

SonarQube Installation — Amazon Linux 2023 (FULL FIXED GUIDE)

0 EC2 Prerequisites

Instance:

t3.medium or higher

Security Group inbound rule:

Custom TCP | Port 9000 | Anywhere (0.0.0.0/0)

1 Update System

```
sudo dnf update -y
```

2 Install Java 17 (VERY IMPORTANT)

SonarQube fails with Java 21.

```
sudo dnf install java-17-amazon-corretto -y
```

Set Java 17 as default:

```
sudo alternatives --config java
```

Verify:

```
java -version
```

Must show:

17.x

3 Install PostgreSQL

```
sudo dnf install postgresql15 postgresql15-server -y
```

 On Amazon Linux 2023 **initdb may already be done.**

If you get:

```
data directory not empty
```

 Ignore and continue.

Start DB:

```
sudo systemctl enable postgresql
sudo systemctl start postgresql
```

4 FIX PostgreSQL Authentication (CRITICAL)

Edit:

```
sudo vi /var/lib/pgsql/data/pg_hba.conf
```

Change ONLY these lines:

```
local    all    all                      md5
host     all    all    127.0.0.1/32      md5
```

```
host      all      all      ::1/128                      md5
```

Restart DB:

```
sudo systemctl restart postgresql
```

5 Create SonarQube Database + Permissions (CRITICAL FIX)

```
sudo -i -u postgres
psql
```

Run:

```
CREATE DATABASE sonarqube;
CREATE USER sonar WITH ENCRYPTED PASSWORD 'StrongPassword';

ALTER DATABASE sonarqube OWNER TO sonar;
GRANT ALL ON DATABASE sonarqube TO sonar;
```

```
\c sonarqube
```

```
GRANT ALL ON SCHEMA public TO sonar;
ALTER SCHEMA public OWNER TO sonar;
```

```
\q
exit
```

👉 These schema permissions fix the error:

```
permission denied for schema public
```

**6**

Kernel Settings (Elasticsearch requirement)

```
sudo vi /etc/sysctl.conf
```

Add:

```
vm.max_map_count=524288  
fs.file-max=131072
```

Apply:

```
sudo sysctl -p
```

Limits:

```
sudo vi /etc/security/limits.conf
```

Add:

```
sonar    -    nofile    131072  
sonar    -    nproc      8192
```

**7**

Install SonarQube

```
cd /opt  
sudo wget https://binaries.sonarsource.com/Distribution/sonarqube/sonarqube-25.1.0.102122.zip  
sudo dnf install unzip -y  
sudo unzip sonarqube-25*.zip  
sudo mv sonarqube-25* sonarqube
```

Create user:

```
sudo useradd sonar  
sudo chown -R sonar:sonar /opt/sonarqube
```

8 Configure SonarQube Database

```
sudo vi /opt/sonarqube/conf/sonar.properties
```

Uncomment/add:

```
sonar.jdbc.username=sonar  
sonar.jdbc.password=StrongPassword  
sonar.jdbc.url=jdbc:postgresql://localhost/sonarqube  
sonar.web.host=0.0.0.0
```

9 Force Java 17 for SonarQube (Amazon Linux Fix)

```
sudo vi /opt/sonarqube/bin/linux-x86-64/sonar.sh
```

Add at top:

```
export JAVA_HOME=/usr/lib/jvm/java-17-amazon-corretto
```

10 Create SonarQube Service

```
sudo vi /etc/systemd/system/sonarqube.service
```

Paste:

```
[Unit]  
Description=SonarQube service  
After=network.target
```

```
[Service]
Type=forking
User=sonar
Group=sonar
ExecStart=/opt/sonarqube/bin/linux-x86-64/sonar.sh start
ExecStop=/opt/sonarqube/bin/linux-x86-64/sonar.sh stop
LimitNOFILE=131072
LimitNPROC=8192
Restart=always
```

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

Reload:

```
sudo systemctl daemon-reload
```

1 Start SonarQube

```
sudo systemctl enable sonarqube
sudo systemctl start sonarqube
```

Check:

```
sudo systemctl status sonarqube
```

2 Verify Port Listening

```
sudo ss -tulnp | grep 9000
```

Expected:

```
0.0.0.0:9000
```

Access SonarQube

Open:

<http://EC2-PUBLIC-IP:9000>

Login:

admin / admin

Troubleshooting Quick Map (from your real errors)

Error	Fix
403 download	Use 25.x community build
Java 21 detected	Install Java 17
Ident authentication failed	Change pg_hba.conf to md5
permission denied schema public	Grant schema ownership
connection refused	Open port 9000 + sonar.web.host

Want the REAL DevOps production version?

Your setup right now is **lab style**.