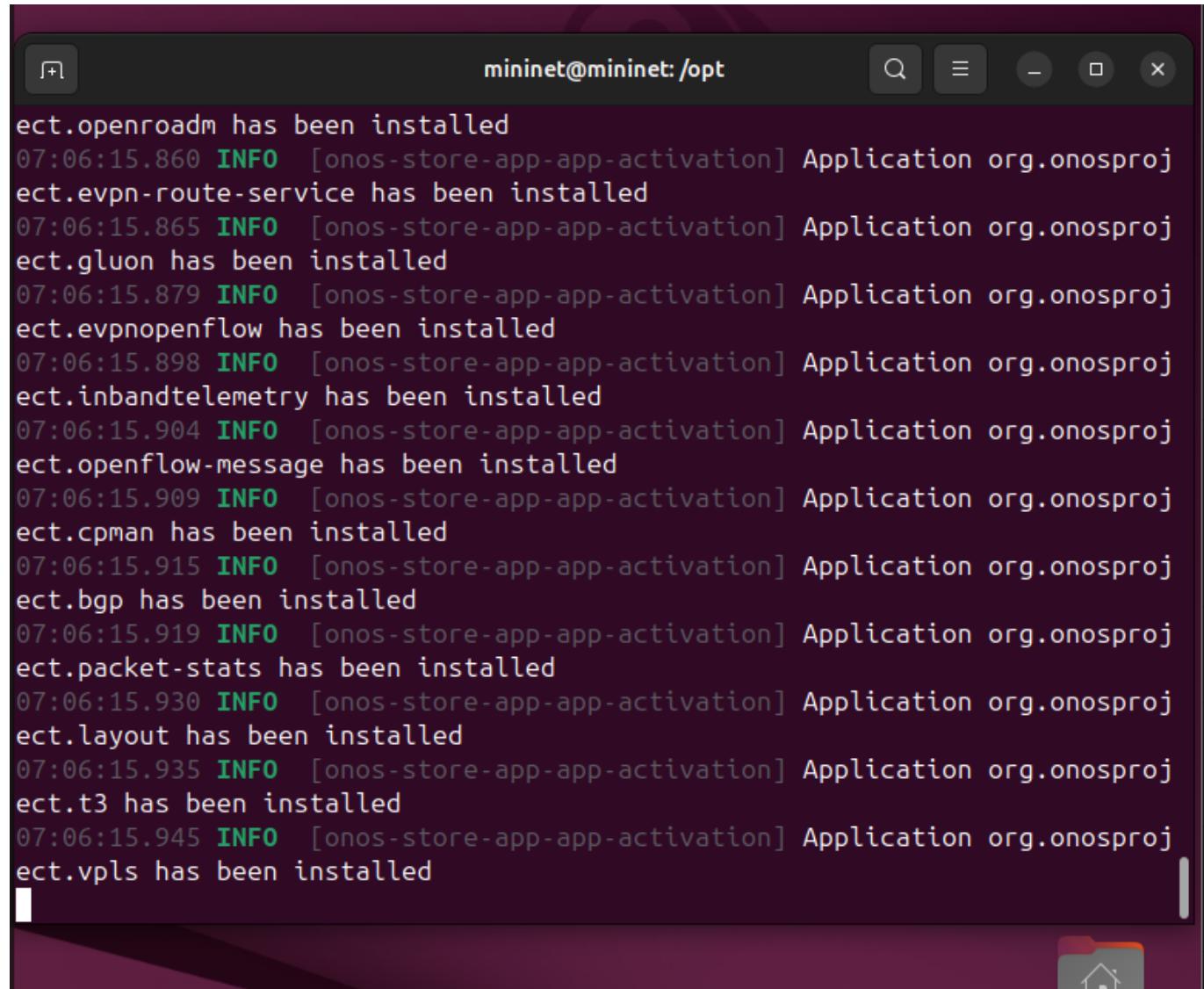


## Section 1



```
mininet@mininet: /opt
ect.openroadm has been installed
07:06:15.860 INFO [onos-store-app-app-activation] Application org.onosproj
ect.evpn-route-service has been installed
07:06:15.865 INFO [onos-store-app-app-activation] Application org.onosproj
ect.gluon has been installed
07:06:15.879 INFO [onos-store-app-app-activation] Application org.onosproj
ect.evpnopenflow has been installed
07:06:15.898 INFO [onos-store-app-app-activation] Application org.onosproj
ect.inbandtelemetry has been installed
07:06:15.904 INFO [onos-store-app-app-activation] Application org.onosproj
ect.openflow-message has been installed
07:06:15.909 INFO [onos-store-app-app-activation] Application org.onosproj
ect.cpman has been installed
07:06:15.915 INFO [onos-store-app-app-activation] Application org.onosproj
ect.bgp has been installed
07:06:15.919 INFO [onos-store-app-app-activation] Application org.onosproj
ect.packet-stats has been installed
07:06:15.930 INFO [onos-store-app-app-activation] Application org.onosproj
ect.layout has been installed
07:06:15.935 INFO [onos-store-app-app-activation] Application org.onosproj
ect.t3 has been installed
07:06:15.945 INFO [onos-store-app-app-activation] Application org.onosproj
ect.vpls has been installed
```

## Section 2

The screenshot shows a web browser window displaying the ONOS (Open Network Operating System) user interface at <http://localhost:8181/onos/ui/#/topo>. The title bar of the browser shows the URL and the ONOS logo.

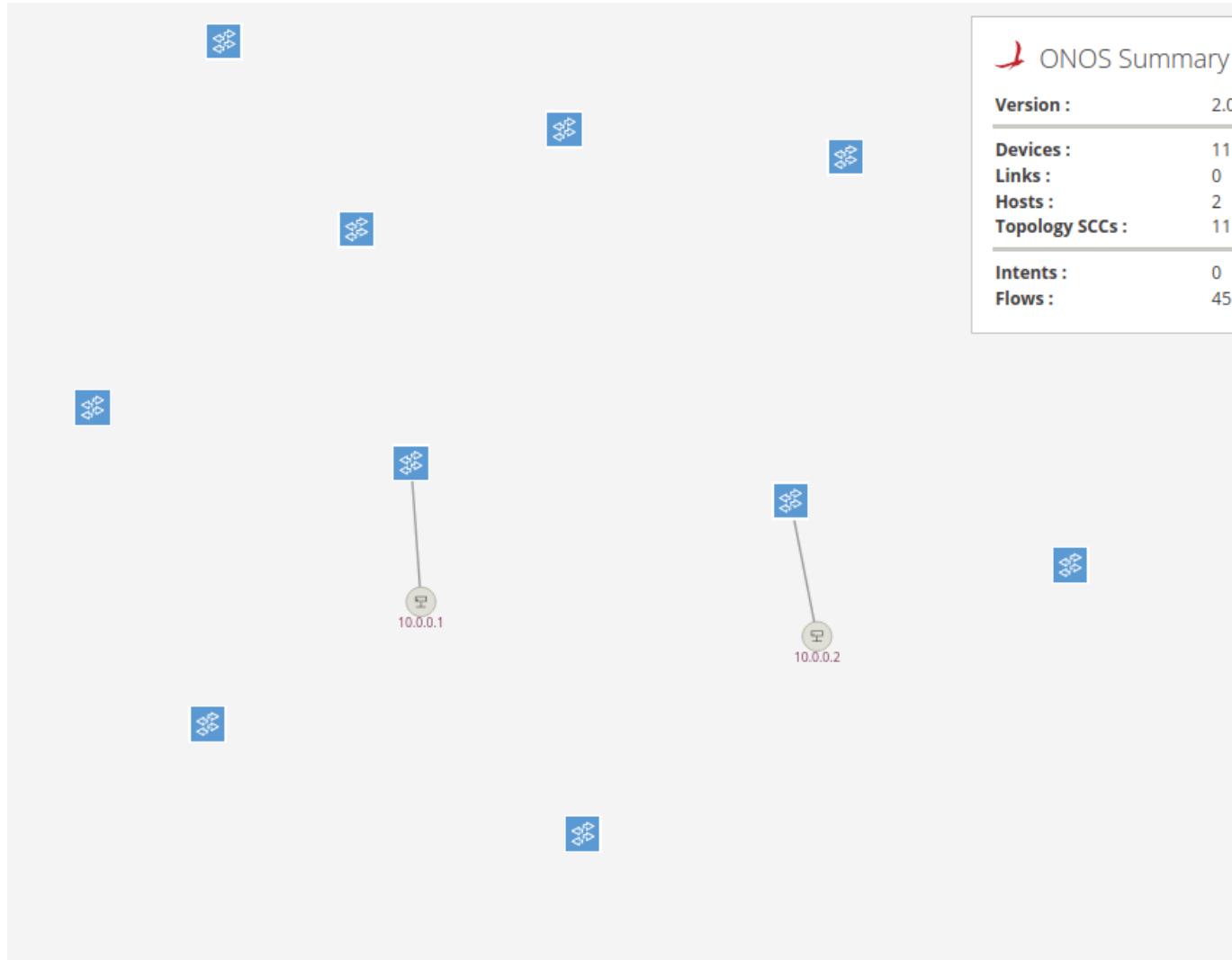
The ONOS logo is visible in the top right corner of the main content area. Below it, there is a navigation menu icon and a search bar with the text "onos".

In the top left corner of the main content area, there is a small sidebar with the IP address "192.168.56.101" and a dropdown menu showing "192.168.56.101" and "%devices%: 0".

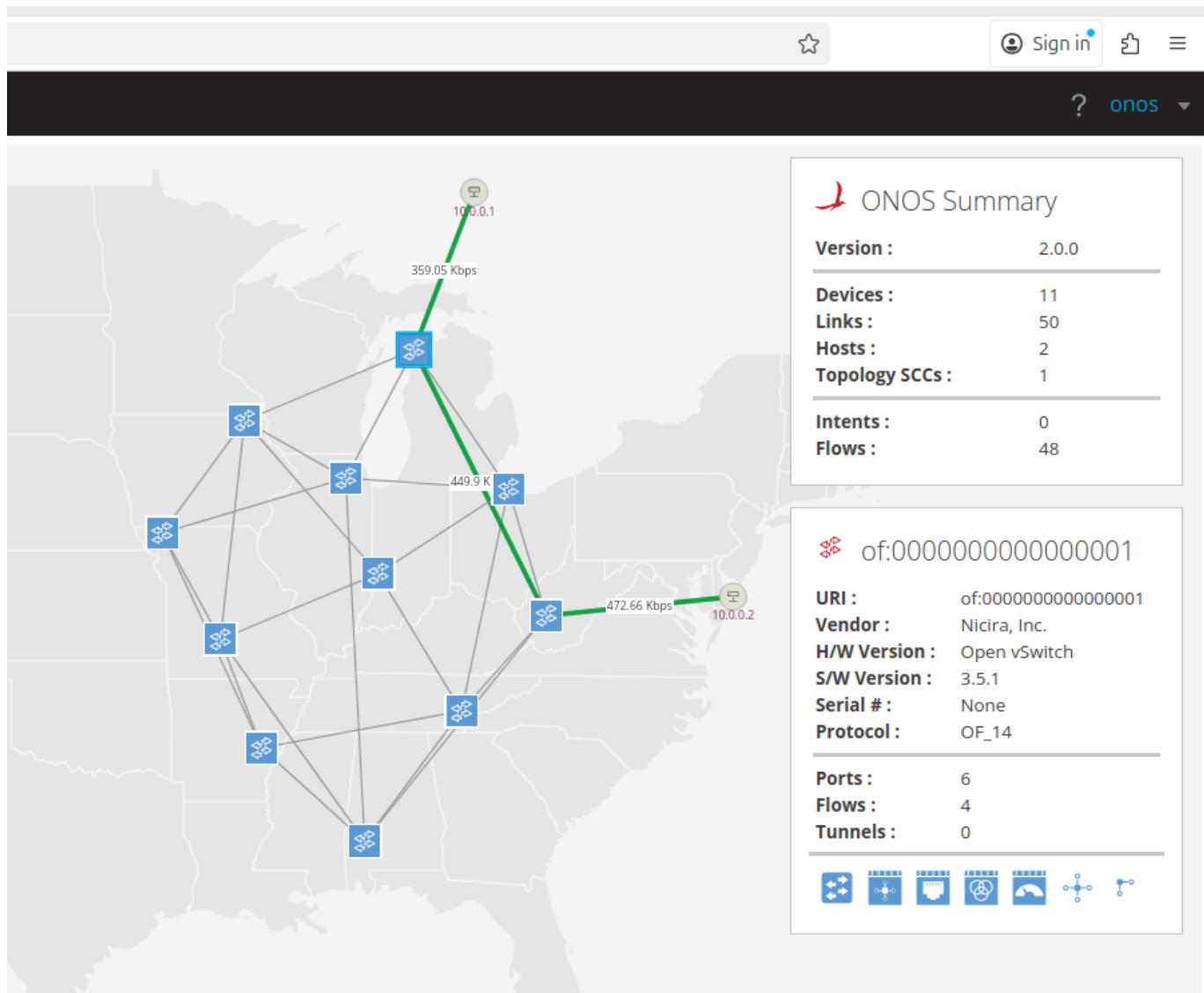
The main content area is titled "ONOS Summary" and displays the following statistics:

Version :	2.0.0
Devices :	0
Links :	0
Hosts :	0
Topology SCCs :	0
Intents :	0
Flows :	0

## Section 3



## Section 4



The screenshot shows two terminal windows within the ONOS API Docs interface. The top window is titled "Node: h2" and displays the output of an iperf test between Node h2 and Node h1. The bottom window is titled "Node: h1" and displays the output of an iperf test from Node h1 back to Node h2. Both tests show a bandwidth of approximately 9.44 Mbit/sec.

```
[ 2] 3.0000-4.0000 sec 1.10 MBytes 9.27 Mbits/sec
[ 2] 4.0000-5.0000 sec 1.08 MBytes 9.04 Mbits/sec
[ 2] 5.0000-6.0000 sec 1.11 MBytes 9.30 Mbits/sec
[ 2] 6.0000-7.0000 sec 1.07 MBytes 9.00 Mbits/sec
[ 2] 7.0000-8.0000 sec 1.06 MBytes 8.92 Mbits/sec
[ 2] 8.0000-9.0000 sec 1.09 MBytes 9.17 Mbits/sec
[ 2] 9.0000-10.0000 sec 1.10 MBytes 9.24 Mbits/sec
[ 2] 10.0000-10.5313 sec 582 KBytes 8.98 Mbits/sec
[ 2] 0.0000-10.5313 sec 11.5 MBytes 9.16 Mbits/sec
[ 3] local 10.0.0.2 port 5001 connected with 10.0.0.1 port 32792
[ ID] Interval Transfer Bandwidth
[ 3] 0.0000-1.0000 sec 1.01 MBytes 8.47 Mbits/sec
[ 3] 1.0000-2.0000 sec 1.06 MBytes 8.87 Mbits/sec
[ 3] 2.0000-3.0000 sec 1.09 MBytes 9.17 Mbits/sec
[ 3] 3.0000-4.0000 sec 1.12 MBytes 9.36 Mbits/sec
[ 3] 4.0000-5.0000 sec 1.07 MBytes 8.99 Mbits/sec
[ 3] 5.0000-6.0000 sec 1.08 MBytes 9.08 Mbits/sec
[ 3] 6.0000-7.0000 sec 1.10 MBytes 9.27 Mbits/sec
[ 3] 7.0000-8.0000 sec 1.02 MBytes 8.56 Mbits/sec
[ 3] 8.0000-9.0000 sec 1.07 MBytes 9.00 Mbits/sec
[ 3] 9.0000-10.0000 sec 1.07 MBytes 8.99 Mbits/sec
[ 3] 10.0000-10.4963 sec 582 KBytes 9.28 Mbits/sec
[ 3] 0.0000-10.4963 sec 11.3 MBytes 8.99 Mbits/sec

[ 1] 8.0000-9.0000 sec 1.12 MBytes 9.44 Mbits/sec
[ 1] 9.0000-10.0000 sec 1.12 MBytes 9.44 Mbits/sec
[ 1] 10.0000-10.5392 sec 128 KBytes 1.94 Mbits/sec
[ 1] 0.0000-10.5392 sec 11.5 MBytes 9.15 Mbits/sec
root@mininet:/home/mininet/Desktop# iperf -c 10.0.0.2 -i 1
Client connecting to 10.0.0.2, TCP port 5001
TCP window size: 85.3 KByte (default)
-----
[ 1] local 10.0.0.1 port 32792 connected with 10.0.0.2 port 5001
[ ID] Interval Transfer Bandwidth
[ 1] 0.0000-1.0000 sec 1.50 MBytes 12.6 Mbits/sec
[ 1] 1.0000-2.0000 sec 896 KBytes 7.34 Mbits/sec
[ 1] 2.0000-3.0000 sec 1.12 MBytes 9.44 Mbits/sec
[ 1] 3.0000-4.0000 sec 1.12 MBytes 9.44 Mbits/sec
[ 1] 4.0000-5.0000 sec 1.12 MBytes 9.44 Mbits/sec
[ 1] 5.0000-6.0000 sec 1.12 MBytes 9.44 Mbits/sec
[ 1] 6.0000-7.0000 sec 1.12 MBytes 9.44 Mbits/sec
[ 1] 7.0000-8.0000 sec 896 KBytes 7.34 Mbits/sec
[ 1] 8.0000-9.0000 sec 1.12 MBytes 9.44 Mbits/sec
[ 1] 9.0000-10.0000 sec 1.12 MBytes 9.44 Mbits/sec
[ 1] 10.0000-10.5054 sec 128 KBytes 2.07 Mbits/sec
[ 1] 0.0000-10.5054 sec 11.3 MBytes 8.98 Mbits/sec
root@mininet:/home/mininet/Desktop# ]
```

## Section 5

## Flows for Device of:0000000000000004 (5 Total)

Search  Search By 

STATE	PACKETS	DURATION	FLOW PRIORITY	TABLE NAME	SELECTOR	TREATMENT	APP NAME
Added	0	964	40000	0	ETH_TYPE:arp	imn[OUTPUT:CONTROLLER], cleared:true	*core
Added	0	964	40000	0	ETH_TYPE:lldp	imn[OUTPUT:CONTROLLER], cleared:true	*core
Added	0	964	40000	0	ETH_TYPE:bddp	imn[OUTPUT:CONTROLLER], cleared:true	*core
Added	0	964	5	0	ETH_TYPE:ipv4	imn[OUTPUT:CONTROLLER], cleared:true	*core
Added	0	20	40000	0	ETH_TYPE:ipv4, IP_PROTO:1, IPV4_SRC:10.0.0.4/32	imn[NOACTION], cleared:false	of:0000000000000004

D http://localhost:8181/onos/v1/docs/#!/flows/get\_flows\_deviceId

90%

POST /flows/{deviceId}

Creates new flow rule

**Implementation Notes**  
Creates and installs a new flow rule for the specified device.  
Flow rule criteria and instruction description: <https://wiki.onosproject.org/display/ONOS/Flow+Rules>

**Parameters**

Parameter	Value	Description	Parameter Type	Data Type
deviceId	of:0000000000000004	device identifier	path	string
appId	of:0000000000000004	application identifier	query	string
stream	<pre>{   "priority": 40000,   "timeout": 0,   "isPermanent": true,   "deviceId": "of:0000000000000004",   "treatment": {     "instructions": [       {         "type": "NOACTION"       }     ],     "selector": {       "criteria": [         {           "type": "ETH_TYPE",           "ethType": "0x8000"         },         {           "type": "IPV4_SRC",           "ip": "10.0.0.4/32"         },         {           "type": "IP_PROTO",           "protocol": 1         }       ]     }   } }</pre>	flow rule JSON	body	<input type="button" value="Model"/> <input type="button" value="Example Value"/> <div style="background-color: #ffffcc; padding: 5px;"> <pre>{   "priority": 40000,   "timeout": 0,   "isPermanent": true,   "deviceId": "of:0000000000000004",   "treatment": {     "instructions": [       {         "type": "NOACTION"       }     ],     "selector": {       "criteria": [         {           "type": "ETH_TYPE",           "ethType": "0x80cc"         }       ]     }   } }</pre> </div>

Parameter content type: application/json