



Document Number	EDCS-1054794
Author	Kamal
Reviewers	BAC Cable Eng Team (bac-cable-eng)
Revision	4
Last Updated	October 21, 2011

BAC Cable Port Information

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1. Summary

Local Machine – These ports are used for communication on the given machine only (nothing outside of the machine should be able to access these ports)

BAC Component – These ports are used for communication between BAC components (these ports should be protected from subscribers)

BAC Administrator – These ports are used for communication or for user interfaces to be used by BAC Administrators (these ports should be protected from subscribers)

Device Provisioning – These ports are used for communication with subscriber devices on the network (these ports should be reachable from subscribers)

2. BAC version

This port information document was drafted based on BAC 4.x release train. The information in this document is applicable to BAC versions 4.0.1, 4.0.1.x, 4.1.0.x and 4.2.

3. Port Information

Type	Range
Known Ports	0 to 1023
Reserved Ports	1024 to 49151
Dynamic, Private Ports	49152 to 65535

4. RDU Server

a) Local Machine Ports

- 49888/TCP - BAC Watchdog (bprAgent) listens on this port.
The port value is configurable. You will need to edit a property entry (/agent/agentport=49888) in \$BPR_HOME/agent/conf/agent.conf as well as a property entry (/snmp/statusServer/port=49888) in \$BPR_HOME/rdu/snmp/conf/agent.properties. Make sure that the two properties have the same port value.
- 49887/TCP - RDU SNMP Agent's listening port (for watchdog)
The port value is configurable. You will need to edit a property entry (/agent/statusport=49887) in \$BPR_HOME/agent/conf/agent.conf as well as a property entry (/snmp/statusReceiver/port=49887) in \$BPR_HOME/rdu/snmp/conf/agent.properties. Make sure that the two properties have the same port value.

- 8001/UDP - RDU SNMP Agent's SNMP port
The port value is configurable. A script rduSnmpAgent.sh located in \$BPR_HOME/rdu/snmp/bin directory can be used to modify the default port value.
- 67/UDP – Default port used for DHCPv4 Lease Query between the RDU and the DHCP servers.
- 547/UDP – Default port used for DHCPv6 Lease Query between the RDU and the DHCP servers.

b) BAC Component Ports

- 49187/TCP - The default port used by the RDU server. This port is also used by database utilities (this is because we actually want to prevent the RDU from running when database utilities are in use).
The port value is configurable. ServerProperties.SERVER_PORT_KEY or /server/port is used to change the port value.

c) BAC Administrator Ports

- 8100 - The default HTTP port used by BAC Admin UI
- 8443 - The default HTTPS port used by BAC Admin UI

d) Device Provisioning Ports

None

5. DPE Server

a) Local Machine Ports

- 8008/UDP - Internal Registration Service to SNMP Service (only if PacketCable is enabled)
- 8001/UDP - DPEs native SNMP agent's port
- ***Random/UDP – Internal SNMP Service***
- ***Random/UDP – Internal Kerberos Service***

b) BAC Component Ports

- 49186 UDP - The default port used by DPE server.
The port value is configurable. Use DPE CLI "dpe port <port>" to change the port value. Make sure your DPE is stopped when you change the port value.

- 2246/UDP - Inbound messages from KDC (only if PacketCable is enabled)

c) BAC Administrator Ports

- 2323/TCP - Software DPE CLI listens on 2323 by default (only on the Software DPE)
The port value is configurable. You will need to edit a property entry /cli/port=2323 in \$BPR_HOME/cli/conf/cli.properties.
- 161/UDP – Default SNMP agent port used by DPE
- 23/TCP – Default TCP port used by DPE CLI
- 21/TCP – Default FTP server port used by DPE

d) Device Provisioning Ports

- 69/UDP - TFTP port
- 37/UDP - Time of day port
- 162/UDP - Inbound MTA messages to SNMP Service (only if PacketCable is enabled)
- 1293/UDP - Registration Server to MTA (only if PacketCable is enabled)

6. CNR EP Ports

a) Local Machine Ports

None

b) BAC Component Ports

- One random UDP port for status messages to the DPEs for each DPE, 16 random UDP ports connected to that DPE for configuration queries. NOTE: It is required to leave open the DPE port (49186) from the CNR server and allow traffic from the DPE to the CNR servers because the DPE will reply to where the packet came from.

c) BAC Administrator Ports

None

d) Device Provisioning Ports

None

7. KDC Ports

a) Local Machine Ports

None

b) BAC Component Ports

None

c) BAC Administrator Ports

None

d) Device Provisioning Ports

- 88/UDP - default port used by KDC server
- 2246/UDP - KDC sends on UDP port 2246 (FQDN-REQ)

8. Question and Answers

a) Will RDU and DHCP server conflict on same port when installed on same Solaris server?

Yes. If ports 547 and port 67 are used by the RDU, you need not perform special configuration to send lease query requests. While installing the RDU, the installation program detects that either of these ports is being used by another process, it recommends that you use the dynamic ports that the operating system selects.

For example:

DHCPv4/DHCPv6 lease query port(s) (Udp/67 and Udp/547) is in use.

Configuring the RDU to use a dynamic port for DHCPv4/DHCPv6 lease query.

The installation program automatically enables selection of dynamic ports by setting zero values to the following properties in the BPR_HOME/rdu/conf/rdu.properties file:

```
/cnrQuery/clientSocketAddress=0.0.0.0:0  
/cnrQuery/ipv6/clientSocketAddress=[::]:0
```

User can also configure the IP address and port of their choice for lease query communication using the same properties. This workaround can help users to get over the lease query issue on a Solaris server.

b) Will RDU and DHCP server conflict on same port when installed on same Linux server?

Yes. Due to a 'known limitation on Linux' it is not supported to install RDU and CNR on the same Linux server. Also this is not a recommended deployment scenario in BAC (All components on same server box).

c) Noticed "Error: 8100 is in use" message during installation. How to proceed?

There are rare chances this message is seen during re-installation or upgrade. This can occur if port 8100 isn't freed after uninstalling BAC.

In such a condition, it is required to disable the process which is bound to this port and continue with installation.