# Common Industrial Protocol (CIP)

## Information About CIP

The Common Industrial Protocol (CIP) is an industrial protocol for industrial automation applications. Previously known as Control and Information Protocol, CIP encompasses a comprehensive suite of messages and services for the collection of manufacturing automation applications - control, safety, synchronization, motion, configuration and information. It is supported by Open DeviceNet Vendors Association (ODVA), an organization that supports network technologies based upon CIP such as DeviceNet, EtherNet/IP, CIP Safety and CIP Sync. CIP allows users to integrate these manufacturing applications with enterprise-level Ethernet networks and the Internet.

## CIP Restrictions

CIP can be enabled on only one VLAN on the switch.

## Enabling CIP

**Before you begin**

By default, CIP is not enabled.

**SUMMARY STEPS**

1. **Configure Terminal**
2. **cip security** { **password** *password* | **window timeout** *value* }
3. **interface vlan 20**
4. **cip enable**
5. **end**

6. **show running-config**
7. **copy running-config startup-config**
8. **show cip** { **connection** | **faults** | **file** | **miscellaneous** | **object** | **security** | **session** | **status** }
9. **debug cip** { **assembly** | **connection manager** | **dlr** | **errors** | **event** | **file** | **io** | **packet** | **request response** | **security** | **session** | **socket** }

## DETAILED STEPS

|        | Command or Action | Purpose |
|--------|-------------------|---------|
| Step 1 | **Configure Terminal** | Enters global configuration mode. |
| Step 2 | **cip security** { **password** *password* | **window timeout** *value* } | Sets CIP security options on the switch. |
| Step 3 | **interface vlan 20** | Enters interface configuration mode. |
| Step 4 | **cip enable** | Enables CIP on a VLAN. |
| Step 5 | **end** | Returns to privileged EXEC mode. |
| Step 6 | **show running-config** | Verifies your entries. |
| Step 7 | **copy running-config startup-config** | (Optional) Saves your entries in the configuration file. |
| Step 8 | **show cip** { **connection** | **faults** | **file** | **miscellaneous** | **object** | **security** | **session** | **status** } | (Optional) Displays information about the CIP subsystem. |
| Step 9 | **debug cip** { **assembly** | **connection manager** | **dlr** | **errors** | **event** | **file** | **io** | **packet** | **request response** | **security** | **session** | **socket** } | (Optional) Enables debugging of the CIP subsystem. |

# Additional References

### Related Documents

| Related Topic | Document Title |
|---------------|----------------|
| Cisco IOS basic commands | *Cisco IOS Configuration Fundamentals Command Reference* |

### Standards and RFCs

| Standard/RFC | Title |
|--------------|-------|
| No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature. | |
| No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified by this feature. | |

**MIBs**

| MB | MIBs Link |
|---|---|
| | To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: https://mibs.cloudapps.cisco.com/ITDIT/MIBS/servlet/index?dtid=osscdc000283 |

**Technical Assistance**

| Description | Link |
|---|---|
| The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. | http://www.cisco.com/support |
| To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. | |
| Access to most tools on the Cisco Support website requires a Cisco.com user ID and password. | |