Epic Games - Cloud Developer Platform

Accessing RDS Databases and EC2 Instances with Teleport

Document Level Classification

[200](#)

Introduction

[Teleport](#) is a Certificate Authority and an Access Plane for our infrastructure. Providing a single sign-on endpoint and a central place to access EC2 instances and RDS for the entire organization.

Benefits of Teleport include:

- Reduction of bastion host use.
- Provides greater insight into developer interactions with resources for auditing purposes. All actions recorded while connected to resource.

Access

In order to access Teleport you must be a member of one of the Okta/ TONUAM team groups that is allowed to access Teleport. Each Okta/UAM

team group maps to a role in Teleport. For example the group team-dba maps to the role team-dba in Teleport and would provide access to Databases that role has access to. You also need a username on the RDS instance that matches your Okta account name. This username should be created by the DBA that owns the database.

Prerequisites

Download and Installation of the Teleport Client is required to access resources. Expand the section specific to your OS below. The official instructions for download and install can be found on the [Teleport website](#).

The version recommended at the moment is **16.5.0**

∨ Mac OS

```
# Download the package
curl -O https://cdn.teleport.dev/teleport-ent-<version>.pkg

# Install the package
sudo installer -pkg teleport-ent-<version>.pkg -target /

# Enter password when prompted
Password:
installer: Package name is teleport-ent-<version>
installer: Upgrading at base path /
installer: The upgrade was successful.

# Validate install location
which tsh
/usr/local/bin/tsh
```

```
# Clean up installer
rm teleport-ent-<version>.pkg
```

Windows

This contains the tsh client only and these commands can be run under cmd, PowerShell, and Windows Terminal. After extracting the binary it can be copied to any folder. Be sure the folder is your PATH if you want to use this command globally.

```
# Get the expected checksum for the Windows tsh package
$Resp = Invoke-WebRequest https://get.gravitational.com/teleport-v<vers

# PowerShell will return the binary representation of the response cont
# by default, so you need to convert it to a string
[System.Text.Encoding]::UTF8.getstring($Resp.Content)
# <checksum> <filename>
curl -O https://get.gravitational.com/teleport-v<version>-windows-amd64
certUtil -hashfile teleport-v<version>-windows-amd64-bin.zip SHA256
# SHA256 hash of teleport-v<version>-windows-amd64-bin.zip:
# <checksum>
CertUtil: -hashfile command completed successfully.

# Extract the binary
Expand-Archive teleport-v<version>-windows-amd64-bin.zip
cd teleport-v<version>-windows-amd64-bin\teleport
# Validate version
.\tsh.exe version
Teleport v12.1.1 git:v<version> go1.19
```

Linux

```
#OS: linux, darwin
#OSarch: amd64, arm64
# Download install package
wget https://get.gravitational.com/teleport-ent-v<version>-<OS>-<OSarch
```

```
# Extract files
tar -xvzf teleport-ent-v<version>-<OS>-<OSarch>-bin.tar.gz

# Change directory into unzipped files
cd teleport-ent

# Run the installer
sudo ./install

# Verify location of binary
which tsh
# Output should be /usr/local/bin/tsh

# Verify binary version
tsh version
# Output should be in the format 'Teleport v<TSH-VERSION> git:api/v<TSH

# Move up one directory
cd ..

# Cleanup files
rm -rf teleport-ent*
```

SQL Client Installation

Depending on the type of database you are connecting to, you will also require one or both of the following DB clients to be installed and must be available in PATH:

Installing psql

⌄ Mac OS

```
# First check for current version
psql --version

# Install using Homebrew
brew update
brew install libpq

# Symlink psql (and other libpq tools) into /usr/local/bin:
brew link --force libpq

# Check location is correct
which psql
# Output should be /usr/local/bin

# Check for current version
psql --version
```

⌄ Windows

It is recommended to use the official Windows installer for your Windows platform from https://www.enterprisedb.com/downloads/postgres-postgresql-downloads

⌄ Linux

```
# Installing on Ubuntu and Debian using the apt package manager
sudo apt-get update
sudo apt-get install postgresql-client
```

Installing mysql

⌄ Mac OS

```
# Install using Homebrew
brew update
```

```
brew install mysql-client

# If using bash, add mysql-cliennt to PATH
echo 'export PATH="/usr/local/opt/mysql-client/bin:$PATH"' >> ~/.bash_p

# Reload bash profile
source ~/.bash_profile

# If using zsh, add mysql-client to PATH
echo 'export PATH="/usr/local/opt/mysql-client/bin:$PATH"' >> ~/.zshrc

# Reload zsh profile
source ~/.zshrc

# Check location
which mysql
# Output should be /usr/local/opt/mysql-client/bin

# Check version
mysql --version
# Output should be in format 'msql Ver <VERSION> for macos<VERSION> on
```

Windows

It is recommended that you use the official Windows installer for your Windows platform version from https://dev.mysql.com/downloads/installer/

Linux

```
# Ubuntu and Debian using apt
sudo apt update

# Debian
sudo apt update && sudo apt install mariadb-client

# Ubuntu
sudo apt update && sudo apt install mysql-client
```

```
# Check location
which mysql
# Output should be /usr/local/bin


# Check version
mysql --version
```

Command Reference

Command	Usage
tsh login	Used to log in to Teleport cluster to gain access to resources
tsh ls	Used to list nodes you have access to
tsh db ls	Used to list available databases and their connection information.
tsh db config	Prints database connection information.
tsh db login	Retrieves database credentials.
tsh db connect	Used to connect to the database using it's CLI client (Ex. psql or mysql)
tsh db logout	Used to log out of teleport
tsh ssh	Used to connect to an instance using the ssh client

Using Teleport to Access RDS or EC2 Using the GUI

To access the web based GUI for Teleport perform the following:

1. Connect to Substrate Teleport Web UI https://teleport.beef.live.use1a.on.epicgames.com/web or Old Prod Teleport Web UI https://teleport.ol.epicgames.net.

2. Login with Okta.

3. Once logged in click on **Servers** or **Databases** in the left hand navigation bar to see a list of resources you have access to.

4. Click the **Connect** button to the right of the resource.

Using Teleport to Access RDS Using the CLI

The flow of accessing an RDS instance follows this pattern:

1. **Connect to Teleport Cluster**
2. **List RDS Instances/Nodes**
3. **Connect to RDS Using the CLI**

Connect to Teleport Cluster

Substrate Teleport

```
# Login to the Teleport Cluster
tsh login --proxy=teleport.beef.live.use1a.on.epicgames.com:443 --user
```

Or

Old Prod Teleport

```
# Login to the Old Prod Teleport cluster with Okta
tsh login --proxy=teleport.ol.epicgames.net:443 --user firstname.lastna
```

List RDS Instances/Clusters

```
#List all nodes you have access to
tsh db ls
```

Connect to RDS Using the CLI Client psql or mysql

```
# Login to the database and connect to the database
tsh db login --db-user=<db-user> --db-name=<db-name> <RDS instance name
tsh db connect --db-user=<db-user> --db-name=<db-name> <RDS instance na
```

Using Teleport to Access EC2 Instances Using the CLI

The flow of accessing an EC2 instance follows this patter:

1. **Connect to the Teleport Cluster**
2. **List EC2 Instance/Nodes**
3. **Connect to EC2 Instance**

Connect to the Teleport Cluster

Substrate Teleport

```
# Login to the Teleport Cluster
tsh login --proxy=teleport.beef.live.use1a.on.epicgames.com:443 --user
```

Or

Old Prod Teleport

```
# Login to the Old Prod Teleport cluster with Okta
tsh login --proxy=teleport.ol.epicgames.net:443 --user firstname.lastna
```

List EC2 Instance/Nodes

```
# List all nodes you have access to
tsh ls

# List specific node you have access to.
tsh ls | grep <node_name>
```

Connect to EC2 Instance

```
# Connect to EC2 Instance Using SSH Client
tsh ssh <firstname.lastname>@<instance_name>
```

Troubleshooting

1. Unable to log into https://teleport.beef.live.use1a.on.epicgames.com/web

   1. This could mean your specific team hasn't been mapped to an internal Teleport role.

   2. Go to the support slack channel #cloud-support-ext
   3. Provide them with the team or group name (Ex. team-dba)
2. Able to log into https://teleport.beef.live.use1a.on.epicgames.com/web but unable to see nodes or databases in GUI or CLI with 'tsh ls'

   1. This could mean the Teleport role doesn't contain the labels applied to your EC2 or the account-id label applied to RDS doesn't match the account-id in the teleport role.

   2. Go to the support slack channel #cloud-support-ext
   3. Provide them with the team or group name (Ex. team-dba)
3. Unable to log into the database.
   1. Example Error :

      psql: error: connection to server at "teleport.beef.live.use1a.on.epicgames.com" (X.X.X.X), port 5432 failed: access to db denied. User does not have permissions. Confirm database user and name. ERROR: exit status 2

   2. Make sure you are using Okta account and not shared account

3. The DBA team for that database will need to create a login if not already done.