent of the report template and saved reports.
Addi	ing Fields and Methods to a Dynamic Template

8. In the Dynamic Template Designer dialog box, locate and double-click the Array Name,	Array
Type, Config Available, Config Allocated, and Config Total fields to include it in the ten	ıplate.

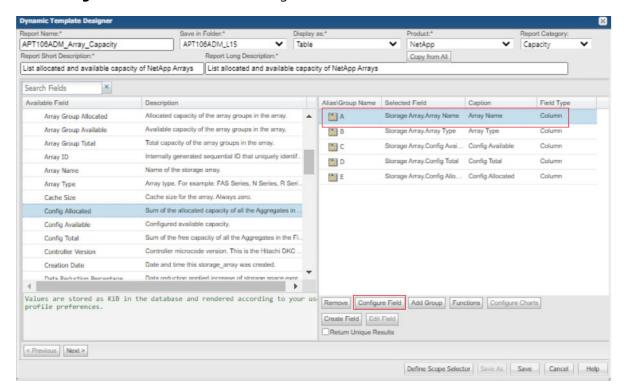
To enable easier manipulation of fields in the Dynamic Template Designer , a simpler
name is assigned when a field is dragged into the Selected Fields panel in the Report
Designer. This name, typically a single alpha character, can be used to perform
operations, such as mathematical calculations, with other fields.

Note that as you add and remove fields from the selected list, the alphabetic sequence
for the alias names is not retained. That is, when a field is removed, its alias name will not
be reused when you add fields to the selected list.

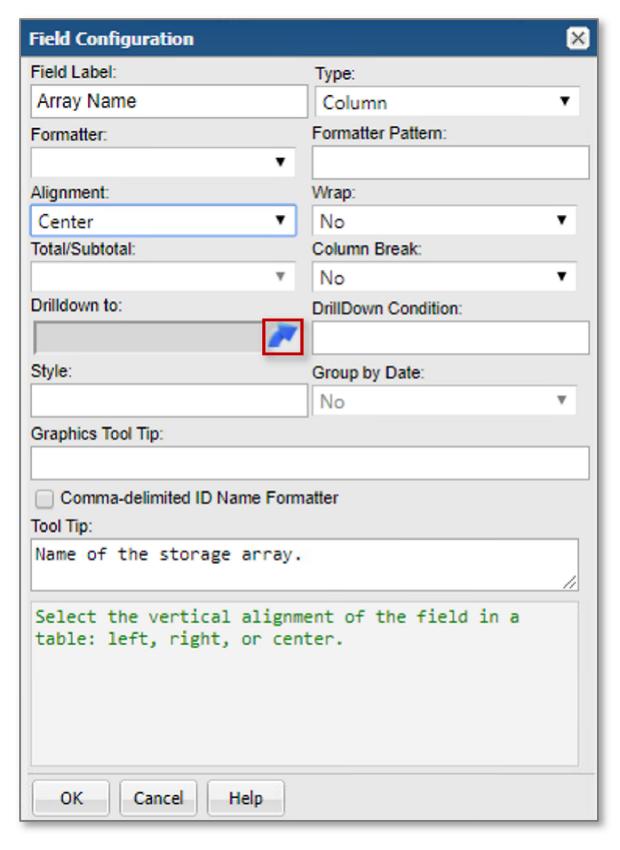
9. In the Dynamic Template Designer window, also include the # Aggregates , # Volumes , and #
CIFS Shares fields. There fields are located in the Storage Array > NetApp Storage System
folder.

Dynamic Template Field Configuration

10. In the **Dynamic Template Designer** window, select the **Storage Array.Array Name** field and click **Configure Field** as illustrated in the figure below.



11. In the **Field Configuration** dialog box that is displayed, select **Center** in the **Alignment** dropdown list and click the **Drilldown to** icon as illustrated in the figure below.



The **Drilldown Configuration** window is displayed and lists the reports that can be selected as a target for the drilldown.

12. In the **Drilldown Configurtion** window, select the **Array Details** report and click **OK**.

You are returned to the **Field Configuration** dialog box, note that **Array Details** is listed in the **Drilldown to** field.

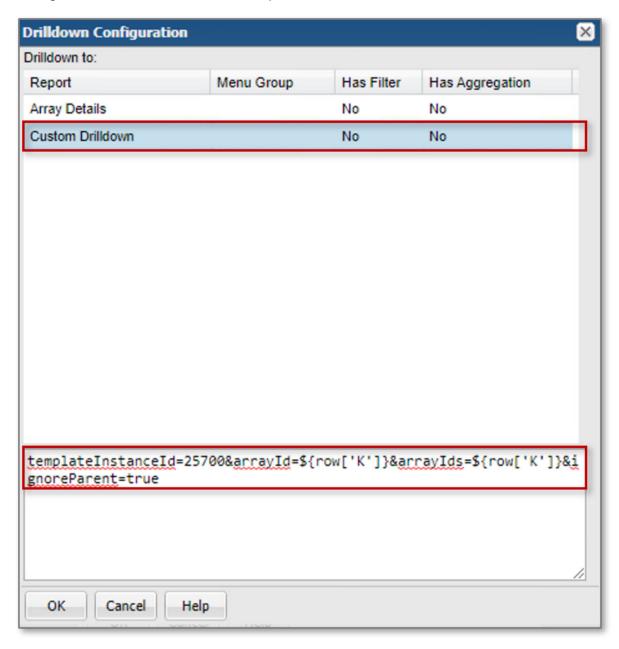
13. In the **Field Configuration** dialog box, click **OK** to save the changes.

	A new Field (Storage System ID) of Type Hidden is automatically included in the template. This field will not be displayed in the report, but is required to access the necessary details to link to the sub-report template. There will be cases where the UI will automatically add hidden fields to the report template, to ensure satisfactory performance.
14.	In the Dynamic Template Designer window, select the Storage Array.Config Available field and click Configure Field .
15.	In the Field Configuration dialog box that is displayed, change the Field Label to Available Capacity .
16.	In the Field Configuration dialog box, select Unit Converter in the Formatter drop-down list and enter KB::GB in the Formatter Pattern field.
	The Unit Converter determines the value to be used when converting from one unit to another, for example, from KB to GB . The "division by" value is determined from the user's profile settings, either 1000 or 1024 .
17.	Select Center in the Alignment drop-down list and enter Sum of available capacity of all the Aggregrates in the NetApp Filer in the Graphics Tool Tip field.
	The description specified in the Graphics Tool Tip field is displayed when a user hovers the mouse over a value or an image in a report.
18.	In the Dynamic Template Designer window, select the Storage Array.Config Allocated field and click Configure Field .
19.	In the Field Configuration dialog box that is displayed, change the Field Label to Allocated Capacity .
20.	In the Field Configuration dialog box, select Unit Converter in the Formatter drop-down list and enter KB::GB in the Formatter Pattern field.
21.	Select Center in the Alignment drop-down list and enter Sum of allocated capacity of all the Aggregrates in the NetApp Filer in the Graphics Tool Tip field.
22.	In the Field Configuration dialog box, click OK to save the changes.
23.	In the Dynamic Template Designer window, select the Storage Array.Config Total field and click Configure Field .
24.	In the Field Configuration dialog box that is displayed, change the Field Label to Total Capacity .
25.	In the Field Configuration dialog box, select Unit Converter in the Formatter drop-down list and enter KB::GB in the Formatter Pattern field.
26.	Select Center in the Alignment drop-down list and enter Total capacity of all the Aggregrates in the NetApp Filer in the Graphics Tool Tip field.
27.	In the Field Configuration dialog box, click OK to save the changes.

- 28. In the **Dynamic Template Designer** window, select the **NetApp Storage System.# Aggregates** field and click **Configure Field**.
- 29. In the **Field Configuration** dialog box, select **Center** in the **Alignment** drop-down list and click the **Drilldown to** icon.
- 30. In the **Drilldown Configurtion** window, select the **Custom Drilldown** and enter the following parameter in the parameters field.

templateInstanceId=25700&arrayId=\${row['K']}&arrayIds=\${row['K']}&ignoreParent=true

The figure below illustrates the above step.



To identify the **systemName**, **templateName**, or **templateInstanceID** of an existing report template, generate that report and in the active browser window type: **Ctrl-Alt-T**

In this example, we are associating the **NetApp Aggregate Summary** report which has a **templateInstanceId** of **25700** to the data in the **# Aggregates** field in our template.

	The parameters arrayId and arrayIds allows us to fetch data only for a particular Filer from the NetApp Aggregate Summary report. In our template, the letter K is the alias for the Storage System ID field.
31.	In the Drilldown Configurtion window, click OK to return to the Field Configuration dialog box.
32.	In the Field Configuration dialog box, enter \${ row['C'] != '0'} in the DrillDown Condition field and click OK to save the changes.
	In the above step, we are adding a DrillDown Condition to disable the DrillDown link if no data is available for the # Aggregrate field. In our template, the letter C is the alias for the # Aggregrates field.
33.	In the Dynamic Template Designer window, select the NetApp Storage System.# Volumes field and click Configure Field .
34.	In the Field Configuration dialog box that is displayed, select Numeric in the Formatter and Center in the Alignment drop-down list.
35.	Click the Drilldown to icon. The Drilldown Configuration window is displayed.
36.	In the Drilldown Configurtion window, select the Custom Drilldown and enter the following parameter in the parameters field.
	$templateInstanceId=25720\&arrayId=\$\{row['K']\}\&arrayIds=\$\{row['K']\}\&ignoreParent=true\}$
	In this example, we are associating the NetApp Volume Summary report which has a templateInstanceId of 25720 to the data in the # Volumes field in our template.
	The parameters arrayId and arrayIds allows us to fetch data only for a particular Filer from the NetApp Volume Summary report. In our template, the letter K is the alias for the Storage System ID field.
37.	In the Drilldown Configurtion window, click OK to return to the Field Configuration dialog box.
38.	In the Field Configuration dialog box, enter \${ row['D'] != '0'} in the DrillDown Condition field and click OK to save the changes.
	In the above step, we are adding a DrillDown Condition to disable the DrillDown link if no data is available for the # Volumes field. In our template, the letter D is the alias for the # Volumes field.
39.	In the Dynamic Template Designer window, select the NetApp Storage System.# CIFS Shares field and click Configure Field .
40.	In the Field Configuration dialog box that is displayed, select Numeric in the Formatter and Center in the Alignment drop-down list.
41.	Click the Drilldown to icon. The Drilldown Configuration window is displayed.
42.	In the Drilldown Configurtion window, select the Custom Drilldown and enter the following parameter in the parameters field.

templateInstanceId=25760&arrayId=\${row['K']}&arrayIds=\${row['K']}&ignoreParent=true

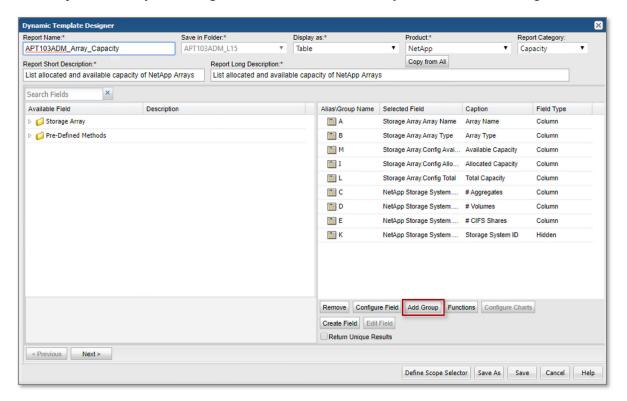
In this example, we are associating the **NetApp CIFS Summary** report which has a **templateInstanceId** of **25760** to the data in the **# CIFS Shares** field in our template.

The parameters **arrayId** and **arrayIds** allows us to fetch data only for a particular Filer from the **NetApp Volume Summary** report. In our template, the letter **K** is the alias for the **Storage System ID** field.

- 43. In the **Drilldown Configuration** window, click **OK** to return to the **Field Configuration** dialog box.
- 44. In the **Field Configuration** dialog box, enter **\${ row['E'] != '0'}** in the **DrillDown Condition** field and click **OK** to save the changes.
 - In the above step, we are adding a **DrillDown Condition** to disable the **DrillDown** link if no data is available for the **# CIFS Shares** field. In our template, the letter **E** is the alias for the **# CIFS Shares** field.

Using Groups in Dynamic Templates

45. In the **Dynamic Template Designer** window, click **Add Group** as illustrated in the figure below.



- 46. In the **Group** dialog box that is displayed, enter **Array Details** in the **Group Name** and **Group Title** fields.
 - The group title becomes the table column heading and the field captions become the subheadings. In most cases, a group will have a title, although there may be cases where a single column of data requires no grouping. Therefore, **Group Title** is an optional setting.
- 47. In the **Group** dialog box, click **OK** to return to the **Dynamic Template Designer** window.

Exercise C: Configuring a Bar Chart Dynamic Template

In this exercise, you create and configure a Bar Chart Dynamic Template.

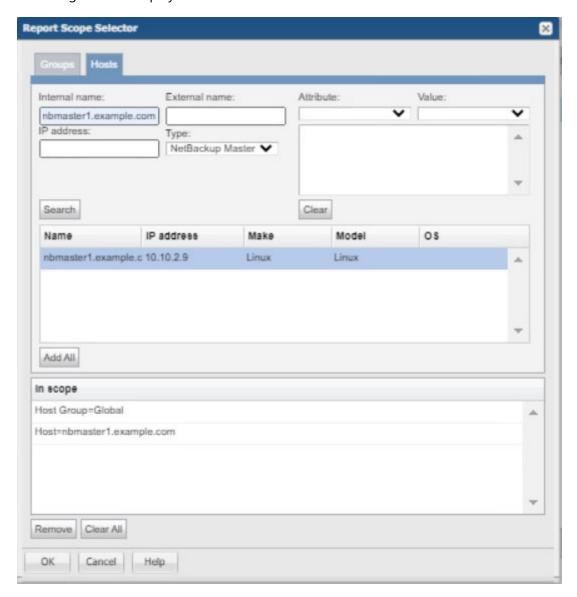
	C	reating	g a l	Dynamic	Temp	late
--	---	---------	-------	---------	------	------

	1.	. In the Reports Navigation Panel , right-click the APT106ADM_L15 folder and in the resulting menu select New Dynamic Template .
	2.	In the Dynamic Template Designer dialog box that is displayed, select Job and click OK . The Dynamic Template Designer dialog box is displayed.
	3.	. In the Dynamic Template Designer dialog box, enter APT106ADM_Jobs in the Report Name field and verify that APT106ADM_L15 is selected in the Save in Folder drop-down list.
	4.	. Select Bar Chart in the Display as drop-down list and Veritas NetBackup in the Product drop-down list.
	5.	. Select Backup in the Report Category drop-down list and enter Daily backup job status in the Report Short Description and in the Report Long Description fields.
	6.	In the Dynamic Template Designer window, expand Job folder in the left panel and double-click the Job Finish Date and Summary Status fields to include them in the template.
Co	nf	iguring Field Functionality
	7.	. In the Dynamic Template Designer window, select the Job.Job Finish Date field and click Configure Field .
	8.	. In the Field Configuration dialog box that is displayed, select Caption in the Type drop-down and Date Group By in the Formatter drop-down list.
	9.	. In the Field Configuration dialog box, click OK to save the changes.
	10.	In the Dynamic Template Designer window, select the Job.Summary Status field and click Configure Field .
	11.	. In the Field Configuration dialog box that is displayed, enter Success in the Field Label field, select Bar in the Type field and change the color to Green .
	12.	. In the Field Configuration dialog box, click OK to save the changes.
	13.	In the Dynamic Template Designer window, expand Job folder in the left panel and double-click the Summary Status field to include another Summary Status field it in the template.
	14.	. In the Dynamic Template Designer window, select the Job.Summary Status field with alias C and click Configure Field .
	15.	. In the Field Configuration dialog box that is displayed, enter Warning in the Field Label field, select Bar in the Type field and change the color to Yellow .
	16.	. In the Field Configuration dialog box, click OK to save the changes.
	17.	In the Dynamic Template Designer window, expand Job folder in the left panel and double-

18. In the Dynamic Template Designer window, select the Job.Summary Status field with alias D and click Configure Field.
19. In the Field Configuration dialog box that is displayed, enter Failed in the Field Label field, select Bar in the Type field and change the color to Red.
Each of the Summary Status fields in the template require two functions:
• DECODE , which detect and differentiate the status values, create counters for the status so that the number of backup jobs for the particular status can be tallied.
 SUM, which sums the number of backup jobs per status.
Configuring Functions for a Field
20. In the Dynamic Template Designer window, select the Job.Summary Status field with alias B and click Functions .
21. In the Function Builder window that is displayed, click Add. The Function dialog box is displayed.
22. In the Function dialog box, select DECODE returns Decimal in the drop-down list.
Only functions relevant to the selected field will be available. The majority of these functions are Oracle functions that enable you to manipulate values.
23. In the Functions dialog box, configure the Mandatory and Optional Parameters as below.
 For the first Decimal, click in the Value cell and enter a 0. (0 = Success.) For the second Decimal, click in the Value cell and enter a 1. Click Add in the Optional Parameters section and enter a value of 0.
This configuration tells the system that whenever a zero is encountered for a job summary status, make it a 1 so that it can be added to the count of successful jobs; then, any other status will be set to 0 so that it will not get counted in this status.
24. In the Function dialog box, click OK to save the DECODE function's configuration.
You are returned to the Function Builder window.
25. In the Function Builder window, click OK to return to the Dynamic Template Designer window.
26. In the Dynamic Template Designer window, select the Job.Summary Status field with alias C and click Functions .
27. In the Function Builder window that is displayed, click Add. The Function dialog box is displayed.
28. In the Function dialog box, select DECODE returns Decimal in the drop-down list.
29. In the Functions dialog box, configure the Mandatory and Optional Parameters as below.
 For the first Decimal, click in the Value cell and enter a 1. (1 = Warning.)

		 Click Add in the Optional Parameters section and enter a value of 0.
	30	. In the Function dialog box, click OK to save the DECODE function's configuration.
		You are returned to the Function Builder window.
	31	. In the Function Builder window, click OK to return to the Dynamic Template Designer window.
	32	. In the Dynamic Template Designer window, select the Job.Summary Status field with alias D and click Functions .
	33	. In the Function Builder window that is displayed, click Add . The Function dialog box is displayed.
	34	. In the Function dialog box, select DECODE returns Decimal in the drop-down list.
	35	. In the Functions dialog box, configure the Mandatory and Optional Parameters as below.
		 For the first Decimal, click in the Value cell and enter a 2. (2 = Failure.) For the second Decimal, click in the Value cell and enter a 1. Click Add in the Optional Parameters section and enter a value of 0.
	36	. In the Function dialog box, click OK to save the DECODE function's configuration.
		You are returned to the Function Builder window.
	37	. In the Function Builder window, click OK to return to the Dynamic Template Designer window.
D	efii	ning the Scope Selector
	38	. In the Dynamic Template Designer window, click Define Scope Selector .
	39	. In the Scope Selector Components dialog box that is displayed, select the Group By component and click OK to return to the Dynamic Template Designer window
		Whenever a bar chart has a caption that is a date, a Group By in the Scope selector is required.
Sa	vii	ng and Running the Report Template
	40	. In the Dynamic Template Designer window, click Save to save the template.
	41	. In the Reports view panel, double-click the APT106ADM_Jobs report. The APT106ADM_Jobs Scope Selector dialog box is displayed.
	42	. In the APT106ADM_Jobs Scope Selector dialog box, select Last 3 years in the Time period drop-down list.
	43	. Click Modify under Select report scope .
	44	. In the Report Scope Selector dialog box , click Hosts .
		. In the Internal name:, enter nbmaster1.example.com and set Type to NetBackup Master.

- 46. Click **Search**.
- 47. Following result is displayed:



- 48. Click **Add All** and then click **OK**. You are returned to **APT106ADM_Jobs Scope Selector**.
- 49. Click **Generate** to generate the report.
 - It might take a couple of minutes to generate the report.

The contents of the **APT106ADM_Jobs** report are displayed in a new tab as illustrated below:



50. Review the contents of the **APT106ADM_Jobs** report and close the **APT106ADM_Jobs** tab.

While a bar chart provides an at-a-glance, visual representation of backup job success, it's often useful to be able to drill down to details. You can achieve this by configuring a drilldown for each Summary Status field.

Go to Lab Exercises

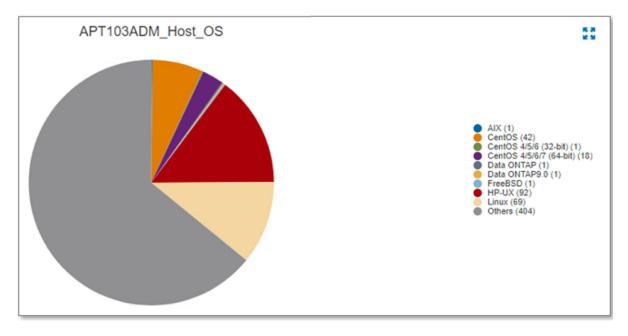
Exercise D: Configuring a Pie Chart Dynamic Template

In t	his	exercise, you create and configure a Pie Chart Dynamic Template.
	1.	In the Reports Navigation Panel , right-click the APT106ADM_L15 folder and in the resulting menu select New Dynamic Template .
	2.	In the Dynamic Template Designer dialog box that is displayed, select Host and click OK . The Dynamic Template Designer dialog box is displayed.
	3.	In the Dynamic Template Designer dialog box, enter APT106ADM_Host_OS in the Report Name field and verify that APT106ADM_L15 is selected in the Save in Folder drop-down list.
	4.	Select Pie Chart in the Display as drop-down list and All in the Product drop-down list.
	5.	Select Administration in the Report Category drop-down list and enter Host Operating System Details in the Report Short Description and in the Report Long Description fields.
	6.	In the Dynamic Template Designer window, expand Host > Host Info folder in the left panel and double-click the OS field to include it in the template.
	7.	In the Dynamic Template Designer window, select the Host Info.OS field and click Configure Field .
	8.	In the Field Configuration dialog box that is displayed, select Sector in the Type drop-down list and click OK to save the changes and return to the Dynamic Template Designer window.
	9.	In the Dynamic Template Designer window, expand Host > Host Info folder in the left panel and double-click the OS field to add a second OS field it in the template.
	10.	In the Dynamic Template Designer window, select the Host Info.OS field with alias ' B ' and click Configure Field .
	11.	In the Field Configuration dialog box that is displayed, select Caption in the Type drop-down list and click OK to save the changes and return to the Dynamic Template Designer window.
	12.	In the Dynamic Template Designer window, select the Host Info.OS field with alias ' A ' and click Functions .
	13.	In the Function Builder window that is displayed, click Add . The Function dialog box is displayed.
	14.	In the Function dialog box, select COUNT returns Decimal in the drop-down list and click OK to return to the Function Builder window.
	15.	In the Function Builder window, click OK to return to the Dynamic Template Designer window.
	16.	. In the Dynamic Template Designer window, click Save to save the template.
	17.	In the Reports view panel, double-click the APT106ADM_Host_OS report. The APT106ADM_Host_OS Scope Selector dialog box is displayed.
	18.	In the APT106ADM_Host_OS Scope Selector dialog box, click Generate without making any changes.

It might take a couple of minutes to generate the report.

The contents of the APT106ADM_Host_OS report are displayed in a new tab.

The Report Template defined in this exercise results in the following pie chart.



- 19. Review the contents of the **APT106ADM_Host_OS** report and close the **APT106ADM_Jobs** tab.
- 20. In the APTARE IT Analytics Portal, click System Administrator > Log Out to log out of the APTARE IT Analytics Portal.
- 21. Close the **Google Chrome** browser window and log out of the **console.example.com** system.

End of Lab