

```

ciapsql=# create table foo(i int);
CREATE TABLE
ciapsql=# insert into foo VALUES(1), (2);
INSERT 0 2
ciapsql=#
ciapsql=# select * from foo;
 i
---
 1
 2
(2 rows)

ciapsql=#
ciapsql=# \dt
      List of relations
 Schema | Name | Type  | Owner
-----+-----+-----+-----
 public | foo  | table | pgadmin
(1 row)

```

The screenshot shows a user interface for managing backup configurations. On the left, a sidebar lists 'Edit Backup Configuration' with two items: '1 Backup Configuration' and '2 Customize Backup Schedule'. The 'Customize Backup Schedule' item is selected and highlighted in blue.

The main area is titled 'Customize Backup Schedule' and contains the following details:

- Name:** default-incremental-backup
- Type***: Incremental
- Start Time***: 03 : 35
- Frequency***: Daily Every 1 day(s)

Below these fields is a 'REMOVE' button with a trash icon.

At the bottom of the main panel, there is another backup entry:

- Name:** default-full-backup

At the bottom right of the main panel are three buttons: 'CANCEL' (blue), 'BACK' (blue), and 'SAVE' (green).

Databases > ciapsql | ACTIONS

Summary Monitoring Backup Logs Operations

After you enable Backups, the Backup Location provides a place for both the Backup files we take as well as where we stream the WAL Logs. The combination of these two enables us to restore to any point in time as well as being resilient if any specific backup fails.

Transaction Log Streaming

Last Successful Backup (UTC) 3:35 AM - 04/30/2024 WAL Status Success

Backup Configuration EDIT

Enable Backups Enabled Backup Location database-backup-localstr Backup Retention 30 Day(s)

Backup Schedule

Name	Backup Type	Start Time (Local time zone of the database server)	Frequency
default-full-backup	Full	23:59	Weekly, Every Sat
default-incremental-backup	Incremental	03:35	Daily

Backup Schedules per page 10 1-2 of 2 Backup Schedules

File Object Tools Help

Object Explorer

Dashboards X Properties X SQL X Statistics X Dependencies X Dependents X Processes X

General System Statistics Replication

Database sessions

Transactions per second

Tuples in **Tuples out** **Block I/O**

Database activity

Sessions Locks Prepared Transactions

Active sessions only

PID	User	Application	Client	Backend start	Transaction start	State	Wait event	Blocking PIDs
702362	postgres		192.168.2.4	2024-04-30 03:43:26 UTC		idle	Client: ClientRead	
702366	postgres		192.168.2.4	2024-04-30 03:43:31 UTC		idle	Client: ClientRead	
710291	postgres		192.168.2.4	2024-04-30 03:51:55 UTC		idle	Client: ClientRead	
710292	postgres		192.168.2.4	2024-04-30 03:51:55 UTC		idle	Client: ClientRead	
719324	pgAdmin 4 - DB ciapsql	pgAdmin	192.168.0.1	2024-04-30 04:00:56 UTC	2024-04-30 04:11:50 UTC	act...		
719486	pgsql	pgsql	192.168.0.1	2024-04-30 04:01:04 UTC		idle	Client: ClientRead	

Delete Table?

Are you sure you want to delete table "foo"?

```
ciapsql=# \dt
Did not find any relations.
ciapsql=#
```

Databases > ciapsql

ACTIONS

- Clone
- Create Database from Backup
- Change Owner
- Delete

View Alert X

Basic Information [COPY](#) [CONF](#)

Instance Name ciapsql	Database Engine & Version Postgres 15.5+vmware.v2.0.0	Status Ready ⓘ	Database Name ciapsql
Admin Name pgadmin	Database Owner dsm-admin@corp.vmbeans.com	Created In DSM	
> Labels			

Database Replication [EDIT](#)

Replica Mode ⓘ	Topology ⓘ	Instance IP ⓘ
Single vSphere Cluster	3 (1 Primary, 1 Replica, 1 Monitor)	192.168.111.220
> Details		

Infrastructure [EDIT](#)

Infrastructure Policy ciademo	Storage Policy vSAN Default Storage Policy	VM Class ⓘ	Disk Size ⓘ
		medium	60Gi

Maintenance Window [EDIT](#)

Maintenance Window allows CVEs, bug fixes, new lifecycle management features and minor version upgrades to be addressed

Enable Maintenance Window	Day of the week	Start Time(Local Time Zone)	Duration
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Databases > Create Database from Backup of: ciapsql

1. Restore Database to New Instance [Restore this Database from latest available time or custom time](#)

DSM will allow you to restore to any point in time.

Required Field*

Restore Point*

Latest Available Time
Allows restore to the most recent timestamp.

Custom Time
Allows restore upto the chosen timestamp.

NEXT

2. Basic Information Database Engine, Version, Database Replication and Name

3. Infrastructure Infrastructure Policy, Storage Policy, VM Class and Storage Size

4. Backup and Maintenance Backup Configuration, Automated Backup and Maintenance Window

5. Advanced Settings Database Options

6. Summary Review All Information

Databases > Create Database from Backup of: ciapsql

> Restore Database to New Instance Restore this Database from latest available time or custom time

2. Basic Information Database Engine, Version, Database Replication and Name

Database Engine* POSTGRES

Database Version* 15.5+vmware.v2.0.0

Instance Name* ciapsql-66307111

Replica Mode* Single Server
No replica. You can use vSphere HA

Single vSphere Cluster
Multiple nodes co-located on Single vSphere Cluster providing non-disruptive upgrades.

Topology* 1 (1 (Primary + Monitor), 0 Replica)

Database Name* ciapsql

Admin Username* pgadmin

NEXT RESTORE NOW

Databases > Create Database from Backup of: ciapsql

Instance

> Basic Information Database Engine, Version, Database Replication and Name

3. Infrastructure Infrastructure Policy, Storage Policy, VM Class and Storage Size

Infrastructure Policy* ciademo

Select Placement

Storage Policy* vSAN Default Storage Policy

VM Class* medium | vCPU: 4 Cores | Memory: 8 GB

Disk Size* 60 Gi

NEXT RESTORE NOW

4. Backup and Maintenance Backup Configuration, Automated Backup and Maintenance Window

5. Advanced Settings Database Options

6. Summary Review All Information

[Databases](#) > Create Database from Backup of: ciapsql

Instance

- > Basic Information Database Engine, Version, Database Replication and Name
- > Infrastructure Infrastructure Policy, Storage Policy, VM Class and Storage Size
- > **4. Backup and Maintenance** Backup Configuration, Automated Backup and Maintenance Window

Configure Backup Details. Enable Backups will allow automated backups of the Database in the scheduled time without any manual intervention.

Enable Backups

Required Field*

Backup Location*

Backup Retention Period * in Days

> [Backup Schedule](#)

Enable Maintenance Window will allow CVEs, bug fixes, new Lifecycle Management features and minor version upgrades to be addressed. Also, it will not lead to any downtime when the database is deployed with replication.

Enable Maintenance Window

> [Maintenance Window Details](#)

[Databases](#) > Create Database from Backup of: ciapsql

- > **Restore Database to New Instance** Restore this Database from latest available time or custom time
- > Basic Information Database Engine, Version, Database Replication and Name
- > Infrastructure Infrastructure Policy, Storage Policy, VM Class and Storage Size
- > Backup and Maintenance Backup Configuration, Automated Backup and Maintenance Window
- > **5. Advanced Settings** Database Options

DSM will default to the same Advanced Settings as the source Database. You can edit it later.

NEXT **RESTORE NOW**

6. Summary Review All Information

VMware Data Services Manager [DSM Admin]

Databases [CREATE DATABASE](#)

Actions	Instance Name	Alert	Status	DB Version	Nodes	VM Class	Storage	Created In	Created In Metadata	Created Date	Owner
⋮	ciapsql-6630711	-	InProgress	15.5+vmware.v2.0.0	1	medium	60Gi	DSM	-	4:21 AM - 04/30/2024	dsm-admin@corp.vmbeans.com
⋮	pg-dev-k8s-01	Ok	Ready	14.10+vmware.v2.0.0	3	medium	60Gi	Kubernetes	dev-team 6364fc67-a884-4eb0-ad52-2d840ff8825	1:49 AM - 04/25/2024	dsm-admin@corp.vmbeans.com
⋮	aria-dbaas	Ok	Ready	15.5+vmware.v2.0.0	1	medium	60Gi	Aria	DSM_PROJECT vra-01a.corp.vmbeans.com	4:19 PM - 04/24/2024	dsm-admin@corp.vmbeans.com
⋮	ciapsql	Ok	Ready	15.5+vmware.v2.0.0	3	medium	60Gi	DSM	-	12:45 PM - 04/23/2024	dsm-admin@corp.vmbeans.com

VMware Data Services Manager

Databases > ciapsql-66307111 | ACTIONS

- Dashboard
- Permissions
- Infrastructure Policies
- Databases
 - Version & Upgrade
 - Operations
 - System Logs
 - System Audit
 - External Storage
 - Settings

Operation Type Status Creation date User

CREATE DATABASE CLUSTER FROM EXISTING CLUSTER	In Progress	4:21 AM - 04/30/2024	dsm-admin@corp.vmbeans.com
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Operations per page 10 1 - 1 of 1 operations

vSphere Client

Search in all environments

ciapsql-66308e19-bgrps | ACTIONS

Summary Monitor Configure Permissions Datastores Networks Snapshots Updates

Virtual Machine Details

Power Status: Powered On
Guest OS: Ubuntu Linux (64-bit)
VMware Tools: Running, version: 1360 (Guest Managed)

DNS Name (1): ciapsql-66308e19-bgrps
IP Addresses (3): 192.168.11.100, 192.168.11.99, AND 1 MORE

Encryption: Not encrypted

Usage

Last updated: 4/30/24, 6:27 AM
CPU: 2.295 GHz used
Memory: 6 GB used
Storage: 8.12 GB used

VIEW STATS

VM Hardware

CPU: 4 CPU(s), 3855 MHz used
Memory: 8 GB, 7 GB memory active
Hard disk 1 (of 3): 25 GB | Thin Provision | vdisk01 | See All Disks
Network adapter 1: vft-paris-vds01-pg-vm (connected)

PCI Devices: No PCI devices

Related Objects

Cluster: vft-paris-cluster1
Host: vft-vi-paris-esx-01.corp.vmbeans.com
Networks: vft-paris-vds01-oo-vm

Tags: No tags assigned

Databases

Postgres MySQL

CREATE DATABASE

Actions	Instance Name	Alert	Status	DB Version	Nodes	VM Class	Storage	Created In	Created In Metadata	Created Date	Owner
...	ciapsql-66308e19	Ok	Ready	15.5+vmware.v2.0.0	1	medium	60Gi	DSM	-	6:22 AM - 04/30/2024	dsm-admin@corp.vmbeans.com
...	pg-dev-k8s-01	Ok	Ready	14.10+vmware.v2.0.0	3	medium	60Gi	Kubernetes	dev-team 6364fc67-a884-4eb0-ad62-2c084fbfb825	1:49 AM - 04/25/2024	dsm-admin@corp.vmbeans.com
...	aria-dbaas	Ok	Ready	15.5+vmware.v2.0.0	1	medium	60Gi	Aria	DSM_PROJECT vra-01a.corp.vmbeans.com	4:19 PM - 04/24/2024	dsm-admin@corp.vmbeans.com
...	ciapsql	Ok	Ready	15.5+vmware.v2.0.0	3	medium	60Gi	DSM	-	12:45 PM - 04/23/2024	dsm-admin@corp.vmbeans.com

Databases > ciapsql-66308e19 | : ACTIONS

Summary Monitoring Backup Logs Operations

Basic Information [COPY CONNECTION STRING](#)

Instance Name ciapsql-66308e19	Database Engine & Version Postgres 15.5+vmware.v2.0.0	Status Ready ⓘ	Database Name ciapsql
Admin Name pgadmin	Database Owner dsm-admin@corp.vmbeans.com	Created in DSM	
> Labels			

Database Replication [EDIT](#)

Replica Mode ⓘ Single Server	Topology ⓘ 1 (1 Primary + Monitor, 0 Replica)	Instance IP ⓘ 192.168.111.101
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Details

Database Node	VM Name	Role	Lag (s)
ciapsql-66308e19-0	ciapsql-66308e19-bgrps	Primary	0
ciapsql-66308e19-monitor-0	ciapsql-66308e19-bgrps	Monitor	-

Infrastructure [EDIT](#)

Infrastructure Policy ciademo	Storage Policy vSAN Default Storage Policy	VM Class ⓘ medium	Disk Size ⓘ 60Gi
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```
root@ubuntu:/home/ubuntu# export restore=postgres://pgadmin:4BzvSMsK6Sh8556HpE01SLCic0Z5eV@192.168.111.101:5432/ciapsql
root@ubuntu:/home/ubuntu#
```

```
root@ubuntu:/home/ubuntu# psql "$restore"
psql (14.11 (Ubuntu 14.11-0ubuntu0.22.04.1), server 15.5 (VMware Postgres 15.5.0))
WARNING: psql major version 14, server major version 15.
          Some psql features might not work.
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, bits: 256, compression: off)
Type "help" for help.

ciapsql=# 
ciapsql=# \dt
      List of relations
 Schema |   Name    | Type  |  Owner
-----+-----+-----+-----
 public | foo     | table | pgadmin
(1 row)

ciapsql=#

```