



## Online Insertion and Removal

Online insertion and removal (OIR) enables you to replace faulty modules without affecting system operation. There is only soft OIR, which is done via CLI.

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## Soft OIR Procedures

The following describes the soft OIR procedures:

```
Router# hw-module subslot 0/0 start
client#
*Oct 26 21:50:22.272: %IOSXE_OIR-6-SOFT_STARTSPA: SPA(C1111-2x1GE) restarted in subslot 0/0
client#
*Oct 26 21:50:28.553: %SPA_OIR-6-ONLINECARD: SPA (C1111-2x1GE) online in subslot 0/0

Router# hw-module subslot 0/0 stop
Proceed with stop of module? [confirm]

*Oct 26 21:50:15.498: %SPA_OIR-6-OFFLINECARD: SPA (C1111-2x1GE) offline in subslot 0/0
*Oct 26 21:50:15.499: %IOSXE_OIR-6-SOFT_STOPSPA: SPA(C1111-2x1GE) stopped in subslot 0/0,
interfaces disabled

Router# hw-module subslot 0/0 reload
Proceed with reload of module? [confirm]
Router#
*Nov 6 17:23:58.176: %IOSXE_OIR-6-SOFT_RELOADSPA: SPA(C1111-2x1GE) reloaded on subslot 0/0
*Nov 6 17:23:58.179: %SPA_OIR-6-OFFLINECARD: SPA (C1111-2x1GE) offline in subslot 0/0
*Nov 6 17:24:09.320: %SPA_OIR-6-ONLINECARD: SPA (C1111-2x1GE) online in subslot 0/0
```

## Manage OIR for Pluggable LTE Modules

To replace a faulty pluggable module, or to swap a module when the system is in operation, use the following CLI:

**hw-module subslot <subslot> stop**

Wait for the module to power off and then remove the module. Insert another pluggable LTE module into the slot, which is automatically detected, powers-up, and is authenticated.

```
Router# hw-module subslot 0/2 stop
Proceed with stop of module? [confirm]

Router#
*Oct 26 21:50:15.498: %SPA_OIR-6-OFFLINECARD: SPA (C1111-2x1GE) offline in subslot 0/2
*Oct 26 21:50:15.499: %IOSXE_OIR-6-SOFT_STOPSPA: SPA(C1111-2x1GE) stopped in subslot 0/2,
interfaces disabled
```