

## Instalacion del modulo python ncclient

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Versión 10.0.22000.1219]
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C:\Users\foser>pip install ncclient
Requirement already satisfied: ncclient in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (0.6.13)
Requirement already satisfied: setuptools>0.6 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from ncclient) (63.2.0)
Requirement already satisfied: paramiko>1.15.0 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from ncclient) (2.11.0)
Requirement already satisfied: lxml>3.3.0 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from ncclient) (4.9.1)
Requirement already satisfied: six in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from ncclient) (1.16.0)
Requirement already satisfied: bcrypt>3.1.3 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from ncclient) (4.0.1)
Requirement already satisfied: pynacl>1.0.1 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from ncclient) (1.5.0)
Requirement already satisfied: cryptography>2.5 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from paramiko>1.15.0->ncclient) (38.0.1)
Requirement already satisfied: cffi>1.12 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from cryptography>2.5->paramiko>1.15.0->ncclient) (1.15.1)
Requirement already satisfied: pycparser in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from cffi>1.12->cryptography>2.5->paramiko>1.15.0->ncclient) (2.21)

C:\Users\foser>
```

## capacidades del IOS XE: modelos YANG admitidos

```
lab2.7.py - Visual Studio Code

C:\Users\foser>Downloads>lab2.7.py>...
1 import ncclient
2 from ncclient import manager
3
4 m = manager.connect(
5     host="10.10.20.48",
6     port=830,
7     username="developer",
8     password="Cisco12345",
9     hostkey_verify=False
10 )
11
12 print("#Supported Capabilities (YANG models):")
13 for capability in m.server_capabilities:
14     print(capability)
15
```

```
urn:ietf:params:xml:ns:yang:smiv2:SNMP-PROXY-MIB&revision=2002-10-14
urn:ietf:params:xml:ns:yang:smiv2:SNMPv2-MIB&revision=2002-10-16
urn:ietf:params:xml:ns:yang:smiv2:SNMPv2-TC&revision=2002-10-16
urn:ietf:params:xml:ns:yang:smiv2:SONET-MIB&revision=2003-08-11
urn:ietf:params:xml:ns:yang:smiv2:TCP-MIB&revision=2005-02-18
urn:ietf:params:xml:ns:yang:smiv2:TOKEN-RING-IPV4-MIB&revision=1994-10-23
urn:ietf:params:xml:ns:yang:smiv2:TOKEN-RING-MIB&revision=1994-10-23
urn:ietf:params:xml:ns:yang:smiv2:TUNNEL-MIB&revision=2005-05-16
urn:ietf:params:xml:ns:yang:smiv2:UDP-MIB&revision=2005-05-20
urn:ietf:params:xml:ns:yang:smiv2:VPM-TC-STD-MIB&revision=2005-11-15
urn:ietf:params:xml:ns:yang:ietf-netconf&revision=2011-06-01
urn:ietf:params:xml:ns:yang:ietf-netconf-with-defaults&revision=2011-06-01
urn:ietf:params:netconf:capability:notification:1.1
```

## Salida

```
urn:ietf:params:xml:ns:yang:smiv2:SNMP-PROXY-MIB module=SNMP-PROXY-MIB revision=2002-10-14
urn:ietf:params:xml:ns:yang:smiv2:SNMPv2-MIB module=SNMPv2-MIB revision=2002-10-16
urn:ietf:params:xml:ns:yang:smiv2:SNMPv2-TC module=SNMPv2-TC
urn:ietf:params:xml:ns:yang:smiv2:SNMPv2-MIB module=SNMPv2-MIB revision=2003-08-11
urn:ietf:params:xml:ns:yang:smiv2:TCP-MIB module=TCP-MIB revision=2005-02-18
urn:ietf:params:xml:ns:yang:smiv2:TOKEN-RING-RMON-MIB module=TOKEN-RING-RMON-MIB
urn:ietf:params:xml:ns:yang:smiv2:TOKENRING-MIB module=TOKENRING-MIB revision=1994-10-23
urn:ietf:params:xml:ns:yang:smiv2:TUNNEL-MIB module=TUNNEL-MIB revision=2005-05-16
urn:ietf:params:xml:ns:yang:smiv2:UDP-MIB module=UDP-MIB revision=2005-05-20
urn:ietf:params:xml:ns:yang:smiv2:VFN-TC-STD-MIB module=VFN-TC-STD-MIB revision=2005-11-15
urn:ietf:params:xml:ns:netconf:base:1.0 module=ietf-netconf revision=2011-06-01
urn:ietf:params:xml:ns:yang:ietf-netconf-with-defaults module=ietf-netconf-with-defaults revision=2011-06-01

urn:ietf:params:netconf:capability:notification:1.1
```