

# 2-Directory Services Menu

## 2- Directory Services Menu

[Main Menu](#) [Directory Services](#)

The Directory Services menu is used for various file operations within the RediGate file system.

Enter **2** at the Main Menu for the Directory Services menu.

```
===== Directory Services =====
ElecSys(V:5.7.2017-08-07-1200) Thu Aug 17 06:32:10 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
-----
 1) Executables           2) Current Configs
 3) Download Directory   4) Put File to Remote
 5) Get File From Remote 6) Rename File
 7) Delete File in Remote 8) Delete IsaGraf Files
 9) View Zombie.log      10) IsaGraf App Info
11) Restore Previous UFF 12) View UFF Processing Details
13) View Load-Store File 14) View kernel or message logs
15) MQTT XML Information 16) View customer settings
17) ZMODEM File to Remote 18) ZMODEM File from Remote
19) View Problem.txt     20) View ModemLog.txt
21) Store-N-Forward File

Make selection:
```

### 1- Executables

[Main Menu](#) [Directory Services](#) [Executables](#)

View list of files contained in the /usr/director/bin folder, mainly executable files.

Enter **1** for Executables. File sizes are rounded to 1Kb; thus some entries listed as zero are not actually empty files.

```
Make selection: 1
===== Executable Directory =====
ElecSys(V:5.7.2017-08-07-1200) Thu Aug 17 08:23:01 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
-----
 12 ArClock*           72 IButton*           100 TeleGyrMast*
  0 ArFunc.so@         4 IsaFind_1st.sh*     72 Term1Serv*
  0 ArFunc.so.1@       12 IsagInfo*          72 TermServd*
 60 ArFunc.so.1.7*     84 JSON_Rbe*          24 UdpHandler*
  8 ArcomUpdate.sh*    8 LinuxSys.sh*        52 UdpServ*
336 BACnetIpMast*     60 MELSECMast*        8 UffUpdate.txt
336 BACnetIpSlave*    4 MMI*                268 VirtMast*
```

### 2- Current Configs

[Main Menu](#) [Directory Services](#) [Current Configs](#)

Show diagnostic information related to the current configuration files in the RediGate.

When an XML configuration is uploaded to the RediGate, it is converted into a UFF file (or the UFF file may be loaded from ACE directly). The configuration is then broken into various components and stored in the /usr/director/configs folder.

Enter **2** to show Current Configs. Enter **Y** to see additional information about the current configuration.

The first two parts of the display show the current UFF filename and the internal component configurations stored in the RediGate.

```
===== Configuration Directory =====
ElecSys(V:5.7.2017-08-07-1200) Thu Aug 17 08:28:07 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
```

```

-----
Contents of /usr/director/config
-rw-r--r--  1 root      director    12347 Aug 17 06:17 /usr/director/config/RG-110E.uff

Show RediGate Linux Config Files (Y/N) Y
/usr/director/config/Channel00.1.cfg
/usr/director/config/Channel02.1.cfg
/usr/director/config/Channel15.1.cfg
/usr/director/config/DiagManual_Configuration.xml.gz
/usr/director/config/Director.0.cfg
/usr/director/config/IsaGraf02.1.cfg
/usr/director/config/Launch.conf
/usr/director/config/MQRbePr.1.cfg
/usr/director/config/MQXRbePr0.1.cfg
/usr/director/config/MQisdP.1.cfg
/usr/director/config/MQisdPX0.1.cfg
/usr/director/config/ModSlTcP00d.7.cfg
/usr/director/config/ONE_BAD_POLL.txt
/usr/director/config/RG-110E.uff
/usr/director/config/TS32.txt
/usr/director/config/Watchdog.1.cfg
/usr/director/config/css.000
/usr/director/config/customer
/usr/director/config/findfirst
/usr/director/config/uff2lnux.dbg
/usr/director/config/watchdog

/usr/director/config/Channel00:
DBM.1.cfg          ModMast00002.1.cfg  Tags00001.1.cfg    Tags00002.1.pub
Launch.conf       ModMast00003.1.cfg  Tags00001.1.pub    Tags00003.1.cfg
ModMast00001.1.cfg  SCAN.1.cfg         Tags00002.1.cfg    Tags00003.1.pub

/usr/director/config/Channel02:
DBM.1.cfg          Launch.conf         ModMast00001.1.cfg  SCAN.1.cfg

/usr/director/config/Channel15:
DBM.1.cfg          SCAN.1.cfg Launch.conf         VirtMast00003.1.cfg

/usr/director/config/init.arcom:
IsaPlc02.sh        gateway            inittab.Port0      inittabMMI-grep
S89runIO200port    hosts.modname      inittab.Port2      networks
SerialMMI.sh       hosts.modsh        inittab.Port64
eth0               inittab-modmmi     inittab.Port65
eth0_1            inittab-no-mgetty  inittab.Port79

Do you want to debug the UFF file? (Y/N) ? Y

```

If you have entered **Y** for the two prompts, you will then be given the uff2lnux diagnostic, which shows in detail the ACE objects and property values contained in the current configuration.

At the next four prompts, press **Enter**. The following output is typical of what might be seen in a configuration diagnostic view.

```

Just keep pressing ENTER until finished...

=====

uff2lnux
Revision    $Revision: 1.91 $

Usage
uff2lnux          -> Program will prompt you
uff2lnux -f *     -> Read *.UFF files
uff2lnux -f Apex -a 1 -> Read Apex.UFF, Abbreviated report
uff2lnux -f * -p  -> Read *.UFF files, Pause after each object
uff2lnux -f Apex -N -> No Bootloader files created
uff2lnux -f * > text -> NOTE: use the MS-DOS redirect symbol '>' to
                        redirect the output to a text file
uff2lnux -c plus any cmd -> Create individual download files

Enter UFF file name without UFF extension (wildcards ok)
APEX                08/17/117 08:28:21
=====

```

```

Pause after each Object Entry? y/n
y          08/17/117 08:28:22
=====

Create Individual Download Files? y/n
N
=====

Abbreviated Report? (Mostly Network Info) y/n
NNo Leading minus sign!117 08:28:23

```

Customer: RediGate

```

COM3_STOP_ECHO=1
ALL_16550_COMM=1
DF1_NEWPOLLTBL=1
RTU_FORCE_SCANUPD=1
DF1_DUPLEX_CTRL=1
EXTRA_TSERV_SOCKS=1
DO_PPP_OPTIONS=1
BAD_POLL_KILLS_RTU=1
BLOB_ANY_ADDR=1
HCP_32BIT_AWARE=1
POST_XML_FILE=1
TIME_STAMP_32BIT=1
UDHCPD_SERVER=1
HCP_RTC_VIA_SYSCMD=1
COMPILE_POD=1
DF1_BIN_POLLS=1
SRTP_NOT_ENRON_MAP=1
MULTI_HOME_SCRIPT=1
EXTRA_RBE_FLAGS=1
HTTP_PUT_NOT_POST=1
LINUX_3_XX=1
OPC_RELAX_RBE=1
FALCON_PROJECT=1
MSEC_TIMESTAMP=1
REDIGATE_PROJECT=1
PPP_CMUX_PTDEV=1
DIRUPLD_PASSWD=1
DELAY_HLTHECHO=1
BASH_USES_TILDE=1
=====

```

Opening APEX...

In this section, some important information is given about the configuration file, including:

- **XML filename** (if applicable, truncated to 32 characters) or **UFF filename** (if loaded directly from ACE ??? check this)
- **Configuration date** (date of the XML to UFF translation on a RediGate, or the date of original creation if UFF was loaded directly from ACE)
- **Build number** of the configuration (updated every time the configuration is saved)

```

UffVer=3 (DiagManual_Configuration.xml) 17/08/21 14:00:0
CfgVer=[1] BuildNumber=16 Machine=/ElecsysRediGate/
Number of Object Entries=40 : Size=12347

```

Each following section includes the object "filename" separated by @@, which appears in the ACE Configuration Editor after the Object Type, and all of the properties included in the UFF configuration file. The file size includes the total number of "bytes" included in the property values for the object. Enter **Q** to exit the configuration diagnostic, **B** followed by a number to back up that many sections, **S** followed by a number to skip forward that many sections, or any other key to show the next section.

```

@@cir0000@@      8 bytes @ 1080
  Circuit Type: DIRECT
  Primary Port: 64 Secondary : -1
  Redundancy : Dedicated
; Press Any Key. Q to quit. S to skip 'N' Entries. B to Backup. [35 remain]

@@cir0001@@      25 bytes @ 1088
  Circuit Type: MASTER NETWORK(s)

```

```

Server Port : 3040
ConnectDelay: 15 seconds
Server IP   : 192.003.001.011
Interface   : Ether0
= Press Any Key.  Q to quit.  S to skip 'N' Entries.  B to Backup. [34 remain]

@@firewall@@      299 bytes @ 1268

Input Policy      : DROP
Output Policy     : ACCEPT
Forward Policy    : ACCEPT
Port Management Chain : INPUT tcp eth0      22 ACCEPT
Port Management Chain : INPUT tcp eth0      3040 ACCEPT

<<< RAW CUSTOM IPTABLES>>>

iptables -A INPUT -p icmp -m state --state NEW,ESTABLISHED,RELATED -j ACCEPT
iptables -A OUTPUT -p icmp -m state --state NEW,ESTABLISHED,RELATED -j ACCEPT
: Press Any Key.  Q to quit.  S to skip 'N' Entries.  B to Backup. [33 remain]

@@lxsystem@@      155 bytes @ 1567
Apex Number      : 1
Apex Name        : UnitName
User Name        : user
Password         : user
Date Enumer      : 5
< Press Any Key.  Q to quit.  S to skip 'N' Entries.  B to Backup. [32 remain]

@@mastchan00@@    71 bytes @ 1722
Name             : Channel0
Type             : 993
Auto Start       : Yes
Timeout          : 200 msec
Broadcast        : 0 msec delay
Interpoll        : 0 msec delay
Scan Period      : 7000 sec
Net Recover      : 0 sec

      RTU    Poll  Delay(sec)
=====  =====  =====
      1      1    3600
      1      2     60
      2      1    3600
      2      2     60
      3      1    3600
      3      2     60
-----

; Press Any Key.  Q to quit.  S to skip 'N' Entries.  B to Backup. [35 remain]

```

### 3- Download Directory

[Main Menu](#) [Directory Services](#) [Download Directory](#)

Enter **3** for to show the files contained in the /home/director download directory.

Files with a ".run" extension are shortcuts to the current configuration files, and after the arrow (->) is the actual location of the file. If there is an .xml.gz or .uff file without the .run extension, it indicates a configuration file that has been loaded but not deployed. (See [Configuration Not Updating on RediGate](#) for fixing a problem if there is more than one un-deployed configuration file.)

```

===== Download Directory =====
ElecSys(V:5.7.2017-07-24-1300) Mon Aug 14 11:54:25 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <40170-0118>-SerialNumb
-----total 8
-rw-r--r--  1 root    root           64 Aug 13 12:59 AceConfigName.txt
-rw-r--r--  1 root    root            6 Jul 23  2014 CoreMSQID
lrwxrwxrwx  1 root    root           53 Aug 13 12:59 DiagManual_Configuration2.xml.gz.run
-> /usr/director/config/DiagManual_Configuration2.xml.gz
lrwxrwxrwx  1 root    root           32 Aug 13 12:59 RG-110E.uff.run ->
/usr/director/config/RG-110E.uff

```

```

-rw-r--r--    1 root    root                0 Aug 13 12:59 UnitName.nam
lrwxrwxrwx    1 root    root                28 Aug 13 12:59 is1500000.run ->
/usr/director/bin/is1500000

Press ENTER to continue

```

## 4- Put File to Remote

[Main Menu](#) [Directory Services](#) [Put File to Remote](#)

Load a file to the RediGate through the COM0 console port using YMODEM protocol. (This option requires using a terminal program that supports the YMODEM file transfer protocol.)

Enter 4 for Put File to Remote. After selecting the menu, a series of "C" characters will be displayed for 40 seconds.

In the serial terminal program, select the option to send a file using YMODEM protocol.

- In Tera Term or ExtraPUTTY, select File Transfer YMODEM Send
- In HyperTerminal, select Transfer Send File, and select the YMODEM protocol

### YMODEM timeout

The file must begin transferring within about 40 seconds, or the RediGate will time out. If this happens, just select option 4 in Directory Services to try again.

After the transfer is complete, the file will be in the /home/director folder. Use Directory Services option 3 to view contents of the Download Directory.

```

Make selection: 4

===== Put File to Remote =====
ElecSys(V:5.7.2017-08-07-1200) Thu Aug 17 13:33:54 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
-----
Ready to receive file.../dev/ymodem.dbg=-1
STARTINGCC
Press ENTER to continue

```

## 5- Get File From Remote

[Main Menu](#) [Directory Services](#) [Get File From Remote](#)

Retrieve a file from the RediGate's /home/director folder through the COM0 console port using YMODEM protocol. (This option requires using a terminal program that supports the YMODEM file transfer protocol.)

Enter 5 for Get File From Remote. Enter the exact file name to retrieve (case-sensitive). If the filename is not entered, it will time out in 40 seconds.

If you download a ".run" file (which is a shortcut to an actual file), it will download the original file, but you will need to rename in Windows to remove the ".run" extension.

```

Make selection: 5

===== Get File from Remote =====
ElecSys(V:5.7.2017-08-07-1200) Thu Aug 17 14:57:01 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
-----total 172
-rw-r--r--    1 root    root                63 Aug 17 09:51 AceConfigName.txt
-rw-r--r--    1 root    root                 6 Jul 23 2014 CoreMSQID
-rw-r--r--    1 user    director        73421 Aug 17 13:34 DefaultTemplate.xml.tmp.gz
lrwxrwxrwx    1 root    root                 52 Aug 17 09:55 DiagManual_Configuration.xml.gz.run
-> /usr/director/config/DiagManual_Configuration.xml.gz
lrwxrwxrwx    1 root    root                 32 Aug 17 09:55 RG-110E.uff.run ->
/usr/director/config/RG-110E.uff
-rw-r--r--    1 root    root                0 Aug 17 09:55 UnitName.nam
lrwxrwxrwx    1 root    root                28 Aug 13 12:59 is1500000.run ->
/usr/director/bin/is1500000
-rw-r--r--    1 root    root                166 Dec 4 1999 ppp0.log

```

```

Enter name if File to Receive DiagManual_Configuration.xml.gz.run
/dev/ymodem.dbg=-1
AceConfigName.txt                RG-110E.uff.run@
CoreMSQID                        UnitName.nam
DefaultTemplate.xml.tmp.gz       is15000000.run@
DiagManual_Configuration.xml.gz.run@ ppp0.log

Press ENTER to continue

```

## 6- Rename File

[Main Menu](#) [Directory Services](#) [Rename File](#)

Enter **6** to rename a file in the /home/director folder. Enter the exact existing and new filenames (case-sensitive).

## 7- Delete File in Remote

[Main Menu](#) [Directory Services](#) [Delete File in Remote](#)

Enter **7** to delete a file in the /home/director folder. Enter the exact existing filename (case-sensitive) to be deleted.

```

Make selection: 7

===== Delete File =====
ElecSys(V:5.7.2017-08-07-1200) Thu Aug 17 17:38:58 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
-----
AceConfigName.txt                RG-110E.uff.run
CoreMSQID                        UnitName.nam
DiagManual_Configuration.xml.tmp.gz.run is15000000.run
NewConfiguration.xml.gz         ppp0.log

There is no need to delete a file ending in '.run' or '.nam'
These are only softlinks to the actual running files.
Enter File Name to delete NewConfiguration.xml.gz

Press ENTER
-rw-r--r--  1 root    root          63 Aug 17 09:51 /home/director/AceConfigName.txt
-rw-r--r--  1 root    root           6 Jul 23  2014 /home/director/CoreMSQID
lrwxrwxrwx  1 root    root          52 Aug 17 09:55
/home/director/DiagManual_Configuration.xml.tmp.gz.run ->
/usr/director/config/DiagManual_Configuration.xml.gz
lrwxrwxrwx  1 root    root          32 Aug 17 09:55 /home/director/RG-110E.uff.run ->
/usr/director/config/RG-110E.uff
-rw-r--r--  1 root    root           0 Aug 17 09:55 /home/director/UnitName.nam
lrwxrwxrwx  1 root    root          28 Aug 13 12:59 is15000000.run ->
/usr/director/bin/is15000000
-rw-r--r--  1 root    root        166 Dec  4  1999 /home/director/ppp0.log

```

## 8- Delete IsaGraf Files

[Main Menu](#) [Directory Services](#) [Delete IsaGraf Files](#)

Enter **8** to remove an ISaGRAF logic file (such as is15000000) from the /usr/director/bin folder.

```

Make selection: 8

===== Delete IsaGraf Files =====
ElecSys(V:5.7.2017-08-07-1200) Thu Aug 17 17:52:33 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
-----
-rw-r--r--  1 root    director    88972 Aug 17 13:41 is15000000

Enter File Name to delete is15000000

```

## 9- View Zombie.log

Enter **9** to view the Zombie.log file, if it exists. The Zombie.log file is created in /home/director if a RediGate process dies unexpectedly (Linux calls this a "Zombie" process). Certain diagnostic information is stored in the file, and then shortly afterward the RediGate will automatically reboot. The hope is that if the process died as the result of a one-time anomaly, the system will automatically recover itself.

When no Zombie.log file exists and a process dies, the RediGate will reboot relatively quickly (within a minute). If the Zombie.log file exists when the event occurs, such as a persistent condition (bad configuration setting, etc.), the reboot will be delayed longer (up to 9-10 minutes) to allow a technician to intervene, obtain log files from the RediGate, reconfigure it, etc., in order to remove the condition causing the Zombie process to occur. Press the Space bar to page through to the end of the file. Newest entries are at the bottom. The Zombie.log shows the **process name** (which process died) and the **date/time** and other system conditions when it was detected.

The Zombie.log file is never deleted automatically, but it can be deleted manually through the Delete File in Remote option, or through the command line or an FTP deletion.

```
Make selection: 9

Press SPACE BAR for more pages...
Fri Aug 18 07:53:07 CDT 2017
Discovered [Z [DirectorScan]] zombie 17123
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 0.0.0.0:ssh              0.0.0.0:*               LISTEN
tcp        0      0 localhost:1883           0.0.0.0:*               LISTEN
tcp        0      0 0.0.0.0:3040            0.0.0.0:*               LISTEN
tcp        1      0 UnitName:42636          192.3.1.11:3040        CLOSE_WAIT
tcp        0      0 :::ssh                  :::*                     LISTEN
Active UNIX domain sockets (servers and established)
Proto RefCnt Flags               Type           State         I-Node Path
unix    20     [ ]                DGRAM          2934         /dev/log
unix    2      [ ]                DGRAM          115113
unix    2      [ ]                DGRAM          16168
unix    2      [ ]                DGRAM          115115
```

## 10- IsaGraf App Info

Enter **10** to show information about any ISaGRAF logic files that may exist on this RediGate. This shows the ISaGRAF **filename**, **project name** and **build number**.

Note that the ISaGRAF logic file is not automatically operational just because of being resident on a RediGate. In order to use ISaGRAF, the configuration must also include a Virtual Circuit and ISaGRAF Field Unit configured under an Internal Channel with an instance number that matches the first two digits of the ISaGRAF filename (e.g., Internal Channel 15 for the example below).

```
Make selection: 10

===== IsaGraf App Info =====
ElecSys(V:5.7.2017-08-07-1200) Thu Aug 17 17:50:39 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
-----

FileName=is15000000      -> IsaGraf-Project=wdpub06 : Version=251

Press ENTER...
```

## 11- Restore Previous UFF

Enter **11** to restore the previous RediGate configuration. The RediGate keeps only one previous backup configuration that was running before the current configuration. This menu option allows the system to be reverted back to the previous.

After being prompted, enter **Y** to confirm rolling back the configuration (with an automatic reconfigure and possibly reboot if needed), or **N** or **Enter** to keep the current.

```
Make selection: 11

===== Restore Previous UFF Configuration =====
ElecSys(V:5.7.2017-08-07-1200) Fri Aug 18 14:17:58 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
```

```
-----
-rw-r--r-- 1 root  director  5450 Aug 17 09:51
/usr/director/backup/DiagManual_Configuration.xml.gz
-rw-r--r-- 1 root  director  12347 Aug 17 09:51 /usr/director/backup/RG-110E.uff

Do you want to RESTORE with REBOOT this UFF or XML file? (y/n) y
```

## 12- View UFF Processing Details

[Main Menu](#) [Directory Services](#) [View UFF Processing Details](#)

Enter **12** to view details of the RediGate's processing of the UFF configuration file. Press **Enter** to begin viewing the details.

When a .uff file is loaded directly, or created from an .xml.gz configuration file, the RediGate processes the UFF file in order to start up all its processes. The UFF Processing Details give some detailed diagnostic information about how the new configuration was handled. The following lines show some excerpts from a typical diagnostic output.

```
Make selection: 12

===== View UFF Processing Details =====
ElecSys(V:5.7.2017-08-07-1200) Fri Aug 18 14:21:59 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
-----
Press the SPACE bar to view the next page or ENTER to advance one line

Rtdb 0 has 4 Fields 96 bytes
Rtdb 0 has 4 Fields 96 bytes
Rtdb 1 has 4 Fields 96 bytes
Rtdb 0 has 0 Fields 0 bytes
Rtdb 0 has 5 Fields 120 bytes
Customer is RediGateBuild Directory is .
Director System V-1.001
Comm Port      V-1.001

Ethernet       V-1.001
Rx_Tx_SerialComm00 232 0
Rx_Tx_SerialComm02 232 0
Rx_Tx_SerialComm64 232 0
Rx_Tx_SerialComm65 232 0
Rx_Tx_SerialComm79 4095 4095
Found Primary COM64 for Circuit0000
Found Primary COM79 for Circuit0200
Found 3 Master Channels
Building Chann00 (Channel0)
Match Chann-Rtu (Modbus02) Addr=2
Match Chann-Rtu (Modbus01) Addr=1
Match Chann-Rtu (Modbus03) Addr=3
MQttClientPort=1883
Count of RtuRBE=16
DELAY_HLTHECHO=1
REDIGATE_400=1
CCM2_NOT_ENRON_MAP=1
BASH_USES_TILDE=1

Finished... Press ENTER
```

## 13- View Load-Store File

[Main Menu](#) [Directory Services](#) [View Load-Store File](#)

Enter **13** to view the contents of a LoadStore file, and (if present) enter the name of the file to view.

The LoadStore object is used as part of an ISaGRAF logic program, with default values that may be configured in the LoadStore child object under the ISaGRAF Field Unit. Values in the LoadStore file are stored in permanent memory in /usr/director/bin (e.g. Is02000000 in the example below). Values may be updated during runtime of the ISaGRAF program. The LoadStore file contains 16 columns by a **variable number of rows** ("Boards"). The View Load-Store File option shows the data one row (**16 integer values**) at a time. Press **Enter** to continue displaying each row, or **Esc Enter** to quit.

```
Make selection: 13
```



```

===== Display Load/Store File =====
ElecSys(V:5.7.2017-08-07-1200) Fri Aug 18 16:27:52 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
-----
-rw-r--r--    1 root    director    64 Aug 18 14:32 ls02000000

Enter Isagraf LS File to display ls02000000
  Load-Store Board 1
  0 : 0x00000001    1
  1 : 0x00000002    2
  2 : 0x00000003    3
  3 : 0x00000004    4
  4 : 0x00000005    5
  5 : 0x00000006    6
  6 : 0x00000007    7
  7 : 0x00000008    8
  8 : 0x00000009    9
  9 : 0x0000000a   10
 10 : 0x00000000    0
 11 : 0x00000000    0
 12 : 0x00000000    0
 13 : 0x00000000    0
 14 : 0x00000000    0
 15 : 0x00000000    0
Press ENTER to Continue : ESC to quit

```

## 14- View kernel or message logs

[Main Menu](#) [Directory Services](#) [View kernel or message logs](#)

Enter **14** to view the Linux log files, then enter **1** for the 'kernel' log or **2** for the 'message' log.

Press the **Space** bar to page through the log file until the end, or **Enter** to scroll one line at a time.

```

Make selection: 14

===== View KERNEL or MESSAGE Logs =====
ElecSys(V:5.7.2017-08-07-1200) Sun Aug 27 16:14:04 2017
UnitName : 1 @ 192.3.1.10 REDIGATE <46247-0004>-SerialNumb
-----
1=/var/log/kernel    2=/var/log/message
Enter 1 or 2 2

Press SPACE BAR to advance screen....Q to Quit

```

## 15- MQTT XML Information

Option **15** on the Directory Services menu is a legacy option that is not used for most customers.

## 16- View customer settings

[Main Menu](#) [Directory Services](#) [View customer settings](#)

Enter **16** to view the settings contained in the "customer file." The first line contains the customer or product name, such as "RediGate\_400". On the RediGate 100 or 400 products, these settings will typically be identical according to the standard tarball (firmware) release. (On some systems, the customer settings may contain some alternative values that enable various processes to act in a different, customer-specific manner.)

```

Make selection: 16

===== View CUSTOMER settings =====
ElecSys(V:5.7.2017-08-24-1000) Fri Dec 3 23:02:54 1999
DNPmastTest : 1 @ 10.63.191.28 REDIGATE-400 <38258-0025>-SerialNumb
-----
Press the SPACE bar to view the next page or ENTER to advance one line
RediGate_400
RTU_CMD_STATS=0

```

```
RTU_PASS_STATS=0
RBE_ALL_DATA=1

* * *

Finished... Press ENTER
```

## 17- ZMODEM File to Remote

[Main Menu](#) [Directory Services](#) [ZMODEM File to Remote](#)

Load a file to the RediGate through the COM0 console port using ZMODEM protocol. (This option requires using a terminal program that supports the ZMODEM file transfer protocol.)

Enter **17** for ZMODEM File to Remote. After selecting the menu, a series of characters will be displayed for 2 minutes and 40 seconds.

In the serial terminal program, select the option to send a file using ZMODEM protocol.

- In Tera Term or ExtraPUTTY, select File Transfer ZMODEM Send
- In HyperTerminal, select Transfer Send File, and select the ZMODEM protocol

### ZMODEM Transfer

After the transfer is complete, the file will be in the /home/director folder. Use Directory Services option 3 to view contents of the Download Directory.

```
Make selection: 17

===== ZMODEM Put File to Remote =====
ElecSys(V:5.7.2016-05-02-1600) Sat Dec 18 10:13:44 1999
PoT-Field-Device : 1 @ 192.3.1.10 REDIGATE-400 <45743-0002>-SerialNumb
-----

Ready to receive file...
Press ENTER to continue
```

## 18- ZMODEM File from Remote

[Main Menu](#) [Directory Services](#) [ZMODEM File from Remote](#)

Retrieve a file from the RediGate's /home/director folder through the COM0 console port using ZMODEM protocol. (This option requires using a terminal program that supports the ZMODEM file transfer protocol.)

Enter **18** for ZMODEM File From Remote. Enter the exact file name to retrieve (case-sensitive). If the filename is not entered, it will time out in a minute and 40 seconds.

Depending on the serial terminal program, you may have to start the ZMODEM file receive through a menu option.

If you download a ".run" file (which is a shortcut to an actual file), it will download the original file, but you will need to rename in Windows to remove the ".run" extension.

## 19- View Problem.txt

[Main Menu](#) [Directory Services](#) [View Problem.txt](#)

View Problem.txt file in /home/director download directory, if it exists. The Problem.txt file is created if there was a problem during a reconfiguration or software update, such as loading two different configuration files or loading the wrong tarball type (RG-100 vs. RG-400 series).

Enter **19** for View Problem.txt. If there is a file present, its **contents** will be shown. The file is cumulative (until deleted manually), so it may indicate multiple failed update attempts.



```

Connect: ppp0 <--> /dev/ttyEMUX0
local IP address 75.242.97.94 (The Local IP address indicates a successful connection and the RediGate's
address on the cellular network.)
remote IP address 66.174.62.1
primary DNS address 198.224.147.135
secondary DNS address 198.224.146.119
Press ENTER...

```

## 21- Store-N-Forward File

Main Menu Directory Services Store-N-Forward

View the stored contents of a "Store and Forward" data log file. This feature depends on having Store & Forward configured in the RediGate and having a file containing stored historical data.

Enter **21** for Store-N-Forward File.

Enter **0** for the /tmp/sdcard1 device (this will normally be the built-in SD memory card. If a memory card is not present, this device will be in a RAM drive).

Enter the folder containing Store & Forward data. Folders are named "SNFxx\_yyyyy", where **xx** is the Master Channel number, and **yyyyy** is the Field Unit address (such as SNF15\_00001).

Then enter the file name of the data to view. Data is stored in **.csv** files, one for each device and for each day on which historical data was stored. The filename is **case-sensitive** and must be entered exactly.

```

Make selection: 21

===== Store and Forward Files =====
ElecSys(V:5.7.2017-08-24-1000) Wed Sep 6 16:35:43 2017
RediGate120E : 1 @ 0.0.0.0 REDIGATE <46247-0002>-SerialNumb
-----
0=/tmp/sdcard1 : 1=/tmp/usb1 : 2=Edit Last Reported Times

Select folder (0,1)? 0

```

Enter **0** to select the /tmp/sdcard1 location, then enter the folder name containing the archive files.

```

Gateway.json SNF14_00003 SNF15_00003 SNF_HELP.txt
SNF00_00001 SNF15_00002 SNF15_00004

Enter Directory name (e.g. SNF00_00001) SNF00_00001
-rwxr-xr-x 1 root root 241 Oct 4 2016 CHAN00~RTU-1~20161004.csv
-rwxr-xr-x 1 root root 16021 Oct 6 2016 CHAN00~RTU-1~20161006.csv
-rwxr-xr-x 1 root root 428984 May 22 20:35 CHAN00~RTU-1~20170522.csv

Enter name if File to View CHAN00~RTU-1~20170522.csv

```

After entering the file name, the file will be displayed one page at a time. Press the **Space** bar to page through the file, or enter **Q** to quit the display.

Comma-separated values are shown, following a CSV header. The header columns are:

- **EpochTime** is the timestamp of data in seconds since 1/1/1970 (32-bit integer, based on the system clock at the time); or if the Pacing is set to 0, the column will be **EpochTimeMS** (a 64-bit integer containing milliseconds since 1/1/1970).
- **RegAddr\_OR\_TagName** is either the RTDB register number, or the Tag name if configured for that register.
- **Delivered** is 1 if the data has already been published to MQTT, or 0 if not published.
- **GoodQuality** is 1 if the point quality status at the time it was logged (1=online, 0=offline).
- **DataType** is the type enumeration of the register (1=Boolean, 2=CHAR, 3=UINT8, 4=SINT16, 5=UINT16, 8=SINT32, 9=UINT32, 10=REAL32, 11=STRING-32, 12=STRING-256, 15=REAL64, 16=SINT64, 17=UINT64).
- **Value** is the register value at the time it was logged. String data might include commas, which would appear as additional CSV columns.

Below is an example of the content of the CSV file containing historical values using EpochTime (seconds).

- The data header is stored in the CSV file every time the connection goes from connected to disconnected state.
- This example shows tag names CycleCount, TankLevel, and PumpStatus, and an untagged register address 40001.
- The Delivered column is 1=Published or 0=Unpublished. (This value is only saved at the time the data originally stored and is not updated once the historical data is subsequently published.)
- The GoodQuality column indicates the Quality flag of the RTDB register at the time it was stored.
- The DataType column is 1=Boolean, 5=UINT16, 9=UINT32, 10=REAL32.
- The Value column shows the value in the data type. Boolean values are 0 or 1.

```

EpochTime,RegAddr_OR_TagName,Delivered,GoodQuality,DataType,Value
1495429200,CycleCount,1,1,9,910722733

```

```

1495429214,40001,1,1,5,65535
1495429220,TankLevel,1,1,10,4.0
1495429224,CycleCount,0,1,9,910729218
1495429229,CycleCount,0,1,9,910731378
1495429235,PumpStatus,0,1,1,1

```

Below is an example with the content of the CSV file containing historical value using EpochTimeMS (milliseconds).

```

EpochTimeMS,RegAddr_OR_TagName,Delivered,GoodQuality,DataType,Value
1529675863415,40001,0,1,8,1529675863
1529675863415,40002,0,1,8,367

```

The Store & Forward process keeps track of the date of the last-reported historical record value. Upon reconnected link status of the monitored process, it will begin at this timestamp to publish additional historical values.

You can change the last-reported time to skip forward and not publish some records, or to skip backward and republish older historical records.

From the Directory Services menu option 21, select 2 to Edit Last Reported Times.

```

Make selection: 21

===== Store and Forward Files =====
ElecSys(V:5.7.2017-08-24-1000) Wed Sep 6 16:35:43 2017
RediGate120E : 1 @ 0.0.0.0 REDIGATE <46247-0002>-SerialNumb
-----
0=/tmp/sdcard1 : 1=/tmp/usb1 : 2=Edit Last Reported Times

Select folder (0,1 or 2)? 2

```

Enter the Channel Number and Field Unit Address of a unit to change the Store & Forward last-reported date/time.

```

Chan Name          Status      Rtus Time
=====
 0 CHAN00          Normal      2 Mon Jul 23 12:27:10 2018
 2 Master Channel  Normal      1 Thu Jul 19 15:16:14 2018
Enter Channel Number (0-15) 0

-----RTU-----
Addr Name          Protocol Status      Time      Count  TimOut  BadData  Frame
-----
 1 RTU-1           SOSMST00 PollDone 12:27:14   57304    0        0        0
Enter Rtu Address (0 - 65535) 1

```

Enter a **number of days** (positive or negative) to adjust the current last-reported time for this Field Unit. Enter a whole number of days, or a fraction (such as -0.5 to skip backward half a day, or 0.04167 to skip forward one hour).

Enter **Y** to accept the adjusted last-reported time.

```

Last CSV Time ==> 2018-10-28 12:00:04 LOCAL
DAYS forward (positive) or backward (negative) to adjust (e.g. 0.5 days) 0.04167
New CSV Time ==> 2018-10-28 13:00:04 LOCAL
Is this acceptable as the new reporting time? (y/n) y

```