# DataStax OpsCenter Tarball Installation on Rocky Linux

## 1. Prerequisites & System Requirements

### Minimum System Requirements

- OS: Rocky Linux 8.x or 9.x (RHEL-compatible)
- RAM: 8 GB minimum, 16 GB recommended
- CPU: 4+ cores
- Disk: 100 GB free space
- Java: OpenJDK 8 or 11 (Corretto recommended for DSE compatibility)

### Network Requirements

bash

### Required ports

- 8888 (OpsCenter web UI)
- 61620 (OpsCenter agent)
- 7199 (JMX - for node management)
- 9042 (CQL - if OpsCenter connects to cluster)
- 22 (SSH - for remote management)

### Install Prerequisites

bash

### Update system

```
sudo dnf update -y
```

### Install required packages

```
sudo dnf install -y \
    java-11-openjdk-devel \
    python3 \
    python3-pip \
    openssl \
    ntp \
    nginx \
    curl \
    wget \
    tar \
    gzip \
    epel-release
```

Install Python dependencies

```
sudo pip3 install psycopg2-binary cryptography
```

Verify Java

```
java -version
```

Create System User & Directories

bash

Create OpsCenter user and group

```
sudo groupadd -r opscenter
sudo useradd -r -s /bin/bash -d /opt/opscenter -g opscenter opscenter
```

Create directory structure

```
sudo mkdir -p /opt/opscenter
sudo mkdir -p /var/log/opscenter
sudo mkdir -p /var/lib/opscenter
sudo mkdir -p /etc/opscenter
```

Set permissions

```
sudo chown -R opscenter:opscenter /opt/opscenter
sudo chown -R opscenter:opscenter /var/log/opscenter
sudo chown -R opscenter:opscenter /var/lib/opscenter
sudo chown -R opscenter:opscenter /etc/opscenter
```

Download & Extract OpsCenter Tarball

bash

Navigate to install directory

```
cd /opt
```

Download OpsCenter tarball (check for latest version)

```
sudo -u opscenter wget https://downloads.datastax.com/enterprise/opscenter-
6.8.9.tar.gz
```

Extract tarball

```
sudo -u opscenter tar -xzvf opscenter-6.8.9.tar.gz
```

Create symlink for easier management

```
sudo -u opscenter ln -s /opt/opscenter-6.8.9 /opt/opscenter/current
```

Clean up

```
sudo -u opscenter rm opscenter-6.8.9.tar.gz
```

Verify extraction

```
ls -la /opt/opscenter/current/
```

Configure OpsCenter

Create Configuration Files

Main configuration file: `/etc/opscenter/opscenterd.conf`
ini
Basic configuration

```
[webserver]
port = 8888
interface = 0.0.0.0


[logging]
level = INFO
log_path = /var/log/opscenter/opscenterd.log

[authentication]
enabled = True

[ssl]
 Uncomment for SSL
 ssl_keyfile = /etc/opscenter/ssl/opscenter.key
 ssl_certfile = /etc/opscenter/ssl/opscenter.pem
 ssl_port = 8443

[agents]
agent_rpc_interface = <your_opscenter_ip>
agent_rpc_broadcast_address = <your_opscenter_ip>
```

```
[stat_reporter]
Disable phone home for internal use
enabled = False

[kerberos]
```

If using Kerberos

```
 enabled = False

[cassandra]
```

Seed nodes for the cluster OpsCenter will manage

```
seed_hosts = 192.168.1.10,192.168.1.11,192.168.1.12
```

Create SSL Certificates (Optional but Recommended)

```
sudo mkdir -p /etc/opscenter/ssl
cd /etc/opscenter/ssl
```

Generate self-signed certificate (for testing)

```
sudo openssl req -x509 -nodes -days 365 -newkey rsa:2048 \
  -keyout opscenter.key -out opscenter.pem \
  -subj "/C=US/ST=State/L=City/O=Organization/CN=opscenter.yourdomain.com"
```

Set permissions

```
sudo chown -R opscenter:opscenter /etc/opscenter/ssl
sudo chmod 600 /etc/opscenter/ssl/*
```

Configure Database (PostgreSQL for OpsCenter)

bash

```
 Install PostgreSQL 16
sudo dnf install -y https://download.postgresql.org/pub/repos/yum/reporpms/EL-8-
x86_64/pgdg-redhat-repo-latest.noarch.rpm
sudo dnf -qy module disable postgresql
sudo dnf install -y postgresql16 postgresql16-server
```

Initialize database

```
sudo /usr/pgsql-13/bin/postgresql-16-setup initdb
```

Start PostgreSQL

```
sudo systemctl enable postgresql-13
sudo systemctl start postgresql-13
```

Create OpsCenter database and user

```
CREATE USER opscenter WITH PASSWORD 'StrongPassword123!';
CREATE DATABASE opscenter_db WITH OWNER opscenter ENCODING 'UTF8'
LC_COLLATE='en_US.UTF-8' LC_CTYPE='en_US.UTF-8' TEMPLATE template0;
GRANT ALL PRIVILEGES ON DATABASE opscenter_db TO opscenter;
\c opscenter_db
CREATE EXTENSION IF NOT EXISTS "uuid-ossp";
```

Configure PostgreSQL for OpsCenter

OpsCenter specific settings

```
max_connections = 200
shared_buffers = 256MB
effective_cache_size = 1GB
work_mem = 8MB
maintenance_work_mem = 64MB
checkpoint_completion_target = 0.9
wal_buffers = 16MB
default_statistics_target = 100
```

Configure authentication

OpsCenter connection

```
host    opscenter_db    opscenter    127.0.0.1/32    scram-sha-256
host    opscenter_db    opscenter    ::1/128         scram-sha-256
```

Restart PostgreSQL

```
sudo systemctl restart postgresql-16
```

Test connection

```
psql -h localhost -U opscenter -d opscenter_db -W
```

Configure Systemd Service

```
Create service file: `/etc/systemd/system/opscenterd.service`
```

**[Unit]**
**Description=DataStax OpsCenter**
**After=network.target postgresql-13.service**
**Wants=postgresql-13.service**

**[Service]**
**Type=simple**
**User=opscenter**
**Group=opscenter**
**Environment="OPSCENTER_HOME=/opt/opscenter/current"**
**Environment="OPSCENTER_CONF=/etc/opscenter"**
**Environment="JAVA_HOME=/usr/lib/jvm/jre-11-openjdk"**
**Environment="PATH=/usr/lib/jvm/jre-11-openjdk/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"**

**WorkingDirectory=/opt/opscenter/current**
**ExecStart=/opt/opscenter/current/bin/opscenter -f**
**Restart=on-failure**
**RestartSec=10**
**LimitNOFILE=100000**
**LimitMEMLOCK=infinity**
**LimitNPROC=32768**
**LimitAS=infinity**
**StandardOutput=journal**
**StandardError=journal**

**Security hardening**
**PrivateTmp=yes**
**NoNewPrivileges=yes**
**ProtectSystem=strict**
**ReadWritePaths=/var/log/opscenter /var/lib/opscenter**
**ReadOnlyPaths=/**
**PrivateDevices=yes**

**[Install]**
**WantedBy=multi-user.target**

Reload systemd and enable service:

```
sudo systemctl daemon-reload
sudo systemctl enable opscenterd.service
```

Configure Firewall

Configure firewalld (Rocky Linux default)
**sudo firewall-cmd --permanent --add-port=8888/tcp**
**sudo firewall-cmd --permanent --add-port=61620/tcp**
**sudo firewall-cmd --permanent --add-port=8443/tcp  If using SSL**
**sudo firewall-cmd --reload**

Start & Verify OpsCenter

Start OpsCenter

```
sudo systemctl start opscenterd
```

Check status

```
sudo systemctl status opscenterd
```

Initial Setup via Web UI

1. Access OpsCenter: Open browser to **`http://<your-server-ip>:8888`**
2. First-time setup:
   - Choose "Install OpsCenter without an existing database"
   - Configure admin user/password
   - Connect to your DSE cluster using seed nodes
3. Configure cluster:
   - Add cluster credentials (username/password for DSE nodes)
   - Configure SSH keys for agent installation
   - Install OpsCenter agents on DSE nodes