

## Appendix B

The following are the core instructions for installing a PostgreSQL cluster with `pgaudit`.

**Note:** The following instructions use the `PGDATA` and `PGVER` environment variables. Refer to supplementary content APPENDIX-F and APPENDIX-H for instructions on configuring `PGDATA` and `PGVER`.

### Installing `pgaudit`

First, PostgreSQL must be installed. This example uses Red Hat Enterprise Linux 7 RPMs. Use the appropriate RPM URL found here: <https://yum.postgresql.org/repopackages/>.

```
$ sudo yum update

$ sudo yum install bison flex gcc \
    readline-devel zlib-devel perl-devel \
    perl-ExtUtils-Embed openssl-devel \
    pam-devel libxml2-devel libxslt-devel \
    libuuid-devel openldap-devel tcl-devel \
    python-devel
```

Next, install PostgreSQL:

```
$ sudo yum install -y
https://download.postgresql.org/pub/repos/yum/repopms/EL-7-x86\_64/pgdg-redhat-repo-latest.noarch.rpm

$ sudo yum install postgresql${PGVER}/. postgresql${PGVER}/.-contrib \
    postgresql${PGVER}/.-devel postgresql${PGVER}/.-docs \
    postgresql${PGVER}/.-libs postgresql${PGVER}/.-server
```

Now that PostgreSQL is installed, set `PATH` to point to the new binaries:

```
$ export PATH=/usr/pgsql-${PGVER}/bin:$PATH
$ pg_config --configure
```

Install `pgaudit` (as root).

```
$ search pgaudit
$ dnf install pgaudit16
```

Initialize the database:

```
$ sudo /usr/pgsql- $\{PGVER\}$ /bin/postgresql $\{PGVER\}$ ./-setup initdb
$ sudo systemctl enable postgresql- $\{PGVER\}$ 
```

As postgres user, add pgaudit to the shared\_preload\_libraries in postgresql.conf:

```
$ sudo su - postgres
$ vi  $\{PGDATA\}$ /postgresql.conf
```

Change shared\_preload\_libraries to the following:

```
shared_preload_libraries = 'pgaudit'
```

As a sudo user, start the PostgreSQL server:

```
# SERVER USING SYSTEMCTL ONLY
$ sudo systemctl start postgresql- $\{PGVER\}$ 

# SERVER USING INITD ONLY
$ sudo service postgresql- $\{PGVER\}$  start
```

pgaudit is now loaded and ready to be configured.

## Configuration

pgaudit is configured using either the postgresql.conf or an included configuration file (Refer to Optional Configuration Organization).

For a complete list of configuration parameters see: <https://github.com/pgaudit/pgaudit#settings>.

### Example Settings for postgresql.conf

```
# Enable catalog logging - default is 'on'
pgaudit.log_catalog='on'
# Specify the verbosity of log information (INFO, NOTICE, LOG, WARNING, DEBUG)
pgaudit.log_level='log'
```

```
# Log the parameters being passed
pgaudit.log_parameter='on'
# Log each relation (TABLE, VIEW, etc) mentioned in a SELECT or DML statement
pgaudit.log_relation='off'
# For every statement and substatement, log the statement and parameters every
time
pgaudit.log_statement_once='off'
# Define the master role to use for object logging
# pgaudit.role=''
# Choose the statements to log:
# READ - SELECT, COPY
# WRITE - INSERT, UPDATE, DELETE, TRUNCATE, COPY
# FUNCTION - Function Calls and DO Blocks
# ROLE - GRANT, REVOKE, CREATE/ALTER/DROP ROLE
# DDL - All DDL not included in ROLE
# MISC - DISCARD, FETCH, CHECKPOINT, VACUUM
pgaudit.log='ddl, role, read, write'
```