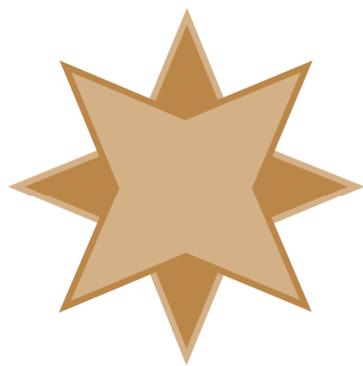


Installing the Zen v15 Engine Onto a Raspberry Pi

A White Paper From



**GOLDSTAR
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Installing the Zen v15 Engine onto a Raspberry Pi

Last Updated: April 2024

The Actian Zen database engine (formerly known as Actian PSQL) supports a wide variety of application programming interfaces (APIs) to access the data. Some of these interfaces leverage the power of SQL to access your data, while others use a lower-level interface, commonly known as the Btrieve API to provide the needed performance and flexibility.

Whichever interface you use, you must first install the Zen Engine onto the computer that will be running the database and serving that data to the end-user applications. While the Windows installation is fairly straightforward, the Linux install does take a few more steps, so this paper was created to walk you through those steps.

Downloading and Installing the Zen Engine

The first piece you need (after installing the 32-bit Raspberry Pi OS, of course), is the Zen Engine. The following steps will get the no-cost Community Edition engine installed onto your Raspberry Pi environment:

- 1) Go to https://esd.actian.com/product/Zen_PSQL in a web browser.
- 2) In the boxes provided, select **Actian Zen Community Edition, v15 Community Edition**, and select Raspbian ARM 32-bit in the third box.

Electronic Software Distribution

SELECT VIA PRODUCT or [Select Via Platform](#)

PRODUCT: Actian Zen Community Edition	RELEASE: v15 Community Edition	PLATFORM: Raspbian ARM 32-bit
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- 3) Scroll down and open up the link for **Zen Edge v15 Community Edition**, then click on the Download button for the Zen Edge Community Edition download. We are working with this version of the file for the purposes of this paper:

Downloads:

Actian Zen Edge Community Edition v15 SP2 1-user for Raspbian ARM 32-bit.

Zen-Edge-Community-linux-armhf-15.20.010.000.tar.gz (19 MB)

[DOWNLOAD](#) ↓

- 4) Open up a shell/terminal window to your system (either locally or remote).
- 5) Copy the file from the ~/Downloads folder to the /usr/local folder. *Note that your filename may be different as this download is updated, so adjust the commands accordingly. One handy feature of Linux command prompt is “tab completion”, so you can just start typing “Z” and press the <Tab> key to complete the filename.*

```
$ cd ~/Downloads
$ sudo cp Zen-Edge-Community-linux-armhf-15.20.010.000.tar.gz /usr/local
```
- 6) Explode the Zen Engine files using these commands:

```
$ cd /usr/local
$ sudo tar -zxf Zen-Edge-Community-linux-armhf-15.20.010.000.tar.gz
```
- 7) Change to the new etc folder and perform the pre-install checklist using these commands:

```
$ cd actianzen/etc
```

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```
$ sudo ./preinstall.sh
```

This should show you “Passed” for all checks.

```
++++ Checking current user rights...  
Passed...
```

```
++++ Checking for previous installs...  
Passed...
```

```
++++ Checking for running processes owned by user 'psql'...  
Passed...
```

```
++++ Checking for system dependencies...  
Passed...
```

If anything fails, you should address those issues before continuing. If you see an error message like this:

```
ERROR: ld-linux-armhf.so.3 not found. This package requires this version of ld-linux.
```

Then you are running a 64-bit OS, which is not (currently) supported. Replace the OS with a 32-bit version, and it should work as expected.

8) When the pre-requisite check is completed, complete the install using this command:

```
$ sudo ./postinstall.sh
```

9) At the end of the process, you should see the message “Install has successfully completed.”

Creating Administrative User Credentials

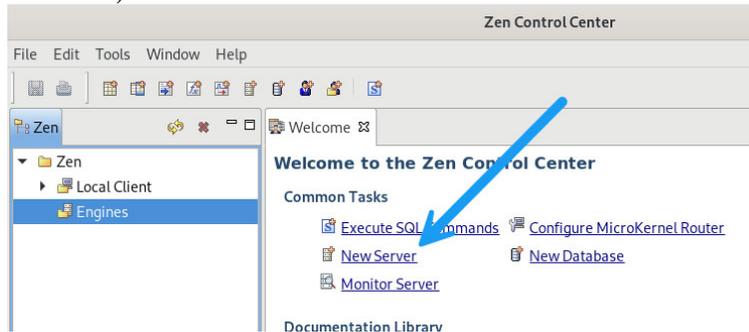
With the engine installed, you will need to have administrative user credentials available in order to configure or monitor the server remotely. This is done through the **btadmin** tool on the command line:

```
$ sudo su zen-svc  
zen-svc:/$ btadmin -p password at zenadmin
```

The above command will create an administrative user called “zenadmin” with a password of “password” that can be used to configure and monitor the system remotely.

Configuring and Monitoring the Zen Engine Remotely

Once you have the Zen Engine installed, you may need to modify the engine’s configuration or use the Monitor tool to see what is going on. There is no Zen Control Center available for the Raspberry Pi OS, so you should start the **ZenCC** from a Windows or Linux workstation (with the Zen v15 Client installed) instead. Select the **New Server** link in the Welcome screen:



Then enter in the new server’s name or IP address in the dialog box provided. Once connected to the newly-installed engine, right-click it and select **Properties**. When you do this, you will be prompted for login credentials (created above). Once authorized, you’ll be able to change the settings on the server remotely. You can also go to the Tools menu and launch the Monitor tool to see what is currently being done on that engine.

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Configuring and Monitoring the Zen Engine Locally

You can also configure and monitor the engine locally, without using the GUI tools. The **bcfg** tool provides command-line access to the configuration data, and the **bmon** tool provides command-line access to the monitoring data. Also, remember that these tools are configured (by default) to only run under the “zen-svc” user, so be sure to issue the **su** command first like this:

```
$ sudo su zen-svc
zen-svc:/$ bcfg 127 1024
```

This sequence will configure the engine for a 1GB database engine cache. See the documentation for the various options for these tools.

Restarting the Zen Engine

When configuration changes are made, or if you need to restart the engine for any other reason, this can be done directly from the command line:

```
$ sudo /usr/local/actianzen/etc/init.d/actianzen restart
```

This will stop the engine and restart it with the new configuration. Of course, all user connections to any database on the server will be reset as well, so use care with this.

Finding More Help

If you have other problems getting this to work, we urge you to contact Actian directly through their web forums at <https://communities.actian.com/s/> for more help. If you need some additional hand-holding, Goldstar Software may be able to assist you as well. You can contact us at 1-708-647-7665 or via the web at <http://www.goldstarsoftware.com>.