



# Configuring IoT FND for IPv6 Tunnel Provisioning and Registration

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IoT FND OVA supports only IPv4 tunnels and Registration out of the box.

To setup an IPv6 network for tunnel provisioning and registration, follow these steps:

## Procedure

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**Step 1** Ensure you have one interface with a valid IPv6 network which has a IPv6 prefix length less than 125.

See the following example of the ens224 interface:

```
[root@iot-fnd ~]# ifconfig ens224
ens224: flags=4163[UP,BROADCAST,RUNNING,MULTICAST] mtu 1500
inet 2.2.56.117 netmask 255.255.0.0 broadcast 2.2.255.255
inet6 fe80::54f0:5d24:d320:8e38 prefixlen 64 scopeid 0x20[ink]
inet6 2001:420:7bf:5f::1522 prefixlen 64 scopeid 0x0[global]
ether 00:0c:29:18:1b:3a txqueuelen 1000 (Ethernet)
RX packets 97618 bytes 12391774 (11.8 MiB)
RX errors 1001 dropped 1011 overruns 0 frame 0
TX packets 3004 bytes 568097 (554.7 KiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
[root@iot-fnd ~]#
```

**Step 2** Run the `./setup-IPv6-network.sh` script in the `/opt/fnd/scripts` directory to obtain the FND IPv6 address on the router for tunnel provisioning and registration.

**Note:** While specifying the IPv6 address for the network-mgmt-bridge, provide an Interface Name and a valid IPv6 address (and IP address prefix length) that is in the subnet of the provided host interface. If IPv6 address is in a different subnet, the IPv6 tunnel provisioning and registration will not be successful.

```
[root@iot-fnd scripts]# ./setup-IPv6-network.sh

Setup IPv6 Network For Containers
IPv6 Network setup process will require an active interface with a Global IPv6 Address.
IPv6 prefix length must be less than 125.

Enter Interface Name: ens32
Enter IPv6 Address: 2001:1111:2222:0:20c:29ff:fe44:ea4d
Enter IPv6 Prefix Length: 64

One of the IPv6 networks in /125 subnet from 2001:1111:2222:0:20c:29ff:fe44:ea4d/64 will be required to setup container network.
Enter IPv6 Address for network-mgmt-bridge from /125 subnet: 2001:1111:2222:0:20c:29ff:fe44:1515

Preparing Network Configuration...
Stopping Watchdog...
Stopping FND container...
Stopping FogD container...
Removing FND container...
Removing FogD container...
Prune Docker container...
Removing Docker network...
Configure Docker network for v6...
e6de98f5f67ee01c77491500e19c897eeac35b96cf718f0ac3f9bf2fb59b3836
Starting FND container...
6664d4178b244043a18aa2fb1014a8cc2ce9faa7aa86ac1d9aa89f01e7df7d3
Starting Fog Director container...
fe83771e031c731276376a47a5ed34d86a6a8b70c4064d9923d7076170193d9b
Configure containers for v6...
Starting Watchdog...
Configured IPv6 network on the containers
Please use following FND IPv6 address with prefix length 2001:1111:2222:0:20c:29ff:fe44:1511/125 on the router for IPv6 Tunnel Provisioning and Registration
```