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# Alternative Solutions for PostgreSQL Service Failure and Detailed Explanation of the Issue



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When encountering a “Job for postgresql-12.service failed” error on RHEL, there can be various reasons behind the failure. Let’s explore alternative solutions and delve into the potential causes of the issue in detail.



## Potential Causes of PostgreSQL Service Failure

### 1. Incorrect Data Directory Permissions

Improper permissions on the PostgreSQL data directory can prevent the service from starting. PostgreSQL requires specific permissions on its data directory to function correctly.

## 2. Configuration Errors

Mistakes in the `postgresql.conf` or `pg_hba.conf` configuration files can lead to service failure. Incorrect settings related to replication, authentication, or other parameters can cause the service to fail during startup.

## 3. Port Conflict

If another service is using the default PostgreSQL port (5432), it can prevent PostgreSQL from starting.

## 4. Insufficient Resources

If the server doesn't have enough memory or CPU resources, PostgreSQL might fail to start.

## Alternative Solutions

### 1. Check Data Directory Permissions

Ensure that the PostgreSQL data directory has the correct permissions:

```
sudo chown -R postgres:postgres /var/lib/pgsql/12/data/  
sudo chmod 700 /var/lib/pgsql/12/data/
```

### 2. Validate Configuration Files

Check the `postgresql.conf` and `pg_hba.conf` files for any syntax errors or incorrect settings:

```
sudo -u postgres postgresql-12 --check
```

Review the output for any error messages or warnings that could indicate a problem with the configuration files.

### 3. Check Port Availability

Verify if the default PostgreSQL port (5432) is being used by another service:

```
sudo netstat -tuln | grep 5432
```

If another service is using port 5432, you'll need to either stop that service or reconfigure PostgreSQL to use a different port.

## 4. Inspect System Logs

Examine the system logs for any clues or error messages related to PostgreSQL:

```
journalctl -xe | grep postgresql-12
```

Reviewing the logs can provide valuable insights into what might be causing the service to fail.

## 5. Test Configuration and Start Service Manually

You can test the PostgreSQL configuration for syntax errors and start the service manually to see if it provides any error messages:

```
sudo -u postgres postgresql-12 --config-file=/var/lib/pgsql/12/data/postgresql.
```

## Detailed Explanation of the Issue

The “Job for postgresql-12.service failed” error message indicates that the systemd service control process exited with an error code, preventing the PostgreSQL service from starting. This error can be due to various reasons, as mentioned above.

- **Data Directory Permissions:** PostgreSQL requires specific permissions on its data directory to ensure data integrity and security. Incorrect permissions can prevent the service from accessing the necessary files, leading to a startup failure.
- **Configuration Errors:** Incorrect settings in the `postgresql.conf` or `pg_hba.conf` files can cause the service to fail during startup. These files control various

aspects of PostgreSQL's behavior, including replication, authentication, and connection settings.

- **Port Conflict:** If another service is using the default PostgreSQL port (5432), it can prevent PostgreSQL from binding to that port, leading to a startup failure.
- **Insufficient Resources:** If the server doesn't have enough memory or CPU resources, PostgreSQL might fail to start due to resource constraints.

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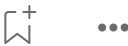


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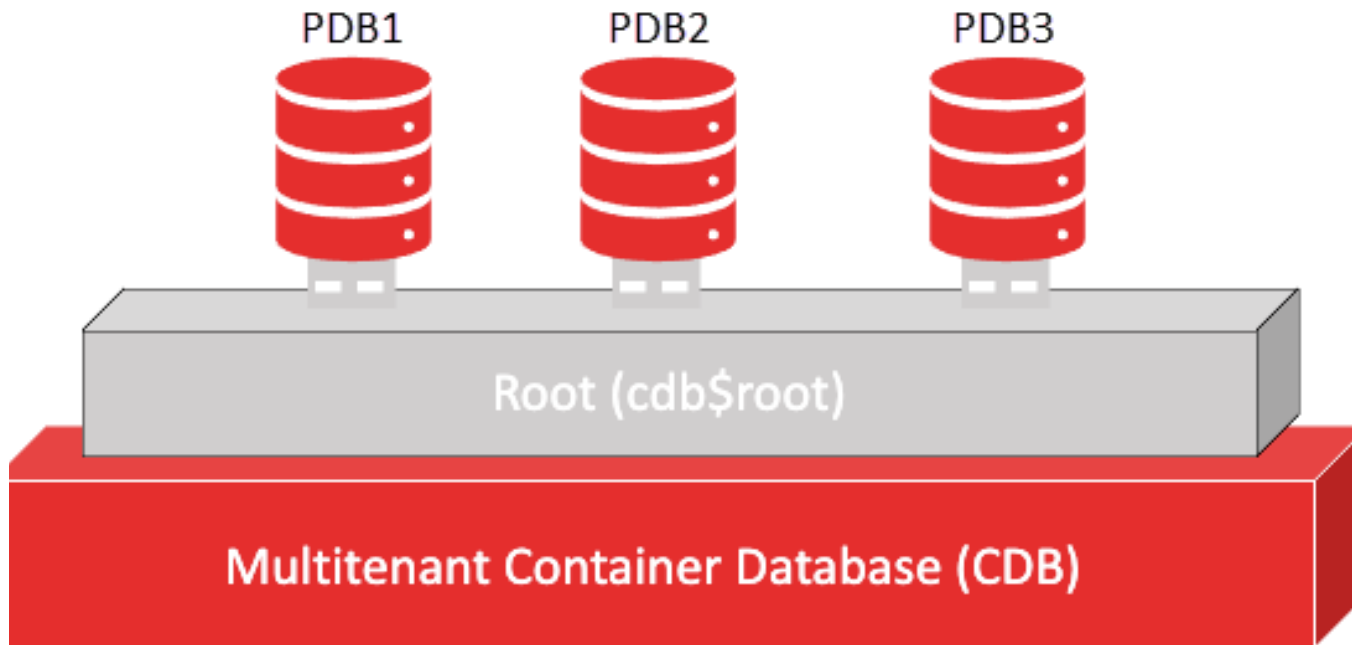
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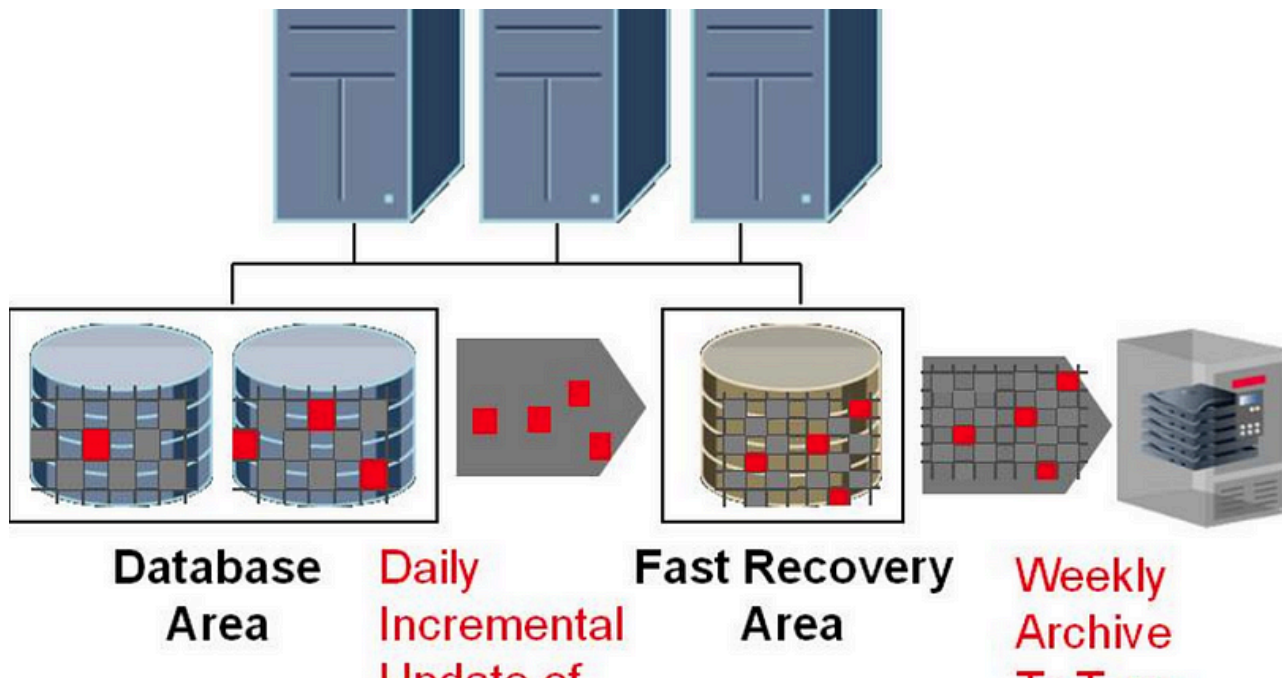
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----- - create pluggable database pdb1 admin user root identified by test123; alter pluggable database...



May 12, 2023





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rman target / rman target sys/password@YDKTST; backup database; backup database format '/backup/path/%d\_%t\_%s.rman'; backup tablespace...



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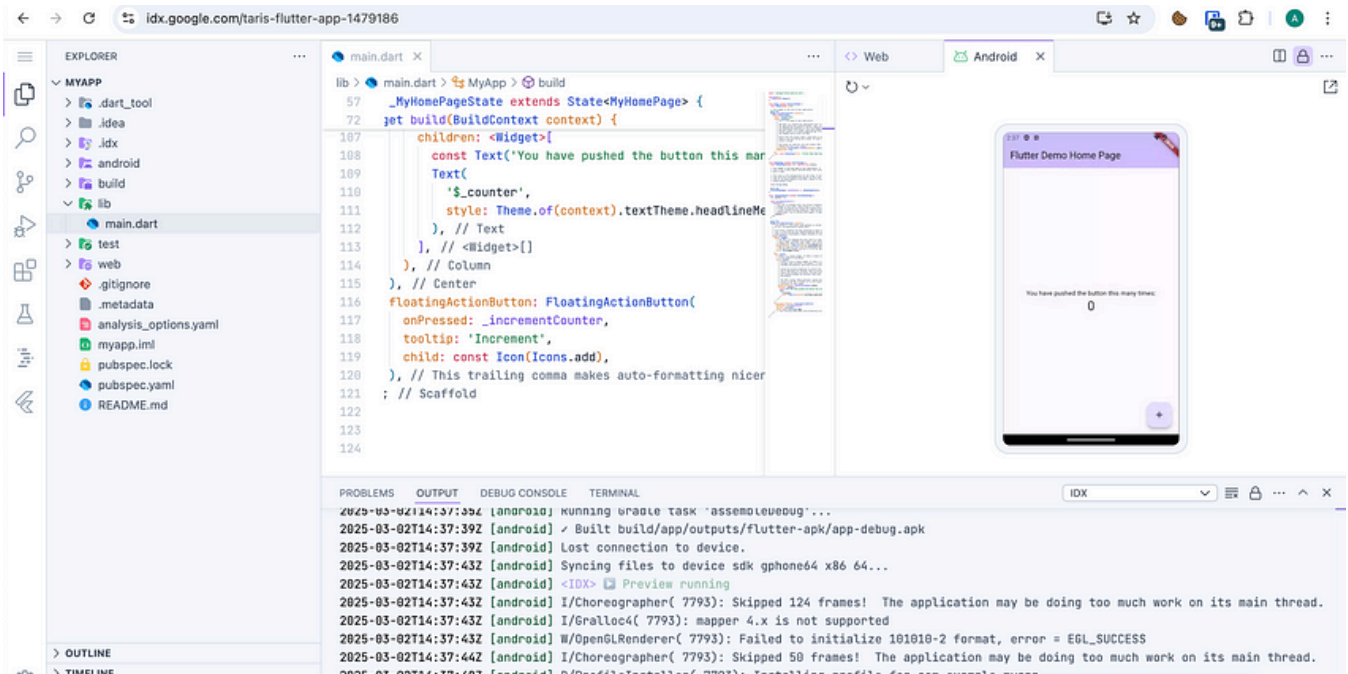
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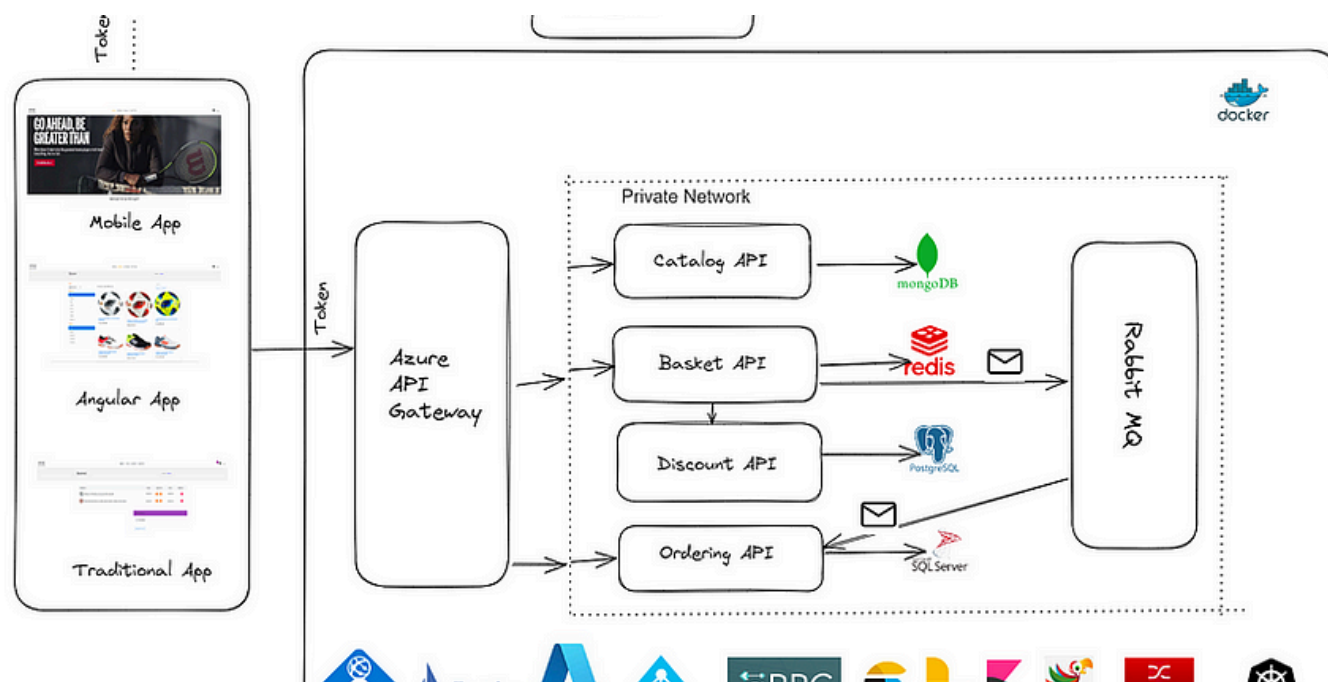


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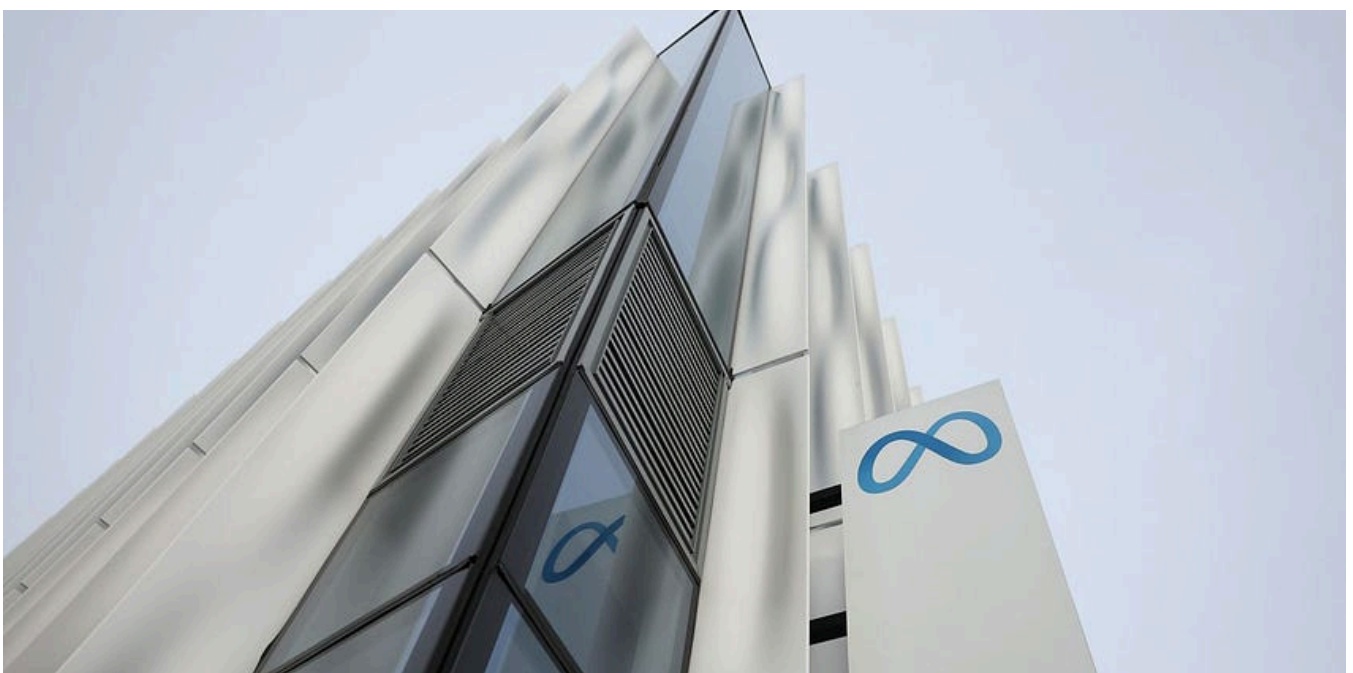


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