

Management and front port IPv4/IPv6 Address

Configure IP address on management port "eth0"

Procedure :

Steps 1. Configure IP address on management port "eth0"

```
admin@sonic:~$ sudo config interface ip add eth0 188.188.97.16/16 188.188.1.1
admin@sonic:~$ sudo config interface ip add eth0 2001::8/64 2001::1
```

Steps 2. Check IP address

```
admin@sonic:~$ show ip interfaces
```

Interface	Master	IPv4 address/mask	Admin/Oper	BGP Neighbor	Neighbor
Loopback0		10.1.0.1/32	up/up	N/A	N/A
docker0		240.127.1.1/24	up/down	N/A	N/A
eth0		188.188.97.16/16	up/up	N/A	N/A
lo		127.0.0.1/8	up/up	N/A	N/A

```
admin@sonic:~$ show ipv6 interfaces
```

Interface	Master	IPv6 address/mask	Admin/Oper	BGP Neighbor	Neighbor IP
Bridge		fe80::4020:6aff:fee4:b0a3%Bridge/64	up/down	N/A	N/A
Ethernet0		fe80::ba6a:97ff:fee2:479c%Ethernet0/64	up/up	N/A	N/A
Ethernet1		fe80::ba6a:97ff:fee2:479c%Ethernet1/64	up/up	N/A	N/A
Ethernet48		fe80::ba6a:97ff:fee2:479c%Ethernet48/64	up/up	N/A	N/A
Ethernet52		fe80::ba6a:97ff:fee2:479c%Ethernet52/64	up/up	N/A	N/A
Loopback0		fe80::243e:e6ff:fee7:5ca1%Loopback0/64	up/up	N/A	N/A
eth0		2001::8/64	up/up	N/A	N/A
		fe80::ba6a:97ff:fee2:479c%eth0/64			
lo		::1/128	up/up	N/A	N/A

```
admin@sonic:~$ show management_interface address
```

```
Management IP address = 188.188.97.16/16
Management Network Default Gateway = 188.188.1.1
Management IP address = 2001::8/64
Management Network Default Gateway = 2001::1
```

Caution: "BGP Neighbor" and "Neighbor IP" won't support on 202006 branch.

Steps 3. Save the setting to config_db.json

```
admin@sonic:~$ sudo config save -y
```

Steps 4. Check IP address setting on config_db.json

```
admin@sonic:/etc/sonic$ sudo vi config_db.json
```

```
{
  ...omitted
  "MGMT_INTERFACE": {
    "eth0|188.188.97.16/16": {
      "gwaddr": "188.188.1.1"
    },
    "eth0|2001::8/64": {
      "gwaddr": "2001::1"
    }
  },
  ...omitted
}
```

Configure IP address on front port (aka physical interface).

Procedure :

Steps 1. Configure IP address on front port. i.e Ethernet0

```
admin@sonic:~$ sudo config interface ip add Ethernet0 192.168.1.1/24
```

```
admin@sonic:~$ sudo config interface ip add Ethernet0 2002::1/64
```

Steps 2. Check IP address

```
admin@sonic:~$ show ip interfaces
```

Interface	IPv4 address/mask	Admin/Oper	BGP Neighbor	Neighbor IP
Ethernet0	192.168.1.1/24	up/down	N/A	N/A
docker0	240.127.1.1/24	up/down	N/A	N/A
eth0	188.188.97.32/16	up/up	N/A	N/A
lo	127.0.0.1/8	up/up	N/A	N/A
	10.1.0.1/32			

```
admin@sonic:~$ show ipv6 interfaces
```

Interface	IPv6 address/mask	Admin/Oper	BGP Neighbor	Neighbor IP
Bridge	fe80::f4f6:a4ff:fe97:3c88%Bridge/64	up/up	N/A	N/A
Ethernet0	2002::1/64	up/down	N/A	N/A
dummy	fe80::90cd:eff:fe7b:359f%dummy/64	up/up	N/A	N/A
eth0	fe80::aa2b:b5ff:fe9d:d7db%eth0/64	up/up	N/A	N/A
lo	::1/128	up/up	N/A	N/A

Steps 3. Save the setting to config_db.json

```
admin@sonic:~$ sudo config save -y
```

Steps 4. Check IP address setting on config_db.json

```
admin@sonic:/etc/sonic$ sudo vi config_db.json
```

```
{
  ...omitted
  "INTERFACE": {
    "Ethernet0": {},
    "Ethernet0|192.168.1.1/24": {},
    "Ethernet0|2002::1/64": {}
  },
  ...omitted
}
```

Configure IP address on port channel interface.

Procedure :

Steps 1. Create PortChannel01 and append member.(Please refer to [LAG](#))

Steps 2. Configure IP address on portchannel. i.e PortChannel01

```
admin@sonic:~$ sudo config interface ip add PortChannel01 192.168.1.1/24
```

```
admin@sonic:~$ sudo config interface ip add PortChannel01 2002::1/64
```

Steps 3. Check IP address

```
admin@sonic:~$ show ip interfaces
```

Interface	Master	IPv4 address/mask	Admin/Oper	BGP Neighbor	Neighbor IP
PortChannel01		192.168.1.1/24	up/down	N/A	N/A
docker0		240.127.1.1/24	up/down	N/A	N/A
eth0		188.188.98.39/16	up/up	N/A	N/A
lo		127.0.0.1/8	up/up	N/A	N/A

```
admin@sonic:~$ show ipv6 interfaces
```

Interface	Master	IPv6 address/mask	Admin/Oper	BGP Neighbor	Neighbor IP
Bridge		fe80::5476:b1ff:fe43:a8d2%Bridge/64	up/down	N/A	N/A
Ethernet48		fe80::6f8:f8ff:fe6a:f691%Ethernet48/64	up/up	N/A	N/A
Ethernet56		fe80::6f8:f8ff:fe6a:f691%Ethernet56/64	up/up	N/A	N/A
Ethernet60		fe80::6f8:f8ff:fe6a:f691%Ethernet60/64	up/up	N/A	N/A
PortChannel01		2002::1/64	up/down	N/A	N/A
eth0		2001::6f8:f8ff:fe6a:f691/64	up/up	N/A	N/A

	fe80::6f8:f8ff:fe6a:f691%eth0/64	up/up	N/A	N/A
lo	::1/128	up/up	N/A	N/A

Steps 4. Save the setting to config_db.json

```
admin@sonic:~$ sudo config save -y
```

Steps 5. Check IP address setting on config_db.json

```
admin@sonic:/etc/sonic$ sudo vi config_db.json
```

```
{
  omitted...
  "PORTCHANNEL_INTERFACE": {
    "PortChannel01": {},
    "PortChannel01|192.168.1.1/24": {},
    "PortChannel01|2002::1/64": {}
  },
  omitted...
}
```

Configure IP address on loopback interface.

Procedure :

Steps 1. Configure IP address to loopback interface i.e Loopback0

```
admin@sonic:~$ sudo config interface ip add Loopback0 4.4.4.4/32
admin@sonic:~$ sudo config interface ip add Loopback0 2002::1/128
```

Steps 2. Check IP address

```
admin@sonic:~$ show ip interfaces
```

Interface	Master	IPv4 address/mask	Admin/Oper	BGP Neighbor	Neighbor IP
Loopback0		4.4.4.4/32	up/up	N/A	N/A
docker0		240.127.1.1/24	up/down	N/A	N/A
eth0		188.188.98.39/16	up/up	N/A	N/A
lo		127.0.0.1/8	up/up	N/A	N/A

```
admin@sonic:~$ show ipv6 interfaces
```

Interface	Master	IPv6 address/mask	Admin/Oper	BGP Neighbor	Neighbor IP
Bridge		fe80::fc13:74ff:feb7:769c%Bridge/64	up/down	N/A	N/A
Ethernet48		fe80::6f8:f8ff:fe6a:f691%Ethernet48/64	up/up	N/A	N/A
Ethernet56		fe80::6f8:f8ff:fe6a:f691%Ethernet56/64	up/up	N/A	N/A
Ethernet60		fe80::6f8:f8ff:fe6a:f691%Ethernet60/64	up/up	N/A	N/A
Loopback0		2002::1/128	up/up	N/A	N/A

	fe80::500c:7eff:feb7:c607%Loopback0/64	up/up	N/A	N/A
eth0	2001::6f8:f8ff:fe6a:f691/64	up/up	N/A	N/A
	fe80::6f8:f8ff:fe6a:f691%eth0/64	up/up	N/A	N/A
lo	::1/128	up/up	N/A	N/A

Steps 3. Save the setting to config_db.json

```
admin@sonic:~$ sudo config save -y
```

Steps 4. Check IP address setting on config_db.json

```
admin@sonic:/etc/sonic$ sudo vi config_db.json
```

```
{
  omitted...
  "LOOPBACK_INTERFACE": {
    "Loopback0": {},
    "Loopback0|4.4.4.4/32": {},
    "Loopback0|2002::1/128": {}
  },
  omitted...
}
```