

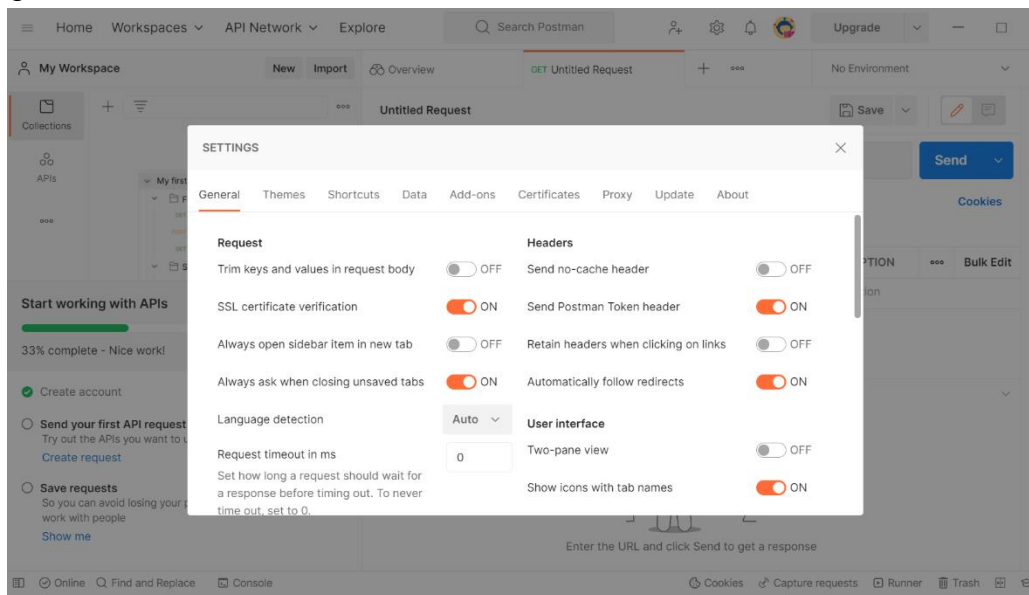
2.4 Lab - RESTCONF with Postman

RESTCONF es una interfaz API RESTful que proporciona una interfaz programática para acceder a los datos definidos en los modelos de dispositivos YANG.

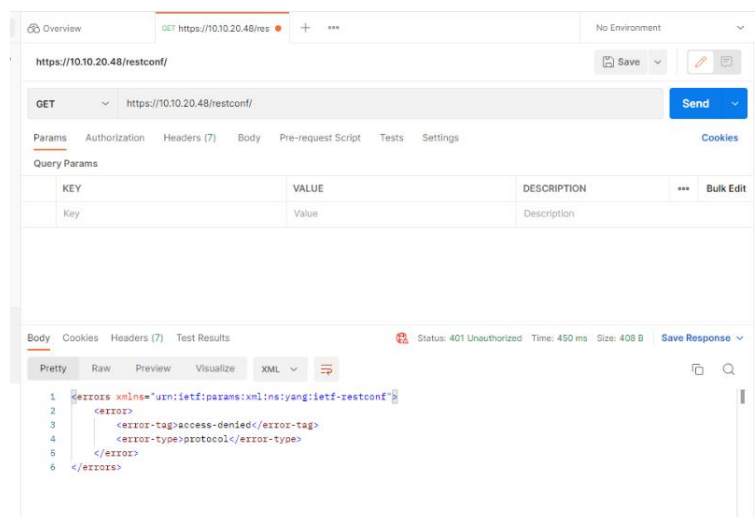
En este laboratorio, aprenderá cómo interactuar con la interfaz RESTCONF utilizando la aplicación Postman para recuperar la configuración del dispositivo, actualizar y crear nuevas interfaces y recuperar datos de operación.

Configurar encabezados HTTP y autenticación en Postman

Configurar Postman.



Seleccione el método e introduzca la URL necesaria.



Introduzca la información del encabezado de autenticación.

Overview | GET https://10.10.20.48/restconf/ | Save | Edit | Comments

https://10.10.20.48/restconf/ [Save] [Edit] [Comments]

GET | https://10.10.20.48/restconf/ [Send]

Params | Authorization | Headers (8) | Body | Pre-request Script | Tests | Settings | Cookies

Type: Basic Auth

The authorization header will be automatically generated when you send the request. Learn more about [authorization](#)

Heads up! These parameters hold sensitive data. To keep this data secure while working in a collaborative environment, we recommend using variables. Learn more about [variables](#)

Username: developer

Password: C1sco12345

☒ Show Password

Body | Cookies | Headers (7) | Test Results

Status: 401 Unauthorized | Time: 450 ms | Size: 408 B | Save Response

Pretty | Raw | Preview | Visualize | XML | [Icons]

```
1 <errors xmlns="urn:ietf:params:xml:ns:yang:ietf-restconf">
2   <error>
3     <error-tag>access-denied</error-tag>
4     <error-type>protocol</error-type>
5   </error>
6 </errors>
```

Overview | GET https://10.10.20.48/res | + | ... | No Environment

https://10.10.20.48/restconf/ [Save] [Edit] [Comments]

GET | https://10.10.20.48/restconf/ [Send]

Params | Authorization | Headers (9) | Body | Pre-request Script | Tests | Settings | Cookies

Headers [Hide auto-generated headers]

	KEY	VALUE	DESCRIPTION	...	Bulk Edit	Presets
<input checked="" type="checkbox"/>	Authorization	Basic ZGV2ZWxvcGVyOkMxc2NmMTIzNDU=				
<input checked="" type="checkbox"/>	Cache-Control	no-cache				Go to settings
<input checked="" type="checkbox"/>	Postman-Token	<calculated when request is sent>				
<input checked="" type="checkbox"/>	Host	<calculated when request is sent>				
<input checked="" type="checkbox"/>	User-Agent	PostmanRuntime/7.29.2				

Body | Cookies | Headers (7) | Test Results

Status: 401 Unauthorized | Time: 450 ms | Size: 408 B | Save Response

Pretty | Raw | Preview | Visualize | XML | [Icons]

```
1 <errors xmlns="urn:ietf:params:xml:ns:yang:ietf-restconf">
2   <error>
3     <error-tag>access-denied</error-tag>
4     <error-type>protocol</error-type>
5   </error>
6 </errors>
```

Introduzca los encabezados adicionales.

Overview GET https://10.10.20.48/res + ...

https://10.10.20.48/restconf/

GET https://10.10.20.48/restconf/

Params Authorization Headers (11) Body Pre-request Script Tests S

<input type="checkbox"/>	Accept	/*/*
<input checked="" type="checkbox"/>	Accept-Encoding	gzip, deflate, br
<input checked="" type="checkbox"/>	Connection	keep-alive
<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Accept	application/yang-data+json
<input checked="" type="checkbox"/>	Content-Type	application/yang-data+json
	Key	Value

Body Cookies Headers (7) Test Results Status

Pretty Raw Preview Visualize XML

```
1 <errors xmlns="urn:ietf:params:xml:ns:yang:ietf-restconf">
2   <error>
3     <error-tag>access-denied</error-tag>
4     <error-type>protocol</error-type>
5   </error>
6 </errors>
```

Envíe la solicitud.

Overview GET https://10.10.20.48/res + ...

https://10.10.20.48/restconf/

GET https://10.10.20.48/restconf/

Params Authorization Headers (11) Body Pre-request Script Tests S

<input type="checkbox"/>	Accept	/*/*
<input checked="" type="checkbox"/>	Accept-Encoding	gzip, deflate, br
<input checked="" type="checkbox"/>	Connection	keep-alive
<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Accept	application/yang-data+json
<input checked="" type="checkbox"/>	Content-Type	application/yang-data+json
	Key	Value

Body Cookies Headers (8) Test Results Status

Pretty Raw Preview Visualize JSON

```
1 {
2   "ietf-restconf:restconf": {
3     "data": {},
4     "operations": {},
5     "yang-library-version": "2016-06-21"
6   }
7 }
```

Overview GET https://10.10.20.48/res + ...

https://10.10.20.48/restconf/

GET https://10.10.20.48/restconf/

Params Authorization Headers (11) Body Pre-request Script Tests Settings

<input type="checkbox"/>	Accept	/*/*
<input checked="" type="checkbox"/>	Accept-Encoding	gzip, deflate, br
<input checked="" type="checkbox"/>	Connection	keep-alive
<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Accept	application/yang-data+xml
<input checked="" type="checkbox"/>	Content-Type	application/yang-data+xml
	Key	Value

Body Cookies Headers (8) Test Results Status

Pretty Raw Preview Visualize XML

```
1 <restconf xmlns="urn:ietf:params:xml:ns:yang:ietf-restconf">
2   <data/>
3   <operations/>
4   <yang-library-version>2016-06-21</yang-library-version>
5 </restconf>
```

Recuperar configuración de interfaz

Recuperar datos YANG en XML.

Overview | GET https://10.10.20.48/res | GET https://10.10.20.48/res | + ... | No Environment

https://10.10.20.48/restconf/data/ietf-interfaces:interfaces

GET | https://10.10.20.48/restconf/data/ietf-interfaces:interfaces

Params	Authorization	Headers (9)	Body	Pre-request Script	Tests	Settings
<input checked="" type="checkbox"/>	User-Agent		PostmanRuntime/7.29.2			
<input type="checkbox"/>	Accept		/*/*			
<input checked="" type="checkbox"/>	Accept-Encoding		gzip, deflate, br			
<input checked="" type="checkbox"/>	Connection		keep-alive			
<input checked="" type="checkbox"/>	Accept		application/yang-data+xml			
<input checked="" type="checkbox"/>	Content-Type		application/yang-data+xml			
	Key		Value			Description

Body | Cookies | Headers (7) | Test Results

Status: 200 OK | Time: 3.38 s | Size: 1.59 KB

Pretty | Raw | Preview | Visualize | XML

```
1
2 <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces"
3   xmlns:if="urn:ietf:params:xml:ns:yang:ietf-interfaces">
4   <interface>
5     <name>GigabitEthernet1</name>
6     <description>MANAGEMENT INTERFACE - DON'T TOUCH ME</description>
7     <type xmlns:ianaif="urn:ietf:params:xml:ns:yang:iana-if-type">ianaif:ethernetCsmacd</type>
8     <enabled>true</enabled>
9     <ipv4 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
```

Configuración de la interfaz de actualización

Overview | GET https://10.10.20.48/res | PUT https://10.10.20.48/res | + ...

https://10.10.20.48/restconf/data/ietf-interfaces:interfaces/interface=Loopback1

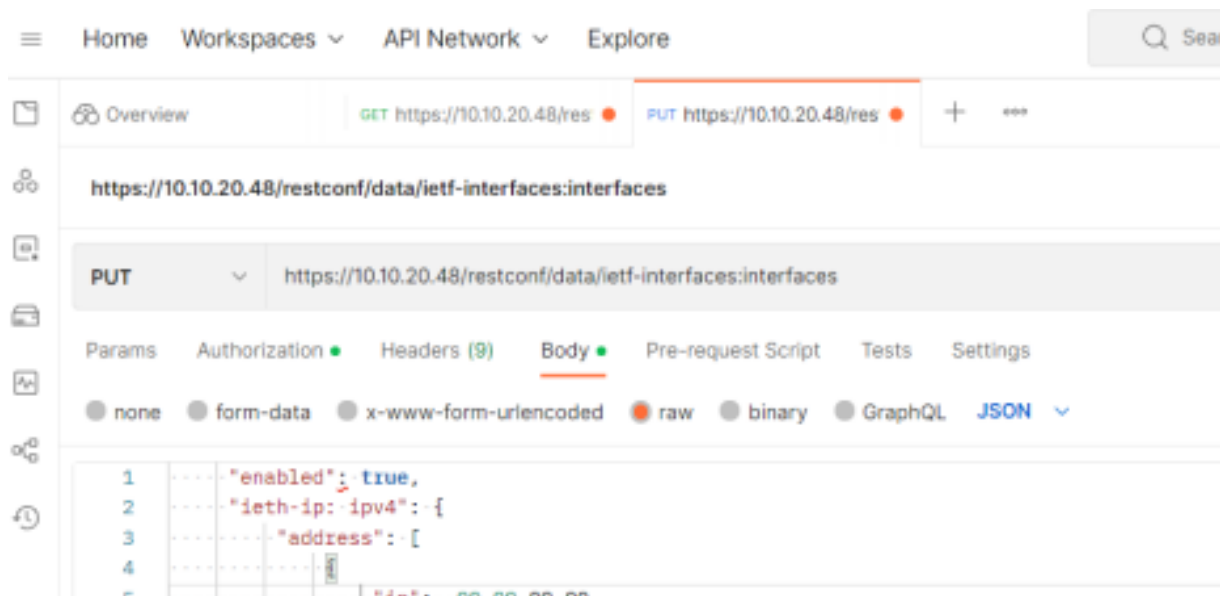
GET | https://10.10.20.48/restconf/data/ietf-interfaces:interfaces/interface=Loopback1

KEY	VALUE
<input checked="" type="checkbox"/> Authorization	Basic ZGV2ZWxvcGVyOXMxc2NvMTIzNDU=
<input checked="" type="checkbox"/> Postman-Token	<calculated when request is sent>
<input checked="" type="checkbox"/> Host	<calculated when request is sent>
<input checked="" type="checkbox"/> User-Agent	PostmanRuntime/7.29.2

Body | Cookies | Headers (7) | Test Results

Pretty | Raw | Preview | Visualize | XML

```
1
2 <interface xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces" xmlns:if="urn:ietf:params:xml:ns:yang:ietf-interfaces">
3   <name>Loopback1</name>
4   <description>laboratorio 2.2</description>
5   <type xmlns:ianaif="urn:ietf:params:xml:ns:yang:iana-if-type">ianaif:softwareLoopback</type>
6   <enabled>true</enabled>
7   <ipv4 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
8     <address>
9       <ip>1.1.1.1</ip>
10      <netmask>255.255.255.0</netmask>
11    </address>
12  </ipv4>
13  <ipv6 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
14    </ipv6>
15  </interface>
```



Postman es una plataforma gratuita si trabajas solo o de pago si quieres trabajar de manera colaborativa con tu equipo. Esta plataforma posibilita y facilita la creación y el uso de APIs. Se puede usar, por ejemplo, para obtener información sobre las respuestas HTTP, en diferentes métodos, que realicemos a APIs de diferentes temáticas.

La plataforma también te brinda una serie de observaciones de avanzada inteligencia que te generarán alertas, elementos o búsqueda, entre otros elementos que te ayudarán a desarrollar o conectar con una API.

El objetivo principal de RESTCONF es permitir que las aplicaciones web (que utilizan el protocolo HTTP) accedan a un dispositivo de red para la adquisición de datos de configuración y estado.

RESTCONF se divide principalmente en dos capas: capa de contenido y capa de protocolo.

- Capa de contenido: define una colección de objetos para ser operados, definidos en lenguaje YANG, y distingue entre datos de gestión y de configuración.

- Capa de protocolo: Utiliza directamente el protocolo HTTP (+TLS) para proporcionar funciones distintas del contenido.