

Example: Configuring Initial CoS Parameters Dynamically Obtained from RADIUS

The following configuration is an example of a client dynamic profile in which initial CoS parameters are dynamically obtained from the RADIUS server when a subscriber authenticates over the interface to which the dynamic profile is applied.

For this example, assume that the RADIUS authentication server has been configured with traffic-shaping parameters (at Juniper Networks VSA 26-108) and CoS scheduling and queuing parameters (at Juniper Networks VSA 26-146).

The subscriber interface is a single-unit static gigabit Ethernet VLAN interface on an EQ DPC port:

```
[edit]
interfaces {
  ge-9/0/3 {
    hierarchical-scheduler;
    vlan-tagging;
    unit 100 {
      vlan-id 100;
      family inet {
        address 192.168.32.2/24;
      }
    }
  }
}
```

The client dynamic profile `residential_silver` attaches the traffic-control profile `tcp_1` to the subscriber interface:

```
[edit]
dynamic-profiles {
  residential_silver {
    interfaces {
      "$junos-interface-ifd-name" {
        unit "$junos-underlying-interface-unit" {
          family inet;
        }
      }
    }
    class-of-service {
      interfaces {
        "$junos-interface-ifd-name" {
          unit "$junos-underlying-interface-unit" {
            output-traffic-control-profile tcp1;
          }
        }
      }
    }
  }
}
```

The traffic-control profile **tcp_1**, references JUNOS predefined variables to obtain a scheduler-map name and traffic-shaping parameter values from RADIUS when a subscriber logs in. For this example, assume that the RADIUS server replaces the JUNOS predefined variable **\$junos-cos-scheduler-mapscheduler-map** name **business_smap_1**. The scheduler map **business_smap_1** is configured in the client dynamic profile:

```
[edit]
dynamic-profiles {
  residential_silver {
    class-of-service {
      traffic-control-profiles {
        tcp_1 {
          scheduler-map "$junos-cos-scheduler-map"; # 'business_smap_1'
          shaping-rate "$junos-cos-shaping-rate";
          guaranteed-rate "$junos-cos-guaranteed-rate";
          delay-buffer-rate "$junos-cos-delay-buffer-rate";
        }
      }
      scheduler-maps {
        business_smap_1 {
          forwarding-class best-effort scheduler be_sched;
          forwarding-class ef scheduler home_sched
        }
      }
    }
  }
}
```

A scheduler definition references JUNOS predefined variables to obtain scheduler configurations from RADIUS when a subscriber logs in. For this example, assume that the RADIUS server provides scheduler configurations for schedulers named **be_sched** and **home_sched**, which are included in the scheduler map **business_smap_1**:

```
[edit]
dynamic-profiles {
  residential_silver {
    class-of-service {
      schedulers {
        "$junos-cos-scheduler" { # 'be_sched' and 'home_sched'
          transmit-rate "$junos-cos-scheduler-tx";
          buffer-size "$junos-cos-scheduler-bs";
          priority "$junos-cos-scheduler-pri";
          drop-profile-map loss-priority low protocol any drop-profile
            "$junos-cos-scheduler-dropfile-low";
          drop-profile-map loss-priority medium-low protocol any drop-profile
            "$junos-cos-scheduler-dropfile-medium-low";
          drop-profile-map loss-priority medium-high protocol any drop-profile
            "$junos-cos-scheduler-dropfile-medium-high";
          drop-profile-map loss-priority high protocol any drop-profile
            "$junos-cos-scheduler-dropfile-high";
        }
      }
    }
  }
}
```

Static configurations for CoS consist of configurations for the forwarding classes used in the scheduler map **business_smap_1** and configurations for drop-profile names provided by RADIUS for as part of the scheduler configurations provided (for **be_sched** and **home_sched**) when a subscriber logs in:

```
[edit]
  class-of-service {
    forwarding-classes {
      queue 0 best-effort;
      queue 1 ef;
    }
    drop-profiles {
      . . . configurations_for_drop_profile_names_provided_by_RADIUS . . .
    }
  }
}
```

- Related Topics**
- Activating Subscribers and Managing Services in an Access Network
 - Dynamic Profiles Overview
 - Dynamic Variables Overview
 - Subscriber Interfaces that Provide Initial CoS Parameters Dynamically Obtained from RADIUS
 - Configuring Initial CoS Parameters Dynamically Obtained from RADIUS

