

## Understanding 802.1X and VSAs on EX Series Switches

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Juniper Networks EX Series Ethernet Switches support the configuration of RADIUS server attributes specific to Juniper Networks. These attributes are known as vendor-specific attributes (VSAs) and are described in RFC 2138, *Remote Authentication Dial In User Service* (RADIUS). Through VSAs, you can configure port-filtering attributes on the RADIUS server. VSAs are clear text fields sent from the RADIUS server to the switch as a result of the 802.1X authentication success or failure. The 802.1X authentication prevents unauthorized user access by blocking a supplicant at the port until the supplicant is authenticated by the RADIUS server. The VSA attributes are interpreted by the switch during authentication, and the switch takes appropriate actions. Implementing port-filtering attributes with 802.1X authentication on the RADIUS server provides a central location for controlling LAN access for supplicants.

These port-filtering attributes specific to Juniper Networks are encapsulated in a RADIUS server VSA with the vendor ID set to the Juniper Networks ID number, 2636.

As well as configuring port-filtering attributes through VSAs, you can apply a port firewall filter that has already been configured on the switch directly to the RADIUS server. Like port-filtering attributes, the filter is applied during the 802.1X authentication process, and its actions are applied at the switch port. Adding a port firewall filter to a RADIUS server eliminates the need to add the filter to multiple ports and switches. For more information, see [Example: Applying a Firewall Filter to 802.1X-Authenticated Supplicants Using RADIUS Server Attributes on an EX Series Switch](#).

VSAs are only supported for 802.1X single-supplicant configurations and multiple-supplicant configurations.

- Related Topics**
- [Understanding 802.1X Authentication on EX Series Switches](#)
  - [Example: Setting Up 802.1X for Single Supplicant or Multiple Supplicant Configurations on an EX Series Switch](#)
  - [Filtering 802.1X Supplicants Using RADIUS Server Attributes](#)
  - [Configuring Firewall Filters \(CLI Procedure\)](#)
  - [VSA Match Conditions and Actions for EX Series Switches](#)

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