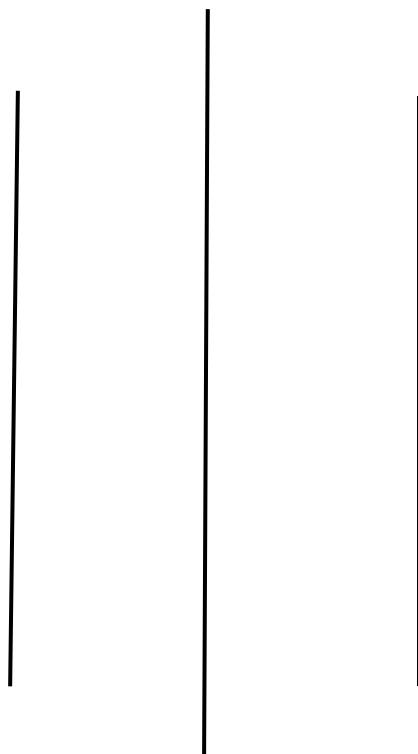




## Disaster Recovery Drill of Global Remit

Global IME Bank, Kamalpokhari



2023

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# **Disaster Recovery Drill of Global Remit**

**Date:** 24<sup>th</sup> Aug, 2023 to 26<sup>th</sup> Aug, 2023

**Location:** Digital Banking Department, Kamalpokhari, Kathmandu

**Participants:** Yubaraj Shresstha (Digital Banking Department), Ishwor Prasad Chalise (Digital Banking Department), Rajanish Mahato (Techmind Solution), Nishchal Poudyal (IT Network), Sanjay Dangol (IT network), Basanta Gotame Khatri (System Admin - IT), Rajshree Rawal, Malika Bataju and Samjhana Thapa (Remittance Department)

**Objective:** System recovery from DR Server in case of primary server failure

## **Scenario:**

Disaster recovery of a Global Remit system involves the processes, procedures, and actions taken to restore a system to normal operation after a significant disruption or disaster. This disruption could be caused by various factors, such as hardware failure, software malfunction, cyberattacks, natural disasters, or human errors. An effective disaster recovery plan ensures that critical business processes and data can be recovered and restored with minimal downtime and data loss.

Streaming data replication with PostgreSQL 9.6 is used to maintain the data replication at standby server at Bhairahawa and primary server is hosted at Silverlining data center in physical server. The application context is replicated using SFTP in schedule.

## **Recovery Steps:**

1. **Communication:** Notified to Remittance Department, Receiving Partners and Paying Partners

### **2. Infrastructure Setup:**

#### **Phase I : DC convert to standby and DR to primary server**

- i> Connection at DR CBS from HRIS (192.168.101.35) server at port 1521  
port for DR CBS view connection
- ii> Connection at DR CBS from Online Banking Server (192.168.126.23) at  
port 1521 for DR CBS account statement view

- iii> DR application server IP (192.168.201.80) whitelist at Connect 24
- iv> SSH access 192.168.126.80 ⇄ 192.168.201.80 and 192.168.126.81 ⇄ 192.168.201.81
- v> Port 5432 access at 192.168.126.81 ⇄ 192.168.201.81
- vi> ISO port 20421 at 192.168.103.13 from 192.168.201.80
- vii> Shutdown the application services and scheduler jobs
  - /usr/tomcat/bin/shutdown.sh
  - /usr/tomcat\_8/bin/shutdown.sh
  - /usr/tomcat\_website/bin/shutdown.sh
- viii> Update the Utilities.class and globalWebService.war (Received fromTechmind Solution) file with private ip of DR (DB: 192.168.201.81 and ISO IP 192.168.103.13) in database connection at
  - /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/util/ and
  - /usr/tomcat/webapps/
- ix> Domain mapping change to DR [www.globalremit.net](http://www.globalremit.net) => DC: 192.168.126.80 to DR: 192.168.201.80 and update in AD
- x> Take the backup of Global remit database (DC)
- xi> Update pg\_hba.conf at DR
  - >su - postgres
  - >cd /var/lib/pgsql/9.6/data
  - host all postgres 192.168.201.80 255.255.255.0 trust
  - host replication repuser 192.168.126.81 255.255.255.0 trust
- xii> Update postgresql.conf at DC to make the DC standby server
  - listen\_addresses='\*'
  - hot\_standby = on
- xiii> Update postgresql.conf at DR to make the DC primary server
  - listen\_addresses='\*'
  - #hot\_standby = on

- xiv> Create recovery.conf at DC or copy from DR to make the DC in recover state and in stand by mode
- ```
->cd /var/lib/pgsql/9.6/data
->scp -r root@192.168.201.81: /var/lib/pgsql/9.6/data/recovery.conf .
->vi recovery.conf
```
- standby\_mode = 'on'
- primary\_conninfo = 'user=repuser host=192.168.201.81 port=5432  
sslmode=prefer sslcompression=1 krbsrvname=postgres'
- primary\_slot\_name = 'standby1'
- xv> Move the recovery.conf at DR as mv recovery.conf recovery.conf\_24Aug2023
- xvi> Create replication slot at new primary (i.e DR 192.168.201.81 ) as
- ```
->su – postgres
->psql
select * from pg_create_physical_replication_slot('standby1');
select slot_name, restart_lsn from pg_replication_slots;
```
- xvii> Confirm new standby server (DC 192.168.126.81) is in recovery mode then restart the replication slot and resume the replication
- ```
select pg_is_in_recovery();
select slot_name, restart_lsn from pg_replication_slots;
select pg_xlog_replay_resume();
```
- xviii> Restart the PostgreSQL service at both DC and DR
- ```
systemctl restart postgresql-9.6.service
systemctl status postgresql-9.6.service
```
- xix> Start the application services at new primary server (DC)
- ```
/usr/tomcat/bin/startup.sh
/usr/tomcat_8/bin/sstartup.sh
/usr/tomcat_website/bin/startup.sh
```

## Phase II : DC convert to primary and DR to standby server

- i> Shutdown the application services and scheduler jobs
  - /usr/tomcat/bin/shutdown.sh
  - /usr/tomcat\_8/bin/shutdown.sh
  - /usr/tomcat\_website/bin/shutdown.sh
- ii> Domain mapping change to DR [www.globalremit.net](http://www.globalremit.net) => DC:  
192.168.201.80 to DR: 192.168.126.80 and update in AD
- iii> Take the backup of Global remit database (DC)
- iv> Update pg\_hba.conf at DC
  - >su - postgres
  - >cd /var/lib/pgsql/9.6/data
  - host all postgres 192.168.126.80 255.255.255.0 trust
  - host replication repuser 192.168.201.81 255.255.255.0 trust
- v> Update postgresql.conf at DC
  - listen\_addresses='\*'
  - #hot\_standby = on
- vi> Update postgresql.conf at DR
  - listen\_addresses='\*'
  - hot\_standby = on
- vii> Copy recovery.conf\_24Aug2023 to recovery.conf at DR
  - > cp -a recovery.conf\_24Aug2023 recovery.conf
  - >vi recovery.conf --- **confirm the below configuration**
  - standby\_mode = 'on'
  - primary\_conninfo = 'user=repuser host=192.168.126.81 port=5432 sslmode=prefer sslcompression=1 krbsrvname=postgres'
  - primary\_slot\_name = 'standby1'
- viii> Move the recovery.conf at DC as mv recovery.conf recovery.conf\_26Aug2023
- ix> Create replication slot at new primary (i.e DR 192.168.201.81 ) as

```

->su - postgres
->psql
    select * from pg_create_physical_replication_slot('standby1');
    select slot_name, restart_lsn from pg_replication_slots;
x> Confirm new standby server (DC 192.168.201.81) is in recovery mode
    then restart the replication slot and resume the replication

```

```

select pg_is_in_recovery();
select slot_name, restart_lsn from pg_replication_slots;
select pg_xlog_replay_resume();
xi> Restart the PostgreSQL service at both DC and DR
    systemctl restart postgresql-9.6.service
    systemctl status postgresql-9.6.service
xii> Start the application services at new primary server (DC)
    /usr/tomcat/bin/startup.sh
    /usr/tomcat_8/bin/sstartup.sh
    /usr/tomcat_website/bin/startup.sh

```

### **3. Testing:**

```

->tail -f /usr/tomcat/logs/catalina.out
->tail -f /usr/tomcat_8/logs/catalina.out
->tail -f /usr/tomcat_website/logs/catalina.out
->netstat -nltp
->ps -ef | grep java

```

### **4.Validation:**

| <b>Phase I :Data Verification before DC conversion to Standby server and vice versa</b> |                                       |                                     |
|-----------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------|
| <b>Table Name</b>                                                                       | <b>192.168.126.81 (DC) Read/Write</b> | <b>192.168.201.81(DR) Read Only</b> |
| <b>REMITTANCE_INFO</b>                                                                  | 12327987                              | 12327987                            |
| <b>USERS</b>                                                                            | 1448                                  | 1448                                |
| <b>ACCOUNT_OPEN</b>                                                                     | 1139                                  | 1139                                |
| <b>AUDIT_REMIT</b>                                                                      | 68277552                              | 68277552                            |

|                       |         |         |
|-----------------------|---------|---------|
| <b>AGENT_MST</b>      | 5826    | 5826    |
| <b>ISO_ERROR_DESC</b> | 26      | 26      |
| <b>IPS_BRANCH</b>     | 5601    | 5601    |
| <b>IPS_BANK</b>       | 51      | 51      |
| <b>BRANCH</b>         | 7256    | 7256    |
| <b>BANK</b>           | 195     | 195     |
| <b>OFAC_LIST</b>      | 2408308 | 2408308 |

| <b>Phase I : Data Verification after DC conversion to Standby server and vice versa</b> |                                      |                                          |
|-----------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------|
| <b>Table Name</b>                                                                       | <b>192.168.126.81 (DC) Read Only</b> | <b>192.168.201.81(DR)<br/>Read/Write</b> |
| <b>REMITTANCE_INFO</b>                                                                  | 12327990                             | 12327990                                 |
| <b>USERS</b>                                                                            | 1448                                 | 1448                                     |
| <b>ACCOUNT_OPEN</b>                                                                     | 1139                                 | 1139                                     |
| <b>AUDIT_REMIT</b>                                                                      | 68277660                             | 68277660                                 |
| <b>AGENT_MST</b>                                                                        | 5826                                 | 5826                                     |
| <b>ISO_ERROR_DESC</b>                                                                   | 26                                   | 26                                       |
| <b>IPS_BRANCH</b>                                                                       | 5601                                 | 5601                                     |
| <b>IPS_BANK</b>                                                                         | 51                                   | 51                                       |
| <b>BRANCH</b>                                                                           | 7256                                 | 7256                                     |
| <b>BANK</b>                                                                             | 195                                  | 195                                      |
| <b>OFAC_LIST</b>                                                                        | 2408308                              | 2408308                                  |

| <b>Phase II: Data Verification before DC conversion to primary server and vice versa</b> |                                                    |                                                |
|------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------|
| <b>Table Name</b>                                                                        | <b>192.168.126.81<br/>(Primary)<br/>Read/Write</b> | <b>192.168.201.81(Secondary)<br/>Read Only</b> |
| <b>REMITTANCE_INFO</b>                                                                   | 12336106                                           | 12336106                                       |
| <b>USERS</b>                                                                             | 1448                                               | 1448                                           |
| <b>ACCOUNT_OPEN</b>                                                                      | 1139                                               | 1139                                           |
| <b>AUDIT_REMIT</b>                                                                       | 68791448                                           | 68791448                                       |
| <b>AGENT_MST</b>                                                                         | 5826                                               | 5826                                           |
| <b>ISO_ERROR_DESC</b>                                                                    | 26                                                 | 26                                             |
| <b>IPS_BRANCH</b>                                                                        | 5601                                               | 5601                                           |
| <b>IPS_BANK</b>                                                                          | 51                                                 | 51                                             |
| <b>BRANCH</b>                                                                            | 7256                                               | 7256                                           |
| <b>BANK</b>                                                                              | 195                                                | 195                                            |
| <b>OFAC_LIST</b>                                                                         | 2408308                                            | 2408308                                        |

| <b>Phase II: Data Verification after DC conversion to primary server and vice versa</b> |                                                    |                                                |
|-----------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------|
| <b>Table Name</b>                                                                       | <b>192.168.126.81<br/>(Primary)<br/>Read/Write</b> | <b>192.168.201.81(Secondary)<br/>Read Only</b> |
| <b>REMITTANCE_INFO</b>                                                                  | 12336106                                           | 12336106                                       |
| <b>USERS</b>                                                                            | 1448                                               | 1448                                           |
| <b>ACCOUNT_OPEN</b>                                                                     | 1139                                               | 1139                                           |
| <b>AUDIT_REMIT</b>                                                                      | 68791448                                           | 68791448                                       |
| <b>AGENT_MST</b>                                                                        | 5826                                               | 5826                                           |
| <b>ISO_ERROR_DESC</b>                                                                   | 26                                                 | 26                                             |
| <b>IPS_BRANCH</b>                                                                       | 5601                                               | 5601                                           |
| <b>IPS_BANK</b>                                                                         | 51                                                 | 51                                             |
| <b>BRANCH</b>                                                                           | 7256                                               | 7256                                           |
| <b>BANK</b>                                                                             | 195                                                | 195                                            |
| <b>OFAC_LIST</b>                                                                        | 2408308                                            | 2408308                                        |

**5.User Verification:** Remittance Department team had verified the functionality of the application after the application was started from DR server. Global Remit's transaction status was fetched from Global IME Bank's website.

#### **Lessons Learned:**

- i. NCHL Root, Intermediate and public certificate have to re-trust in JAVA for IPS transaction re-push from the menu “Auto IPS transaction after Validation”

```
->/usr/local/java_8/bin/keytool -import -keystore
/usr/local/java_8/jre/lib/security/cacerts -file
/home/yubaraj/NCHL_certs/nchlrootca_2022.crt -alias nchlroot

->/usr/local/java_8/bin/keytool -import -keystore
/usr/local/java_8/jre/lib/security/cacerts -file
/home/yubaraj/NCHL_certs/182.93.93.107.cer -alias nchlintermediate

->/usr/local/java_8/bin/keytool -import -keystore
/usr/local/java_8/jre/lib/security/cacerts -file
```

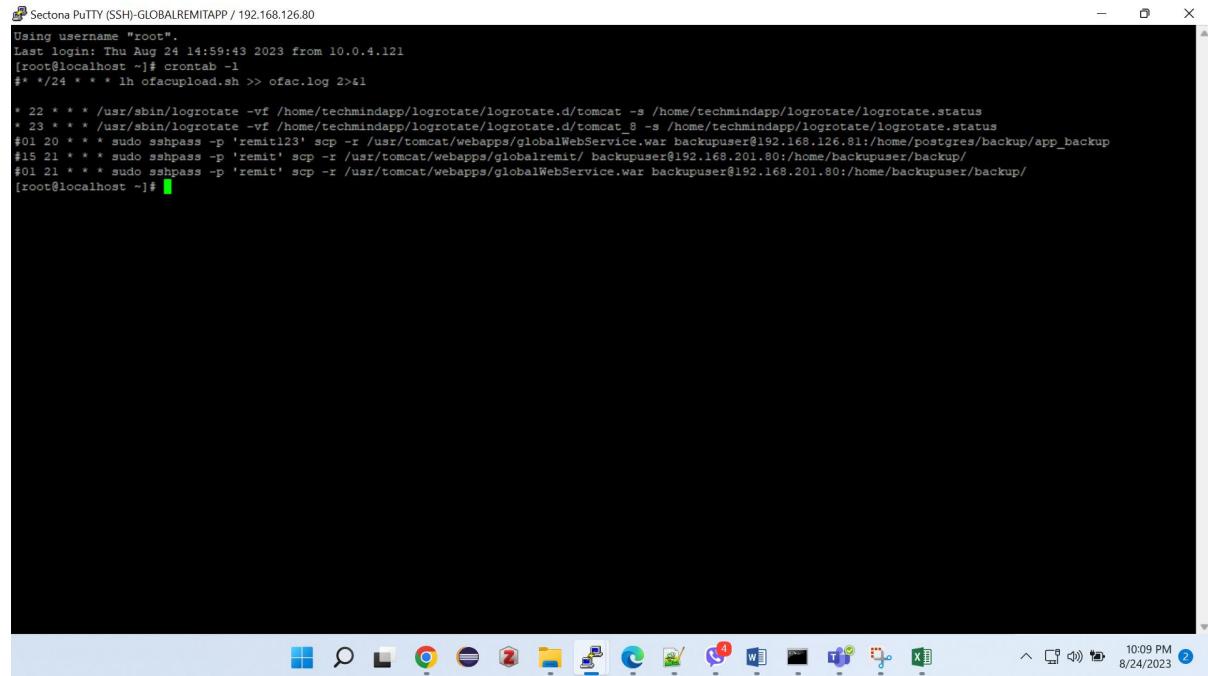
```
/home/yubaraj/NCHL_certs/nchlissuerca_2022.crt -alias nchl
```

- ii. Need to confirm the access at nspservices.imeltd-remit.net (110.74.137.166) at port 4433 from DR application server (192.168.201.80) for IME remit API access for sending and paying the transaction of IME remit
- iii. Need to confirm that the Global Remit's (DR: 192.168.201.80) API at port 8444 is accessible from Global IME Bank website [www.globalimebank.com](http://www.globalimebank.com) (192.168.214.25)

**Conclusion:** It was found that we can successfully run the Global Remit from DR server with streaming data replication in case of disaster or maintenance at primary server. The DC's server had been restart to kill all the idle process after the application had been started from DR servers.

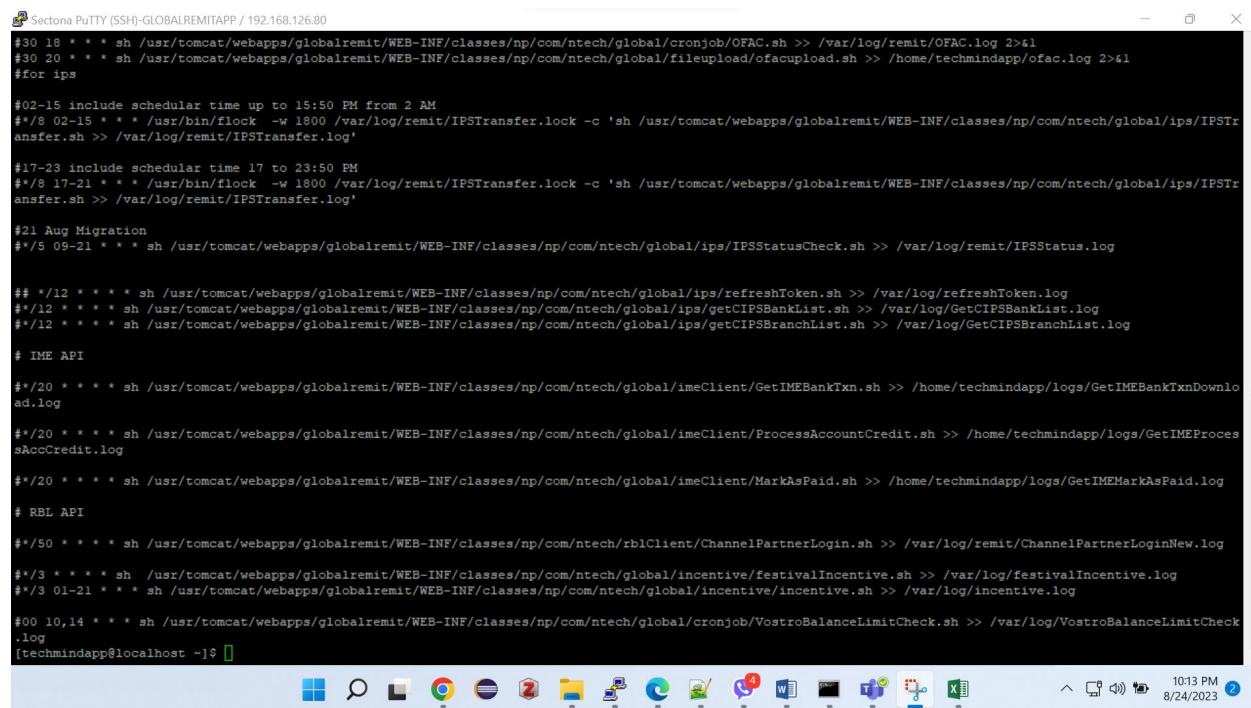
All the snapshots of DR Drill are available at Annex I (DC convert to standby and DR to primary server) and Annex II (DC convert to primary and DR to standby server).

## Annex I



```
Using username "root".
Last login: Thu Aug 24 14:59:43 2023 from 10.0.4.121
[root@localhost ~]# crontab -l
#*/24 * * * * lh ofacupload.sh >> ofac.log 2>&1

* 22 * * * /usr/sbin/logrotate -vf /home/techmindapp/logrotate/logrotate.d/tomcat -s /home/techmindapp/logrotate/logrotate.status
* 23 * * * /usr/sbin/logrotate -vf /home/techmindapp/logrotate/logrotate.d/tomcat_8 -s /home/techmindapp/logrotate/logrotate.status
#01 20 * * * sudo sshpass -p 'remit123' scp -r /usr/tomcat/webapps/globalWebService.war backupuser@192.168.126.81:/home/postgres/backup/app_backup
#01 21 * * * sudo sshpass -p 'remit' scp -r /usr/tomcat/webapps/globalremit/ backupuser@192.168.201.80:/home/backupuser/backup/
#01 21 * * * sudo sshpass -p 'remit' scp -r /usr/tomcat/webapps/globalWebService.war backupuser@192.168.201.80:/home/backupuser/backup/
[root@localhost ~]#
```



```
#00 18 * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/cronjob/OFAC.sh >> /var/log/remit/OFAC.log 2>&1
#00 20 * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/fileupload/ofacupload.sh >> /home/techmindapp/ofac.log 2>&1
#for ips

#02-15 include scheduled time up to 15:50 PM from 2 AM
#*/8 02-15 * * * /usr/bin/flock -w 1800 /var/log/remit/IPSTransfer.lock -c 'sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/ips/IPSTransfer.sh >> /var/log/remit/IPSTransfer.log'

#17-23 include scheduled time 17 to 23:50 PM
#*/8 17-21 * * * /usr/bin/flock -w 1800 /var/log/remit/IPSTransfer.lock -c 'sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/ips/IPSTransfer.sh >> /var/log/remit/IPSTransfer.log'

#21 Aug Migration
#*/5 09-21 * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/ips/IPSStatusCheck.sh >> /var/log/remit/IPSSStatus.log

## */12 * * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/ips/refreshToken.sh >> /var/log/refreshToken.log
## */12 * * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/ips/getCIPSBankList.sh >> /var/log/GetCIPSBankList.log
## */12 * * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/ips/getCIPSBBranchList.sh >> /var/log/GetCIPSBBranchList.log

# IME API
#*/20 * * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/imeClient/GetIMEBankTxn.sh >> /home/techmindapp/logs/GetIMEBankTxnDownload.log

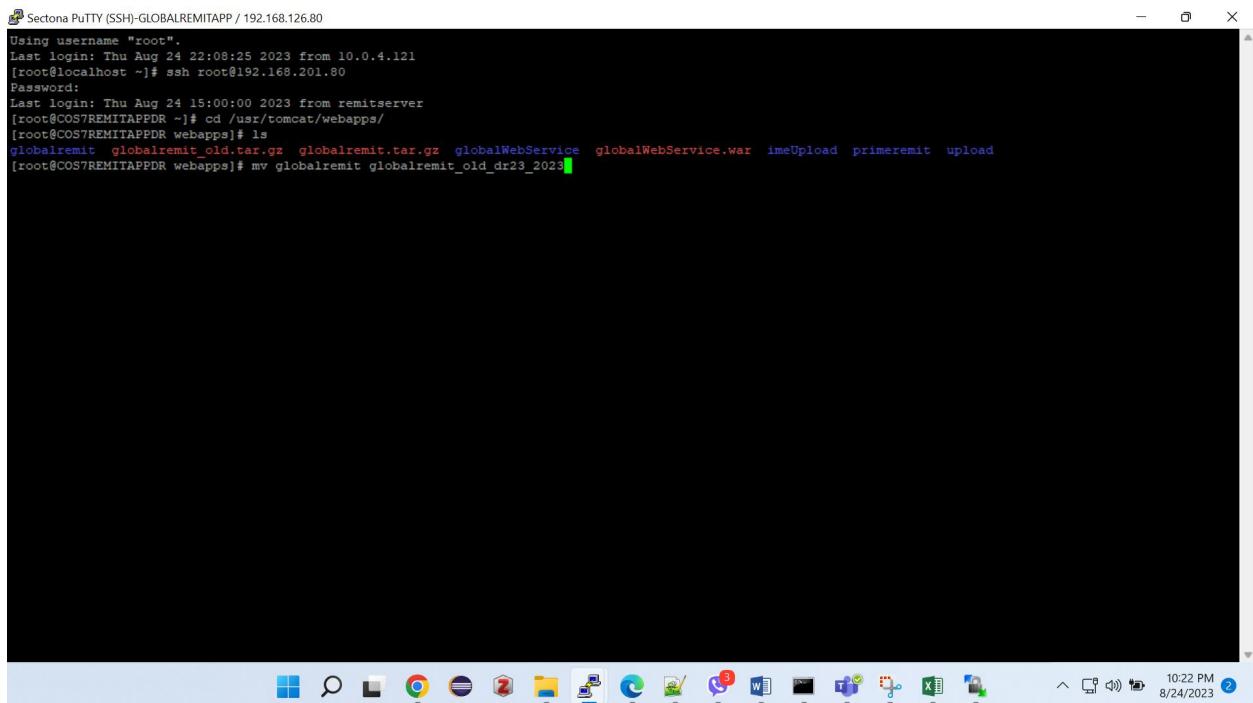
#*/20 * * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/imeClient/ProcessAccountCredit.sh >> /home/techmindapp/logs/GetIMEProcessCredit.log

#*/20 * * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/imeClient/MarkAsPaid.sh >> /home/techmindapp/logs/GetIMEMarkAsPaid.log

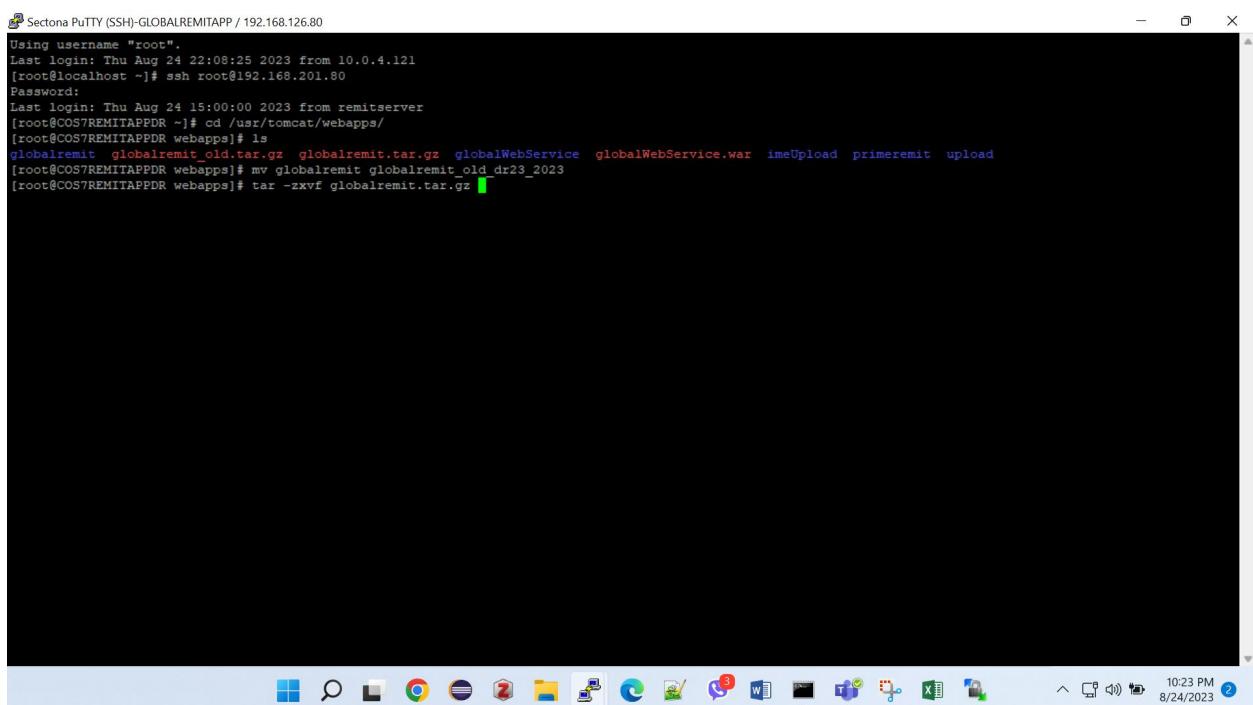
# RBL API
#*/50 * * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/rblClient/ChannelPartnerLogin.sh >> /var/log/remit/ChannelPartnerLoginNew.log
#*/3 * * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/incentive/festivalIncentive.sh >> /var/log/festivalIncentive.log
#*/3 01-21 * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/incentive/incentive.sh >> /var/log/incentive.log

#00 10,14 * * * sh /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/cronjob/VostroBalanceLimitCheck.sh >> /var/log/VostroBalanceLimitCheck.log
[techmindapp@localhost ~]$
```





```
Using username "root".
Last login: Thu Aug 24 22:08:25 2023 from 10.0.4.121
[root@localhost ~]# ssh root@192.168.201.80
Password:
Last login: Thu Aug 24 15:00:00 2023 from remitserver
[root@COS7REMITAPPDR ~]# cd /usr/tomcat/webapps/
[root@COS7REMITAPPDR webapps]# ls
globalremit globalremit_old.tar.gz globalremit.tar.gz globalWebService.war imUpload primeremit upload
[root@COS7REMITAPPDR webapps]# mv globalremit globalremit_old_dr23_2023
```



```
Using username "root".
Last login: Thu Aug 24 22:08:25 2023 from 10.0.4.121
[root@localhost ~]# ssh root@192.168.201.80
Password:
Last login: Thu Aug 24 15:00:00 2023 from remitserver
[root@COS7REMITAPPDR ~]# cd /usr/tomcat/webapps/
[root@COS7REMITAPPDR webapps]# ls
globalremit globalremit_old.tar.gz globalremit.tar.gz globalWebService.war imUpload primeremit upload
[root@COS7REMITAPPDR webapps]# mv globalremit globalremit_old_dr23_2023
[root@COS7REMITAPPDR webapps]# tar -zxfv globalremit.tar.gz
```

Update the new ISO and Utilities files with the connection of DR database and ISO

```

Sectona Putty (SSH)-GLOBALREMITAPP / 192.168.126.80
[root@localhost tmp]# scp -r Utilities.class root@192.168.201.80:/usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/util/
Password:
Utilities.class
100% 26KB 26.2KB/s 00:00
[root@localhost tmp]# ls /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/util/
AppConfig.class           GetRemoteIP.class30Mar2021  Ime.class      JspCalendar.class    Utilities.class      Utilities.class_30May2018
DbConnectionException.class HTTPSMS.class          InWords.class   NoCacheFilter.class Utilities.class      Utilities_test
GetRemoteIP.class          HTTPSMS_new.class     InWords.class   SendMail.class    Utilities.class_07march2018
[root@localhost tmp]# ls /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/util/ -lrt
total 188
-rw-r--r--. 1 techmindapp techmindapp 25707 Jan  4  2018 Utilities.class_07march2018
-rw-r--r--. 1 techmindapp techmindapp 25709 Jan  8  2018 Utilities_test
-rw-r--r--. 1 techmindapp techmindapp 16250 Jan  8  2018 Utilities_.class
-rw-r--r--. 1 techmindapp techmindapp 2994 Jan  8  2018 SendMail.class
-rw-r--r--. 1 techmindapp techmindapp 1369 Jan  8  2018 NoCacheFilter.class
-rw-r--r--. 1 techmindapp techmindapp 4108 Jan  8  2018 JspCalendar.class
-rw-r--r--. 1 techmindapp techmindapp 4334 Jan  8  2018 InWords.class
-rw-r--r--. 1 techmindapp techmindapp 4333 Jan  8  2018 InWords_.class
-rw-r--r--. 1 techmindapp techmindapp 3780 Jan  8  2018 Ime.class
-rw-r--r--. 1 techmindapp techmindapp 4515 Jan  8  2018 HTTPSMS_new.class
-rw-r--r--. 1 techmindapp techmindapp 4704 Jan  8  2018 HTTPSMS.class
-rw-r--r--. 1 techmindapp techmindapp 468 Jan  8  2018 DbConnectionException.class
-rw-r--r--. 1 techmindapp techmindapp 888 Jan  8  2018 AppConfig.class
-rw-r--r--. 1 techmindapp techmindapp 23276 Mar  7  2018 Utilities.class_30May2018
-rw-r--r--. 1 techmindapp techmindapp 23214 May 29 2018 Utilities.class
-rw-r--r--. 1 techmindapp techmindapp 3047 Jan 16 2020 GetRemoteIP.class30Mar2021
-rw-r--r--. 1 yubaraj yubaraj 3059 Mar 30 2021 GetRemoteIP.class
[root@localhost tmp]# ls /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/i
imeClient/ incentive/ ips/
iso/
[root@localhost tmp]# scp -r ISOClientValues.class root@192.168.201.80:/usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/iso/
Password:
ISOClientValues.class
100% 617 0.6KB/s 00:00
[root@localhost tmp]#

```

```

Sectona Putty (SSH)-GLOBALREMITAPP / 192.168.126.80
[root@localhost tmp]# scp -r Utilities.class root@192.168.201.80:/usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/util/
Password:
Utilities.class
100% 26KB 26.2KB/s 00:00
[root@localhost tmp]# ls /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/util/
AppConfig.class           GetRemoteIP.class30Mar2021  Ime.class      JspCalendar.class    Utilities.class      Utilities.class_30May2018
DbConnectionException.class HTTPSMS.class          InWords.class   NoCacheFilter.class Utilities.class      Utilities_test
GetRemoteIP.class          HTTPSMS_new.class     InWords.class   SendMail.class    Utilities.class_07march2018
[root@localhost tmp]# ls /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/util/ -lrt
total 188
-rw-r--r--. 1 techmindapp techmindapp 25707 Jan  4  2018 Utilities.class_07march2018
-rw-r--r--. 1 techmindapp techmindapp 25709 Jan  8  2018 Utilities_test
-rw-r--r--. 1 techmindapp techmindapp 16250 Jan  8  2018 Utilities_.class
-rw-r--r--. 1 techmindapp techmindapp 2994 Jan  8  2018 SendMail.class
-rw-r--r--. 1 techmindapp techmindapp 1369 Jan  8  2018 NoCacheFilter.class
-rw-r--r--. 1 techmindapp techmindapp 4108 Jan  8  2018 JspCalendar.class
-rw-r--r--. 1 techmindapp techmindapp 4334 Jan  8  2018 InWords.class
-rw-r--r--. 1 techmindapp techmindapp 4333 Jan  8  2018 InWords_.class
-rw-r--r--. 1 techmindapp techmindapp 3780 Jan  8  2018 Ime.class
-rw-r--r--. 1 techmindapp techmindapp 4515 Jan  8  2018 HTTPSMS_new.class
-rw-r--r--. 1 techmindapp techmindapp 4704 Jan  8  2018 HTTPSMS.class
-rw-r--r--. 1 techmindapp techmindapp 468 Jan  8  2018 DbConnectionException.class
-rw-r--r--. 1 techmindapp techmindapp 888 Jan  8  2018 AppConfig.class
-rw-r--r--. 1 techmindapp techmindapp 23276 Mar  7  2018 Utilities.class_30May2018
-rw-r--r--. 1 techmindapp techmindapp 23214 May 29 2018 Utilities.class
-rw-r--r--. 1 techmindapp techmindapp 3047 Jan 16 2020 GetRemoteIP.class30Mar2021
-rw-r--r--. 1 yubaraj yubaraj 3059 Mar 30 2021 GetRemoteIP.class
[root@localhost tmp]# ls /usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/i
imeClient/ incentive/ ips/
iso/
[root@localhost tmp]# scp -r ISOClientValues.class root@192.168.201.80:/usr/tomcat/webapps/globalremit/WEB-INF/classes/np/com/ntech/global/iso/
Password:
ISOClientValues.class
100% 617 0.6KB/s 00:00
[root@localhost tmp]# scp -r globalWebService.war root@192.168.201.80:/usr/tomcat/webapps/
Password:
globalWebService.war
[root@localhost tmp]# cd
[root@localhost ~]#

```

Copy the Rest Webservice

```
§ Sectona PuTTY (SSH)-GLOBALREMITAPP / 192.168.126.80
[root@COS7REMITAPPDR webapps]# cp -a globalRestWebService.war globalRestWebService.war23Aug2023
```

```
§ Sectona PuTTY (SSH)-GLOBALREMITAPP / 192.168.126.80
[root@localhost tmp]# cd
[root@localhost ~]# scp -r globalremit root@192.168.201.80:/usr/tomcat_website/webapps/
globalremit/           globalremit.pfx      globalremit_rbl.pfx
[root@localhost ~]# scp -r /tmp/global root@192.168.201.80:/usr/tomcat_website/webapps/
globalRestWebService.war  globalRestWebService.zip  globalWebService.war   globalWebService.zip
[root@localhost ~]# scp -r /tmp/globalRestWebService.war root@192.168.201.80:/usr/tomcat_website/webapps/
Password:
globalRestWebService.war
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]#
```

```
§ Sectona PuTTY (SSH)-GLOBALREMITAPP / 192.168.126.80
[root@localhost ~]# /usr/tomcat/bin/shutdown.sh
Using CATALINA_BASE:  /usr/tomcat
Using CATALINA_HOME:  /usr/tomcat
Using CATALINA_TMPDIR: /usr/tomcat/temp
Using JRE_HOME:        /usr/local/java_8/jre
Using CLASSPATH:       /usr/tomcat/bin/bootstrap.jar:/usr/tomcat/bin/tomcat-juli.jar
[root@localhost ~]# /usr/tomcat/bin/shutdown.sh
Using CATALINA_BASE:  /usr/tomcat
Using CATALINA_HOME:  /usr/tomcat
Using CATALINA_TMPDIR: /usr/tomcat/temp
Using JRE_HOME:        /usr/local/java_8/jre
Using CLASSPATH:       /usr/tomcat/bin/bootstrap.jar:/usr/tomcat/bin/tomcat-juli.jar
Aug 24, 2023 10:33:01 PM org.apache.catalina.startup.Catalina stopServer
SEVERE: Could not contact localhost:8006. Tomcat may not be running.
Aug 24, 2023 10:33:01 PM org.apache.catalina.startup.Catalina stopServer
SEVERE: Catalina.stop:
java.net.ConnectException: Connection refused
    at java.net.PlainSocketImpl.socketConnect(Native Method)
    at java.net.AbstractPlainSocketImpl.doConnect(AbstractPlainSocketImpl.java:350)
    at java.net.AbstractPlainSocketImpl.connectToAddress(AbstractPlainSocketImpl.java:206)
    at java.net.AbstractPlainSocketImpl.connect(AbstractPlainSocketImpl.java:188)
    at java.net.SocksSocketImpl.connect(SocksSocketImpl.java:392)
    at java.net.Socket.connect(Socket.java:589)
    at java.net.Socket.connect(Socket.java:538)
    at java.net.Socket.<init>(Socket.java:434)
    at java.net.Socket.<init>(Socket.java:211)
    at org.apache.catalina.startup.Catalina.stopServer(Catalina.java:450)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
    at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
    at java.lang.reflect.Method.invoke(Method.java:497)
    at org.apache.catalina.startup.Bootstrap.stopServer(Bootstrap.java:400)
    at org.apache.catalina.startup.Bootstrap.main(Bootstrap.java:487)

[root@localhost ~]#
```

```
Sectona Putty (SSH)-GLOBALREMITAPP / 192.168.126.80
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:497)
at org.apache.catalina.startup.Bootstrap.stopServer(Bootstrap.java:400)
at org.apache.catalina.startup.Bootstrap.main(Bootstrap.java:487)

[root@localhost ~]# /usr/tomcat_8/bin/shutdown.sh
Using CATALINA_BASE:  /usr/tomcat_8
Using CATALINA_HOME:  /usr/tomcat_8
Using CATALINA_TMPDIR:  /usr/tomcat_8/temp
Using JRE_HOME6:      /usr/local/java_6/jre
Using CLASSPATH:      /usr/tomcat_8/bin/bootstrap.jar:/usr/tomcat_8/bin/tomcat-juli.jar
[root@localhost ~]# /usr/tomcat_8/bin/shutdown.sh
Using CATALINA_BASE:  /usr/tomcat_8
Using CATALINA_HOME:  /usr/tomcat_8
Using CATALINA_TMPDIR:  /usr/tomcat_8/temp
Using JRE_HOME6:      /usr/local/java_6/jre
Using CLASSPATH:      /usr/tomcat_8/bin/bootstrap.jar:/usr/tomcat_8/bin/tomcat-juli.jar
Aug 24, 2023 10:33:38 PM org.apache.catalina.startup.Catalina stopServer
SEVERE: Could not contact localhost:8036. Tomcat may not be running.
Aug 24, 2023 10:33:38 PM org.apache.catalina.startup.Catalina stopServer
SEVERE: Catalina.stop:
java.net.ConnectException: Connection refused
at java.net.PlainSocketImpl.socketConnect(Native Method)
at java.net.AbstractPlainSocketImpl.doConnect(AbstractPlainSocketImpl.java:350)
at java.net.AbstractPlainSocketImpl.connectToAddress(AbstractPlainSocketImpl.java:206)
at java.net.AbstractPlainSocketImpl.connect(AbstractPlainSocketImpl.java:188)
at java.net.SocksSocketImpl.connect(SocksSocketImpl.java:392)
at java.net.Socket.connect(Socket.java:589)
at java.net.Socket.connect(Socket.java:538)
at java.net.Socket.<init>(Socket.java:434)
at java.net.Socket.<init>(Socket.java:211)
at org.apache.catalina.startup.Catalina.stopServer(Catalina.java:450)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:497)
at org.apache.catalina.startup.Bootstrap.stopServer(Bootstrap.java:400)
at org.apache.catalina.startup.Bootstrap.main(Bootstrap.java:487)

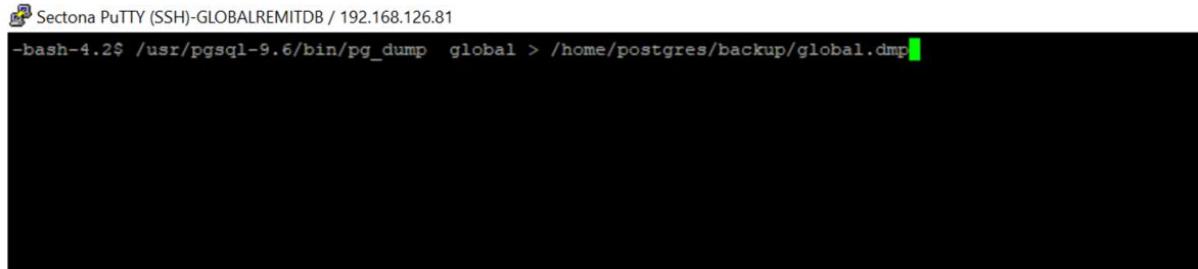
[root@localhost ~]#
```

```
Sectona Putty (SSH)-GLOBALREMITAPP / 192.168.126.80
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:497)
at org.apache.catalina.startup.Bootstrap.stopServer(Bootstrap.java:400)
at org.apache.catalina.startup.Bootstrap.main(Bootstrap.java:487)

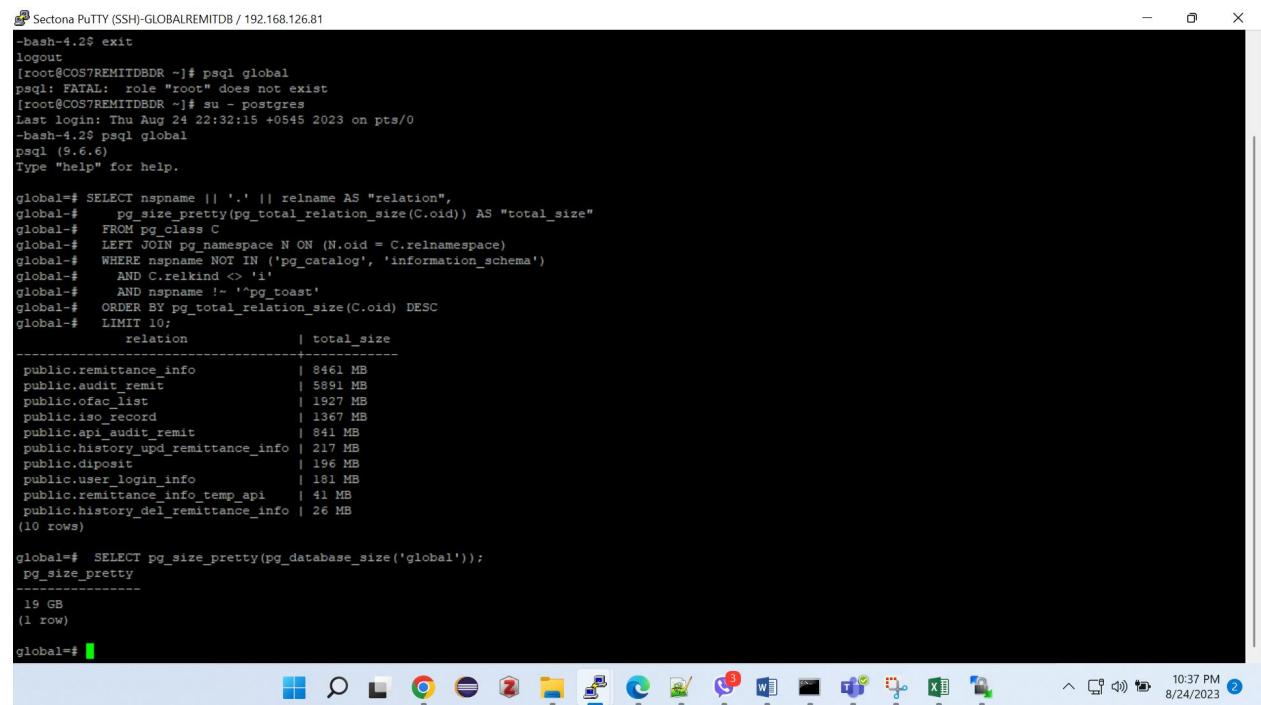
[root@localhost ~]# /usr/tomcat_website/bin/shutdown.sh
Using CATALINA_BASE:  /usr/tomcat_website
Using CATALINA_HOME:  /usr/tomcat_website
Using CATALINA_TMPDIR:  /usr/tomcat_website/temp
Using JRE_HOME6:      /usr/local/java_6/jre
Using CLASSPATH:      /usr/tomcat_website/bin/bootstrap.jar:/usr/tomcat_website/bin/tomcat-juli.jar
[root@localhost ~]# /usr/tomcat_website/bin/shutdown.sh
Using CATALINA_BASE:  /usr/tomcat_website
Using CATALINA_HOME:  /usr/tomcat_website
Using CATALINA_TMPDIR:  /usr/tomcat_website/temp
Using JRE_HOME6:      /usr/local/java_6/jre
Using CLASSPATH:      /usr/tomcat_website/bin/bootstrap.jar:/usr/tomcat_website/bin/tomcat-juli.jar
Aug 24, 2023 10:33:53 PM org.apache.catalina.startup.Catalina stopServer
SEVERE: Could not contact localhost:8046. Tomcat may not be running.
Aug 24, 2023 10:33:54 PM org.apache.catalina.startup.Catalina stopServer
SEVERE: Catalina.stop:
java.net.ConnectException: Connection refused
at java.net.PlainSocketImpl.socketConnect(Native Method)
at java.net.AbstractPlainSocketImpl.doConnect(AbstractPlainSocketImpl.java:350)
at java.net.AbstractPlainSocketImpl.connectToAddress(AbstractPlainSocketImpl.java:206)
at java.net.AbstractPlainSocketImpl.connect(AbstractPlainSocketImpl.java:188)
at java.net.SocksSocketImpl.connect(SocksSocketImpl.java:392)
at java.net.Socket.connect(Socket.java:589)
at java.net.Socket.connect(Socket.java:538)
at java.net.Socket.<init>(Socket.java:434)
at java.net.Socket.<init>(Socket.java:211)
at org.apache.catalina.startup.Catalina.stopServer(Catalina.java:450)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:497)
at org.apache.catalina.startup.Bootstrap.stopServer(Bootstrap.java:400)
at org.apache.catalina.startup.Bootstrap.main(Bootstrap.java:487)

[root@localhost ~]#
```

Take the database backup after application stopped



```
Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
-bash-4.2$ /usr/pgsql-9.6/bin/pg_dump global > /home/postgres/backup/global.dmp
```



```
root@COS7REMITDBR ~]# pg_size_pretty(pg_database_size('global'))
pg_size_pretty
-----
19 GB
(1 row)

global=# SELECT nspname || '.' || relname AS "relation",
global-#   pg_size_pretty(pg_total_relation_size(C.oid)) AS "total_size"
global-#   FROM pg_class C
global-#   LEFT JOIN pg_namespace N ON (N.oid = C.relnamespace)
global-#   WHERE nspname NOT IN ('pg_catalog', 'information_schema')
global-#     AND C.relkind <> 'i'
global-#     AND nspname !~ '^pg_toast'
global-# ORDER BY pg_total_relation_size(C.oid) DESC
global-# LIMIT 10;
          relation          | total_size
-----+-----
public.remittance_info | 8461 MB
public.audit_remit    | 5891 MB
public.ofac.list       | 1927 MB
public.iso.record     | 1367 MB
public.api_audit_remit | 841 MB
public.history_upd_remittance_info | 217 MB
public.deposit         | 196 MB
public.user_login_info | 181 MB
public.remittance_info_temp_api | 41 MB
public.history_del_remittance_info | 26 MB
(10 rows)

global=# SELECT pg_size_pretty(pg_database_size('global'));
pg_size_pretty
-----
19 GB
(1 row)
```

DC

```
Putty Sectona Putty (SSH)-GLOBALREMITDB / 192.168.126.81
select count(*) from audit_remit;
select count(*) from api_audit_remit;
count
-----
12327987
(1 row)

global=# select count(*) from USERS;
count
-----
1448
(1 row)

global=# select count(*) from ACCOUNT_OPEN;
count
-----
1139
(1 row)

global=# select count(*) from AUDIT_REMIT;
count
-----
68277552
(1 row)

global=# select count(*) from AGENT_MST;
count
-----
5826
(1 row)

global=# select count(*) from ISO_ERROR_DESC;
count
-----
26
(1 row)

global=# select count(*) from IPS_BRANCH;
count
-----
```

DR

```
Putty Sectona Putty (SSH)-GLOBALREMITDB / 192.168.126.81
select count(*) from audit_remit;
select count(*) from api_audit_remit;
count
-----
12327987
(1 row)

global=# select count(*) from USERS;
count
-----
1448
(1 row)

global=# select count(*) from ACCOUNT_OPEN;
count
-----
1139
(1 row)

global=# select count(*) from AUDIT_REMIT;
count
-----
68277552
(1 row)

global=# select count(*) from AGENT_MST;
count
-----
5826
(1 row)

global=# select count(*) from ISO_ERROR_DESC;
count
-----
26
(1 row)

global=# select count(*) from IPS_BRANCH;
count
-----
```

# Primary Server

```
Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
-bash-4.2$ ls -lrt *.conf
-rw----- 1 postgres postgres    88 Dec 25  2022 postgresql.auto.conf
-rw----- 1 postgres postgres  1636 Dec 25  2022 pg_ident.conf
-rw----- 1 postgres postgres 22430 Dec 25  2022 postgresql.conf
-rw----- 1 postgres postgres   5520 Aug 24 12:41 pg_hba.conf
-bash-4.2$
```

```
Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
-bash-4.2$ ls -lrt *.conf
-rw----- 1 postgres postgres    88 Aug 17 12:57 postgresql.auto.conf
-rw----- 1 postgres postgres  1636 Aug 17 12:57 pg_ident.conf
-rw-r--r-- 1 postgres postgres   167 Aug 17 12:59 recovery.conf
-rw----- 1 postgres postgres 22429 Aug 17 13:06 postgresql.conf
-rw----- 1 postgres postgres   5280 Aug 17 13:07 pg_hba.conf
-bash-4.2$
```

```
Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
-bash-4.2$ ls -lrt *.conf
-rw----- 1 postgres postgres    88 Aug 17 12:57 postgresql.auto.conf
-rw----- 1 postgres postgres  1636 Aug 17 12:57 pg_ident.conf
-rw-r--r-- 1 postgres postgres   167 Aug 17 12:59 recovery.conf
-rw----- 1 postgres postgres 22429 Aug 17 13:06 postgresql.conf
-rw----- 1 postgres postgres   5280 Aug 17 13:07 pg_hba.conf
-bash-4.2$ mv recovery.conf recovery.conf23Aug2023
-bash-4.2$
```

## Take the .conf backup in live

```
File Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
-bash-4.2$ ls -lrt *.conf
-rw----- 1 postgres postgres 88 Dec 25 2022 postgresql.auto.conf
-rw----- 1 postgres postgres 1636 Dec 25 2022 pg_ident.conf
-rw----- 1 postgres postgres 22430 Dec 25 2022 postgresql.conf
-rw----- 1 postgres postgres 5520 Aug 24 12:41 pg_hba.conf
-bash-4.2$ scp -r root@192.168.201.81:/var/lib/pgsql/9.6/data/recovery.conf .
Password:
recovery.conf
-bash-4.2$ ls -lrt *.conf
-rw----- 1 postgres postgres 88 Dec 25 2022 postgresql.auto.conf
-rw----- 1 postgres postgres 1636 Dec 25 2022 pg_ident.conf
-rw----- 1 postgres postgres 22430 Dec 25 2022 postgresql.conf
-rw----- 1 postgres postgres 5520 Aug 24 12:41 pg_hba.conf
-rw-r--r-- 1 postgres postgres 167 Aug 24 22:44 recovery.conf
-bash-4.2$ cp -a pg_hba.conf pg_hba.conf23Aug2023
-bash-4.2$ █
```

```
File Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
# "host" records. In that case you will also need to make PostgreSQL
# listen on a non-local interface via the listen_addresses
# configuration parameter, or via the -i or -h command line switches.

# TYPE DATABASE USER ADDRESS METHOD
# "local" is for Unix domain socket connections only
local all all peer
# IPv4 local connections:
#host all all ident
host all postgres 192.168.126.80 255.255.255.0 trust
host all all 192.168.126.81 255.255.255.0 md5
#host all all 192.168.212.0/24 md5
#host all all 10.1.1.26 255.255.255.0 md5
#For BI Purpose
host all postgres 10.0.2.52/32 trust
host all gblreport 10.0.2.52/32 trust
host all gbl 192.168.101.22/32 trust
host all gbl 192.168.101.91/32 trust
#For Logpoint Server
#host all postgres 10.0.4.19/32 trust
#host all postgres 0.0.0.0 0.0.0.0 trust
#host all all 192.168.201.81 255.255.255.0 trust
#host all all 10.0.4.1 255.255.255.0 trust
# IPv6 local connections:
#host all all ::1/128 ident
# Allow replication connections from localhost, by a user with the
# replication privilege.
#local replication postgres peer
#host replication postgres 127.0.0.1/32 ident
#host replication postgres ::1/128 ident
#host replication repuser 192.168.201.81 255.255.255.0 trust
host replication repuser 192.168.126.81 255.255.255.0 trust
#Remittance Details fetch and account open using Remittance TXN from Central Account Opening
host global coa_gibl 192.168.213.45 255.255.255.0 md5
host global coa_gibl 127.0.0.1/32 trust
-- REPLACE --
```

## Recoveryconf at DC

Copy the recovery conf from DR and change the IP of DC to DR server (192.168.201.81)

## Recoveryconf at primary server

Copy the recovery conf from DR and change the IP of primary server to DR server (192.168.201.81)

```
Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
standby_mode = 'on'
primary_conninfo = 'user=repuser host=192.168.201.81 port=5432 sslmode=prefer sslcompression=1 krbsrvname=postgres'
primary_slot_name = 'standby1'

"recovery.conf" 3L, 167C
  10:52 PM 8/24/2023
```

## Update hot\_standby at DC

### Before Change

```
Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
max_replication_slots = 3      # max number of replication slots
                               # (change requires restart)
#track_commit_timestamp = off # collect timestamp of transaction commit
                               # (change requires restart)

# - Master Server -
# These settings are ignored on a standby server.

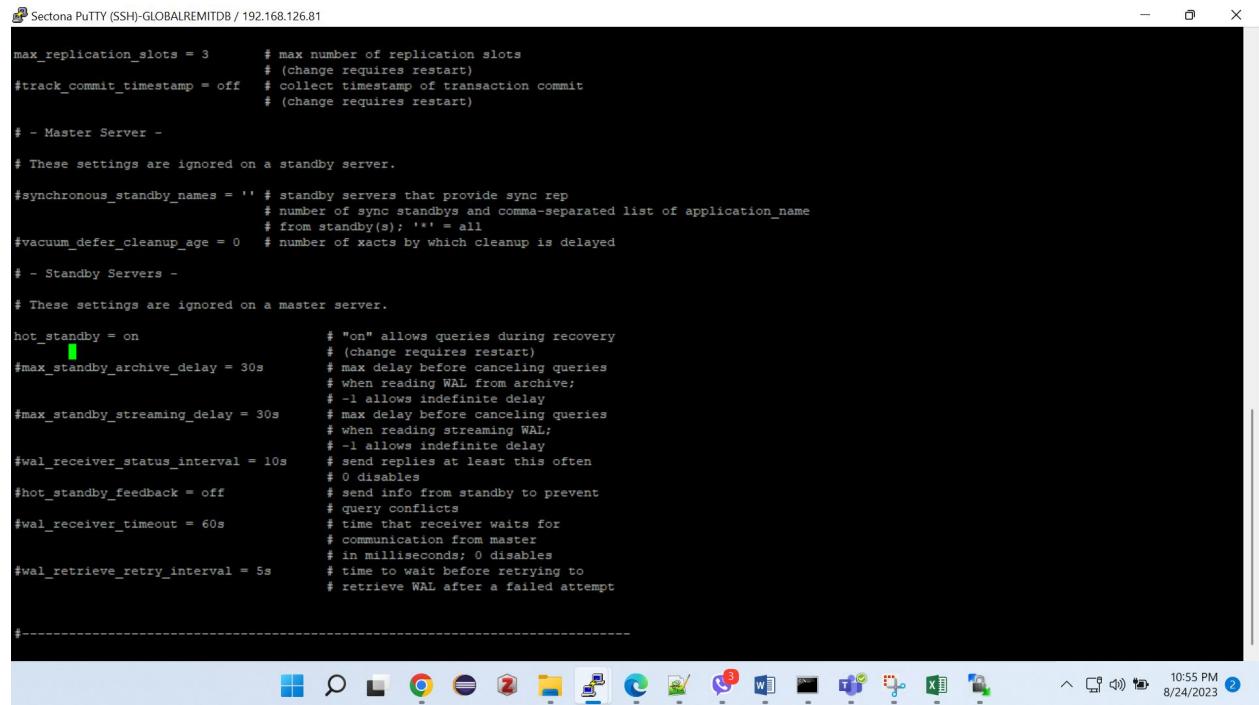
#synchronous_standby_names = '' # standby servers that provide sync rep
                               # number of sync standbys and comma-separated list of application_name
#vacuum_defer_cleanup_age = 0   # number of xacts by which cleanup is delayed

# - Standby Servers -
# These settings are ignored on a master server.

#hot_standby = on             # "on" allows queries during recovery
                               # (change requires restart)
#max_standby_archive_delay = 30s
                               # max delay before canceling queries
                               # When reading WAL from archive;
                               # -1 allows indefinite delay
#max_standby_streaming_delay = 30s
                               # max delay before canceling queries
                               # When reading streaming WAL;
                               # -1 allows indefinite delay
#wal_receiver_status_interval = 10s
                               # send replies at least this often
                               # 0 disables
#hot_standby_feedback = off    # send info from standby to prevent
                               # query conflicts
#wal_receiver_timeout = 60s    # time that receiver waits for
                               # communication from master
                               # in milliseconds; 0 disables
#wal_retrieve_retry_interval = 5s
                               # time to wait before retrying to
                               # retrieve WAL after a failed attempt

-----
-- INSERT --
```

## After Change



```
max_replication_slots = 3      # max number of replication slots
# (change requires restart)
track_commit_timestamp = off  # collect timestamp of transaction commit
# (change requires restart)

# - Master Server -

# These settings are ignored on a standby server.

synchronous_standby_names = '' # standby servers that provide sync rep
# number of sync standbys and comma-separated list of application_name
# from standby(s); '*' = all
vacuum_defer_cleanup_age = 0   # number of xacts by which cleanup is delayed

# - Standby Servers -

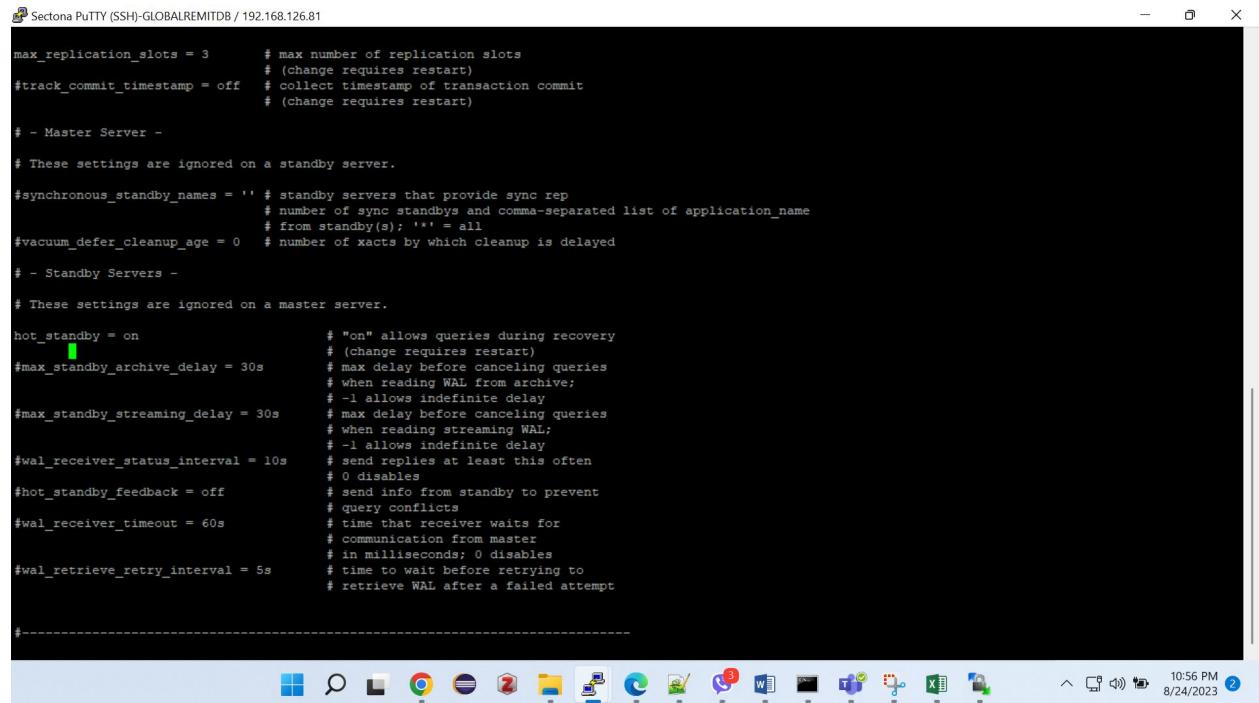
# These settings are ignored on a master server.

hot_standby = on              # "on" allows queries during recovery
# (change requires restart)
max_standby_archive_delay = 30s # max delay before canceling queries
# when reading WAL from archive;
# -1 allows indefinite delay
max_standby_streaming_delay = 30s # max delay before canceling queries
# when reading streaming WAL;
# -1 allows indefinite delay
wal_receiver_status_interval = 10s # send replies at least this often
# 0 disables
hot_standby_feedback = off     # send info from standby to prevent
# query conflicts
wal_receiver_timeout = 60s     # time that receiver waits for
# communication from master
# in milliseconds; 0 disables
wal_retrieve_retry_interval = 5s # time to wait before retrying to
# retrieve WAL after a failed attempt

#-----
```

## Change postgres.conf at DR

### Status of hot\_standby Before update



```
max_replication_slots = 3      # max number of replication slots
# (change requires restart)
track_commit_timestamp = off  # collect timestamp of transaction commit
# (change requires restart)

# - Master Server -

# These settings are ignored on a standby server.

synchronous_standby_names = '' # standby servers that provide sync rep
# number of sync standbys and comma-separated list of application_name
# from standby(s); '*' = all
vacuum_defer_cleanup_age = 0   # number of xacts by which cleanup is delayed

# - Standby Servers -

# These settings are ignored on a master server.

hot_standby = on              # "on" allows queries during recovery
# (change requires restart)
max_standby_archive_delay = 30s # max delay before canceling queries
# when reading WAL from archive;
# -1 allows indefinite delay
max_standby_streaming_delay = 30s # max delay before canceling queries
# when reading streaming WAL;
# -1 allows indefinite delay
wal_receiver_status_interval = 10s # send replies at least this often
# 0 disables
hot_standby_feedback = off     # send info from standby to prevent
# query conflicts
wal_receiver_timeout = 60s     # time that receiver waits for
# communication from master
# in milliseconds; 0 disables
wal_retrieve_retry_interval = 5s # time to wait before retrying to
# retrieve WAL after a failed attempt

#-----
```

### Status of hot\_standby after update at DR

```

max_replication_slots = 3      # max number of replication slots
                                # (change requires restart)
track_commit_timestamp = off   # collect timestamp of transaction commit
                                # (change requires restart)

# - Master Server -

# These settings are ignored on a standby server.

#synchronous_standby_names = '' # standby servers that provide sync rep
                                # number of sync standbys and comma-separated list of application_name
                                # from standby(s); '*' = all
#vacuum_defer_cleanup_age = 0   # number of xacts by which cleanup is delayed

# - Standby Servers -

# These settings are ignored on a master server.

#hot_standby = on             # "on" allows queries during recovery
                                # (change requires restart)
#max_standby_archive_delay = 30s # max delay before canceling queries
                                # when reading WAL from archive;
                                # -1 allows indefinite delay
#max_standby_streaming_delay = 30s # max delay before canceling queries
                                # when reading streaming WAL;
                                # -1 allows indefinite delay
#wal_receiver_status_interval = 10s # send replies at least this often
                                # 0 disables
#hot_standby_feedback = off    # send info from standby to prevent
                                # query conflicts
#wal_receiver_timeout = 60s    # time that receiver waits for
                                # communication from master
                                # in milliseconds; 0 disables
#wal_retrieve_retry_interval = 5s # time to wait before retrying to
                                # retrieve WAL after a failed attempt

#-----

```

## Pg\_hba.conf

```

# Put your actual configuration here
# -----
#
# If you want to allow non-local connections, you need to add more
# "host" records. In that case you will also need to make PostgreSQL
# listen on a non-local interface via the listen_addresses
# configuration parameter, or via the -i or -h command line switches.

# TYPE DATABASE USER ADDRESS METHOD
# "local" is for Unix domain socket connections only
local  all      all      peer
# IPv4 local connections:
#host all      all      127.0.0.1/32      ident
host  all      postgres  192.168.126.80  255.255.255.0 trust
host  all      all      192.168.126.81  255.255.255.0 md5
#host all      all      192.168.212.0/24      md5
#host all      all      10.1.1.26 255.255.255.0 md5
#For BI Purpose
host  all      postgres  10.0.2.52/32      trust
host  all      gblreport 10.0.2.52/32      trust
host  all      gbl      192.168.101.22/32      trust
host  all      gbl      192.168.101.91/32      trust
#For Logpoint Server
#host all      postgres  10.0.4.19/32      trust
#host all      postgres  0.0.0.0 0.0.0.0      trust
#host all      all      192.168.201.81 255.255.255.0 trust
#host all      all      10.0.4.1 255.255.255.0 trust
# IPv6 local connections:
#host all      all      ::1/128      ident
# Allow replication connections from localhost, by a user with the
# replication privilege.
#local  replication postgres  peer
#host  replication postgres  127.0.0.1/32      ident
#host  replication postgres  ::1/128      ident
host  replication repuser  192.168.201.81 255.255.255.0 trust
host  replication repuser  192.168.126.81 255.255.255.0 trust

```

## DC

```
[root@remitdbserver ~]# systemctl restart postgresql-9.6.service
[root@remitdbserver ~]# systemctl status postgresql-9.6.service
● postgresql-9.6.service - PostgreSQL 9.6 database server
   Loaded: loaded (/usr/lib/systemd/system/postgresql-9.6.service; enabled; vendor preset: disabled)
     Active: active (running) since Thu 2023-08-24 22:57:01 +0545; 51s ago
       Docs: https://www.postgresql.org/docs/9.6/static/
  Process: 183826 ExecStartPre=/usr/bin/postgresql96-check-db-dir ${PGDATA} (code=exited, status=0/SUCCESS)
 Main PID: 183833 (postmaster)
    CGroup: /system.slice/postgresql-9.6.service
            └─183833 /usr/bin/postmaster -D /var/lib/pgsql/9.6/data/
              ├─183834 postgres: logger process
              ├─183835 postgres: startup process  recovering 00000002000000EC000000FE
              ├─183836 postgres: checkpointer process
              ├─183837 postgres: writer process
              └─183838 postgres: stats collector process

Aug 24 22:57:00 remitdbserver systemd[1]: Starting PostgreSQL 9.6 database server...
Aug 24 22:57:00 remitdbserver postmaster[183833]: <%2023-08-24 22:57:00 +0545> LOG:  redirecting log output to logging collector process
Aug 24 22:57:00 remitdbserver postmaster[183833]: <%2023-08-24 22:57:00 +0545> HINT:  Future log output will appear in directory "pg_log".
Aug 24 22:57:01 remitdbserver systemd[1]: Started PostgreSQL 9.6 database server.
[root@remitdbserver ~]#
```

The screenshot shows a Windows desktop environment with a terminal window open. The terminal window title is "Sectiona Putty (SSH)-GLOBALREMITDB / 192.168.126.81". The command `systemctl status postgresql-9.6.service` is run, showing the PostgreSQL service is active and running. The terminal then starts the PostgreSQL server with `systemctl restart`, and logs indicate it's redirecting log output to a logging collector process. The desktop taskbar at the bottom shows various application icons.

## DR

```
[root@COS7REMITDBDR ~]# systemctl restart postgresql
[root@COS7REMITDBDR ~]# systemctl restart postgresql.service
[root@COS7REMITDBDR ~]# systemctl status postgresql-9.6.service
● postgresql-9.6.service - PostgreSQL 9.6 database server
   Loaded: loaded (/usr/lib/systemd/system/postgresql-9.6.service; enabled; vendor preset: disabled)
     Active: active (running) since Thu 2023-08-24 22:59:42 +0545; 47s ago
       Docs: https://www.postgresql.org/docs/9.6/static/
  Process: 91409 ExecStartPre=/usr/bin/postgresql96-check-db-dir ${PGDATA} (code=exited, status=0/SUCCESS)
 Main PID: 91416 (postmaster)
    CGroup: /system.slice/postgresql-9.6.service
            └─91416 /usr/bin/postmaster -D /var/lib/pgsql/9.6/data/
              ├─91417 postgres: logger process
              ├─91419 postgres: checkpointer process
              ├─91420 postgres: writer process
              ├─91421 postgres: wal writer process
              ├─91422 postgres: autovacuum launcher process
              ├─91423 postgres: archiver process  last was 00000002000000EC000000010
              └─91424 postgres: stats collector process

Aug 24 22:59:41 COS7REMITDBDR systemd[1]: Starting PostgreSQL 9.6 database server...
Aug 24 22:59:42 COS7REMITDBDR postmaster[91416]: <%2023-08-24 22:59:42 +0545> LOG:  redirecting log output to logging collector process
Aug 24 22:59:42 COS7REMITDBDR postmaster[91416]: <%2023-08-24 22:59:42 +0545> HINT:  Future log output will appear in directory "pg_log".
Aug 24 22:59:42 COS7REMITDBDR systemd[1]: Started PostgreSQL 9.6 database server.
[root@COS7REMITDBDR ~]# su - postgres
Last login: Thu Aug 24 22:36:25 +0545 2023 on pts/0
-bash-4.2$ psql global
psql (9.6.6)
Type "help" for help.

global=# create table aa_dr_test(id int);
CREATE TABLE
global=#
```

The screenshot shows a Windows desktop environment with a terminal window open. The terminal window title is "Sectiona Putty (SSH)-GLOBALREMITDB / 192.168.126.81". The command `systemctl status postgresql-9.6.service` is run, showing the PostgreSQL service is active and running. The terminal then starts the PostgreSQL server with `systemctl restart`, and logs indicate it's redirecting log output to a logging collector process. The desktop taskbar at the bottom shows various application icons.

## DR after change to primary server

```
Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
● postgresql-9.6.service - PostgreSQL 9.6 database server
  Loaded: loaded (/usr/lib/systemd/system/postgresql-9.6.service; enabled; vendor preset: disabled)
  Active: active (running) since Thu 2023-08-24 22:59:42 +0545; 47s ago
    Docs: https://www.postgresql.org/docs/9.6/static/
Process: 91409 ExecStartPre=/usr/bin/postgresql96-check-db-dir ${PGDATA} (code=exited, status=0/SUCCESS)
Main PID: 91416 (postmaster)
  CGroup: /system.slice/postgresql-9.6.service
          ├─91416 /usr/bin/postmaster -D /var/lib/pgsql/9.6/data/
          ├─91417 postgres: logger process
          ├─91419 postgres: checkpoint process
          ├─91420 postgres: writer process
          ├─91421 postgres: wal writer process
          ├─91422 postgres: autovacuum launcher process
          ├─91423 postgres: archiver process last was 00000002000000EC000000010
          └─91424 postgres: stats collector process

Aug 24 22:59:41 COS7REMITDBDR systemd[1]: Starting PostgreSQL 9.6 database server...
Aug 24 22:59:42 COS7REMITDBDR postmaster[91416]: <%2023-08-24 22:59:42 +0545> LOG: redirecting log output to logging collector process
Aug 24 22:59:42 COS7REMITDBDR postmaster[91416]: <%2023-08-24 22:59:42 +0545> HINT: Future log output will appear in directory "pg_log".
Aug 24 22:59:42 COS7REMITDBDR systemd[1]: Started PostgreSQL 9.6 database server.
[root@COS7REMITDBDR ~]# su - postgres
Last login: Thu Aug 24 22:36:25 +0545 2023 on pts/0
-bash-4.2$ psql global
psql (9.6.6)
Type "help" for help.

global=# create table aa_dr_test(id int);
CREATE TABLE
global=# insert into aa_dr_test(id) values(1);
INSERT 0 1
global=# insert into aa_dr_test(id) values(2);
INSERT 0 1
global=# select * from aa_dr_test;
 id
-----
 1
 2
(2 rows)

global=#

```

## DC after change to standby server

```
Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
[root@remitdbserver ~]# systemctl restart postgresql-9.6.service
[root@remitdbserver ~]# systemctl status postgresql-9.6.service
● postgresql-9.6.service - PostgreSQL 9.6 database server
  Loaded: loaded (/usr/lib/systemd/system/postgresql-9.6.service; enabled; vendor preset: disabled)
  Active: active (running) since Thu 2023-08-24 22:57:01 +0545; 51s ago
    Docs: https://www.postgresql.org/docs/9.6/static/
Process: 183826 ExecStartPre=/usr/bin/postgresql96-check-db-dir ${PGDATA} (code=exited, status=0/SUCCESS)
Main PID: 183833 (postmaster)
  CGroup: /system.slice/postgresql-9.6.service
          ├─183833 /usr/bin/postmaster -D /var/lib/pgsql/9.6/data/
          ├─183834 postgres: logger process
          ├─183835 postgres: startup process recovering 00000002000000EC000000FE
          ├─183836 postgres: checkpoint process
          ├─183837 postgres: writer process
          └─183838 postgres: stats collector process

Aug 24 22:57:00 remitdbserver systemd[1]: Starting PostgreSQL 9.6 database server...
Aug 24 22:57:00 remitdbserver postmaster[183833]: <%2023-08-24 22:57:00 +0545> LOG: redirecting log output to logging collector process
Aug 24 22:57:00 remitdbserver postmaster[183833]: <%2023-08-24 22:57:00 +0545> HINT: Future log output will appear in directory "pg_log".
Aug 24 22:57:01 remitdbserver systemd[1]: Started PostgreSQL 9.6 database server.
[root@remitdbserver ~]# su - postgres
Last login: Thu Aug 24 22:32:17 +0545 2023 on pts/0
-bash-4.2$ psql global
psql (9.6.6)
Type "help" for help.

global=# create table aa_dr_test(id int);
ERROR: cannot execute CREATE TABLE in a read-only transaction
global=#

```

```
Sectona Putty (SSH)-GLOBALREMITAPP / 192.168.126.80
Thu Aug 24 23:30:07 NFT 202377623415486 stage:2 blockTrans: N status: null remarks: . remitType: ID
776234415486GetRemoteStatus returnResult S008UNPAID77623415486 by QStms
Accessed from IP of QStms is 13.112.89.74 ON Thu Aug 24 23:30:08 NFT 2023
IP GetRemoteStatus 13.112.89.74 by QStms
GetRemoteStatus validate::: username=QStms radNo=774747324858
[INFO] GetRemoteStatus validate::: username=QStms radNo=774747324858
validation...
user Auth QStms,09F2D430D3C60E348A213C40FBBD988C,N,R,QStms,09F2D430D3C60E348A213C40FBBD988C
status: [Ljava.lang.String;@6bc17629
Thu Aug 24 23:30:08 NFT 2023774747324858 GetStatus Inside by QStms
Thu Aug 24 23:30:08 NFT 2023774747324858 GetStatus Inside:SELECT stage,block_trans,status,remarks,remit_type from remittance_info where rad_no='774747324858'
Thu Aug 24 23:30:08 NFT 2023774747324858 stage:2 blockTrans: N status: null remarks: ACCOUNT DOES NOT EXIST. remitType: BANK
774747324858GetRemoteStatus returnResult S008UNPAID774747324858ACCOUNT DOES NOT EXIST. by QStms
Accessed from IP of QStms is 13.112.89.74 ON Thu Aug 24 23:30:09 NFT 2023
IP GetRemoteStatus 13.112.89.74 by QStms
GetRemoteStatus validate::: username=QStms radNo=770466282102
[INFO] GetRemoteStatus validate::: username=QStms radNo=770466282102
validation...
user Auth QStms,09F2D430D3C60E348A213C40FBBD988C,N,R,QStms,09F2D430D3C60E348A213C40FBBD988C
status: [Ljava.lang.String;@6541a3c9
Thu Aug 24 23:30:09 NFT 2023770466282102 GetStatus Inside by QStms
Thu Aug 24 23:30:09 NFT 2023770466282102 GetStatus Inside:SELECT stage,block_trans,status,remarks,remit_type from remittance_info where rad_no='770466282102'
Thu Aug 24 23:30:09 NFT 2023770466282102 stage:2 blockTrans: N status: null remarks: . remitType: ID
770466282102GetRemoteStatus returnResult S008UNPAID770466282102 by QStms
^C
[root@COS7REMITAPPDR ~]# /usr/tomcat_8/bin/startup.sh
Using CATALINA_BASE: /usr/tomcat_8
Using CATALINA_HOME: /usr/tomcat_8
Using CATALINA_TMPDIR: /usr/tomcat_8/temp
Using JRE_HOME6: /usr/local/java_6/jre
Using CLASSPATH: /usr/tomcat_8/bin/bootstrap.jar:/usr/tomcat_8/bin/tomcat-juli.jar
Tomcat started.
[root@COS7REMITAPPDR ~]# /usr/tomcat_website/bin/startup.sh
Using CATALINA_BASE: /usr/tomcat_website
Using CATALINA_HOME: /usr/tomcat_website
Using CATALINA_TMPDIR: /usr/tomcat_website/temp
Using JRE_HOME6: /usr/local/java_6/jre
Using CLASSPATH: /usr/tomcat_website/bin/bootstrap.jar:/usr/tomcat_website/bin/tomcat-juli.jar
Tomcat started.
[root@COS7REMITAPPDR ~]#
```

```
Sectona Putty (SSH)-GLOBALREMITAPP / 192.168.126.80
[root@COS7REMITAPPDR ~]# tail -f /usr/tomcat/logs/catalina.out
IP GetRemoteStatus 210.180.65.58 by gmetms
GetRemoteStatus validate::: username=gmetms radNo=80284466889
[INFO] GetRemoteStatus validate::: username=gmetms radNo=80284466889
validation...
user Auth gmetms,FDFO9CB5E12CBDA92C1DC02509CE04FE,N,R,gmetms,FDFO9CB5E12CBDA92C1DC02509CE04FE
status: [Ljava.lang.String;@33e7c10
Thu Aug 24 23:40:41 NFT 202380284466889 GetStatus Inside by gmetms
Thu Aug 24 23:40:41 NFT 202380284466889 GetStatus Inside:SELECT stage,block_trans,status,remarks,remit_type from remittance_info where rad_no='80284466889'
Thu Aug 24 23:40:41 NFT 202380284466889 stage:2 blockTrans: N status: null remarks: ACCOUNT DOES NOT EXIST. remitType: BANK
80284466889GetRemoteStatus returnResult S008UNPAID80284466889ACCOUNT DOES NOT EXIST. by gmetms
Accessed from IP of gmetms is 210.180.65.58 ON Thu Aug 24 23:40:44 NFT 2023
IP GetRemoteStatus 210.180.65.58 by gmetms
GetRemoteStatus validate::: username=gmetms radNo=80167479338
[INFO] GetRemoteStatus validate::: username=gmetms radNo=80167479338
validation...
user Auth gmetms,FDFO9CB5E12CBDA92C1DC02509CE04FE,N,R,gmetms,FDFO9CB5E12CBDA92C1DC02509CE04FE
status: [Ljava.lang.String;@2b420d5c
Thu Aug 24 23:40:44 NFT 202380167479338 GetStatus Inside by gmetms
Thu Aug 24 23:40:44 NFT 202380167479338 GetStatus Inside:SELECT stage,block_trans,status,remarks,remit_type from remittance_info where rad_no='80167479338'
Thu Aug 24 23:40:44 NFT 202380167479338 stage:2 blockTrans: N status: null remarks: ACCOUNT DOES NOT EXIST. remitType: BANK
80167479338GetRemoteStatus returnResult S008UNPAID80167479338ACCOUNT DOES NOT EXIST. by gmetms
Accessed from IP of gmetms is 210.180.65.58 ON Thu Aug 24 23:40:47 NFT 2023
IP GetRemoteStatus 210.180.65.58 by gmetms
GetRemoteStatus validate::: username=gmetms radNo=80166104984
[INFO] GetRemoteStatus validate::: username=gmetms radNo=80166104984
validation...
user Auth gmetms,FDFO9CB5E12CBDA92C1DC02509CE04FE,N,R,gmetms,FDFO9CB5E12CBDA92C1DC02509CE04FE
status: [Ljava.lang.String;@3271b3eb
Thu Aug 24 23:40:47 NFT 202380166104984 transaction does not exists 80166104984
80166104984GetRemoteStatus returnResult S990TRANSACTION DOESNOT EXIST80166104984 by gmetms
```

The screenshot shows the Oracle SQL Developer interface. At the top, there's a toolbar with various icons. Below it is a menu bar with 'File', 'Edit', 'View', 'Tools', 'Help', and a 'Desktop' dropdown set to 'SQL'. A 'Top 20' button is also present. The main area has a query editor window titled 'New 1\*' containing the following SQL code:

```
1 ► select b.foracid as acct_no,b.acct_name,a.tran_id,a.tran_date,a.tran_amt,a.ENTRY_DATE from dtd@prod a, gam@prod b where a.acid =b.acid and a.tran_part
```

Below the query editor is a 'Data Grid' tab, which is selected. It displays a table with the following data:

| ACCT_NO        | ACCT_NAME                          | TRAN_ID   | TRAN_DATE | TRAN_AMT | ENTRY_DATE            |
|----------------|------------------------------------|-----------|-----------|----------|-----------------------|
| 0990101000039  | CONTINENTAL EXCHANGE SOLUTIONS INC | S84721725 | 8/25/2023 | 40072.23 | 8/25/2023 12:02:16 AM |
| 27907010038182 | KAMALA REGMI                       | S84721725 | 8/25/2023 | 40072.23 | 8/25/2023 12:02:16 AM |

Reboot the DC server after application and DB started from DR

The screenshot shows a PuTTY session window titled 'Putty (inactive)'. The terminal output displays network statistics for several interfaces (em2, em3, em4, lo) and ends with a 'reboot' command. The output is as follows:

```
RX errors 0 dropped 81298 overruns 0 frame 0
TX packets 10867487612 bytes 3046676121493 (2.7 TiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
device interrupt 41

em2: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
ether 80:18:44:e2:bc:95 txqueuelen 1000 (Ethernet)
RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 0 bytes 0 (0.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
device interrupt 45

em3: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
ether 80:18:44:e2:bc:96 txqueuelen 1000 (Ethernet)
RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 0 bytes 0 (0.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
device interrupt 40

em4: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
ether 80:18:44:e2:bc:97 txqueuelen 1000 (Ethernet)
RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 0 bytes 0 (0.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
device interrupt 44

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
inet 127.0.0.1 netmask 255.0.0.0
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 0 (Local Loopback)
RX packets 6784 bytes 567268 (553.9 KiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 6784 bytes 567268 (553.9 KiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[root@localhost ~]# reboot
```

```

Sectona PuTTY (SSH)-GLOBALREMITAPP / 192.168.126.80
top - 00:51:48 up 34 min, 2 users, load average: 0.57, 0.16, 0.22
Tasks: 754 total, 1 running, 753 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni,100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
KiB Mem: 65691496 total, 45096948 used, 20594548 free, 4068 buffers
KiB Swap: 65535996 total, 0 used, 65535996 free. 4089524 cached Mem

PID USER PR NI VIRT RES SHR S %CPU %MEM TIME+ COMMAND
9791 root 20 0 124236 2316 1236 R 0.7 0.0 0:00.04 top -c
9722 root 20 0 145816 5600 4336 S 0.3 0.0 0:00.01 sshd: root@pts/0
1 root 20 0 159592 8992 2420 S 0.0 0.0 0:03.72 /usr/lib/systemd/systemd --switched-root --system --deserialize 23
2 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [kthreadd]
3 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [ksoftirqd/0]
5 root 0 -20 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/0:0H]
6 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/u384:0]
8 root rt 0 0 0 0 0 S 0.0 0.0 0:00.52 [migration/0]
9 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcu_bh]
10 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/0]
11 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/1]
12 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/2]
13 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/3]
14 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/4]
15 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/5]
16 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/6]
17 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/7]
18 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/8]
19 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/9]
20 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/10]
21 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/11]
22 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/12]
23 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/13]
24 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/14]
25 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/15]
26 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/16]
27 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/17]
28 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/18]
29 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/19]
30 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/20]
31 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/21]
32 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/22]
33 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcuob/23]

```

```

Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
top - 00:45:43 up 34 min, 1 user, load average: 0.04, 0.03, 0.05
Tasks: 367 total, 1 running, 366 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni,100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
KiB Mem: 65686732 total, 64088640 free, 775348 used, 822744 buff/cache
KiB Swap: 65535996 total, 65535996 free, 0 used. 63970848 avail Mem

PID USER PR NI VIRT RES SHR S %CPU %MEM TIME+ COMMAND
2941 root 20 0 158016 2596 1632 R 0.3 0.0 0:00.03 top -c
1 root 20 0 193144 6232 2516 S 0.0 0.0 0:02.47 /usr/lib/systemd/systemd --switched-root --system --deserialize 21
2 root 20 0 0 0 0 S 0.0 0.0 0:00.00 [kthreadd]
3 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [ksoftirqd/0]
5 root 0 -20 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/0:0H]
6 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/u384:0]
8 root rt 0 0 0 0 0 S 0.0 0.0 0:00.28 [migration/0]
9 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [rcu_bh]
10 root 20 0 0 0 0 0 S 0.0 0.0 0:00.39 [rcu_sched]
11 root rt 0 0 0 0 0 S 0.0 0.0 0:00.00 [watchdog/0]
12 root rt 0 0 0 0 0 S 0.0 0.0 0:00.00 [watchdog/1]
13 root rt 0 0 0 0 0 S 0.0 0.0 0:00.28 [migration/1]
14 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [ksoftirqd/1]
16 root 0 -20 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/1:0H]
17 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/u386:0]
18 root rt 0 0 0 0 0 S 0.0 0.0 0:00.00 [watchdog/2]
19 root rt 0 0 0 0 0 S 0.0 0.0 0:00.91 [migration/2]
20 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [ksoftirqd/2]
22 root 0 -20 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/2:0H]
23 root rt 0 0 0 0 0 S 0.0 0.0 0:00.00 [watchdog/3]
24 root rt 0 0 0 0 0 S 0.0 0.0 0:00.28 [migration/3]
25 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [ksoftirqd/3]
27 root 0 -20 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/3:0H]
28 root rt 0 0 0 0 0 S 0.0 0.0 0:00.00 [watchdog/4]
29 root rt 0 0 0 0 0 S 0.0 0.0 0:00.28 [migration/4]
30 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [ksoftirqd/4]
31 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/4:0]
32 root 0 -20 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/4:0H]
33 root rt 0 0 0 0 0 S 0.0 0.0 0:00.00 [watchdog/5]
34 root rt 0 0 0 0 0 S 0.0 0.0 0:00.28 [migration/5]
35 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [ksoftirqd/5]
36 root 20 0 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/5:0]
37 root 0 -20 0 0 0 0 S 0.0 0.0 0:00.00 [kworker/5:0H]

```

## DR after change to primary

```
global=# select count(*) from remittance_info;
   count
-----
12331329
(1 row)

global=# create table aa_yubaraj_test(id int);
CREATE TABLE
global=# insert into aa_yubaraj_test(id) values(1);
INSERT 0 1
global=# insert into aa_yubaraj_test(id) values(2);
INSERT 0 1
global=# insert into aa_yubaraj_test(id) values(3);
INSERT 0 1
```

## DC after change to standby server

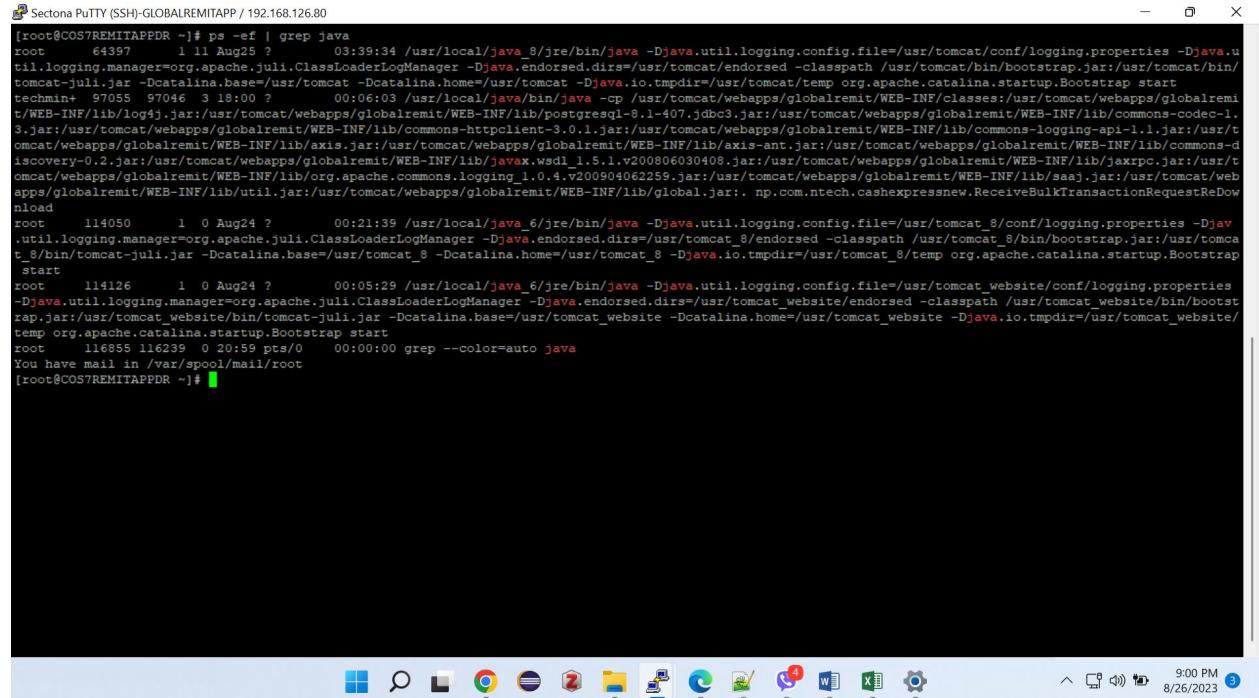
```
global=# select count(*) from remittance_info;
   count
-----
12331329
(1 row)

global=# select * from aa_yubaraj_test;
   id
-----
(0 rows)

global=# select * from aa_yubaraj_test;
   id
-----
 1
 2
 3
(3 rows)

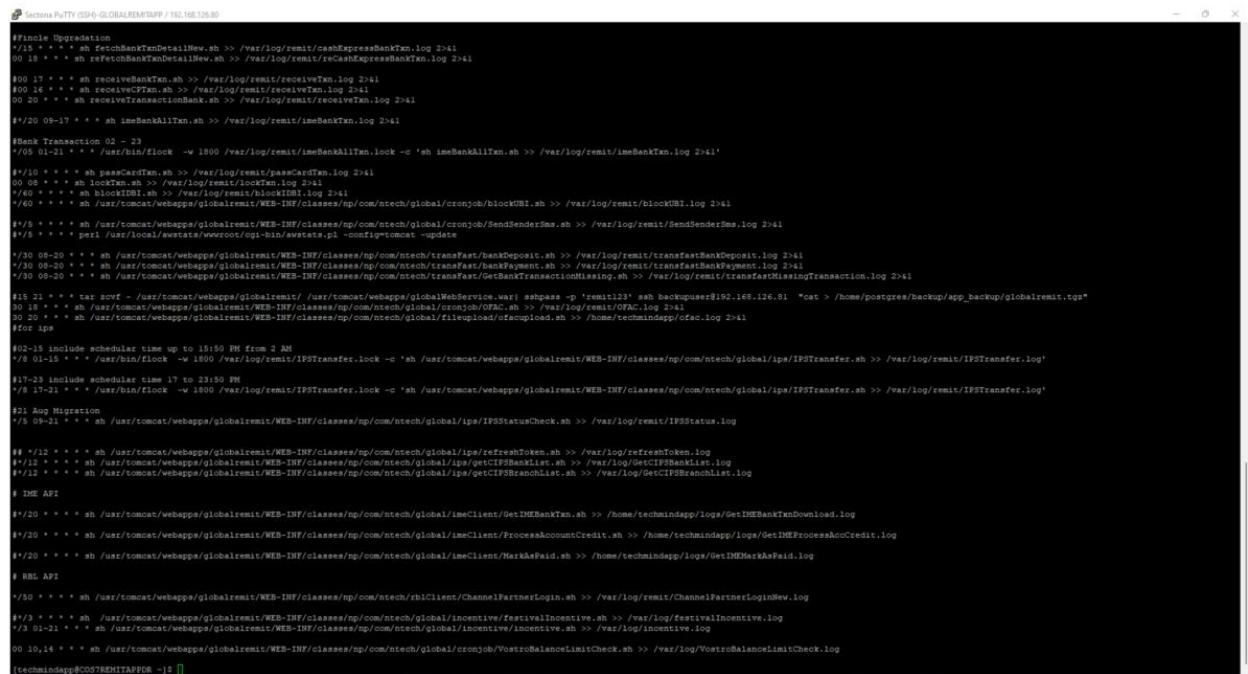
global=# insert into aa_yubaraj_test(id) values(4);
ERROR:  cannot execute INSERT in a read-only transaction
global=# 
```

## Annex II



Sectona Putty (SSH)-GLOBALREMITAPP / 192.168.126.80

```
[root@COS7REMITAPDR ~]# ps -ef | grep java
root      64397     1 11 Aug25 ?        03:39:34 /usr/local/java_8/jre/bin/java -Djava.util.logging.config.file=/usr/tomcat/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djava.endorsed.dirs=/usr/tomcat/endorsed -classpath /usr/tomcat/bin/bootstrap.jar:/usr/tomcat/bin/tomcat-juli.jar -Dcatalina.base=/usr/tomcat -Dcatalina.home=/usr/tomcat -Djava.io.tmpdir=/usr/tomcat/temp org.apache.catalina.startup.Bootstrap start
techmin 97055 97046 3 18:00 ?        00:06:03 /usr/local/java/bin/java -cp /usr/tomcat/webapps/globalremit/WEB-INF/classes:/usr/tomcat/webapps/globalremit/WEB-INF/lib/postgresql-8.1-407.jdbc3.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/commons-codec-1.3.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/commons-httpclient-3.0.1.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/commons-logging-api-1.1.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/axis.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/axis-ant.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/axis-ant.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/jaxws-wsdl_1.5.1.v20080630408.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/jaxrpc.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/org.apache.commons.logging_1.0.4.v200904062259.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/saaj.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/util.jar:/usr/tomcat/webapps/globalremit/WEB-INF/lib/global.jar: np.com.ntech.cashexpressnew.ReceiveBulkTransactionRequestReDownLoad
root    114050     1  0 Aug24 ?        00:21:39 /usr/local/java_6/jre/bin/java -Djava.util.logging.config.file=/usr/tomcat_8/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djava.endorsed.dirs=/usr/tomcat_8/endorsed -classpath /usr/tomcat_8/bin/bootstrap.jar:/usr/tomcat_8/bin/tomcat-juli.jar -Dcatalina.base=/usr/tomcat_8 -Dcatalina.home=/usr/tomcat_8 -Djava.io.tmpdir=/usr/tomcat_8/temp org.apache.catalina.startup.Bootstrap start
root    114126     1  0 Aug24 ?        00:05:29 /usr/local/java_6/jre/bin/java -Djava.util.logging.config.file=/usr/tomcat_website/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djava.endorsed.dirs=/usr/tomcat_website/endorsed -classpath /usr/tomcat_website/bin/bootstrap.jar:/usr/tomcat_website/bin/tomcat-juli.jar -Dcatalina.base=/usr/tomcat_website -Dcatalina.home=/usr/tomcat_website -Djava.io.tmpdir=/usr/tomcat_website/temp org.apache.catalina.startup.Bootstrap start
root    116855 116239  0 20:59 pts/0   00:00:00 grep --color=auto java
You have mail in /var/spool/mail/root
[root@COS7REMITAPDR ~]#
```



Sectona Putty (SSH)-GLOBALREMITAPP / 192.168.126.80

```
#Findle Upgradation
*/15 * * * * sh fetchBankTxnDetailNew.sh >> /var/log/remit/cashExpressBankTxn.log 2>1
00 18 * * * * sh refetchBankTxnDetailNew.sh >> /var/log/remit/reCashExpressBankTxn.log 2>1

#00 17 * * * * sh receiveBankTxn.sh >> /var/log/remit/receiveTxn.log 2>1
#00 16 * * * * sh receiveCPTxn.sh >> /var/log/remit/receiveTxn.log 2>1
#00 20 * * * * sh receiveTransactionBank.sh >> /var/log/remit/receiveTxn.log 2>1

#*30 09-17 * * * * sh imxBankAllTxn.sh >> /var/log/remit/imxBankTxn.log 2>1

#Bank Transaction 02 - 23
*/05 01-31 * * * * /usr/bin/flock -w 1800 /var/log/remit/imxBankAllTxn.lock -c 'sh imxBankAllTxn.sh >> /var/log/remit/imxBankTxn.log 2>1'

#*/10 * * * * sh passCardTxn.sh >> /var/log/remit/passCardTxn.log 2>1
#00 08 * * * * sh lockTxn.sh >> /var/log/remit/lockTxn.log 2>1
#*/40 * * * * sh blockTxn.sh >> /var/log/remit/blockTxn.log 2>1
#*/40 * * * * sh /usr/comcat/webapps/gjcharmatrix/WEB-INF/classes/up/com/ntech/global/cronjob/blockTxn.sh >> /var/log/remit/blockTxn.log 2>1

#*/30 09-20 * * * * sh /usr/comcat/webapps/gjcharmatrix/WEB-INF/classes/up/com/ntech/global/cronjob/SendSenderEmails.sh >> /var/log/remit/SendSenderEmails.log 2>1
#*/30 09-20 * * * * perl /usr/local/wwwroot/wwwroot/ntp-bin/wwwstatis.pl -config=tomcat -update

#*/30 09-20 * * * * sh /usr/comcat/webapp/globalremit/WEB-INF/classes/up/com/ntech/transfer/bankDeposit.sh >> /var/log/remit/transferBankDeposit.log 2>1
#*/30 09-20 * * * * sh /usr/comcat/webapp/globalremit/WEB-INF/classes/up/com/ntech/transfer/bankPayment.sh >> /var/log/remit/transferBankPayment.log 2>1
#*/30 09-20 * * * * sh /usr/comcat/webapp/globalremit/WEB-INF/classes/up/com/ntech/transfer/bankTransfer.sh >> /var/log/remit/transferBankMissingTransaction.log 2>1

#*15 21 * * * tar zcvf - /usr/comcat/webapps/globalremit/ >/var/comcat/webapps/globalremit/service.war sshpass -p 'remit123' scp backupuser192.168.126.81 "cat > /home/postgres/backup/app_backup/globalremit.tgz"
#*0 20 * * * sh /usr/comcat/webapp/globalremit/WEB-INF/classes/up/com/tech/global/cronjob/OFAC.log >> /var/log/remit/OFAC.log 2>1
#0 20 * * * sh /usr/comcat/webapp/globalremit/WEB-INF/classes/up/com/ntech/transfer/transferMissingTransaction.sh >> /var/log/remit/transferMissingTransaction.log 2>1

#*21 Aug Migration
*/5 09-21 * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/global/ips/IPSSStatusCheck.sh >> /var/log/remit/IPSSStatus.log

#*/10 * * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/global/ips/refreshToken.sh >> /var/log/refreshToken.log
#*/10 * * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/global/ips/getCIFSBanList.sh >> /var/log/getCIFSBanList.log
#*/10 * * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/global/ips/getCIFSBanList.sh >> /var/log/getCIFSBanList.log

# IME API
#*/20 * * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/imeClient/GetINMBankTxn.sh >> /home/technimindapp/logs/GetINMBankTxnDownload.log
#*/20 * * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/imeClient/ProceseAccountCredit.sh >> /home/technimindapp/logs/GetIMFProcessAccCredit.log
#*/20 * * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/imeClient/MarktPaid.sh >> /home/technimindapp/logs/GetINMMarketPaid.log

# RBL API
#*/50 * * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/rblClient/ChannelPartnerLogin.sh >> /var/log/remit/ChannelPartnerLoginNew.log
#*/50 * * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/global/incentive/festivalIncentive.sh >> /var/log/festivalIncentive.log
#*/5 01-21 * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/global/incentive/incentive.sh >> /var/log/incentive.log
#0 10,14 * * * sh /usr/comcat/webapps/globalremit/WEB-INF/classes/up/com/ntech/global/cronjob/VostroBalanceLimitCheck.sh >> /var/log/VostroBalanceLimitCheck.log
#technimindapp$COS7REMITAPPDE -1t [ ]
```

## DC

```
Sectona PuTTY (SSH)-GLOBALREMITAPP / 192.168.126.80
[root@localhost ~]# ps -ef| grep java
root      94933  93964  0 21:05 pts/1    00:00:00 grep --color=auto java
[root@localhost ~]# netstat -nltp
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address          Foreign Address        State      PID/Program name
tcp      0      0 127.0.0.1:25            0.0.0.0:*           LISTEN     3804/master
tcp      0      0 127.0.0.1:199           0.0.0.0:*           LISTEN     2634/snmpd
tcp      0      0 0.0.0.0:35757          0.0.0.0:*           LISTEN     2714/rpc.statd
tcp      0      0 0.0.0.0:111            0.0.0.0:*           LISTEN     2643/rpcbind
tcp      0      0 0.0.0.0:22             0.0.0.0:*           LISTEN     2642/sshd
tcp      0      0 127.0.0.1:631            0.0.0.0:*           LISTEN     4668/cupsd
tcp6     0      0 ::1:25                ::*:*              LISTEN     3804/master
tcp6     0      0 ::1:111               ::*:*              LISTEN     2643/rpcbind
tcp6     0      0 ::1:22                ::*:*              LISTEN     2642/sshd
tcp6     0      0 ::1:631               ::*:*              LISTEN     4668/cupsd
tcp6     0      0 ::1:38424             ::*:*              LISTEN     2714/rpc.statd
[root@localhost ~]# 
```

## DR

```
Sectona PuTTY (SSH)-GLOBALREMITAPP / 192.168.126.80
[technindapp@COS7REMITAPP ~]$ ps -ef| grep java
root      64397  1 11 Aug25 ? 00:00:33 /usr/local/java_6/jre/bin/java -Djava.util.logging.config.file=/usr/tomcat/conf/logging.properties -Djava.endorsed.dirs=/usr/tomcat/endorsed -classpath /usr/tomcat/bin/bootstrap.jar:/usr/tomcat/bin/tomcat-juli.jar -Dcatalina.home=/usr/tomcat -Djava.io.tmpdir=/usr/tomcat/temp org.apache.catalina.startup.Bootstrap start
root      114090  1 0 Aug24 ? 00:12:43 /usr/local/java_6/jre/bin/java -Djava.util.logging.config.file=/usr/tomcat_8/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djava.endorsed.dirs=/usr/tomcat_8/endorsed -classpath /usr/tomcat_8/bin/bootstrap.jar:/usr/tomcat_8/bin/tomcat-juli.jar -Dcatalina.home=/usr/tomcat_8 -Djava.io.tmpdir=/usr/tomcat_8/temp org.apache.catalina.startup.Bootstrap start
root      114126  1 0 Aug24 ? 00:05:29 /usr/local/java_6/jre/bin/java -Djava.util.logging.config.file=/usr/tomcat_website/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djava.endorsed.dirs=/usr/tomcat_website/endorsed -classpath /usr/tomcat_website/bin/bootstrap.jar:/usr/tomcat_website/bin/tomcat-juli.jar -Dcatalina.home=/usr/tomcat_website -Djava.io.tmpdir=/usr/tomcat_website/temp org.apache.catalina.startup.Bootstrap start
technindapp@COS7REMITAPP ~]$ netstat -nltp
(No info could be read for "-p": geteuid()=1004 but you should be root)
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address          Foreign Address        State      PID/Program name
tcp      0      0 127.0.0.1:25            0.0.0.*           LISTEN     -
tcp      0      0 0.0.0.0:4210          0.0.0.0.*          LISTEN     -
tcp      0      0 0.0.0.0:4299          0.0.0.0.*          LISTEN     -
tcp      0      0 0.0.0.0:111           0.0.0.0.*          LISTEN     -
tcp      0      0 0.0.0.0:22            0.0.0.0.*          LISTEN     -
tcp5     0      0 ::1:125              ::*:*              LISTEN     -
tcp6     0      0 ::1:8443              ::*:*              LISTEN     -
tcp6     0      0 ::1:8444              ::*:*              LISTEN     -
tcp6     0      0 ::1:8000              ::*:*              LISTEN     -
tcp6     0      0 127.0.0.1:8036          ::*:*              LISTEN     -
tcp6     0      0 0.0.0.0:8006           ::*:*              LISTEN     -
tcp6     0      0 ::1:111               ::*:*              LISTEN     -
tcp6     0      0 ::1:7925              ::*:*              LISTEN     -
tcp6     0      0 ::1:22                ::*:*              LISTEN     -
[technindapp@COS7REMITAPP ~]$ 
```

```
Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
Using username "root".
Last failed login: Fri Aug 25 23:03:18 +0545 2023 from 10.0.4.33 on ssh:notty
There were 44 failed login attempts since the last successful login.
Last login: Fri Aug 25 14:26:45 2023 from 10.0.4.121
[root@remitdbserver ~]# ssh root@192.168.201.81 
```

## DC

Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81

```
-bash-4.2$ ls -lrt *.conf
-rw----- 1 postgres postgres    88 Aug 25 15:21 postgresql.auto.conf
-rw----- 1 postgres postgres  1636 Aug 25 15:21 pg_ident.conf
-rw-r--r-- 1 postgres postgres   67 Aug 25 15:24 recovery.conf
-rw----- 1 postgres postgres 22429 Aug 25 15:25 postgresql.conf
-rw----- 1 postgres postgres  5281 Aug 25 15:29 pg_hba.conf
-bash-4.2$ [REDACTED]
```

## DR

Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81

```
-bash-4.2$ cd 9.6/data
-bash-4.2$ ls -lrt *.conf
-rw----- 1 postgres postgres    88 Aug 17 12:57 postgresql.auto.conf
-rw----- 1 postgres postgres  1636 Aug 17 12:57 pg_ident.conf
-rw----- 1 postgres postgres 22430 Aug 24 22:58 postgresql.conf
-rw----- 1 postgres postgres  5281 Aug 25 15:47 pg_hba.conf
-bash-4.2$ [REDACTED]
```

## DR

Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81

```
(1 row)
global=# select count(*) from AUDIT_REMIT;
count
-----
68779166
(1 row)

global=# select count(*) from AGENT_HST;
count
-----
8246
(1 row)

global=# select count(*) from ISO_ERROR_DESC;
count
-----
26
(1 row)

global=# select count(*) from IPS_BRANCH;
count
-----
5603
(1 row)

global=# select count(*) from IPS_BANK;
count
-----
51
(1 row)

global=# select count(*) from BRANCH;
count
-----
7256
(1 row)

global=# select count(*) from BANK;
count
-----
195
(1 row)

global=# select count(*) from OFAC_LIST;
count
-----
2493008
(1 row)

global=# select count(*) from audit_remit;
count
-----
68779166
(1 row)

global=# select count(*) from spi_audit_remit;
count
-----
945511
(1 row)

global=# [REDACTED]
```

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## DC

```
global# select count(*) from AUDIT_REMIT;
count
-----
68779166
(1 row)

global# select count(*) from AGENT_MST;
count
-----
226
(1 row)

global# select count(*) from ISO_ERRORS_DESC;
count
-----
26
(1 row)

global# select count(*) from IPS_BRANCH;
count
-----
5601
(1 row)

global# select count(*) from IPS_BANK;
count
-----
51
(1 row)

global# select count(*) from BRANCH;
count
-----
7256
(1 row)

global# select count(*) from BANK;
count
-----
199
(1 row)

global# select count(*) from OFAC_LIST;
count
-----
2408308
(1 row)

global# select count(*) from audit_remit;
count
-----
68779166
(1 row)

global# select count(*) from api_audit_remit;
COUNT
-----
945911
(1 row)

global#
```

## DC before change

```
Sectona PuTTY (SSH)-GLOBALREMITDB / 192.168.126.81
# Put your actual configuration here
#
#
# If you want to allow non-local connections, you need to add more
# "host" records. In that case you will also need to make PostgreSQL
# listen on a non-local interface via the listen_addresses
# configuration parameter, or via the -i or -h command line switches.

# TYPE DATABASE USER ADDRESS METHOD
# "local" is for Unix domain socket connections only
local all all peer
# IPv4 local connections:
#host all all 127.0.0.1/32 ident
host all postgres 192.168.126.80 255.255.255.0 trust
host all all 192.168.126.81 255.255.255.0 md5
#host all all 192.168.212.0/24 md5
#host all all 10.1.1.26 255.255.255.0 md5
#for BI Purpose
host all postgres 10.0.2.52/32 trust
host all gblreport 10.0.2.52/32 trust
host all gbl 192.168.101.22/32 trust
host all gbl 192.168.101.91/32 trust
#for Logpoint Server
#host all postgres 10.0.4.19/32 trust
#host all postgres 0.0.0.0 0.0.0.0 trust
#host all all 192.168.201.81 255.255.255.0 trust
#host all all 10.0.4.1 255.255.255.0 trust
# IPv6 local connections:
#host all all ::1/128 ident
# Allow replication connections from localhost, by a user with the
# replication privilege.
#local replication postgres peer
#host replication postgres 127.0.0.1/32 ident
#host replication postgres ::1/128 ident
host replication repuser 192.168.201.81 255.255.255.0 trust
#host replication repuser 192.168.126.81 255.255.255.0 trust
```

## DC after change

```

# METHOD can be "trust", "reject", "md5", "password", "gss", "sspi",
# "ident", "peer", "pam", "ldap", "radius" or "cert". Note that
# "password" sends passwords in clear text; "md5" is preferred since
# it sends encrypted passwords.

# OPTIONS are a set of options for the authentication in the format
# NAME=VALUE. The available options depend on the different
# authentication methods. See the "Authentication" section in the
# documentation for a list of which options are
# available for which authentication methods.

# Databases and user names containing spaces, commas, quotes and other
# special characters must be quoted. Quoting one of the keywords
# "all", "sameuser", "samerole" or "replication" makes the name lose
# its special character, and just match a database or username with
# that name.

# This file is read on server startup and when the postmaster receives
# a SIGHUP signal. If you edit the file on a running system, you have
# to signal the postmaster for the changes to take effect. You can
# use "pg_ctl reload" to do that.

# Put your actual configuration here
-----
# If you want to allow non-local connections, you need to add more
# entries below. In this case, you will need to restart PostgreSQL
# listening on a non-local interface with the "listen_addresses"
# configuration parameter, or via the -I or -h command line switches.

# TYPE DATABASE USER ADDRESS METHOD
# Local" is for Unix domain socket connections only
local all all peer
# IPv4 local connections:
#Host all all 127.0.0.1/32 ident
#Host all postgres 127.0.0.1/32 md5
host all all 127.0.0.1/32 255.255.255.0 trust
host all all 192.168.126.81/32 255.255.255.0 md5
host all all 192.168.212.0/24 md5
#Host all all 10.1.1.26 255.255.255.0 md5
#For BI purpose
host all postgres 10.0.2.52/32 trust
host all gbiport 10.0.2.52/32 trust
host all gbi 192.168.101.23/32 trust
host all gbi 192.168.101.93/32 trust
#For Logpoint Server
#Host all postgres 10.0.4.19/32 trust
#Host all postgres 0.0.0.0 0.0.0.0 trust
#Host all all 10.2.1.201.94 255.255.255.0 trust
#Host all all 10.0.4.4 255.255.255.0 trust
# IPv4 local connections:
#Host all all ::1/128 ident
# Allow replication connections from localhost, by a user with the
# replication privilege.
#local replication postgres peer
#Host replication postgres 127.0.0.1/32 ident
#Host replication postgres ::1/128 ident
#Host replication repuser 192.168.201.81 255.255.255.0 trust
#Host replication repuser 192.168.126.81 255.255.255.0 trust

```

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## DR

```

[root@COS7REMITDBDR ~]# su - postgres
Last login: Sat Aug 26 21:42:05 +0545 2023 on pts/0
-bash-4.2$ psql global
psql (9.6.6)
Type "help" for help.

global=# select * from pg_stat_wal_receiver;
 pid | status | receive_start_lsn | receive_start_tli | received_lsn | received_tli |      last_msg_send_time      |      last_msg_receipt_time
     |        |           |           |           |           |           |           |
     |        |           |           |           |           |           |           |           |
-----+-----+-----+-----+-----+-----+-----+-----+
 75402 | streaming | ED/40000000 |           2 | ED/40973390 |           2 | 2023-08-26 22:31:39.823381+05:45 | 2023-08-26 22:38:55.218762+05:4
5 | ED/40973390 | 2023-08-22:31:39.823381+05:45 | standby | user=repuser dbname=replication host=192.168.126.81 port=5432 fallback_application_name=w
alreceiver sslmode=prefer sslcompression=1 krb2rvnname=postgres
(1 row)

global=# select slot_name, restart_lsn from pg_replication_slots;
 slot_name | restart_lsn
-----+-----
 standby  | ED/3D000098
(1 row)

```

```
Section PutTY (SSH)-GLOBALREMITAPP / 192.168.126.80

tcp6      0      0 ::1::111      ::*:          LISTEN    2643/rpcbind
tcp6      0      0 ::1::22       ::*:          LISTEN    2642/sshd
tcp6      0      0 ::1:631      ::*:          LISTEN    4668/cupsd
tcp6      0      0 ::1:38424     ::*:          LISTEN    2714/rpc.statd
[root@localhost ~]# ps -ef| grep java
root    97642  93964  0 21:47 pts/1    00:00:00 grep --color=auto java
[root@localhost ~]# . .bash_profile
[root@localhost ~]# /usr/tomcat/bin/startup.sh
Using CATALINA_BASE:   /usr/tomcat
Using CATALINA_HOME:   /usr/tomcat
Using CATALINA_TMPDIR: /usr/tomcat/temp
Using JRE_HOME:        /usr/local/java_8/jre
Using CLASSPATH:       /usr/tomcat/bin/bootstrap.jar:/usr/tomcat/bin/tomcat-juli.jar
tomcat started.
[root@localhost ~]# /usr/tomcat_8/bin/startup.sh
Using CATALINA_BASE:   /usr/tomcat_8
Using CATALINA_HOME:   /usr/tomcat_8
Using CATALINA_TMPDIR: /usr/tomcat_8/temp
Using JRE_HOME:        /usr/local/java_6/jre
Using CLASSPATH:       /usr/tomcat_8/bin/bootstrap.jar:/usr/tomcat_8/bin/tomcat-juli.jar
tomcat started.
[root@localhost ~]# /usr/tomcat_website/bin/startup.sh
Using CATALINA_BASE:   /usr/tomcat_website
Using CATALINA_HOME:   /usr/tomcat_website
Using CATALINA_TMPDIR: /usr/tomcat_website/temp
Using JRE_HOME:        /usr/local/java_6/jre
Using CLASSPATH:       /usr/tomcat_website/bin/bootstrap.jar:/usr/tomcat_website/bin/tomcat-juli.jar
tomcat started.
[root@localhost ~]# tail -f /usr/tomcat/logs/catalina.out
IP GetRemoteStatus 103.93.44.111 by idbitms
GetRemoteStatus validate::: username=idbitms radNo=777687537380
[INFO] GetRemoteStatus validate::: username=idbitms radNo=777687537380
validation...
User Auth idbitms,73A9603C15EF3B0D649E3B2671728784,N,R,idbitms,73A9603C15EF3B0D649E3B2671728784
estatus: [Ljava.lang.String;@3ead6d6
Sat Aug 26 21:51:57 NPT 2023777687537380 GetStatus Inside by idbitms
Sat Aug 26 21:51:57 NPT 2023777687537380 GetStatus Inside:SELECT stage,block_trans,status,remarks,remit_type from remittance_info where rad_no='777687537380
Sat Aug 26 21:51:57 NPT 2023777687537380 stage:2 block_trans: N status: null remarks: ~KANDIVILI(W)-MAHAVIR NAGAR-KANDIVILI(W)-MAHAVIR NAGAR remitType: ID
777687537380GetRemoteStatus returnResult 5008UNPAID777687537380 by idbitms
accessed from IP of idbitms is 103.93.44.111 ON Sat Aug 26 21:51:57 NPT 2023
```

### DC after change to primary

```
Global# create table aaaa(id int);
CREATE TABLE
Global# insert into aaaa(id) values(1);
INSERT 0 1
Global# insert into aaaa(id) values(2);
INSERT 0 1
Global# select * from aaaa;
+-----+
| id   |
+-----+
| 1    |
| 2    |
+-----+
(2 rows)

Global# insert into aaaa(id) values(3);
INSERT 0 1
Global# select * from aaaa;
+-----+
| id   |
+-----+
| 1    |
| 2    |
| 3    |
+-----+
(3 rows)

Global# insert into aaaa(id) values(4);
INSERT 0 1
Global# insert into aaaa(id) values(4);
```

## DR after change to standby

```
global=# select * from aaaaa;
id
-----
1
2
3
(3 rows)

global=# select * from aaaaa;
id
-----
1
2
3
4
(4 rows)

global=# insert into aaaaa(id) values(5);
ERROR: cannot execute INSERT in a read-only transaction
global=#
```

```
[root@remotederver ~]# systemctl status postgresql-9.6.service
● postgresql-9.6.service - PostgreSQL 9.6 database server
   Loaded: loaded (/usr/lib/systemd/system/postgresql-9.6.service; enabled; vendor preset: disabled)
   Active: active (running) since Sat 2023-08-26 21:33:44 +0545; 6s ago
     Docs: man:postgresql(8), https://www.postgresql.org/docs/9.6/static/
 Process: 41996 ExecStartPre=/usr/lib/postgresql-9.6/bin/postgresql96-check-db-dir ${PGDATA} (code=exited, status=0/SUCCESS)
 Main PID: 41996 (postmaster)
   CGroup: /system.slice/postgresql-9.6.service
           └─ 41996 postmaster -l -c config -D /var/lib/pgsql/9.6/data/
              ├─ 41998 postmaster: logger process
              ├─ 42000 postmaster: checkpoint process
              ├─ 42001 postmaster: writer process
              ├─ 42002 postmaster: wal writer process
              ├─ 42003 postmaster: autovacuum manager process
              ├─ 42004 postmaster: archiver process
              └─ 42005 postmaster: stats collector process

Aug 26 21:33:44 remotederver systemd[1]: Starting PostreSQL 9.6 database server...
Aug 26 21:33:44 remotederver postmaster[41996]: LOG: redirecting log output to logging collector process
Aug 26 21:33:44 remotederver postmaster[41996]: <PID>2023-08-26 21:33:44 +0545 HINT: Future log output will appear in directory "pg_log".
Aug 26 21:33:44 remotederver systemd[1]: Started PostgreSQL 9.6 database server.
[root@remotederver ~]# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
      inet 192.168.126.31  netmask 255.255.255.0  broadcast 192.168.126.255
        brd 192.168.126.255  scopeid 0x10<link>
          ether 00:15:84:91:21:0c  txqueuelen 1000  (Ethernet)
            RX packets 1353133 bytes 23906547846 (22.2 GiB)
            RX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
            TX packets 34773919 bytes 3877305640 (37.0 GiB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
            device interrupt 54

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
      inet 127.0.0.1  netmask 255.0.0.0
        brd 127.0.0.1  scopeid 0x10<host>
          loop  txqueuelen 1  (Local Loopback)
            RX packets 46860  bytes 6438681 (6.1 MiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 46860  bytes 6438681 (6.1 MiB)
            TX errors 0 dropped 0 overruns 0 frame 0

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   Loaded: loaded (/usr/lib/systemd/system/postgresql-9.6.service; enabled; vendor preset: disabled)
   Active: active (running) since Sat 2023-08-26 21:33:44 +0545; 6s ago
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              ├─ 42000 postmaster: checkpoint process
              ├─ 42001 postmaster: writer process
              ├─ 42002 postmaster: wal writer process
              ├─ 42003 postmaster: autovacuum manager process
              ├─ 42004 postmaster: archiver process
              └─ 42005 postmaster: stats collector process

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```

```
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        brd 127.0.0.1  scopeid 0x10<host>
          loop  txqueuelen 1  (Local Loopback)
            RX packets 46860  bytes 6438681 (6.1 MiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 46860  bytes 6438681 (6.1 MiB)
            TX errors 0 dropped 0 overruns 0 frame 0

[root@remotederver ~]#
```

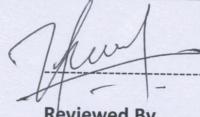
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