

# Juniper MX Bras

В даному розділі буду описувати свій досвід налаштування Juniper MX в ролі [BRASy](#).

На моїй практиці були налаштовані Juniper MX80 MX104 MX960, на останній моделі зупинились (провайдер на якого я працюю), отже всі приклади будуть взяті з нього, але на 95% вони сумісні з іншими моделями Juniper MX. Все залежить від версії прошивки роутера.

## DHCP server

Глобальні налаштування DHCP сервера

```
set system services dhcp-local-server pool-match-order external-authority
set system services dhcp-local-server pool-match-order ip-address-first
set system services dhcp-local-server no-stale-timer-refresh
set system services dhcp-local-server stale-timer 30
```

## QinQ DHCP server

Наступний блок це власне налаштування DHCP сервера. Рекомендую зразу записувати різні кейси в окремі групи - так легше розуміти

```
set system services dhcp-local-server group IPOE_QINQ authentication password PROVIDER
set system services dhcp-local-server group IPOE_QINQ authentication username-include delimiter "|"
set system services dhcp-local-server group IPOE_QINQ authentication username-include user-prefix IPOE_QINQ
set system services dhcp-local-server group IPOE_QINQ authentication username-include mac-address
set system services dhcp-local-server group IPOE_QINQ authentication username-include vlan-tags
set system services dhcp-local-server group IPOE_QINQ liveness-detection failure-action clear-binding
set system services dhcp-local-server group IPOE_QINQ liveness-detection method layer2-liveness-detection
transmit-interval 300
set system services dhcp-local-server group IPOE_QINQ liveness-detection method layer2-liveness-detection max-
```

```
consecutive-retries 3
set system services dhcp-local-server group IPOE_QINQ reconfigure clear-on-abort
set system services dhcp-local-server group IPOE_QINQ reconfigure attempts 5
set system services dhcp-local-server group IPOE_QINQ reconfigure timeout 5
set system services dhcp-local-server group IPOE_QINQ reconfigure token mx960_0
set system services dhcp-local-server group IPOE_QINQ overrides client-discover-match incoming-interface
set system services dhcp-local-server group IPOE_QINQ dynamic-profile dhcp-profile
set system services dhcp-local-server group IPOE_QINQ access-profile IPOE_QINQ
set system services dhcp-local-server group IPOE_QINQ interface ae1.0
```

в даному блоці є 3 змінні без яких нічого не запрацює:

- dynamic-profile dhcp-profile
- access-profile IPOE\_QINQ
- interface ae1.0

їх треба описати

## dynamic-profile dhcp-profile

```
set dynamic-profiles dhcp-profile routing-instances "$junos-routing-instance" interface "$junos-interface-name"
set dynamic-profiles dhcp-profile interfaces demux0 unit "$junos-interface-unit" actual-transit-statistics
set dynamic-profiles dhcp-profile interfaces demux0 unit "$junos-interface-unit" no-traps
set dynamic-profiles dhcp-profile interfaces demux0 unit "$junos-interface-unit" proxy-arp
set dynamic-profiles dhcp-profile interfaces demux0 unit "$junos-interface-unit" demux-options underlying-
interface "$junos-underlying-interface"
set dynamic-profiles dhcp-profile interfaces demux0 unit "$junos-interface-unit" targeted-distribution
set dynamic-profiles dhcp-profile interfaces demux0 unit "$junos-interface-unit" family inet demux-source $junos-
subscriber-ip-address
set dynamic-profiles dhcp-profile interfaces demux0 unit "$junos-interface-unit" family inet unnumbered-address
"$junos-loopback-interface"
```

## access-profile IPOE\_QINQ

```
set access profile IPOE_QINQ accounting-order radius
set access profile IPOE_QINQ authentication-order radius
set access profile IPOE_QINQ domain-name-server 10.10.10.5
set access profile IPOE_QINQ domain-name-server 10.10.10.6
set access profile IPOE_QINQ radius authentication-server 10.10.10.7
set access profile IPOE_QINQ radius accounting-server 10.10.10.7
set access profile IPOE_QINQ radius options calling-station-id-delimiter *
set access profile IPOE_QINQ radius options calling-station-id-format mac-address
set access profile IPOE_QINQ radius options calling-station-id-format stacked-vlan
set access profile IPOE_QINQ radius options calling-station-id-format vlan
set access profile IPOE_QINQ radius options accounting-session-id-format decimal
set access profile IPOE_QINQ radius options client-authentication-algorithm round-robin
set access profile IPOE_QINQ radius options client-accounting-algorithm round-robin
set access profile IPOE_QINQ accounting order radius
set access profile IPOE_QINQ accounting immediate-update
set access profile IPOE_QINQ accounting coa-immediate-update
set access profile IPOE_QINQ accounting address-change-immediate-update
set access profile IPOE_QINQ accounting update-interval 10
set access profile IPOE_QINQ accounting statistics volume-time
set access profile IPOE_QINQ accounting wait-for-acct-on-ack
set access profile IPOE_QINQ accounting send-acct-status-on-config-change

set access radius-server 10.10.10.7 port 1812
set access radius-server 10.10.10.7 accounting-port 1813
set access radius-server 10.10.10.7 dynamic-request-port 3799
set access radius-server 10.10.10.7 secret "$9$nAdl69p0BESeWTzrvLNY2JGDkfz00RhclpuM8XxdVTzF"
set access radius-server 10.10.10.7 retry 3
set access radius-server 10.10.10.7 accounting-retry 3
set access radius-server 10.10.10.7 max-outstanding-requests 2000
set access radius-server 10.10.10.7 source-address *.*.*.*.2
```

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