

CCBOOTCAMP

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Routing and Switching

REMOTE RACK ACCESS FAQ v4.0

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Read Me First

Before your reserved session starts, please read this document THOROUGHLY! This will greatly increase the efficiency of your session.

Session information

If you must use passwords on your routers please use “cisco”. This saves us from having to perform a password recovery for the next user in case you forget to erase your configurations.

Your 8 hour session will terminate exactly on time so please plan ahead and erase all configurations prior to this deadline

Your 8 hour session may start up to 5 minutes late as the ACS server removes the previous customer and adds your credentials.

Rack hardware or access problems may be resolved by using the following URL to submit a trouble ticket: <http://www.ccbootcamp.com/rackhelp.html>. You are encouraged to read this document in its entirety and view the [R&S Rack Access Demo](#) before sending a page.

Customers are expected to erase all configurations prior to the end of their session.

Racks are available in three fixed time blocks. Racks adhere to PST time zone and are as follows:

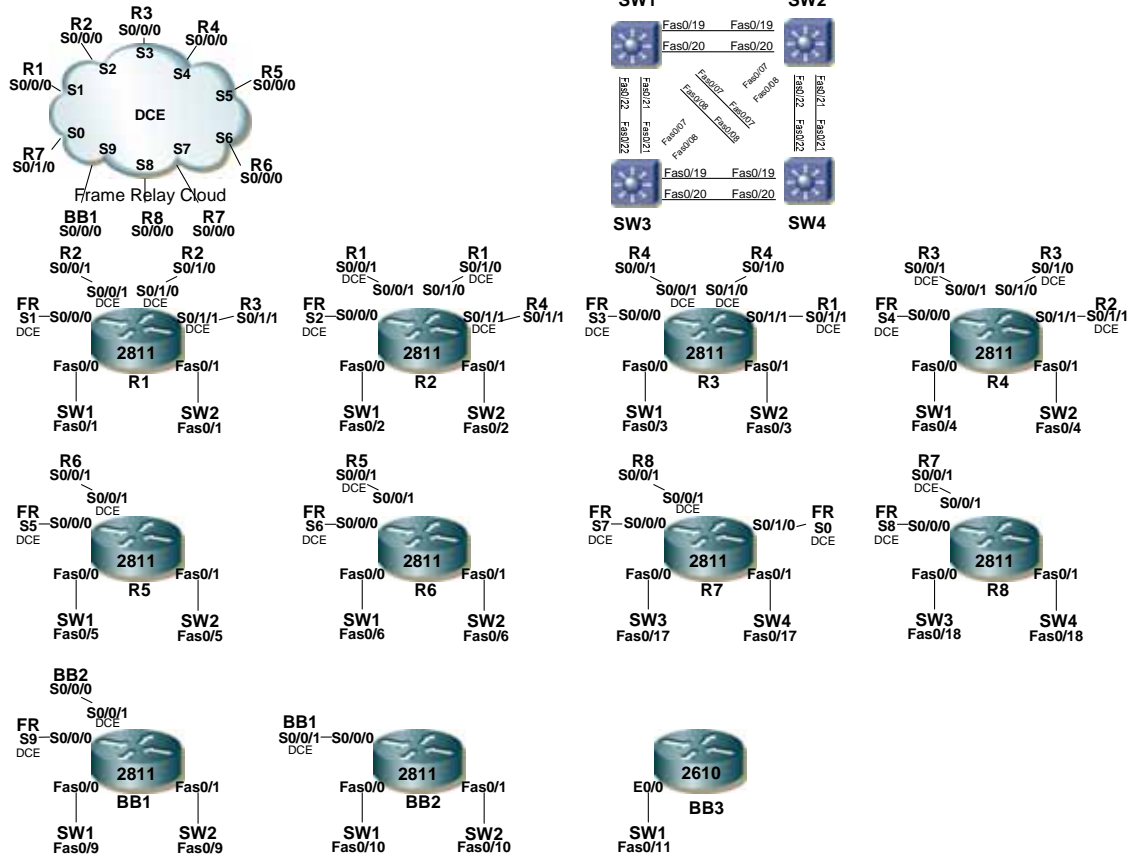
Session 1 – 00:00-08:00 (12:00AM – 8:00 AM)

Session 2 – 08:00-16:00 (8:00AM – 4:00PM)

Session 3 – 16:00-24:00 (4:00PM – 12:00AM)

Rack reservations must be paid in full before they are secured. Refunds are not provided for scheduled rack access. You may reschedule up to 2 hours prior to the start of a reserved session if you are unable to make your session.

Rack Topology



Accessing Your R&S Rack

To access your reserved rack telnet to the fully qualified domain name (FQDN) of the rack. For example, if you reserved R&S rack 17, telnet to rack17.ccbootcamp.com.

When you reach the prompt use your Rack Reserve credentials to log in. If you forgot what credentials you entered while creating your rack reserve account do not worry. You will receive an email notifying you of your upcoming session 15 minutes prior to the start of that session. Your credentials will be in this email along with other valuable information such as a link to this FAQ and a link to Rack Help should you discover a problem with the rack.

This will take you to UserExec mode of the 2511 router which is acting as the Terminal Server for the rack. You will not have privileged level access to this device as it is only used to provide reverse telnet to the console port of all rack devices used to practice your labs. Here is a list of commands that are allowed on the terminal server.

```
access-enable
clear Reset
connect
disconnect
enable (your password won't work here, you don't have access to enable mode)
exit
login
logout
resume
show
clear line
systat
```

From the terminal server issue the “show hosts” command to see all the devices you have access to.

Controlling Power to the Rack

The first device you will need to log into is the APC which is used to provide power to your devices. To access this device parse “apc” from the terminal server.

Once a connection to the APC is established use “apcx” for the username and “powerx” for the password. In place of x use the rack that has been reserved. For example, if you are accessing rack 17 use the credentials apc17 and password17.

Next parse “1” for “Device Manager”. The following screen will show you what devices you can control power to.

Then parse “7” for “ALL Accessible Outlets” or choose the outlet that manages the specific device / devices you want to control power to.

The following screen gives you options for powering the devices. Option “1” will power on the selected device / devices and option “2” will power them down.

Once you have parsed the option of your choosing, you will need to type “YES” in capital letters and hit enter twice for the action to take place.

To log out of the APC press “esc” twice to get back to the initial screen and parse “4” to logout. This will take you back to the terminal server.

Rack Navigation

First parse the “show hosts” command to see a list of all the devices that can be configured.

Next type in the hostname of the device to be taken to the console of that device. for example to reach router 1 type “r1” and press enter twice.

To get back to the terminal server press “ctrl+shift+6” simultaneously then release and press “x”. Once back in the terminal server parsing a null value will take you back into the console of the last accessed device.

If you have several reverse telnet sessions open you can issue the “show sessions” command. Then to access a desired device simply type in the connection ID. Note that the asterisks indicates the current connection that you will be taken back to should you parse a null value from the terminal server.

You may disconnect a session by issuing the “disconnect < line >” command where line is equal to the connection ID.

If you attempt to access a device from the terminal server and get the error “% Connection refused by remote host” you may clear the line by issuing “clear line < last two digits >”. For example the line associated with R1 is 2001 so to clear the line parse “clear line 01” from the terminal server. Then type the host in again to gain console access.

Frame Relay

All of our racks have a 2522 router providing Frame Relay. You do not have access to this device as it has been preconfigured with a full mesh topology. The configuration is below. You will need to make your configurations conform to the configuration of the 2522 router.

Actual Frame Relay Configuration

```
hostname Frame_FullMesh
!
frame-relay switching
!
interface Serial1
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 102 interface Serial2 201
frame-relay route 103 interface Serial3 301
frame-relay route 104 interface Serial4 401
frame-relay route 105 interface Serial5 501
frame-relay route 106 interface Serial6 601
frame-relay route 107 interface Serial7 701
frame-relay route 108 interface Serial8 801
frame-relay route 109 interface Serial9 901
frame-relay route 110 interface Serial10 1001
no sh
!
interface Serial2
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 201 interface Serial1 102
frame-relay route 203 interface Serial3 302
frame-relay route 204 interface Serial4 402
frame-relay route 205 interface Serial5 502
frame-relay route 206 interface Serial6 602
frame-relay route 207 interface Serial7 702
frame-relay route 208 interface Serial8 802
frame-relay route 209 interface Serial9 902
frame-relay route 210 interface Serial10 1002
no sh
!
```

```

interface Serial3
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 301 interface Serial1 103
frame-relay route 302 interface Serial2 203
frame-relay route 304 interface Serial4 403
frame-relay route 305 interface Serial5 503
frame-relay route 306 interface Serial6 603
frame-relay route 307 interface Serial7 703
frame-relay route 308 interface Serial8 803
frame-relay route 309 interface Serial9 903
frame-relay route 310 interface Serial0 1003
no sh
!
interface Serial4
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 401 interface Serial1 104
frame-relay route 402 interface Serial2 204
frame-relay route 403 interface Serial3 304
frame-relay route 405 interface Serial5 504
frame-relay route 406 interface Serial6 604
frame-relay route 407 interface Serial7 704
frame-relay route 408 interface Serial8 804
frame-relay route 409 interface Serial9 904
frame-relay route 410 interface Serial0 1004
no sh
!
interface Serial5
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 501 interface Serial1 105
frame-relay route 502 interface Serial2 205
frame-relay route 503 interface Serial3 305
frame-relay route 504 interface Serial4 405
frame-relay route 506 interface Serial6 605
frame-relay route 507 interface Serial7 705
frame-relay route 508 interface Serial8 805
frame-relay route 509 interface Serial9 905
frame-relay route 510 interface Serial0 1005
no sh
!

```

```

interface Serial6
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 601 interface Serial1 106
frame-relay route 602 interface Serial2 206
frame-relay route 603 interface Serial3 306
frame-relay route 604 interface Serial4 406
frame-relay route 605 interface Serial5 506
frame-relay route 607 interface Serial7 706
frame-relay route 608 interface Serial8 806
frame-relay route 609 interface Serial9 906
frame-relay route 610 interface Serial0 1006
no sh
!
interface Serial7
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 701 interface Serial1 107
frame-relay route 702 interface Serial2 207
frame-relay route 703 interface Serial3 307
frame-relay route 704 interface Serial4 407
frame-relay route 705 interface Serial5 507
frame-relay route 706 interface Serial6 607
frame-relay route 708 interface Serial8 807
frame-relay route 709 interface Serial9 907
frame-relay route 710 interface Serial0 177
no sh
!
interface Serial8
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 801 interface Serial1 108
frame-relay route 802 interface Serial2 208
frame-relay route 803 interface Serial3 308
frame-relay route 804 interface Serial4 408
frame-relay route 805 interface Serial5 508
frame-relay route 806 interface Serial6 608
frame-relay route 807 interface Serial7 708
frame-relay route 809 interface Serial9 908
frame-relay route 810 interface Serial0 188
no sh
!

```

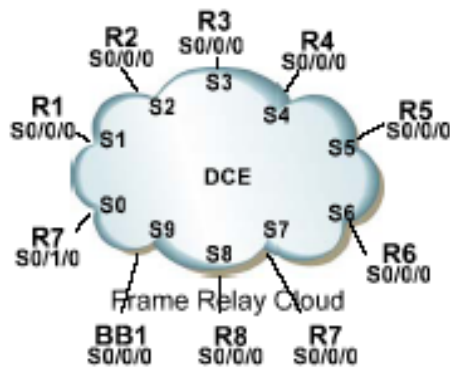
```
interface Serial9
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 901 interface Serial11 109
frame-relay route 902 interface Serial2 209
frame-relay route 903 interface Serial3 309
frame-relay route 904 interface Serial4 409
frame-relay route 905 interface Serial5 509
frame-relay route 906 interface Serial6 609
frame-relay route 907 interface Serial7 709
frame-relay route 908 interface Serial8 809
frame-relay route 910 interface Serial0 199
no sh
!
interface Serial0
no ip address
encapsulation frame-relay
clockrate 64000
frame-relay lmi-type ansi
frame-relay intf-type dce
frame-relay route 1001 interface Serial11 110
frame-relay route 1002 interface Serial2 210
frame-relay route 1003 interface Serial3 310
frame-relay route 1004 interface Serial4 410
frame-relay route 1005 interface Serial5 510
frame-relay route 1006 interface Serial6 610
frame-relay route 177 interface Serial7 710
frame-relay route 188 interface Serial8 810
frame-relay route 199 interface Serial0 910
no sh
!
line con 0
transport input none
line aux 0
line vty 0 4
```

Frame Relay DLCI Chart

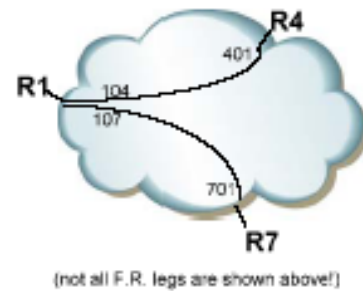
DLCI Configuration Matrix

		Local										
		FR-S7							FR-S0			
		R1	R2	R3	R4	R5	R6	R7	R8	BB1	R7	
Remote	R1	x	201	301	401	501	601	701	801	901	1001	
	R2	102	x	302	402	502	602	702	802	902	1002	
	R3	103	203	x	403	503	603	703	803	903	1003	
	R4	104	204	304	x	504	604	704	804	904	1004	
	R5	105	205	305	405	x	605	705	805	905	1005	
	R6	106	206	306	406	506	x	706	806	906	1006	
	FR-S7	R7	107	207	307	407	507	607	x	807	907	177
	FR-S7	R8	108	208	308	408	508	608	708	x	908	188
	FR-S0	BB1	109	209	309	409	509	609	709	809	x	199
	FR-S0	R7	110	210	310	410	510	610	710	810	910	x

FULL MESH



Example DLCI



Most Common Remote Rack Usage Problems

1. Has your session actually begun? You can verify the local time of our racks at <http://rackreserve.ccbootcamp.com/>. Right below the top tabs you will see the local time and a time converter tool.
2. Are you accessing the correct rack? Check your email as you should receive a message from CCBOOTCAMP 15 minutes prior to the start of your session notifying you of the details.
3. If you login to a rack and none of the devices respond please check and make sure they haven't been powered off . Also, if one of your routers gets locked, our racks have a remote power cycle unit so you can reboot the device.
4. If you get an error similar to "[Connection to r4 closed by foreign host]" you will need to clear the line. In this example, "clear line 4", for R4 will work. You may have to do it twice.

```
rack2>sw3
Trying sw3 (1.1.1.1, 2051)...
% Connection refused by remote host

rack2>clear line 51
[confirm]
[OK]
rack2>sw3
Trying sw3 (1.1.1.1, 2051)... Open

switch#
```

5. Press and hold ctrl-shift-6 then release and press x to go back to the Cisco 2511. If you go back to the Cisco 2511 after the ctrl-shift-6 x key stroke combination and press enter at the "RackX>" prompt you will be sent back to your previous session.
6. Base configurations can be downloaded from [CCBOOTCAMP Downloads](#)
7. Type "show sessions" to see what sessions are already open. You can access them by number.
8. Use CDP to verify your cable connections if necessary.
9. Router FRS used as the frame switch is a Cisco 2522. It is full mesh and has a fixed configuration. The configuration is in this file. You do not have console

access to this device.

10. Use the command "show controllers <interface>" to verify if a serial interface is DCE or DTE. The DCE side must have the clock rate command.
11. When you telnet to our racks you will access a Cisco 2511 configured for reverse telnet. You will not have enable mode access to this router. Just type "show hosts" to see the hostnames for the devices to access. To access the routers (R1, R2, R3, R4, R5, R6, R7, etc) via reverse telnet. Just type the hostname (example R1) and you will be at the console port on R1.
12. If you still have trouble accessing or navigating your way through the rack you can watch a demo at [R&S Rack Access Demo](#).
13. If you still need help after reading this document please send e-mail to the address below. If a problem occurs between 7:00 a.m. and 5:00 p.m. Pacific time, you can call us at 702.968.5100. For problems outside these hours, please page us: [Rack Help](#)