

RESTCONF:

- o Both NETCONF and RESTCONF were developed to manages devices in a standard way.
- o RESTCONF is another IETF standard implementing some NETCONF functionality on top.
- o RESTCONF is just like a NETCONF which is via HTTP/HTTPS using XML or JSON messages.
- o The RESTCONF API on IOS XE is built from the same models the NETCONF is using.
- o RESTCONF is a protocol that provides RESTful APIs over HTTP to access configure.
- o It maps YANG specification to RESTful interface & uses HTTPS protocol for transport.
- o You can use JSON or XML as data formats & it is protocol which works similar to REST API.
- o RESTCONF is newer than NETCONF but not replacement & It's more of lightweight option.
- o Network devices running RESTCONF agent can be managed through five HTTP operations:

RESTCONF	NETCONF
GET	<get>, <get-config>
POST	<edit-config> (operation="create")
PUT	<edit-config> (operation="create/replace")
PATCH	<edit-config> (operation="merge")
DELETE	<edit-config> (operation="delete")

GET	This method retrieves data and metadata for a resource. It is supported for all resource types, except operation resources.
POST	This method creates a data resource or invokes an operations resource.
PUT	This method creates or replaces the target resource.
PATCH	This method partially modifies a resource (the equivalent of the NETCONF merge operation).
DELETE	This method deletes the target resource.

RESCONF Lab:

Network Automation IP Configuration

```
# DHCP config for eth0
auto eth0
iface eth0 inet dhcp
```

CSR Router Configuration

```
Router(config)#hostname CSR
CSR(config)#interface gigabitEthernet 1
CSR(config)#ip address dhcp
CSR(config-if)#no shutdown
```

RESCONF Configuration on CSR Router

```
CSR(config)#restconf
CSR(config)#virtual-service csr_mgmt
CSR(config-virt-serv)#ip shared host-interface GigabitEthernet 1
CSR(config-virt-serv)#activate
CSR(config)#username admin privilege 15 secret 123
CSR(config)#ip http server
CSR(config)#ip http authentication local
CSR(config)#netconf-yang
```