



IoT FND Overview

Cisco IoT Field Area Network Director (FND) is a network management system for the Cisco Field Area Network (FAN).

The FAN is a communication network overlay that provides an end-to-end, IP-based reference architecture from data centers responsible for grid operations to homes and industries. It seamlessly connects IoT devices and services in a power grid infrastructure and provides multiservice enablement, security, fog computing, and more. It also serves as a communication platform for a variety of advanced applications, including Distribution Automation, Advanced Metering Infrastructure, and renewable energy.

IoT FND is a core component of a FAN. Through an intuitive user interface, it provides features for managing, monitoring, and troubleshooting supported devices and network operations in FANs of almost any size. Supported devices include various models of field area routers (FARs), headend routers (HERs), gateways, and endpoints. IoT FND ensures smooth device setup through zero-touch deployment (ZTD), secure communication, seamless scalability, and increased network efficiency. It provides real-time visibility of devices and assets, proactive fault detection, and many other important features for the management of the FAN.

For data protection and security, IoT FND uses digital certificates that undergo stringent authentication process based on 802.1x standards. Use of multiple IP encryptions and a standard FlexVPN solution establishes a secure data transmission environment that implements hop-by-hop encryption to safeguard data integrity and confidentiality.

Key features of IoT FND include the following:

- **Lifecycle management:**
 - On-premises network management system for FAN devices
 - Secure zero-touch provisioning for enrollment and deployment of devices
 - Device inventory
 - Secure tunnel provisioning
 - Rich APIs for third-party application integration
- **Network optimization:**
 - Configuration and firmware management
 - Network management for constrained bandwidth
 - Multitenancy and RBAC support

- Network troubleshooting
- **Real-time monitoring:**
 - Enterprise-class visibility for routers and endpoints
 - Device status, health, and performance metrics
 - Alerts for critical events
 - Location tracking of all network assets and geofencing
 - Dynamic and customizable dashboard