

# Cisco Industrial Network Director

Purpose built for managing industrial networks, the Cisco® Industrial Network Director (IND) is designed to help operations teams gain full visibility of network and automation devices in the context of the automation process and provides improved system availability and performance, leading to increased overall equipment effectiveness (OEE).

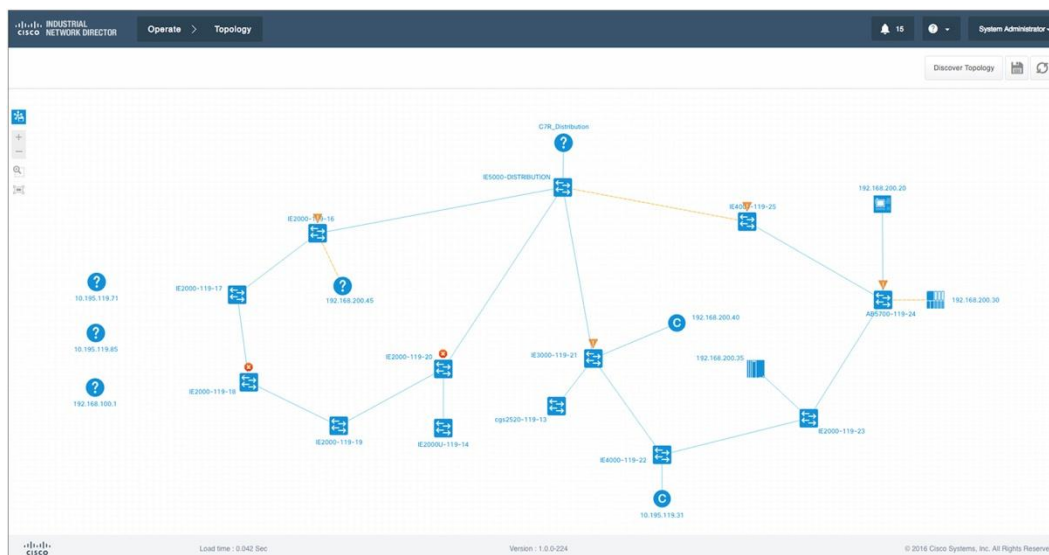
## Overview

Ethernet networks are an integral part of modern automation and control environments, and customers in manufacturing and energy to public sector organizations such as cities and transportation are growing increasingly dependent on network monitoring to reduce unplanned downtime.

The Cisco IND provides operations-centric network management for industrial Ethernet networks. The system leverages the full capabilities of the Cisco Industrial Ethernet product portfolio to make the network accessible to non-IT operations personnel. The familiar and simple user experience streamlines network monitoring and delivers rapid troubleshooting of common network problems found in industrial environments.

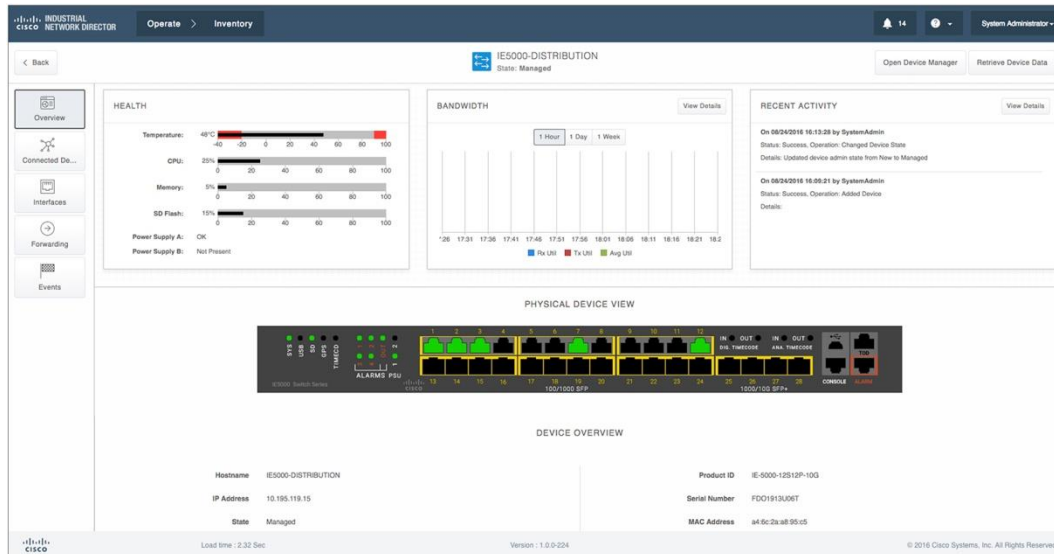
The system delivers an integrated topology of automation and networking assets to provide a common framework for operations and plant IT personnel to manage and maintain the industrial network and quickly recover from unplanned downtime. (See Figure 1.)

**Figure 1.** IND Industrial Network Topology View Sample



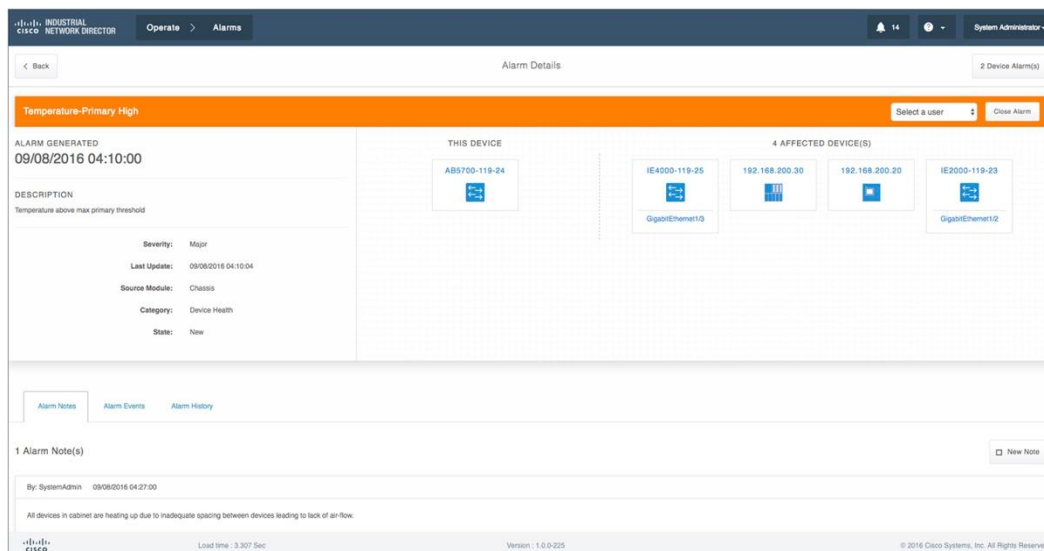
Through the purpose-built system, operators can zoom in on specific devices for real-time monitoring of device status and traffic statistics. (See Figure 2.)

**Figure 2.** IND Network Element Overview Sample



The system provides comprehensive alarm management features with real-time alerting of network events and reporting of effects to automation assets, allowing the operations and plant-IT team to consume network changes in context of the industrial process to simplify troubleshooting issues.

**Figure 3.** IND Alarm Detail Overview Sample



IND also provides a rich set APIs for easy integration of network information into existing industrial asset management systems and allowing customers and system integrators to build dashboards customized to meet specific monitoring and accounting needs.

## Features and Benefits

**Table 1.** Features and Benefits

Feature	Benefit
<b>Purpose-built user experience for non-IT operations personnel</b>	Rapid adoption by operations teams for improved productivity
<b>Passive and targeted discovery of plant floor network assets customized for industrial environments</b>	Ensures that automation devices connected to the network are not affected by discovery process
<b>Automation endpoint discovery using CIP and PROFINET industrial protocols</b>	Complete automation infrastructure inventory, not just network
<b>Hierarchical grouping of network and assets</b>	View assets in line with how they are deployed in industrial environments
<b>Intuitive graphical dashboard</b>	Displays system health and metrics based on grouping of assets allowing users to focus on areas of interest
<b>Integrated topology of automation and networking assets</b>	Common framework for plant floor and plant IT personnel to operate and maintain the industrial network
<b>Optimized alarm management with real-time alerting of network events and reporting of effects to automation assets</b>	Allows for operations and plant-IT team to consume network events in context of the industrial process to simplify troubleshooting issues
<b>Real-time monitoring of device metrics, traffic statistics, and network infrastructure status</b>	Increased visibility of network health for the operations team and reduce unplanned downtime
<b>Comprehensive RESTful APIs for integration with automation applications and control systems</b>	Rapid adoption and integration with existing systems and customization by system integrators
<b>Role-based access control with customizable permission mapping</b>	Restrict system access to authorized users on a per feature basis
<b>Detailed audit trails for operational visibility of network changes, additions, and modifications</b>	Record user actions on network devices for change management
<b>Search capability integrated with major functions</b>	Easily locate functionality and mine for information
<b>Cisco Active Advisor</b>	Free cloud-based service that provides essential network lifecycle information to make sure security and product updates are current
<b>Guided tours</b>	Step-by-step guidance to maximize productivity and ease adoption

## Get Full Visibility and Control of Your Industrial Automation Network

The Industrial Network Director provides operations teams an easily integrated system delivering increased operator and technician productivity through streamlined network monitoring and rapid troubleshooting as part of a comprehensive IoT solution from Cisco:

- Easy-to-adopt network management system purpose built for industrial applications that leverages the full capabilities of the Cisco Industrial Ethernet product family to make the network accessible to non-IT operations personnel.
- Creates a dynamic integrated topology of automation and networking assets using industrial protocol (CIP, PROFINET) discovery to provide a common framework for plant floor and plant IT personnel to monitor and troubleshoot the network and quickly recover from unplanned downtime.
- Rich APIs allow for easy integration of network information into existing industrial asset management systems and allow customers and system integrators to build dashboards customized to meet specific monitoring and accounting needs.

**Table 2.** Supported Devices

Vendor	Product Family
Cisco Systems Inc.	<ul style="list-style-type: none"><li>• Cisco Industrial Ethernet 1000 Series Switches</li><li>• Cisco Industrial Ethernet 2000 Series Switches</li><li>• Cisco Industrial Ethernet 2000 IP67 Series Switch</li><li>• Cisco Industrial Ethernet 2000U Series Switches</li><li>• Cisco Industrial Ethernet 3000 Series Switches</li><li>• Cisco Industrial Ethernet 4000 Series Switches</li><li>• Cisco Industrial Ethernet 5000 Series Switches</li><li>• Cisco Industrial Ethernet 3010 Series Switches</li><li>• Cisco 2500 Series Connected Grid Switches</li></ul>
Rockwell Automation/Allen-Bradley	<ul style="list-style-type: none"><li>• Stratix 5700 Industrial Managed Ethernet Switches</li><li>• ArmorStratix 5700 Industrial Ethernet Switches</li><li>• Stratix 8300 Modular Managed Ethernet Switches</li><li>• Stratix 5400 Industrial Ethernet Switches</li><li>• Stratix 5410 Industrial Distribution Switches</li></ul>

## Licensing

The Cisco Industrial Network Director is licensed on a per-device, term subscription basis. Each customer is licensed for a certain number of devices through a termination date.

Licenses for managing Cisco Industrial Ethernet switches are ordered in increments of one unit device, with a subscription term of 1, 3, or 5 years. Within the subscription term, the customer is entitled to Cisco Industrial Network Director software upgrades on all maintenance releases and patches, minor update releases, and major upgrade releases.

Customers can choose a subscription billing model of either a monthly payment for the duration of the term or prepaid for whole term.

The Cisco Industrial Network Director supports two licensing models (see Table 3).

**Table 3.** Licensing Models

Top Level PID	Billing PID	License Model	Description
IND-SOFTWARE-K9			Top level PID for CCW ordering
	IND-IE-S	Smart software licensing	IND smart license for managing industrial Ethernet switches
	IND-IE	Traditional PAK licensing	IND license for managing industrial Ethernet switches

For customers that do not want to deal with product activation keys (PAKs) and the hassle of manually maintaining license files, smart software licensing provides the following benefits:

- Simple: Procure, deploy, and manage licenses easily. The system self-registers with Cisco for automatic license activation.
- Flexible: Pool license entitlements in a single account. Move licenses freely through the network, wherever you need them.
- Smart: Manage your license deployments with real-time visibility of ownership and consumption.

Learn more at <http://www.cisco.com/web/ordering/smart-software-licensing/index.html>.

## System Requirements

To use Cisco Industrial Director effectively, your system must meet the requirements listed in Table 4.

**Table 4.** Minimum System Requirements

<b>Windows Operating System</b>	Windows 7 or Windows 10
<b>Browser</b>	Chrome (Version 50.0.2661.102 or later) Firefox (Version 46.01 or later)
<b>CPU</b>	Dual Core 2.4Ghz
<b>Memory</b>	8 GB
<b>Storage</b>	50 GB

## Technical Services

Cisco Industrial Network Director includes a Basic Tier of support service, which includes software updates from the Cisco.com software download site, and technical support through email from Monday – Friday 7am-7pm local time for the location of the issue to be addressed.

Basic Tier Response Times	
<b>Severity 1</b>	Not Included
<b>Severity 2</b>	Not Included
<b>Severity 3</b>	8 Business Hours
<b>Severity 4</b>	12 Business Hours

Please email [ask-smart-services@cisco.com](mailto:ask-smart-services@cisco.com) using the [Basic Tier technical support template](#).

## Financing to Help You Achieve Your Objectives

Cisco Capital® financing can help you acquire the technology you need to achieve your objectives and stay competitive. We can help you reduce CapEx, accelerate your growth, and optimize your investment dollars and ROI. Cisco Capital financing gives you flexibility in acquiring hardware, software, services, and complementary third-party equipment. And there's just one predictable payment. Cisco Capital is available in more than 100 countries. [Learn more](#).

## Call to Action

Get full visibility and control of your automation network today with Cisco Industrial Network Director.

For additional information, visit <http://www.cisco.com/go/ind>.



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