Cisco IOS Device Sensor

Customer Need: User Device Visibility in the Network

Many devices are connecting to the network dynamically and need to be detected and managed by multiple network services. These services include asset management, device onboarding, switch configuration, policy management, and device energy management. Traditionally, IT administrators manually add the devices to each service. This consumes unnecessary overhead and is inefficient.

Technology Postcard

Feature Description: Cisco IOS Device Sensor

Cisco IOS® Device Sensor is an embedded Cisco IOS Software feature that is available on Cisco® access switches. It automatically profiles connected user devices, for example, IP phones, wireless access points, laptops, cameras, and videoconferencing terminals. It gathers information such as device type and make and sends this information to the various network services. Cisco Identity Services Engine (ISE) is an important network service that profiles connected devices using Cisco IOS Device Sensor and in turn configures switches with appropriate access policies. Cisco Auto SmartPorts is another service that makes use of the device profile information from Cisco IOS Device Sensor. It sets appropriate QoS and security settings on the switch based on the user device. Here is a use case that shows the benefits of Cisco IOS Device Sensor.

Use Case

- **Without Cisco IOS Device Sensor:** Before an IP phone can be connected to the network, an IT administrator must configure the access switch to assign the traffic to voice VLANs and to designate appropriate QoS settings. This manual approach needs to be repeated for each of the access switches in the network.

- **With Cisco IOS Device Sensor:** Cisco IOS Device Sensor on the access switch detects the IP phone and automatically sends the information to the Cisco Auto SmartPorts feature in the switch. Cisco Auto SmartPorts applies the right VLAN and QoS policies for voice traffic based on configured policy. No manual intervention is required. It works automatically on every access switch for all the connected IP phones.

Benefits

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Cisco IOS Device Sensor automates configuration of switches for connected devices, simplifying network administration and accelerating the deployment of new devices.	Cisco IOS Device Sensor minimizes the need for each network service to continuously scan the network to collect identity information.	Cisco IOS Device Sensor provides "plug and play" for the end user and IT administrator.

Supported Catalyst Platforms

- Cisco Catalyst® 4500E and 4500-X
- Cisco Catalyst 3750-X
- Cisco Catalyst 3560-X

For More Information

http://www.cisco.com/en/US/docs/switches/lan/catalyst3750/software/release/15.0_1_se/device_sensor/guide/sensor_guide.html