How to use VLAN tagging?

JCL currently uses ESXi as the hypervisor. VM ports are connected to port-groups on dvSwitch. In this networking configuration, ESXi drops frames with the standard VLAN tag (TPID = 0x8100).

If you configure VLAN tag to use TPID value != 0x8100, the frames will not be dropped. vMX can be configured to use custom TPID values.

**Test Topology:**

A diagram of a network

Description automatically generated

**Example Configs:**

**Flexible VLAN Tagging on CPE device:**

**Config on vMX-A5:**

set interfaces ge-0/0/0 flexible-vlan-tagging

set interfaces ge-0/0/0 gigether-options ethernet-switch-profile tag-protocol-id 0x9100

set interfaces ge-0/0/0 unit 100 vlan-tags outer 0x9100.100

set interfaces ge-0/0/0 unit 200 vlan-tags outer 0x9100.200

set interfaces ge-0/0/0 unit 100 family inet address 192.168.100.10/24

**Config on vMX-A4:**

set interfaces ge-0/0/0 flexible-vlan-tagging

set interfaces ge-0/0/0 gigether-options ethernet-switch-profile tag-protocol-id 0x9100

set interfaces ge-0/0/0 unit 100 vlan-tags outer 0x9100.100

set interfaces ge-0/0/0 unit 200 vlan-tags outer 0x9100.200

set interfaces ge-0/0/0 unit 100 family inet address 192.168.100.20/24

**Config on Core:**

**Config on vMX-A1:**

set interfaces ge-0/0/3 gigether-options ethernet-switch-profile tag-protocol-id 0x9100

set interfaces ge-0/0/2 gigether-options ethernet-switch-profile tag-protocol-id 0x9100

set interfaces ge-0/0/3 unit 100 vlan-tags outer 0x9100.100

set interfaces ge-0/0/3 unit 200 vlan-tags outer 0x9100.200

set interfaces ge-0/0/2 unit 100 vlan-tags outer 0x9100.100

set interfaces ge-0/0/2 unit 200 vlan-tags outer 0x9100.200

set interfaces ge-0/0/3 unit 0 family bridge interface-mode trunk

set interfaces ge-0/0/3 unit 0 family bridge vlan-id-list 100-300

set interfaces ge-0/0/2 unit 0 family bridge interface-mode trunk

set interfaces ge-0/0/2 unit 0 family bridge vlan-id-list 100-300

set bridge-domains bridge100 vlan-tags outer 0x9100.100

set bridge-domains bridge200 vlan-tags outer 0x9100.200

Graphical user interface, text, application

Description automatically generated with medium confidence

**Bridge Domain configuration on PE devices.**

**Config on vMX-A3:**

jcluser@vMX-addr-2> show configuration interfaces |display set

set interfaces ge-0/0/0 vlan-tagging

set interfaces ge-0/0/0 mtu 9192

set interfaces ge-0/0/0 encapsulation extended-vlan-bridge

set interfaces ge-0/0/0 gigether-options ethernet-switch-profile tag-protocol-id 0x9100

set interfaces ge-0/0/0 unit 100 vlan-tags outer 0x9100.100

set interfaces ge-0/0/0 unit 200 vlan-tags outer 0x9100.200

set interfaces ge-0/0/3 gigether-options ethernet-switch-profile tag-protocol-id 0x9100

set interfaces ge-0/0/3 unit 0 family bridge interface-mode trunk

set interfaces ge-0/0/3 unit 0 family bridge vlan-id-list 100-300

jcluser@vMX-addr-2> show configuration bridge-domains |display set

set bridge-domains bridge100 vlan-tags outer 0x9100.100

set bridge-domains bridge100 interface ge-0/0/0.100

set bridge-domains bridge200 vlan-tags outer 0x9100.200

set bridge-domains bridge200 interface ge-0/0/0.200

Graphical user interface, text, application

Description automatically generated with medium confidence

**Note:** Similar config to be done for vMX-A2.

Please note that this workaround may work only for vMX and **not** for vSRX