# SAP MaxDB DBA's Guide to Actifio GO

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## Preface

The information presented in this guide is intended for users who are familiar with basic Actifio processes and procedures as described in **Getting Started with Actifio GO** and who are qualified to administer SAP MaxDB databases.

### The ActifioNOW Customer Portal

During the configuration and initialization of your Actifio Appliance your Actifio representative provided you with a user name and password for the ActifioNOW customer portal.

From the customer portal you can obtain detailed reports about your Actifio Appliance as well as search the portal's knowledge base for answers to specific questions.

To log into the ActifioNOW customer portal:

- 1. Go to: https://now.actifio.com
- 2. When prompted, enter the user name and password provided by your Actifio representative.

## 1 SAP MaxDB DBA's Introduction to Actific Copy Data Management

An Actifio Appliance is a highly scalable copy data management platform that virtualizes application data to improve the resiliency, agility, and cloud mobility of your business. It works by virtualizing data in much the same way other technologies have virtualized servers and networks. This enables you to capture data from production systems, manage it in the most efficient way possible, and use virtual copies of the data however they are needed.

SAP MaxDB is the database management system developed and supported by SAP SE. SAP MaxDB is available on Microsoft Windows, Linux, and Unix, and for the most prominent hardware platforms.

Actifio VDP provides two ways to manage SAP MaxDB databases:

SAP MaxDB with Linux CBT and LVM Snapshot on page 1 SAP MaxDB with Traditional File-Based Backup on page 2



SAP MaxDB with Linux CBT and LVM Snapshot



### SAP MaxDB with Traditional File-Based Backup

### SAP MaxDB APIs

Actifio VDP uses these SAP MaxDB backup APIs:

- Linux CBT and LVM snapshot: MaxDB "UTIL\_EXECUTE SUSPEND LOGWRITER" and "UTIL\_EXECUTE RESUME LOGWRITER" API with Linux CBT and LVM snapshot
- File-based backups: MaxDB "dbmcli-d <dbsid>-u <dbm\_username>,<dbm\_password> backup\_start " file-based backups API

This provides the full backup of the database in backup format The prerequisite for data backup is we need to define the backup template first. Recovery API restore db will recover the database by physically overwriting the data area

• **MaxDB log backup**: MaxDB Autolog Backup should be enabled on the application side. Actifio will just copy the log backup files to staging disk with "cp" command. As Autolog Backup is enabled we use os command to purge the log backup.

## 2 Preparing an SAP MaxDB Database for Protection

This section details the steps involved in preparing an SAP MaxDB database for Actifio protection and management:

Before You Begin on page 3

Adding an SAP MaxDB Database Host and Discovering the Database on page 3

- a. Adding the Host from the AGM on page 4
- b. Discovering the SAP MaxDB Database Application from the App Manager on page 5
- c. Finding the Discovered SAP MaxDB Database in the App Manager on page 6

### Before You Begin

Before you begin, on the SAP MaxDB server:

- If there are multiple MaxDB instances running on a server, then the DB username/password must be common for all MaxDB instance running on that server.
- Autolog backup must be enabled. Use the following command to enable auto log backup:

dbmcli -d <DBSID> -u <DBM\_USERNAME>,<DBM\_PASSWD> autolog\_on <autolog\_backup\_template\_name>

• For enabling the autolog backup, you need an autolog backup template. To create a backup template.

dbmcli -d <DBSID> -u <DBM\_USERNAME>,<DBM\_PASSWD> backup\_template\_create <BACKUP\_TEMPLATE\_NAME>
to file <FULL\_PATH\_WITH\_FILE\_NAME> content log

• Log Overwrite area must be deactivated to enable autolog backup enable. To deactivate log overwrite:

dbmcli -d <DBSID> -u <DBM\_USERNAME>,<DBM\_PASSWD> db\_execute SET LOG AUTO OVERWRITE OFF.

 Install the Actific Connector on the SAP MaxDB server host (see A Network Administrator's Guide to Actific VDP.)

### Adding an SAP MaxDB Database Host and Discovering the Database

Before you can protect an SAP MaxDB database, you must add the host and discover the database:

- 1. Adding the Host from the AGM on page 4
- 2. Discovering the SAP MaxDB Database Application from the App Manager on page 5
- 3. Finding the Discovered SAP MaxDB Database in the App Manager on page 6

### Adding the Host from the AGM

To add the host:

1. From the AGM Manage > Hosts list, in the upper right corner, click +Add Host.

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Enter OS like Linux			Sybase_2		Sybase_2		sky9_caf_au	to	172.17.205.10		Generic		SUSE Linux Enterpr	ise	No				

- 2. On the Add Host page:
  - o Name: Provide the SAP MaxDB database server name.
  - o **IP Address**: Provide the SAP MaxDB database server IP and click the + sign on the right corner.
  - o Appliances: Select the check box for the Actifio Appliance.
  - o Host Type: Make sure this is Generic.
  - o Provide Application Discovery Credentials to discover SAP MaxDB databases.

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Host T	WDe	Generic						
	77-							
▼ Applica	ation Discovery C	redentials						

- 3. Click Add at bottom right to add the host. The Host will be added.
- 4. Right-click the host and select **Edit**.
- 5. On the Edit Host page: Set the staging disk format:
  - o For block-based backup with CBT, select **Block**.
  - o For file-based backup with Full+Incremental file system backup: select either **Block** or **NFS**.

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				Appliances*	type to	search		٩	IP		
						ky9_caf_auto			172.17.206.76		
				Host Type Staging Disk Format	Generic Block Block NFS		*				

6. Select **Save** at the bottom of Edit Host page.

### Discovering the SAP MaxDB Database Application from the App Manager

To discover the SAP MaxDB database:

1. From the App Manager, Applications list, select **+ Add Application** in the upper right corner.

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😢 clea	ar all filters		Applica	ations												+	ADD APPLIC	ATION
APPLICATION	NAME	•																
HOST NAME	AME		<ul> <li>hide filters</li> </ul>	O Application T	ype: SAP IQ													
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2	6	- 1 4		SQL Serve	er									All Apps			-	

3. Select the host and click **Next** in the bottom right corner. Discovery may take a while. Then follow the Onboarding Wizard to completion.

### Finding the Discovered SAP MaxDB Database in the App Manager

To find the newly-discovered database, go to the App Manager, Applications list. All applications known to the AGM of all types are listed. Use the Type application filter on left pane to show only SAP MaxDB databases.

actifio	Dashbo	oard	Back	kup & Recover 🗸	Test Data M	lanagement +	App Manager	SLA Architect	- Moni	tor v Manage v	Report					Y 1 adm	iln 🌒	0
clear all filters		Ap	plic	ations												+ ADD	APPLICAT	NON
APPLICATION NAME																		
HOST NAME		+ hide	filters	O Type: MaxDB	O Type: My	SQL Instance												
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TYPE			0	SLD		act_DB_Log		LocalProfile		MAXDB_131		maxdb-vm1		skydev1		MaxDB		
select: ALL   NONE CIFS			0	mysqld_3311						maxdb-vm2		maxdb-vm2		skydev1		MySQL Inst	ance	

## **3** Configuring the Backup Method

After the database is prepared and discovered as explained in Chapter 2, Preparing an SAP MaxDB Database for Protection, you can configure an Actifio backup method for the database.

- Using block-based volume level LVM snapshots with CBT on Linux. This option enables you to create application-aware virtual databases from the snapshot images.
- Using file-based traditional backup and recovery. This "file dump" method does not support the creation of virtual databases, and it requires Setting the Schedule for Dumps on page 12.

The procedures for developing SLAs are detailed in the AGM online help. This chapter provides additional information of value to the MaxDB DBA.

Whichever method you select involves these steps:

SAP MaxDB Application Details & Settings on page 8 Ensuring that the Backup Capture Method is Set Correctly on page 9 Ensuring that the Staging Disk Format on the Host is Set Correctly on page 10 Setting the Schedule for Dumps on page 12

### Table 1: SAP MaxDB Application Details & Settings

Setting	Block-Based LVM Snapshot with CBT on Linux	File-Based Backup and Recovery, Block <i>or</i> NFS						
Use Staging Disk Granularity as Minimum Staging Disk Size	For applications that are under the grow this new option is useful to staging disk is thin provisioned, the larger than required for immedic The values are 0 for No and the S	ne size of granularity setting that tend to periodically avoid frequent costly FULL backups. Because the here is no initial cost to use a staging disk that is ate use. taging Disk Granularity setting for Yes.						
Staging Disk Granularity	Maximum size of each staging di application. The default value is 1	isk when multiple staging disks are used for an 000GB.						
Last Staging Disk Minimum Size	Minimum size of the last staging disks. This value is also used for a The default value is 250GB.	disk created for an application with multiple staging Idditional disks allocated to accommodate growth.						
Connector Options	Use this only under the direction	of Actifio Support.						
Percentage of Reserve Space in Volume Group	Needed for LVM snapshot temporary space. Recommended value is 20%	Not applicable						
Backup Capture Method	Use volume level backup	Use full+incremental filesystem backup						
Force Full Filesystem Backup	Not applicable	Use for an on demand full backup						
Database Filesystem Staging Disk Size in GB	Not applicable	Use the default calculation: (database size * 1.5)+ 10%. The disks will grow dynamically.						
Log Backup Staging Disk Size in GB	By default Actifio calculates this as daily log generation * retention of log backup SLA plus 20% buffer. Default is recommended. Providing a value will override the default calculation and the log disk will not grow dynamically. This will become a fixed size							
Retention of Production DB Logs in Days	This value is used to purge the log backup from basepath_logbackup destination. Based on this setting the last data backup id will be selected (CURRENT_TIMESTAMP, - the # days set) and the log will be purged older than the data backup id. Default value is 0 days. With default value all logs prior to last data backup will be purged.							
Script Timeout	The timeout value is applied to in connector. The default value is re	aternal backup and recovery scripts called by ecommended.						

### Ensuring that the Backup Capture Method is Set Correctly

Backup capture settings depend upon the backup capture method that you need. Be certain that you have set the right backup method for your needs:

1. In the App Manager Applications list, right-click the database and select Manage SLA.

actifio 🔤	shboar	d I	Backup	a & Recover 🗸 🔰 1	est Data	Management 🗸	App Mar	nager 🚽 🛛 SLA	Architect 🗸	Manage 🗸	Report	Monitor 🗸			▼ 👤 admin	<b>≜ (?</b>
⊗ clear all filters	Â	Ap	plica	ations											+ ADD APP	LICATION
APPLICATION NAME	•															
HOST NAME	•	< hide	filters	O Application Typ	e: Db2 Da	tabase 🔘 Appli	cation Type:	Db2 Instance								
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PROFILE NAME	•															
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SLA STATUS	•		8	gpfsi1		172.27.58.13		ndmlpar3				weekly10c	Db2 Instance	2	DB2Instance	
Managed Unmanaged		Ø	0	db2inat		172.16.201.25		OracleDBNike				weekly10c	Db2 Instance	:	DB2Instance	
ТҮРЕ	-		۲	syster Mana	ge SLA			stcent76db22				weekly10c	Db2 Databas	ie	DB2	
Select: ALL   NONE			0	db2insl Acces	s			OracleDBNike				weekly10c	Db2 Instance		DB2Instance	
2. At the top of the Manage SLA page, select the <b>Details &amp; Settings</b> link:																

actifio	Dashboard	Backup & Recover 🗸	Test Data Manage	ment 🗸	App Manager +	SLA Architect 🗸	Manage 🗸	Report	Monitor 🗸	T	👤 admin	٠	0
ANAGE SLA	- 🛛 🛛	db2inst1   OracleDBNike	e   OracleDBNike	Details & S	Settings								
TEMPLATE Choose	ie a template		PROFILE										

This opens the details and settings for this database. Check the Backup Capture Method:

- o LVM Snapshot with Change Block Tracking: Use volume level backup.
- o Traditional Backup and Recovery API "file-based" backups: Use full+incremental backup.

**Note:** System databases on a root partition can be backed up as LVM Snapshots and later mounted as virtual databases, but they cannot be used in a traditional Restore operation as the root partition cannot be unmounted. This will need manual restore and recovery from a simple mount back to the same host.

Application Details & Settin	ngs	Settings Help	
Settings			
CONNECTOR OPTIONS			
PERCENTAGE OF RESERVE SPACE IN VOLUME GROUP	20		
BACKUP CAPTURE METHOD	<ul> <li>Use volume level backup</li> <li>Use full+incremental backup</li> </ul>		
FORCE FULL FILESYSTEM BACKUP	🔘 Yes 💿 No	_	
DATABASE FILESYSTEM STAGING DISK SIZE IN GB			
LOG BACKUP STAGING DISK SIZE IN			
RETENTION OF PRODUCTION DB			
SCRIPT TIMEOUT	172800		
		Cancel Save C	Changes

3. Click **Save Changes** at the bottom of the page if you had to change anything.

### Ensuring that the Staging Disk Format on the Host is Set Correctly

Choose between:

- Staging Disk Format: File-Based Traditional Backup and Recovery in NFS/Block on page 10
- Staging Disk Format: LVM Snapshot with Change Block Tracking on Linux on page 11

### Staging Disk Format: File-Based Traditional Backup and Recovery in NFS/Block

To set the staging disk format for storage snapshots:

1. From the Manage, Hosts list, right-click the host and select **Edit**.

actifio	Dashboar	d	Backup & Recover 🗸	Test Data Manageme	nt 🖌 🛛 App Man	ager 🗸	SLA Architect 🗸	ſ	Manage 🗸	Report	Monitor 🗸				Y.	👤 admii	n 🌲	9
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Enter OS like Linux			hpqavm18	h <mark>ia Edit</mark>		)	172.16.159.72		Generic		B.11.31	No		HPUX		U		
OS TYPE	-			Edit Organi	zations													
Enter OS like Linux				Delete														

2. Set Staging Disk Format to either **NFS** or to **Block**.

OCTIFIO Dash	board Backup & Recover 🗸	Test Data Management 🖌 🛛 App M	lanager 🗸 🦷 SLA Architect 🗸	Manage - Report	Monitor 🗸	🍸 👤 admin 🌲 😲
	hpvm5.sqa.actifio.com	Edit H	ost			
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			ke ⊠ st	skinnysky3 sky2	172.16.125. 172.16.125.	3 33
		Host Ty	pe Generic	DXLTS2	172.16.17.1	•
		Staging	Disk Format Block Block NFS	•	)	

3. Then click **Save** at the bottom of the page.

**Note:** File-based backup also requires the DB dump schedule be configured. See Setting the Schedule for Dumps on page 12.

### Staging Disk Format: LVM Snapshot with Change Block Tracking on Linux

To set the staging disk format for storage snapshots:

1. From the Manage, Hosts list, right-click the host and select **Edit**.

actifio	Dashboar	8	Backup & Recover 🗸	Test Data Manageme	ent 🖌 🛛 App Mar	nager <del>v</del>	<ul> <li>SLA Architect -</li> </ul>	ſ	Manage 🗸	Report	Monitor 🗸				Y.	👤 admin	<b>▲ 0</b>
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OS TYPE	-			Edit Organi	izations												
Enter OS like Linux				Delete													

2. Set Staging Disk Format to **Block**.

actifio	Dashboard	Backup & Recover 🗸	Test Data Management 🗸	App Manager 🗸	SLA Architect 🗸	Manage 🗸	Report	Monitor 🗸		🝸 👤 admin 🌲	0
	hpvm	15.sqa.actifio.com		Edit Host							
I FRIENDLY PAT UNIQUE NAM OS RELEAS OS VERSIO OS TYP	<ul> <li>172.16.159.</li> <li>hpvm5.sqa.</li> <li>hpvm5.sqa.</li> <li>B.11.31</li> <li>U</li> <li>E HPUX</li> </ul>	170 actifio.com actifio.com_4022741_null		Name * Friendly Name IP Address * Description	hpvm5.s hpvm5.s 172.16.	aa actifio.com aa.actifio.com 159.170	0				
				Appliances*	type to	search		Q			
					- 4	PPLIANCE			IP		
						l2sky81			172.16.6.79	Î	
						tskinnysky3			172.16.125.63		
						DXLTS2			172.16.17.140		
					Constic					*	
				Host Type Staging Disk Forma Enable Auto Discover	Block Block NFS		•	)			

3. Then click **Save** at the bottom of the page.

### Setting the Schedule for Dumps

The database dump schedule is set by the Actifio CLI policy parameter dumpschedule. The default value of dumpschedule="FIIIIII":

- The string must be seven characters either an 'F' or an 'l'
- Each position within the string represents a weekday, starting with Sunday.
- F represents a full db dump
- I represents an incremental db dump

For example, "FIIIIII" results in:

- Sunday: Full backup
- Monday through Saturday: Incremental backups
- The following Sunday: Full backup again

To check the dump schedule, run this CLI command from the Actifio Appliance: udsinfo lspolicyoption -filtervalue appid=<appid> | grep dumpschedule

If this does not return any value, then the dumpschedule is set to default.

To modify the dump schedule run this CLI command from the Actifio Appliance: udstask mkpolicyoption -appid <appid> -name "dumpschedule" -value "FIIIII"

Replace <appid> with the application id of the MaxDB application. Replace "FIIIIII" as needed.

### Example

To run full backup on Saturday and Tuesday, set dumpschedule="IIFIIIF" For more information, refer to the *Actifio CLI Reference*.

## **4** Protecting an SAP MaxDB Database and its Logs

Protecting an SAP MaxDB database includes both:

Protecting an SAP MaxDB Database on page 13 Protecting SAP MaxDB Database Logs on page 14

### Protecting an SAP MaxDB Database

To protect the database:

1. From the App Manager, Applications list, right-click the database and select Manage SLA.

actifio	Dashboa	ard	Backu	p & Reco	over 🗸 🛛 Test Data Ma	nagement 🗸	App Manager 🗸	SLA Architec	t • Manage • F	Report Monitor •		T	👤 admin	<b>≜ 8</b>
clear all filters	Î	Ap	plic	atior	าร								+ ADD AP	PLICATION
APPLICATION NAME	•													
HOST NAME	•	< hic	le filters	O SL	A: Unmanaged O Appl	cation Type: MaxD	в							
TEMPLATE NAME	•	max	db			0						SHOW SELECTED (1)	111 25 •	0 1
PROFILE NAME	- • I					-								1 1 1
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<ul> <li>Managed</li> <li>Unmanaged</li> </ul>			٥	МАХ	Manage SLA				j-max_auto1	j-max_auto1	caf-source	MaxDB	yes	2989559
ТУРЕ	•		8	ACTE	Access				j-max_auto1	j-max_auto1	caf-source	MaxDB	yes	2989561
Select: ALL   NONE					Edit Organization	Membership								
Systems					Import OnVault In	nages								
Hyper-V VM System State					Manage Expiration									
					Delete Application	n								

2. On the Manage SLA page, select a template and a resource profile, then click Apply SLA.

OCTIFIO Dashboard Backup & Recover -	Test Data Management 🖌 🛛 App Manager 🖌 SLA Ar	rchitect 🗸 Manage 🖌 Report Monitor 🗸	🝸 👤 admin 🌲 😯
Cand   iq3_test   iq3_te	st Details & Settings		
TEMPLATE IQ_logpurge	PROFILE onval_autoprofile_72401	Cancel Changes Apply	
sky9_caf_a		Policies  Snapshot Direct to Dedup Direct to OnVault OnVault OnVault Polication OnVault OnVault Polication OnVault On	

- 3. On the Apply SLA page, fill in the required field based on type of backup as detailed in Ensuring that the Backup Capture Method is Set Correctly on page 9.
- 4. Click **Save Changes**. The database appears in the App Manager Applications list with a green shield icon, and the database will be protected when the job runs according to the schedule in the template.

### Protecting SAP MaxDB Database Logs

To enable and set up the SAP MaxDB database log backup:

1. From the SLA Architect, Templates list, right-click the template for SAP MaxDB database protection and click **Edit**.

actifio	Dashboard	d Backup & Recov	er 🗸 🛛 Test Data Manage	ement 🗸	App Manager 🗸	SLA Architect +	Manage •	Report	Monitor -			Y	👤 adr	nin 4	. 0	
<ul> <li>clear all filter:</li> </ul>	s	Templates											+ CRE	ATE TE	MPLAT	ΓE
TEMPLATE NAME	•															
iq	0	hide filters     Nam	ie: iq										Luci			
DESCRIPTION	-									SHC	W SELECTED (1)	8	ш	25 ¥	0	*
Search by description		⊟ NAME		\$	DESCRIPTION		٥	OVERRIDE			MANAGED BY A	GM				
OVERRIDE	•															
		🗆 iqdblog Edi	it					Yes			Yes					
		iq_dum	one					Yes			Yes					
		IQ_log	it Organizations					Yes			Yes					

2. Click the arrow beside the Snapshot policy to open up the details, then click **Edit Policy**.

actifio	Dashboard	Backup & Recover 🗸	Test Data Management 🗸	App Manager	SLA Architect 🗸	Minage 🗸	Report	Monitor 🗸	🝸 👤 admin 🌲 🌘	2
				C						
TEMPLATE	IQ_LVM		ALLOW OVERRIDES ON	POLICY SETTINGS?	● YES ◎ NO			Save Template		- 1
DESCRIPTION	Descripti	on								- 1
										- 1
		_		_	_			$\bigcirc$ Policies		- 1
		, E	••••• <b>%</b> •					Snapshot 1 mm		- 1
		PRODUC	TION		HIRROR			SCHEDULING Windowed FREQUENCY Everyday		- 1
			O .	_				TIME WINDOW 19:00 to 07:00 REPEAT VALUE Once per window		- 1
		6	-9 10	6				EXPIRE AFTER 2 days POLICY ID 1157397		- 1
		SNAPS	ONVAUL	<sup>1</sup>				Edit Policy		- 1
								Direct to Dedup 0		

3. Near the bottom, select Advanced Policy Settings.

OCTIFIO Dashboard Backup & Re	cover 👻 🛛 Test Data Management 👻	App Manager • SLA Architect •	Manage 🗸 Report	Monitor 🗸	🝸 👤 admin 🌲	0
	Production To Sna	pshot				
	Create/Edit Policy					
	POLICY NAME* snap					
○ Policies	SCHEDULING Windowed					
Snapshot 1	ON THESE DAYS Everyday					
SCHEDULING Windowed	EXCEPT Never ×					
FREQUENCY Everyday	WITHIN THIS WINDOW 19	0:00 то 07:00				
TIME WINDOW 19:00 to 07:00 REPEAT VALUE Once per window	RUN ONCE PER WINDOW	C				
POLICY ID 1157397		24 🕂 Hour(s) 🔻				
Edit Policy	RETAIN FOR O 2	Day(s)				
Direct to Dedup 0	SLA COMPLIANCE Default					
Direct to OnVault 0						
Dedup 0	Medium		N			
Dedup DR 0		Advanced Policy Settings				
Mirror 0						

- 4. Set the log policy options (you will have to scroll to see them all):
  - o Enable Truncate/Purge log after backup.
  - o Set Enable Database Log Backup to Yes.
  - o For **RPO (Minutes)**, enter the desired frequency of log backup.
  - o Set Log Backup Retention Period (in Days) for point in time recovery.
  - o Set **Replicate Logs (Uses StreamSnap Technology)** to **Yes** if you want to enable StreamSnap replication of log backup to a DR site.
  - o Set **Send Logs to OnVault Pool** to **Yes** if you want the database logs to be sent to an OnVault Pool, enabling for point-in-time recoveries from OnVault on another site.

over 🗸	Test Data Management 🗸 🔋 App M	1anager 🗸	SLA Architect 🗸	Manage 🗸	Report	Monitor 🗸	
ſ	Policy Settings			Settings Hell	lp	3	
6		Unmap	staging disks after ea	ch job			^
	TRUNCATE/PURGE LOG AFTER BACKUP	<ul><li>Do not</li><li>Trunca</li></ul>	truncate/purge log af te/Purge log after bac	ter backup kup		Reset to Default	
	SKIP OFFLINE APPLICATIONS	Fail bai Skip of	kup when offline appl fline applications durir	ications are four 1g backup	id		1
L	MAP STAGING DISK TO ALL ESX HOSTS IN A CLUSTER	<ul> <li>Map st</li> <li>Map st</li> <li>Map st</li> </ul>	aging disk to ESX host aging disk to all ESX ho aging disk to 2 ESX ho	for VM only osts in the cluster sts in the cluster			l
L	NODE BACKUP PREFERENCE FOR SQL AVAILABILITY GROUP	<ul> <li>Use Av</li> <li>Primar</li> <li>Prefer</li> </ul>	ailability Group Backup y Node 🔘 Secondary Secondary Node 🔘 A	o Preferences Node Only Iny Node			
	ALLOW MIGRATING FROM OUT-OF- BAND TO IN-BAND DATA MOVEMENT	🔘 Yes 🔘	) No				
	FORCE OUT-OF-BAND BACKUP	🔘 Yes 🔘	) No				
	BACKUP SQL SERVER USER LOGINS	🔘 Yes 🌘	) No				
	ENABLE DATABASE LOG BACKUP	🖲 Yes 🏾	) No			Reset to Default	
					Cancel		
		Advan	ced Policy Settings				

5. Click Save Changes.

## 5 Restoring, Accessing, or Recovering an SAP MaxDB Database

This section describes:

Mount and Refresh from Block-Based Volume Snapshot to a Target MaxDB Server as a Virtual Database on page 17

Refreshing a Virtual Database Using an Actific Workflow on page 19 Restoring and Recovering a MaxDB Database to the Source on page 21

- o Recovering from a Block-Based Volume Snapshot to the Source on page 21
- o Recovering from a File-Based Full+Incremental Backup to the Source on page 23

Restoring a MaxDB Database to a New Target on page 24

- o Restoring from a Block-Based Volume Snapshot to a New Target on page 24
- o Restoring from a File-Based Full+Incremental Backup to a New Target on page 27

### Mount and Refresh from Block-Based Volume Snapshot to a Target MaxDB Server as a Virtual Database

To mount the database image as a virtual database (an application aware mount) to a new target:

1. From the App Manager Applications list, right-click the protected database and select **Access**. You can use the Managed SLA Status filter to show only protected databases.

actifio	Dashboa	rd	Backup	p & Recove	er 👻 🛛 Test Data Manaç	ement 🗸 🔰	App Manager 🗸	SLA Archited	t≁ Manage≁ R	Report Monitor 🗸		Ŧ	👤 admin	<b>≜ 9</b>
🙁 clear all filters	Î	Ap	plica	ations									+ ADD APP	LICATION
APPLICATION NAME	•													
HOST NAME	•	< hide	e filters	O SLA:	Managed O Application	Type: MaxDB								
TEMPLATE NAME	•	max	db		6	3							III 25 ¥	n 4
PROFILE NAME	•													C.J 829
FRIENDLY PATH	•	Ξ		APPLIC	ATION 0	ID	TEMPLATE 🗘	PR 0	FRIENDLY PATH 🗘	HOST NAME 🗘	APPLI 🗘	туре 🗘	PROTE	APPLIA
SLA STATUS	-	Ø		ACTDB	<u></u>	1587994	MYSQLLogS	LocalPr	maxdb-1	maxdb-1	sky9_caf	MaxDB	yes	16847
Managed Unmanaged			۲	DEMO	Manage SLA		Default	LocalPr	maxdb-2	maxdb-2	sky9_caf	MaxDB	yes	16856
ТҮРЕ	•		۲	XDE	Access		Fault	LocalPr	maxdb-1	maxdb-1	sky9_caf	MaxDB	yes	228032
Select: ALL   NONE			•	MAXD	Edit Organization N	1embership	Default	LocalPr	maxdb-2	maxdb-2	sky9_caf	MaxDB	yes	16857
Systems				MAXG	Import OnVault Ima	iges	Default	LocalPr	maxdb-1	maxdb-1	sky9_caf	MaxDB	yes	244148
Hyper-V VM		-		_	Manage Expiration:									
U System State				_	Manage Workflows									
				_	Add To Logical Grou	qu								
Db2 Database				_	Mark Sensitive									
Db2 Instance														
MariaDB Database														
MariaDB Instance														
MaxDB														
MySQL Database			E of I	- applicat	land				e de la officia					
https://172.17.206.75/#sla		1 1	· 5 01 !	sapplicat	ions			104 4	or i page	PP PN			Manage SLA	

2. Select a snapshot image and choose **Mount**.

actifio	Dashboard	Backup & Recover 🗸	Test Data Management 🗸	App Manager 🗸	SLA Architect 🗸	Manage 🗸	Report	Monitor 🗸	🝸 👤 admin 🌲 🕄
ACCESS	- 🙂	MYDB   j-max_auto1	j-max_auto1 Details & Setti	ngs					TIMELINE TABLE
Jump to: 💼 2020-	2020-03-15								2020-03-17 13:22:55 Snapshot Image
	2020-03-16								NAME Image_2998306 STATUS Available TRANSPORT SAN Based, Out-Of-Band Storrage
2020-03-		<u>)</u>							IMAGE SIZE         27.50GB           EXPIRES ON         2020-03:17.14.25:33           APPLIANCE         Cal-Source
2020-03-18									RECOVERY 03-17 14:09 To 03-17 14:24 RANGE
12.10									CATALOG STATE NocApplicable POOL NAME Act_per_pool000 Mount - Live Clone
↑ ↓ Sna	pshot	Dedup	Remote Dedup	emote Snapshot	OnVault	-			Clone Restore

- 3. On the Mount page, from Target, choose the desired target MaxDB server from the dropdown.
- 4. Under Application Options, enable **Create New Virtual Application**.

actifio	Dashboard	Backup & Recover	er 👻 🛛 Test Data Management 🗸	App Manager 🗸	SLA Architect 🗸	Manage 🖌 🛛 Re	port Monitor <del>-</del>	🝸 👤 admin 🌲 😯
ACCESS		MYDB   j-max_auto	o1   j-max_auto1   Details & Setti	ngs				TIMELINE TABLE
2020 Snap	-03-17 13:22:55 shot Image		Mount					
NAME STATUS TRANSPORT	Image_2998306 Available SAN Based, Out-O Storage	f-Band	j-max_auto1	LABEL				
IMAGE SIZE	27.50GB		<ul> <li>Application Optic</li> </ul>	ns				
EXPIRES ON	2020-03-17 14:25:	33						
APPLIANCE	Caf-Source		CREATE NEW VIRTUAL	APPLICATION				
RECOVERY RANGE	03-17 14:09 To 03-	17 14:24	ROLL FORWARD TIME		2020-03-17	0 14:24:35	• HOST TIME USER TIM	ИЕ
CATALOG STATE	Not-Applicable							
POOL NAME	Act_per_pool000		TARGET DATABASE NA	ME *	MyVirtual	B		
Mo	ount 🚽		MAXDB TARGET OS US	ER NAME *	max			
			MAXDB TARGET DB U	ER NAME *	max			
			MAXDB TARGET DB PA	SSWORD *				
			MANAGE NEW APPLIC	ATION				
			TEMPLATE *		zSample1	•		

- 5. For a database protected with log roll-forward, choose a target point in time.
- 6. Fill in:

TARGET DATABASE NAME: The name of the target MaxDB database MAXDB TARGET OS USER NAME: OS user for target MaxDB instance MAXDB TARGET DB USER NAME: dbm user for target MaxDB MAXDB TARGET DB PASSWORD: dbm user password for target MaxDB

- 7. To protect the new virtual database, enable **Manage New Application**. Then choose a template and a resource profile to protect the database.
- 8. In Advanced Options, you can enter the **Home Directory** of the MaxDB database, and for **Overwrite Existing Database**, indicate when to overwrite a database on the target server that has the same name as the new database(s) being mounted: Yes, No, or Only if it's Stale.
- 9. Under Mapping Options:
  - o Storage Pool: The image will be mounted in the Snapshot Pool unless you select a different one.
  - o Mount Location: specify a target mount point to mount the new virtual database to.
- 10. Click Submit.

### Refreshing a Virtual Database Using an Actifio Workflow

You can use a workflow to automate the process of mounting and refreshing a Db2 instance's databases from a snapshot.

- 1. From the AGM App Manager, right-click the Db2 Instance and select **Manage Workflows**.
- 2. In the upper right corner of the Workflows: Application Dashboard page, click + Add Workflow.

a	ctifio	Dashboard	Backup & Recover +	Test Data Management	App Manager +	SLA Architect +	Manage +	Report	Monitor +			Y	1 admir		
	NACE WORKFLOWS +	💛 ASE1   s	ybaseASE-vm1   Sybase	ASE-vm1 Details & Setting	15										
Wo	rkflows: Appli	cation D	ashboard								+ Specified time is in the time	zone of the a	+ ADO	WORKFLO	
												1	<b>3 11 2</b>	5¥ 🖸	٨
	WORKFLOW NAME		APPLIANCE	т	YPE	5	CHEDULE TYP	а	P	REVIOUS RUN STATUS	CURRENT STATUS		N	EXT RUN T	ME

- 3. Specify:
  - o Workflow Name: Enter a name for this workflow.
  - o Workflow Type: Select Direct Mount.
  - o Schedule Type: Choose Scheduled or On Demand based on your requirement. For a scheduled workflow, specify the frequency as well.

Add Workflow : Configure

WORKFLOW NAME *	WORKFLOW TYPE	APPLIANCE localhost.localdom	
Имасе	0		ee ee mount
SCHEDULE TYPE • SCHEDULED ON DEMAND	FREQUENCY * Monthly • on 1	AT 00:01	

- o Source Image: Select based on requirements.
- o Mount Label: (Optional) Specify a mount label for the mounted image.
- o Hosts: Select the target host or hosts where the virtual Db2 instance database copy will be created.

OUN	IT LABEL		
OSTS ASE	*	0	
	HOST	•	IP
	SybaseASE-vm1		192.168.18.203
	SybaseASE-vm2		192.168.18.205

- o Mount Location: Specify a mount point to mount the data volumes and log volumes of the target.
- o Pre-Script (optional): Specify a prescript name to be run before refresh. Pre scripts are detailed in **Network Administrator's Guide to Actifio VDP**.
- o Post-Script (optional): Specify a postscript name to be run at the end of refresh. Post scripts are detailed in **Network Administrator's Guide to Actifio VDP**.
- o Create New Virtual Application: Enable Create New Virtual Application.

MOUNT LOCATION	/wfMnt	
Script Options		
PRE-SCRIPT		TIME OUT (SECONDS)

- o Select Items: Select the databases to refresh on target and specify the target dbname from 'Database Options' for each database.
- o Target Instance Name: If the target instance is visible, select it. Otherwise specify the target instance name.

	IE NEW VIRTUAL APPLICATION				
INCLU	IDED DATABASES				Database Options * are m
type	e to search	۹			SHOW SELECT
Ξ	SELECT ITEMS				
Ø	DB1				Database Op
	DB3				
	DB2				
ROLL	FORWARD TIME	2020-06-16	Q 23:31:47	HOST TIME	USER TIME
TARGE	ET INSTANCE NAME *	inst2	•		
		inst2			
MANA	AGE NEW APPLICATION				
	LATE *	DB_log_AGM		····	
TEMP				F \$8000	CTION

- o Manage New Application: Enable Manage New Application.
- o Template and Profile: Choose a template and a profile to protect the database.
- 4. Click **Add**. This will create an on-demand or scheduled workflow to create or refresh the Db2 Instance's database virtual copy.

### Restoring and Recovering a MaxDB Database to the Source

Depending on how you protected the database, you need the procedure for:

Recovering from a Block-Based Volume Snapshot to the Source on page 21 Recovering from a File-Based Full+Incremental Backup to the Source on page 23

### Recovering from a Block-Based Volume Snapshot to the Source

Use this procedure to restore and recover the source MaxDB database from a volume-based LVM snapshot image. This procedure uses physical recovery of the source data area.

Note: System databases on a root partition backed up as LVM Snapshots can be mounted as virtual databases, but they cannot be used in a traditional Restore operation as the root partition cannot be unmounted. This will need manual restore and recovery from a simple mount back to the same host.

To recover a block-based image back to the source:

1. From the App Manager Applications list, right-click the protected database and select Access. You can use the Managed SLA Status filter to show only protected databases.

actifio	Dashboa	rd	Backup	p & Recov	er 🗸 🛛 Test Data Man	agement 🗸	App Manager 🗸	SLA Architec	t • Manage • F	Report Monitor 🗸		Ţ	👤 admin	<b>A</b> 9
⊗ clear all filters	Î	Ap	plic	ations	5								+ ADD APP	PLICATION
APPLICATION NAME	•													
HOST NAME	•	< hide	e filters	O SLA:	Managed O Applicati	on Type: MaxDB								
TEMPLATE NAME	•	max	db			0						SHOW SELECTED (2)	III 25 ¥	0 1
PROFILE NAME	•					-								1 1 1
FRIENDLY PATH	•	Ξ		APPLIC	CATION 0	ID	TEMPLATE O	PR 🗘	FRIENDLY PATH O	HOST NAME	APPLI 🗘	туре 🗘	PROTE	APPLIA
SLA STATUS	-	ø	0	ACTDB		1587994	MYSQLLogS		maxdb-1	maxdb-1	sky9_caf	MaxDB		16847
Managed			0	DEMO	Manage SLA		Default	LocalPr	maxdb-2	maxdb-2	sky9_caf	MaxDB	yes	16856
ТҮРЕ	•		۲	XDE	Access		Fault	LocalPr	maxdb-1	maxdb-1	sky9_caf	MaxDB	yes	228032
Select: ALL   NONE			۲	MAXD	Edit Organization	Membership	Default	LocalPr	maxdb-2	maxdb-2	sky9_caf	MaxDB	yes	16857
Systems Hyper-V VM System State			0	MAXG	Import OnVault Ir Manage Expiratio	nages ns	Default	LocalPr	maxdb-1	maxdb-1	sky9_caf	MaxDB	yes	244148
□ VM				_	Manage Workflov	/5								
					Add To Logical Gr	oup								
Db2 Database					Mark Sensitive									
MariaDB Database MariaDB Instance														
MaxDB														
MySQL Database MySQL Instance		1	- 5 of	5 applicat	ions			164 - 4	I of 1 page	e >> >>			Manage SLA	

2. Select a snapshot image and choose **Restore**.



3. On the Restore page choose a point in time for the protected database to recover to.

actifio	Dashboard Ba	ckup & Recover 🗸 🛛 Test	Data Management 🗸	App Manager 🗸	SLA Architect 🗸	Monitor +	Manage ~	Report	
C+ ACCESS	MAXDEV	maxdb-vm2 maxdb-vm2	Details & Settings						
() 201 Sna	9-10-29 20:11:25 pshot image	Restore							
NAME	Image_0239146	ROLL FOR	WARD TIME	<b>a</b> (2	019-10-30	1051:55	<ul> <li>HOST TIME</li> </ul>	⊖ USER TIME	
TRANSPORT	SAN Based, Out-Of-Band Storage	Select v	olumes to restore	Deselect All Volum	es   Add All Volumes				
IMAGE SIZE EXPIRES ON	2.00GB 2019-10-31 20:37:50	23037							
APPLIANCE RECOVERY	Skydev1 10-29 15:02 To 10-30 10:51		APACITY 2 GB IIQUE ID dasvol:23037 METYPE Non-Boot	8_D8Dump					
CATALOG STATE	None		TARGET vdisk:fc-SDBI	4FA86100					
R	estore •						Cancel	Submit	

4. Select one or more volumes to restore and click **Submit**.

### Recovering from a File-Based Full+Incremental Backup to the Source

Use this procedure to restore and recover the source MaxDB database from a traditional file-based full+incremental backup image. This procedure overwrites the source data. To recover a volume-base backup with CBT, see Recovering from a Block-Based Volume Snapshot to the Source on page 21.

Using this method, we can restore databases on a MaxDB Instance.

To recover back to the source, overwriting the source data:

1. From the App Manager Applications list, right-click the protected database and select **Access**. You can use the Managed SLA Status filter to show only protected databases.

actifio	Dashboa	rd	Backup	p & Recov	er• T	est Data Mar	agement 🗸	App Manager 🗸	SLA Archited	t 🗸 Manage 🗸 🛛	Report Monitor -		T	👤 admin	<b>≜ (?</b>
<ul> <li>clear all filters</li> </ul>	Î	Ap	plic	ation	S									+ ADD APP	LICATION
APPLICATION NAME	•														
HOST NAME	•	< hid	e filters	O SLA:	Managed	O Applicat	on Type: MaxDE	3							
TEMPLATE NAME	•	max	db				0						SHOW SELECTED (2)	III 25 v	0 *
PROFILE NAME	•	-					-								1 1 1
FRIENDLY PATH	•	Ξ		APPLI	CATION	0	ID	TEMPLATE 🗘	PR 0	FRIENDLY PATH 🗘	HOST NAME 🗘	APPLI 🗘	түре 🗘	PROTE	APPLIA
SLA STATUS	-	₽	0	ACTDB	~		1587994	MYSQLLogS	LocalPr	maxdb-1	maxdb-1	sky9_caf	MaxDB	yes	16847
Managed			۲	DEMO	Manag	e SLA		Default	LocalPr	maxdb-2	maxdb-2	sky9_caf	MaxDB	yes	16856
ТҮРЕ	•		۲	XDE	Access			ofault	LocalPr	maxdb-1	maxdb-1	sky9_caf	MaxDB	yes	228032
Select: ALL   NONE			۲	MAXD	Edit Or	ganizatior	Membershi	Default	LocalPr	maxdb-2	maxdb-2	sky9_caf	MaxDB	yes	16857
Systems			0	MAXG	import Manag	e Expiratio	nages ns	Default	LocalPr	maxdb-1	maxdb-1	sky9_caf	MaxDB	yes	244148
VM					Manag	e Workflo	vs								

#### 2. Select a snapshot image and choose Restore.



3. For a database with multiple volumes, select some or all volumes to restore.



4. Click **Submit**. This will start the source database physical recovery using MaxDB recover commands.

### Restoring a MaxDB Database to a New Target

Both of these procedures require you to customize and run a config file.

Depending on how you protected the database, you need the procedure for:

Restoring from a Block-Based Volume Snapshot to a New Target on page 24 Restoring from a File-Based Full+Incremental Backup to a New Target on page 27

### Restoring from a Block-Based Volume Snapshot to a New Target

### **Before You Begin**

This procedure requires you to customize and run /var/act/scripts/ ACT\_MAXDB\_lvmRestore\_newTarget.conf.

After the file has been edited, save it to /act/custom\_apps/maxdb/restore.

These are the arguments in the config file, and where to get the values:

Argument	Description, or Code to Get the Value (run on the target server)
OSUSER	Target MAXDB OS User
SRC_DBSID	Source MAXDB SID of the source database to restore from
TARGET_DB_USER	Target MAXDB Instance DBM username and password.
TARGET_DBUSER_PASSWD	These must be the same as source DBM username and password or restore and recovery will fail. You can change the password after restore is finished.
TARGET_SERVER_NAME	Target MAXDB SID to restore
TARGET_MNT_PNT	This is the value that you will use in Step 3
UNTIL_TIME	Recovery Time in the format: YYYY-MM-DD HH24:MI:SS
MANIFEST_FILE_LOC	<pre>cat /var/act/log/UDSAgent.log   grep <jobid>   grep -i "Manifest_File_"   grep "/act/tmpdata/"   awk -F"disk at " '{print \$2}'</jobid></pre>
JobID	cat /var/act/log/UDSAgent.log   grep -w <target_mnt_pnt>   grep "GEN-INFO"   tail -1   cut -d']' -f2   cut -d' ' -f2</target_mnt_pnt>
LOG_BKP_MNTPT	df -h   grep <target_mnt_pnt>   grep "_archivelog"   awk '{print \$NF}'</target_mnt_pnt>
BEGIN_TIME	<pre>cat /var/act/log/UDSAgent.log   grep "BEGIN_TIME"   grep -w <target_mnt_pnt>   awk -F"BEGIN_TIME=" '{ print \$2 }'   cut -d' ' - f1-2   cut -d'"' -f2</target_mnt_pnt></pre>
SRC_DB_VERSION	<pre>#dbmcli -d <src_dbsid> dbm_version   grep "VERSION"   awk -F"= " '{print \$2}'</src_dbsid></pre>

### Procedure

To restore a block-based Volume Level backup image to a new target:

- 1. From the App Manager Applications list, right-click the protected database and select **Access**. You can use the Managed SLA Status filter to show only protected databases.
- 2. Select the latest snapshot to recover, and choose Mount.



3. Provide a target mount point under mount location, for example: /dmpRstNew. This will be used as the variable TARGET\_MNT\_PNT.

actifio	Dashboard	Backup & Recover 🗸	Test Data Management 🗸	App Manager 🗸	SLA Architect 🗸	Manage 🗸 🛛 Rep	ort Monitor <del>-</del>		🍸 👤 admin	A 🕄
ACCESS	- 🦁 -	ACTDB   maxdb-1   m	axdb-1 Details & Settings						TIMEUNE	TABLE
2015 Sna	9-11-25 23:22:19 pshot Image		Mount							
NAME	Image_0432417		TARGET*	LABEL						
STATUS	Available		maxdb-1 🔻							
TRANSPORT	SAN Based, Out-Of Storage	f-Band								
IMAGE SIZE	27.50GB		<ul> <li>Application Option</li> </ul>	ns						
EXPIRES ON	2019-11-26 05:24:2	23								
APPLIANCE	Sky9_caf_auto		CREATE NEW VIRTUAL	APPLICATION						
RECOVERY	11-26 00:11 To 11-2	26 00:12	ROLL FORWARD TIME		2019-11-26	00:12:57	🖲 HOST TIME 🌘	USER TIME		
CATALOG STATE	Not-Applicable									
POOL NAME	Act_per_pool000		TARGET DATABASE NA	ME *						
N	lount -		MAXDB TARGET OS US	ER NAME *						
			MAXDB TARGET DB US	ER NAME *						
			MAXDB TARGET DB PA	SSWORD *						
			MANAGE NEW APPLICA	TION						
			<ul> <li>Mapping Options</li> </ul>							
			STORAGE POOL*		act_per_po	ol000 (478G 🔻				
			MOUNT LOCATION		/dmpRstNev	<u>«</u>				
							-			
							Cancel			

The database backup will be mounted under /dmpRstNew (TARGET\_MNT\_PNT) and the log backup will be mounted under /dmpRstNew\_archivelog (LOG\_BKP\_MNTPT).

4. Log into the database server as root. Change directory to /act/custom\_apps/maxdb/restore: #cd /act/custom\_apps/maxdb/restore

5. Run the ACT\_MAXDB\_lvmRestore\_newTarget.sh config file as root user.

#sh ACT\_MAXDB\_lvmRestore\_newTarget.sh

6. Connect to the MaxDB instance and confirm that the databases are recovered and online:

#dbmcli -d <TARGET\_SERVER\_NAME> -u <TARGET\_DB\_USER>,<TARGET\_DBUSER\_PASSWD> db\_state

7. Unmount the mounted snapshot image.

### To change the password

1. To change the password, login to the target db as DBM user:

#dbmcli -d TARGET\_SERVER\_NAME -u TARGET\_DB\_USER,TARGET\_DBUSER\_PASSWD
#user\_changepwd dbm <new\_password>

For example: for DBM user changing the password from welcome123 to welcome456 [root@maxdbtrg dump]# dbmcli -d glxn -u dbm,welcome123

```
dbmcli on glxn>
dbmcli on glxn>user_changepwd dbm welcome456
OK
---
```

dbmcli on glxn>

2. Login again with the new password.

[root@maxdbtrg dump]# dbmcli -d glxn -u dbm,welcome456
dbmcli on glxn>

### Restoring from a File-Based Full+Incremental Backup to a New Target

### **Before You Begin**

This procedure requires you to customize and run /var/act/scripts/ ACT\_Maxdb\_dumpRestore\_newTarget.conf.

After the file has been edited, save it to /act/custom\_apps/maxdb/dump.

These are the arguments in the config file, and where to get the values:

Argument	Description, or Code to Get the Value (run on the target server)
OSUSER	Target MAXDB OS User
SRC_DBSID	Source MAXDB SID of the source database to restore from
TARGET_DB_USER	Target MAXDB Instance DBM username and password.
TARGET_DBUSER_PASSWD	recovery will fail. You can change the password after restore is finished.
TARGET_SERVER_NAME	Target MAXDB SID to restore
DUMPBKPLOC	This is the value that you will use in Step 3
DBADMIN_PWD	DBADMIN Password for the target database
UNTIL_TIME	Recovery Time in the format: YYYY-MM-DD HH24:MI:SS
LOG_MNT_PNT	TargetDB log file mount point If target server directory structure is different from source
DATA_MNT_PNT	TargetDB data file mount point If target server directory structure is different from source
MANIFEST_FILE_LOC	cat /var/act/log/UDSAgent.log   grep <jobid>   grep -i "Manifest_File_"   grep "/act/tmpdata/"   awk -F"disk at " '{print \$2}'</jobid>
JobID	cat /var/act/log/UDSAgent.log   grep -w <dumpbkploc>   grep "GEN-INFO"   tail -1   cut -d']' -f2   cut -d' ' -f2</dumpbkploc>
DUMPBKPLOC	df -h   grep <dumpbkploc>   grep "_archivelog"   awk '{print \$NF}'</dumpbkploc>
LOG_BKP_MNTPT	df -h   grep -w <dumpbkploc>   grep "_archivelog"   awk '{print \$NF}'</dumpbkploc>
BEGIN_TIME	<pre>cat /var/act/log/UDSAgent.log   grep "BEGIN_TIME"   grep -w <dumpbkploc>   awk -F"BEGIN_TIME=" '{ print \$2 }'   cut -d' ' -f1-2   cut -d'"' -f2</dumpbkploc></pre>
SRC_DB_VERSION	<pre>#dbmcli -d <src_dbsid> dbm_version   grep "VERSION"   awk -F"= " '{print \$2}'</src_dbsid></pre>

### Procedure

To restore a traditional File-Based full+incremental backup image to a new target:

- 1. From the App Manager Applications list, right-click the protected database and select **Access**. You can use the Managed SLA Status filter to show only protected databases.
- 2. Select the latest snapshot to recover, and choose Mount.



3. Provide a target mount point under mount location, for example: /dmpRstNew. This will be used as the variable DUMPBKPLOC. The database backup will be mounted under /dmpRstNew (DUMPBKPLOC) and the log backup will be mounted under /dmpRstNew\_archivelog (LOG\_BKP\_MNTPT).

OCTIFIO Dashboard Back	p & Recover 🖌 🛛 Test Data Management 🗸 🛛 App	Manager 🗸 SLA Architect 🖌 Ma	inage 🗸 Report Monitor 🗸	🍸 👤 admin 🌲 🚱
ACCESS 🔹 🥑 ACTDB	maxdb-1   maxdb-1 Details & Settings			TIMELINE TABLE
2019-11-25 23:22:19 Snapshot Image	Mount			
NAME Image_0432417	TARGET* LABE			
STATUS Available	maxdb-1 💌			
TRANSPORT SAN Based, Out-Of-Band Storage				
IMAGE SIZE 27.50GB	<ul> <li>Application Options</li> </ul>			
EXPIRES ON 2019-11-26 05:24:23				
APPLIANCE Sky9_caf_auto	CREATE NEW VIRTUAL APPLIC	ATION O		
RECOVERY 11-26 00:11 To 11-26 00:12 RANGE	ROLL FORWARD TIME	2019-11-26	0 00:12:57   HOST TIME USER TIME	
CATALOG STATE Not-Applicable				
POOL NAME Act_per_pool000	TARGET DATABASE NAME *	MyDatabase		
Mount -	MAXDB TARGET OS USER NAM	e * osuser		
	MAXDB TARGET DB USER NAM	E * targetuser		
	MAXDB TARGET DB PASSWOR	• • • • • • • • • • • • • • • • • • • •		
	MANAGE NEW APPLICATION	$\bigcirc$		
	<ul> <li>Mapping Options</li> </ul>			
	STORAGE POOL*	act_per_pool000	(478G 🔻	
	MOUNT LOCATION	/dmpRstNew		
			Cancel Submit	

4. Log into the database server as root and change directory to /act/custom\_apps/maxdb/dump: #cd /act/custom\_apps/maxdb/dump

5. Run the ACT\_MAXDB\_dumpRestore\_newTarget.sh config file as root user.

#sh ACT\_MAXDB\_dumpRestore\_newTarget.sh

6. Connect to the MaxDB instance and confirm that the databases are recovered and online:

#dbmcli -d <TARGET\_SERVER\_NAME> -u <TARGET\_DB\_USER>,<TARGET\_DBUSER\_PASSWD> db\_state

7. Unmount the mounted dump snapshot image.



### To change the password

1. To change the password, login to the target db as DBM user:

#dbmcli -d TARGET\_SERVER\_NAME -u TARGET\_DB\_USER,TARGET\_DBUSER\_PASSWD
#user\_changepwd dbm <new\_password>

For example: for DBM user changing the password from welcome123 to welcome456 [root@maxdbtrg dump]# dbmcli -d glxn -u dbm,welcome123

```
dbmcli on glxn>
dbmcli on glxn>user_changepwd dbm welcome456
OK
```

- - -

dbmcli on glxn>

2. Login again with the new password.

[root@maxdbtrg dump]# dbmcli -d glxn -u dbm,welcome456
dbmcli on glxn>