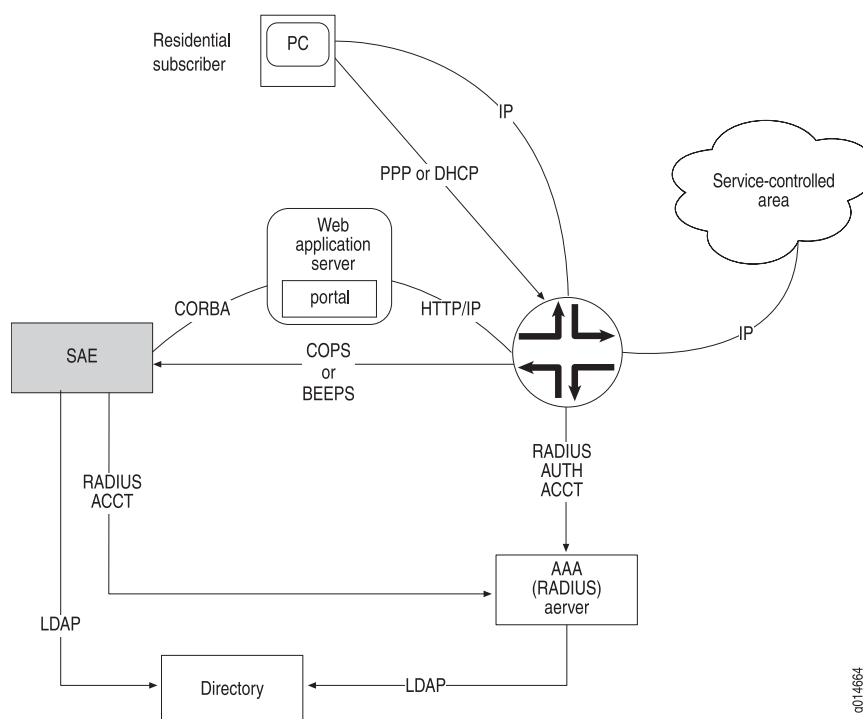


Residential Subscriber Login and Processes

This section focuses on residential subscriber configurations involving authenticated PPP, DHCP, and static IP. The PPP, DHCP, and static IP cases are distinguished by the type and configuration of the networking software on the network device used to access the router. Figure 1 on page 1 shows how residential subscribers connect to SRC components.

Figure 1: Components Involved in Subscription Activation



The residential subscriber's network device (such as a computer, cellular telephone, or set-top box) connects through a layer 2 connection to the router. The network device is configured for network access with PPP or DHCP.

The router and the SAE use a RADIUS server for authentication, accounting, and optionally IP address allocation. The router can also locally manage the allocation of IP addresses to residential subscribers' PCs. A directory supporting LDAP holds the database of subscriber, service, and subscription information. Both the SAE and the RADIUS server use the directory.

Once connected to the network, the subscriber's network device exchanges IP data packets with resources in a service-controlled area. From the service provider's perspective, the resource to which access is controlled may be the network itself or content servers in the network.

The SAE manages the subscriber's IP interface on the router to control the level of access that the subscriber gets to the service-controlled area. The level of access can be anything from viewing a portal page that allows the subscriber to select a service

to varying the network access speed. The subscriber can actively and instantly request access to the service-controlled area by selecting items on Web pages generated by the SAE. Selecting these items triggers the SAE to instantly reconfigure the subscriber's IP interface on the router.

The SAE communicates with JUNOSe routers through COPS messages.

The SAE communicates with JUNOS routing platforms through BEEP messages.