

لكل تنرتن إال ل قح ةكبش ري دم تي بثت مادختساب هتي قرتو Cisco نم ءايشال PostgreSQL

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ةمدقم لال

نم ةي قرتلال او Cisco IoT FND PostgreSQL ب صاخلال OVA تي بثت ةيفيكي دن تسملال اذه حضوي VMware ESXi لعل شحال تارادصلال للال FND نم 5.0.0 رادصلال

ةيساس الابل طت ملال

شحال رادصلال او VMware نم ESXi 7.x جمارب

Cisco IoT Field Network Director (FND) PostgreSQL Open Virtual Appliance (OVA)، 5.0.0 رادصلال او شحال رادصلال او

ةيضارتفالال ةزهجالال تابل طت ملال:

تي اباجيغ 24: ةركاذلال

vCPU: 4 ةيزك رملال ةجالعملال تادحو

يندا دحك تي اباجيغ 450: صرقلال

ةمدختس ملال تانوك ملال

صاغة لعم ةئب ف ةووملا ةزهألا نم دننسملا اذه ف ةراوللا تامولعملل ءاشنإ م تناك اذا. (يضا رتفا) حوسمم نيوكتب دننسملا اذه ف ةمدختسُملا ةزهألا عيمج تآب رمأ يأل لم تحملا ريثأتلل كمهف نم دكأتف ،لغشتلا ديقتك ب ش

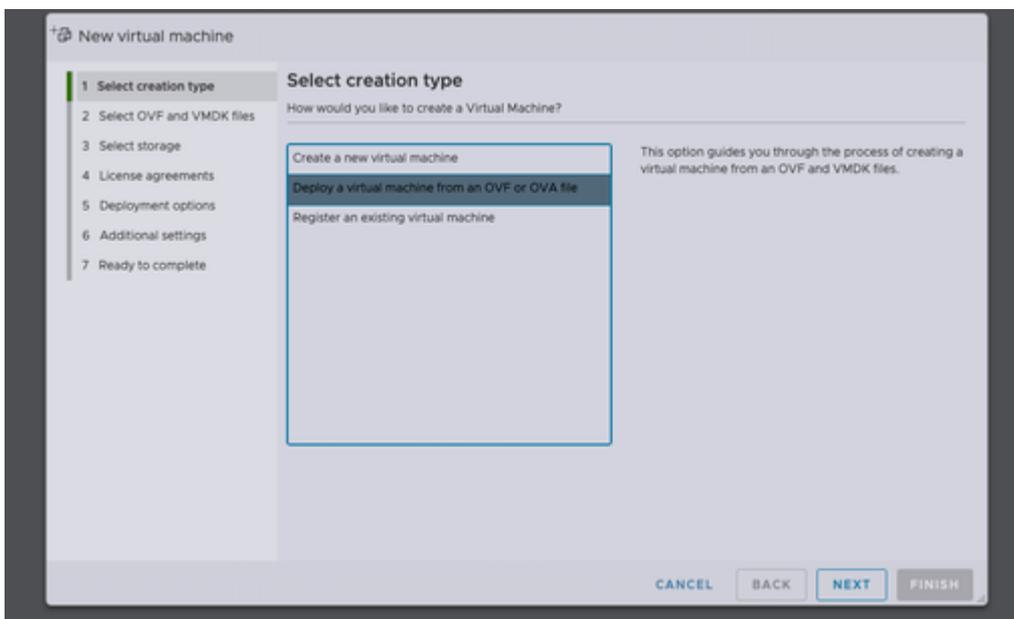
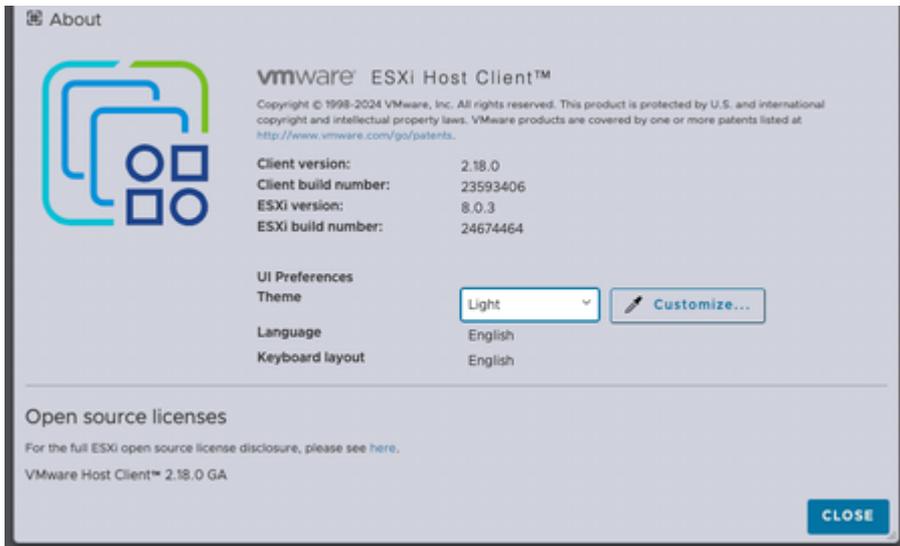
Cisco IoT FND PostgreSQL بصاخال OVA رشن

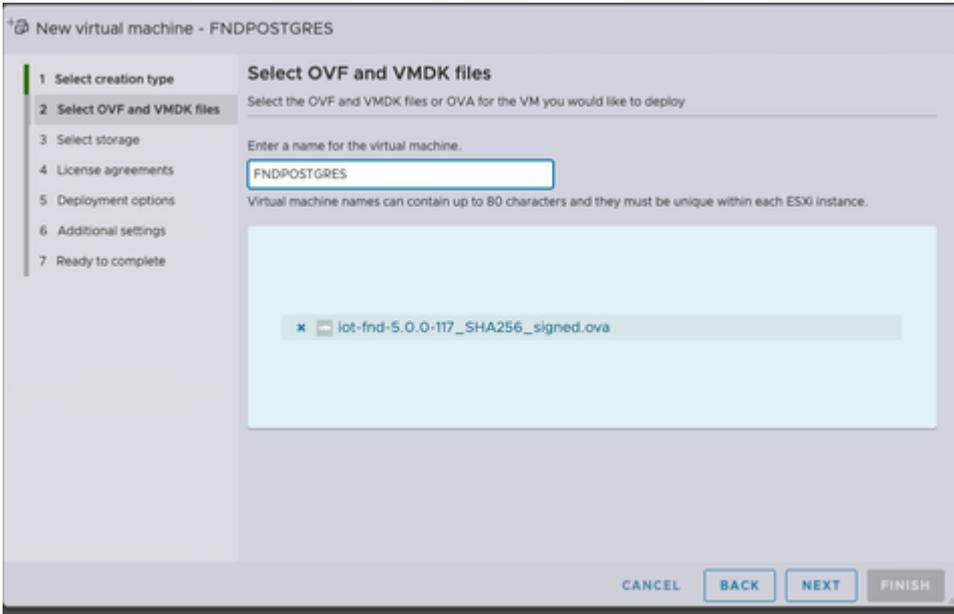
مادختساب شذألا تارادصلإا وأ Cisco IoT FND نم 5.x.x رادصلإا تيبتت تاداشرا يلى امي ف VMware ESXi نم 8.0 أو 7.x تارادصلإا لغشي يذلا (OVA) Open Virtual Appliance جم انرب

Cisco جمارب تاليزنت نم OVA ليزنت :1 ةوطخال

[انه رقنا](#) - Cisco جمارب ةحفص نم OVA فلم ليزنت

لج OVA رشنل VMware نم vSphere ليمع لىل لوخدلا ليجستب م :2 ةوطخال ESXi. مداخ





ايئاقلت ةقاطلا ليغشت راين نيكم تو ديوزتلا عون ديحتب مق ، تانايبلا نزم ديحت دب (يلال) Next قوف رونا . رشنلا ةيلمع لامتك ا درجم يرهاظلا زاوجل ليغشت نمضي اذهو

تاطحالم

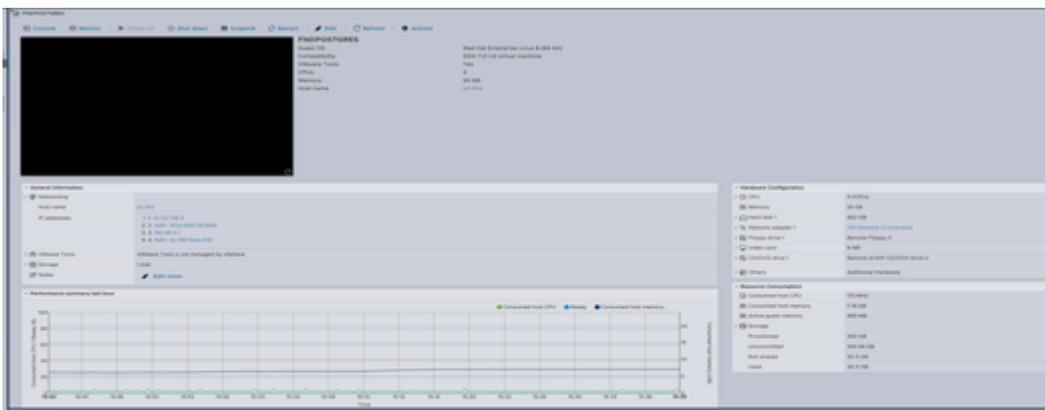
كي م س ل ا د ا م ا ل ا

- ام د قم ص ر ق ل ا ة ح ا س م ن ج ح .
- ة ر ف و ت م ل ا ص ر ق ل ا ة ح ا س م ن م ت ي ا ب ا ج ي ج 600 ب ل ط ت ي OVA .

ق ي ق د ل ا د ا م ا ل ا

- ب ل ط ل ا د ن ع ص ر ق ل ا ة ح ا س م د ا د ت .
- ة س ل ا ه ذ ه د ي ا ز ت ت و ، ا ب ي ر ق ت ت ي ا ب ا ج ي ج 50 ص ا ر ق ا ل ل ة ي ل و ا ل ا م ا د خ ت س ا ل ا ة ع س غ ل ب ت . ر ش ن ل ا س ا ي ق م ي ل ا ا د ا ن ت س ا

ء ا ه ن ا ق و ف ر ق ن ل ا ل ب ق ت ا د ي د ح ت ل ا ع ج ا ر .



د ا م ت ع ا ل ا ت ا ن ا ي ب م ا د خ ت س ا ب ل و خ د ل ا ل ي ج س ت : 3 ة و ط خ ل ا

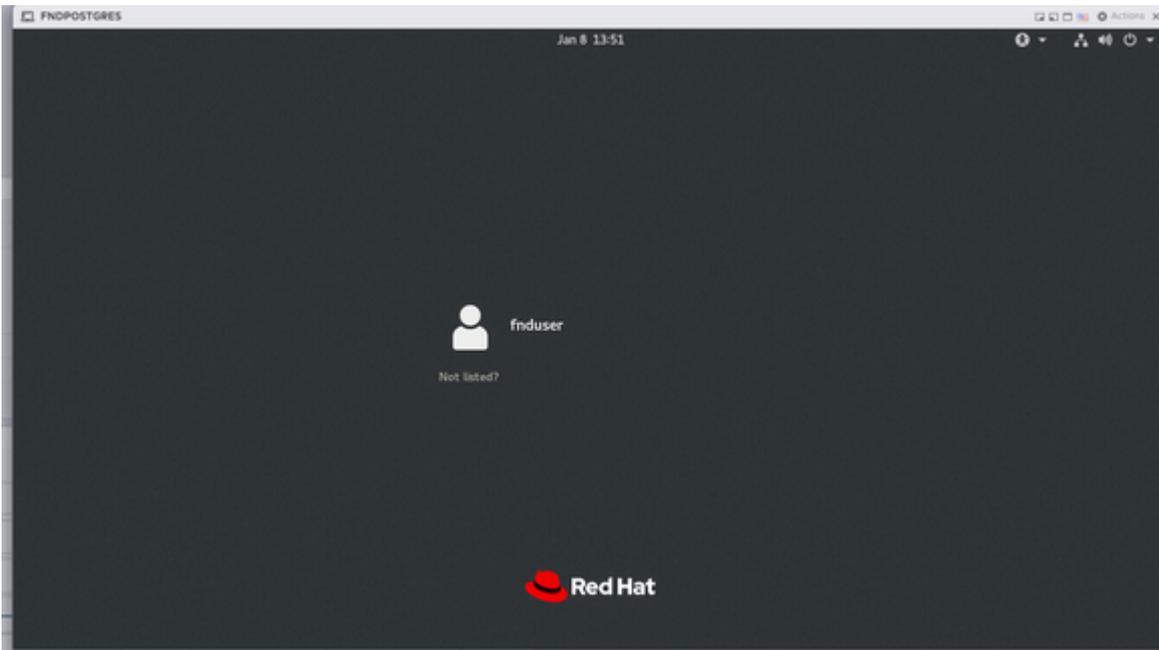
دامت عال اتانايب مدختسأ Linux، ليغشتت ادب ةشاش روهظو OVA رشن لامتك ادعب ةيلالاتل ةيضارتفال:

SSH لىل لوصول

- Username: وزدنف
- رورملا ةملك: C!sco123

ةيموسررلا مدختسمللا ةهجاو لىل لوصول

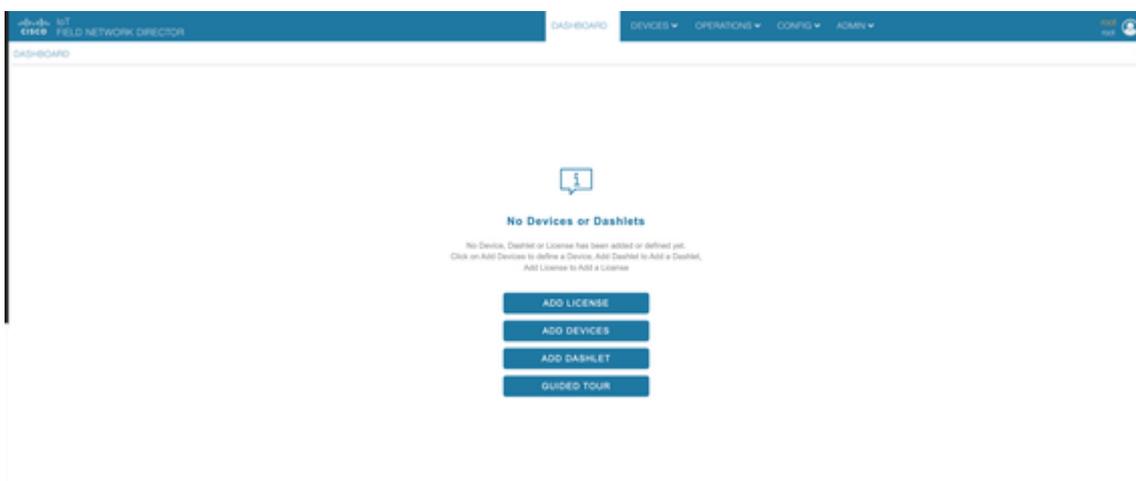
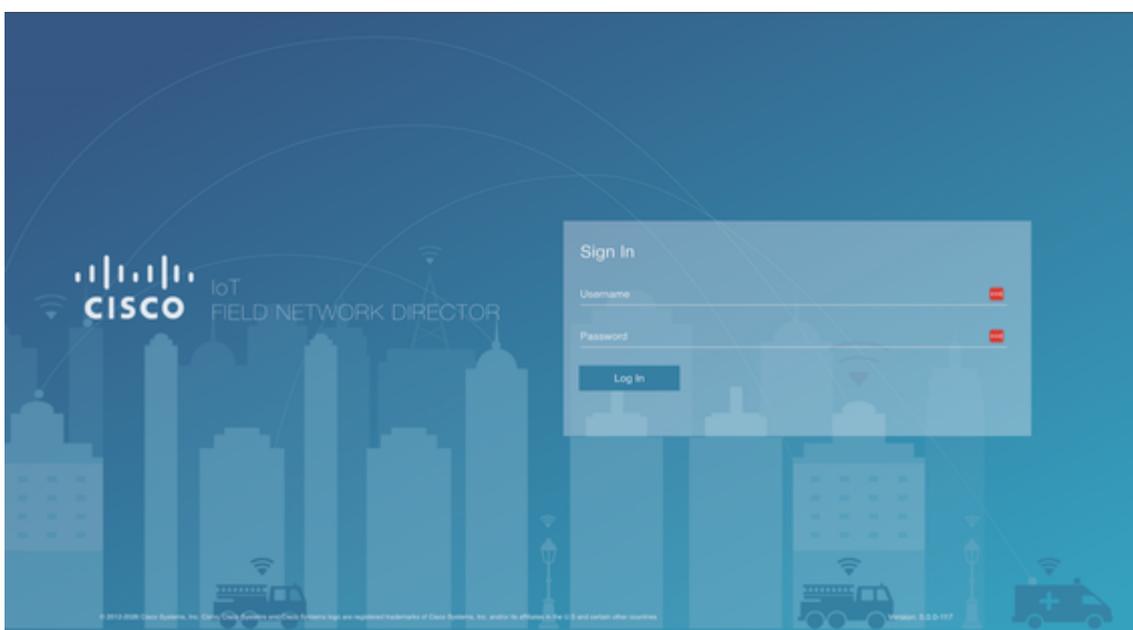
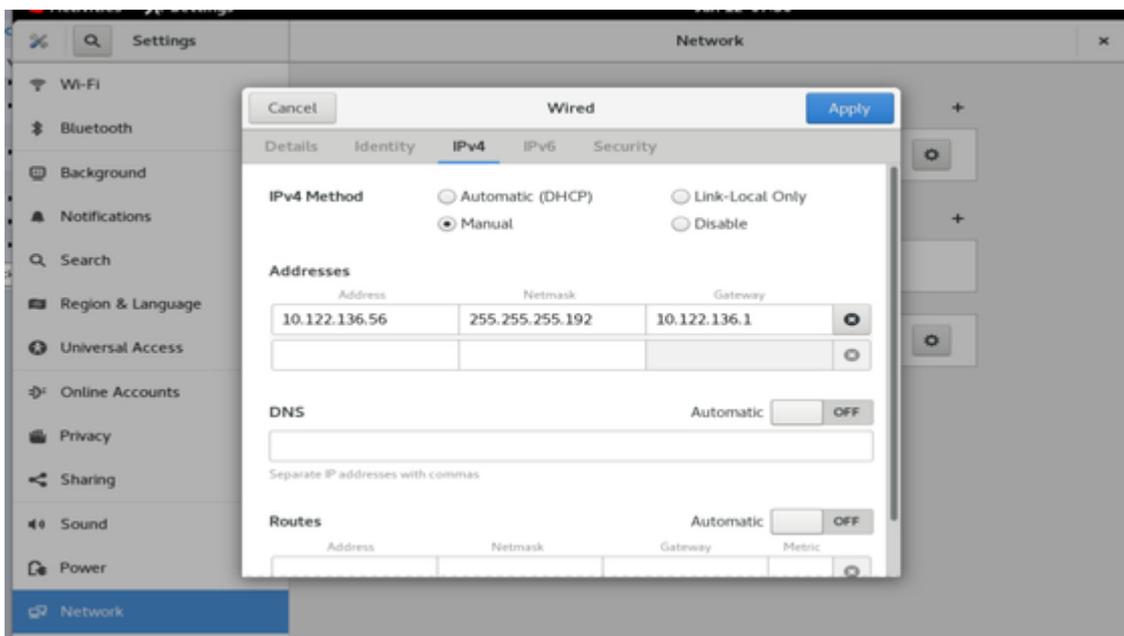
- Username: رذج
- رورملا ةملك: root123



ةكباشللا نيوكت: 4 ةوطخال

steps: ليكشتت ةكباشللا تمتأ

1. ناووع نيوعي نأ رفوتي لدان DHCP تنمض وأ يكيقاتاسا نكاس ناووع تنيع.
2. فيضملا VM لىل لوصوللا نكمي وحوالاص DNS مداخ نيوكتب مق.
3. IP نيوكت لامتك ادعب ةكباشللا تامدخ ليغشتت ةداعاب مق.



5.1 إلى 5.0 قالطإ نم cisco IoT FND نسحي

ةيقرتلا ةمزح ليزنت :1 ةوطخال

Cisco جمارب ليزنت ةحفص نم ةيقرتلا ةمزح ليزنت ب مق [انه رقنا](#) -

فلملا مسا: CISCO-IOTFND-VPI-K9-UPGRADE-SCRIPTS-5.1.0-155.zip

ةيقرتلا لبق ام تا صوحف ءارجاب مق :2 ةوطخال

Cisco IoT نم (FND) تالاصتالا عاطق تامدخ ةحص ةلاح نم ققحت ،ةيقرتلا ةعباتم لبق اهل يغشتو

```
[1]* Stopped ./fnd-container.sh
[root@iot-fnd scripts]# ./fnd-container.sh status
fnd-container is running, pid=2341
*** WARNING : deprecated key derivation used.
Using -iter or -pbkdf2 would be better.
CONTAINER ID        NAME                CPU %               MEM USAGE / LIMIT   MEM %               NET I/O
94f5cac26afa        fnd-container      2.04%               1.822GiB / 23.27GiB  7.83%               21.4MB / 14.4MB
[root@iot-fnd scripts]# ./fnd-container.sh status
fnd-container is running, pid=2341
*** WARNING : deprecated key derivation used.
Using -iter or -pbkdf2 would be better.
CONTAINER ID        NAME                CPU %               MEM USAGE / LIMIT   MEM %               NET I/O
94f5cac26afa        fnd-container      3.35%               1.822GiB / 23.27GiB  7.83%               21.4MB / 14.4MB
[root@iot-fnd scripts]#
```

```
[root@iot-fnd opt]#
[root@iot-fnd opt]#
[root@iot-fnd opt]# hostnamectl
  Static hostname: iot-fnd
            Icon name: computer-vm
            Chassis: vm
            Machine ID: 211ae1b5f1c74a66ace71dad225e6fffb
            Boot ID: 3f5d038fd7044a9c9a4a5db2e080ed81
            Virtualization: vmware
            Operating System: Red Hat Enterprise Linux 8.10 (Ootpa)
            CPE OS Name: cpe:/o:redhat:enterprise_linux:8::baseos
            Kernel: Linux 4.18.0-553.8.1.el8_10.x86_64
            Architecture: x86-64
[root@iot-fnd opt]#
```

```
[root@iot-fnd data]# rpm -qa | grep -i postgres
postgresql12-contrib-12.12-1PGDG.rhel8.x86_64
postgresql12-libs-12.12-1PGDG.rhel8.x86_64
postgresql12-server-12.12-1PGDG.rhel8.x86_64
postgresql12-12.12-1PGDG.rhel8.x86_64
cgms-postgres-5.0.0-117.x86_64
[root@iot-fnd data]#
```

/opt ليلدلا ةيقرتلا RPM خسنا :3 ةوطخال

```
bin boot dev etc home lib lib04 media mnt opt proc root run sbin srv sys usr var
[root@iot-fnd /]# cd /opt/
[root@iot-fnd opt]# ls
cgms-influx cgms-postgres containerd fnd fogd monitor scripts upgrade-ova-5.1.0-155.rpm
[root@iot-fnd opt]#
```

ةيقرتلا رما ل يغشت :4 ةوطخال

لثام:

RPM ةيقرت- uvh-ova—<release>-<build number>.rpm

[root@iot-fnd opt]# rpm -Uvh upgrade-ova-5.1.0-155.rpm

warning: upgrade-ova-5.1.0-155.rpm: Header V4 RSA/SHA256 Signature, key ID a5a10227: NOKEY

Verifying... ##### [100%]

Preparing... ##### [100%]

Updating / installing...

1:upgrade-ova-5.1.0-155 ##### [100%]

Deleting /var/lib/docker/volumes/fogd_data/_data/dist/appmgr/extensions/fnd/dependencies...

Deletion complete.

Started installer in background. Please check ~/rpm.log in few minutes for details.

[root@iot-fnd opt]#

Mon Jan 12 13:38:02 EST 2026 Background installer started

Mon Jan 12 13:38:02 EST 2026 Please wait until the 'RPM installation completed' message is logged

Mon Jan 12 13:38:02 EST 2026 Upgrading cgms-postgres-5.1.0-155.x86_64.rpm

Verifying... #####

Preparing... #####

Updating / installing...

cgms-postgres-5.1.0-155 #####

Cleaning up / removing...

cgms-postgres-5.0.0-117 #####

Mon Jan 12 13:38:22 EST 2026 Upgrading cgms-influx-5.1.0-155.x86_64.rpm

Verifying... #####

Preparing... #####

Updating / installing...

cgms-influx-5.1.0-155 #####

Cleaning up / removing...

cgms-influx-5.0.0-117 #####

Mon Jan 12 13:38:28 EST 2026 monit-5.33.0-1.e17 already installed on non-RHEL 9 system

Mon Jan 12 13:38:36 EST 2026 Stopping PostgreSQL services

Mon Jan 12 13:39:37 EST 2026 Upgrading Postgresql 16.7

Mon Jan 12 13:39:38 EST 2026 Using RHEL 8.x Installing PostgreSQL 16.7 libraries

warning: postgresql16-libs-16.7-1PGDG.rhel8.x86_64.rpm: Header V4 RSA/SHA256 Signature, key ID 08b40d20

Verifying... #####

Preparing... #####

Updating / installing...

postgresql16-libs-16.7-1PGDG.rhel8 #####

postgresql16-16.7-1PGDG.rhel8 #####

postgresql16-server-16.7-1PGDG.rhel8 #####

postgresql16-contrib-16.7-1PGDG.rhel8 #####

Mon Jan 12 13:39:42 EST 2026 Migrating DB data to Postgresql 16.7

Initializing database ... OK

Created symlink /etc/systemd/system/multi-user.target.wants/postgresql-16.service -> /usr/lib/systemd/systemd/systemd

Performing Consistency Checks

Checking cluster versions ok

Checking database user is the install user ok

Checking database connection settings ok

Checking for prepared transactions ok

Checking for system-defined composite types in user tables ok

Checking for reg* data types in user tables ok

Checking for contrib/isn with bigint-passing mismatch ok

Checking for incompatible "aclitem" data type in user tables ok

Checking for user-defined encoding conversions ok

Checking for user-defined postfix operators ok

Checking for incompatible polymorphic functions ok

Creating dump of global objects ok

Creating dump of database schemas ok

Checking for presence of required libraries	ok
Checking database user is the install user	ok
Checking for prepared transactions	ok
Checking for new cluster tablespace directories	ok

If `pg_upgrade` fails after this point, you must re-initdb the new cluster before continuing.

Performing Upgrade

Setting locale and encoding for new cluster	ok
Analyzing all rows in the new cluster	ok
Freezing all rows in the new cluster	ok
Deleting files from new <code>pg_xact</code>	ok
Copying old <code>pg_xact</code> to new server	ok
Setting oldest XID for new cluster	ok
Setting next transaction ID and epoch for new cluster	ok
Deleting files from new <code>pg_multixact/offsets</code>	ok
Copying old <code>pg_multixact/offsets</code> to new server	ok
Deleting files from new <code>pg_multixact/members</code>	ok
Copying old <code>pg_multixact/members</code> to new server	ok
Setting next multixact ID and offset for new cluster	ok
Resetting WAL archives	ok
Setting frozenxid and minmxid counters in new cluster	ok
Restoring global objects in the new cluster	ok
Restoring database schemas in the new cluster	ok
Copying user relation files	ok
Setting next OID for new cluster	ok
Sync data directory to disk	ok
Creating script to delete old cluster	ok
Checking for extension updates	ok

Upgrade Complete

Optimizer statistics are not transferred by pg_upgrade.

Once you start the new server, consider running:

```
/usr/pgsql-16/bin/vacuumdb --all --analyze-in-stages
```

Running this script will delete the old cluster's data files:

```
./delete_old_cluster.sh
```

Starting new PostgreSQL server...

waiting for server to start.... done

server started

Setting password encryption method to 'scram-sha-256'...

ALTER ROLE

ALTER ROLE

Stopping new PostgreSQL server...

waiting for server to shut down.... done

server stopped

Upgrade and password config completed.

Mon Jan 12 13:40:05 EST 2026 Data migration completed

Removed /etc/systemd/system/multi-user.target.wants/postgresql-12.service.

Reinitializing monit daemon

Mon Jan 12 13:40:53 EST 2026 Deleting postgres 12

Updating Subscription Management repositories.

Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Dependencies resolved.

=====

Package	Arch	Version	Repository	Size
---------	------	---------	------------	------

=====
Removing:

postgresql12	x86_64	12.12-1PGDG.rhel8	@@commandline	8.6 M
postgresql12-contrib	x86_64	12.12-1PGDG.rhel8	@@commandline	2.3 M
postgresql12-libs	x86_64	12.12-1PGDG.rhel8	@@commandline	1.5 M
postgresql12-server	x86_64	12.12-1PGDG.rhel8	@@commandline	21 M

Transaction Summary
=====

Remove 4 Packages

Freed space: 33 M

Running transaction check

Transaction check succeeded.

Running transaction test

Transaction test succeeded.

Running transaction

Preparing	:		1/1
Running scriptlet:	postgresql12-contrib-12.12-1PGDG.rhel8.x86_64		1/1
Erasing	: postgresql12-contrib-12.12-1PGDG.rhel8.x86_64		1/4
Running scriptlet:	postgresql12-server-12.12-1PGDG.rhel8.x86_64		2/4
Erasing	: postgresql12-server-12.12-1PGDG.rhel8.x86_64		2/4
Running scriptlet:	postgresql12-server-12.12-1PGDG.rhel8.x86_64		2/4
Erasing	: postgresql12-12.12-1PGDG.rhel8.x86_64		3/4
Running scriptlet:	postgresql12-12.12-1PGDG.rhel8.x86_64		3/4
Erasing	: postgresql12-libs-12.12-1PGDG.rhel8.x86_64		4/4
Running scriptlet:	postgresql12-libs-12.12-1PGDG.rhel8.x86_64		4/4
Verifying	: postgresql12-12.12-1PGDG.rhel8.x86_64		1/4
Verifying	: postgresql12-contrib-12.12-1PGDG.rhel8.x86_64		2/4
Verifying	: postgresql12-libs-12.12-1PGDG.rhel8.x86_64		3/4
Verifying	: postgresql12-server-12.12-1PGDG.rhel8.x86_64		4/4

Installed products updated.

Removed:

postgresql12-12.12-1PGDG.rhel8.x86_64

postgresql12-contrib-12.12-1PGDG.rhel8.x86_64

postgresql12-libs-12.12-1PGDG.rhel8.x86_64

postgresql12-server-12.12-1PGDG.rhel8.x86_64

Complete!

Mon Jan 12 13:41:00 EST 2026 Using PostgreSQL version 16 for configuration path.

setting idle_in_transaction_session_timeout to 3h

set idle_in_transaction_session_timeout to 3h

Mon Jan 12 13:41:01 EST 2026 Already running influxdb 1.8.3

Mon Jan 12 13:41:04 EST 2026 Already running docker-ce 19.03.15

Mon Jan 12 13:41:04 EST 2026 Restarting services

Mon Jan 12 13:41:34 EST 2026 RPM installation completed

Cisco IoT FND on OVA upgrade is complete.

