

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.

OIR allows you to insert and remove hardware components, such as network modules, PIM, while the system is powered on and operational. This involves a process where the specific module needs to be shut down before physical removal, without shutting down the entire system.

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Soft OIR procedures

The following describes the soft OIR procedures:

```
Router#hw-module subslot 0/0 start
*Sep 11 12:38:46.023: %IOSXE_OIR-6-SOFT_STARTSPA: SPA(C8161-2S) restarted in subslot 0/0
*Sep 11 12:38:51.365: %SPA_OIR-6-ONLINECARD: SPA (C8161-2S) online in subslot 0/0


Router#hw-module subslot 0/0 stop
Proceed with stop of module? [confirm]
Router#
*Sep 11 12:38:01.505: %SPA_OIR-6-OFFLINECARD: SPA (C8161-2S) offline in subslot 0/0
*Sep 11 12:38:01.505: %IOSXE_OIR-6-SOFT_STOPSPA: SPA(C8161-2S) stopped in subslot 0/0,
interfaces disabled

Router#hw-module subslot 0/0 reload
Proceed with reload of module? [confirm]
Router#
*Sep 11 12:40:18.301: %IOSXE_OIR-6-SOFT_RELOADSPA: SPA(C8161-2S) reloaded on subslot 0/0
*Sep 11 12:40:18.302: %SPA_OIR-6-OFFLINECARD: SPA (C8161-2S) offline in subslot 0/0
*Sep 11 12:40:29.127: %SPA_OIR-6-ONLINECARD: SPA (C8161-2S) 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#
*Sep 11 12:38:01.505: %SPA_OIR-6-OFFLINECARD: SPA (C8161-2S) offline in subslot 0/2
*Sep 11 12:38:01.505: %IOSXE_OIR-6-SOFT_STOPSPA: SPA(C8161-2S) stopped in subslot 0/2,
interfaces disabled
```