Canon

Canon MDS
Managed Document Services

MDS CLOUD
Centralized Printing Fleet Intelligence

Technical Impact Document

Overview

This document describes the impact and technical details of installing Canon MDS Cloud on a network. It will provide customers with general information about how the system functions, which data is collected, how the data is collected, and how that data is transmitted to a cloud-based server.

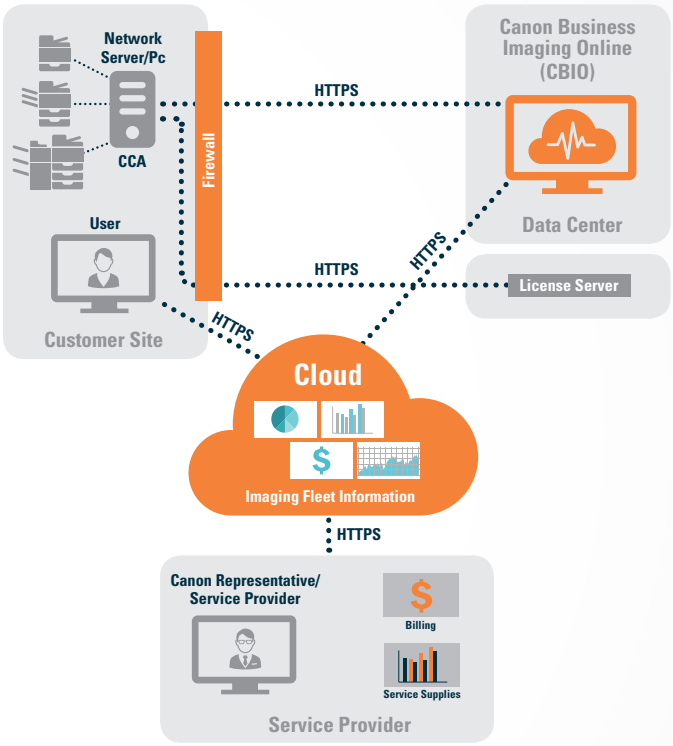
MDS Cloud has two main components: the Collection and Configuration Agent (CCA) and the MDS Cloud server. The CCA is a software application that collects information from printers, copiers, fax machines, and multifunction peripherals on a network and then transmits the data back to the centralized MDS Cloud server.

MDS Cloud has several core functions:

- Collect imaging device data in order to maintain device health, uptime, and usability
- Provide information on usage and overall business intelligence on imaging devices
- Ensure device firmware is up to date
- Help maintain centralized backup of device configurations and user settings

How It Works

The CCA collects data from imaging devices on a periodic basis throughout the day. The data is then compiled and transmitted to the MDS Cloud server, where it's processed. Depending on the device and customer settings, the MDS Cloud server could trigger an alert if action is required. In addition to the automated processing of information, authorized Canon Service Providers and customer representatives may access device information via a Web browser interface by logging on to the Canon MDS Cloud server at any time.



Installation and Technical Requirements

The CCA is installed on either a server or computer that has Microsoft® Windows® Server 2003 or XP operating system or higher installed, as well as Microsoft.NET framework 2.0 or higher and runs 24 hours a day, 7 days a week. The host device must have access to all imaging systems on the network, as well as an ability to transmit data from these devices to the MDS Cloud server. The CCA collects data via ICMP (ping) and Simple Network Management Protocol (SNMP) and, therefore, the network and printing devices must be SNMP-enabled.

CCA Network Communication Protocols

When the CCA sends data to the MDS Cloud server, only the HTTPS TCP port 443 is used. The table at right outlines the protocols used on the Local Area Network (LAN) between the CCA and the devices for capturing imaging data.

PROTOCOL	PORT NUMBER	SOURCE	PURPOSE
SNMP	UDP/161	Device	MIB (device monitoring and device configuration information)
SLP	UDP/427	Device	Device Configuration
Canon Original	UDP/47545 TCP/47546 TCP/9007 UDP/50700(IPv4) UDP/50701(IPv6)	Device	Job Logs/Counter Information/Event Information
SLP (status notice from devices)	UDP/11427	MDS CC Agent	Receiving Device Status

Data Collected from Devices by the CCA and Sent to MDS Cloud Server

The table at right outlines the data collected by the CCA, the frequency of that collection, and the approximate size of the data packets.

CONTENTS	DEVICE	DATA AMOUNTS	CAPTURING FREQUENCY
Job History*	Canon Device	Dependent on the Number of Jobs Print Job: Approximately 4KB Scan Job: Approximately 3KB Fax Job: Approximately 2KB Send Job: Approximately 2KB	Every 10 Minutes (for devices that cannot store more than 1,000 jobs) Every 60 Minutes (for devices that can store more than 1,000 jobs)
	Other-Branded Device	Not Captured	Not Captured
Counter Information	Canon Device	Approximately 19.1KB	Every 12 Hours (polling)
	Other-Branded Device	Approximately 1.7KB	Every 12 Hours (polling)
Status of Device	Canon Device	Approximately 0.8KB	Every 5 Minutes
	Other-Branded Device	Approximately 0.6KB	Every 5 Minutes
Toner Level	Canon Device	Approximately 2.4KB	Every 5 Minutes
	Other-Branded Device		
Paper Level	Canon Device	Approximately 2.7KB	Every 5 Minutes
	Other-Branded Device		
Configuration	Canon Device	Approximately 10KB	Once a Day (when power is on)
	Other-Branded Device		
Device Settings Information	Canon Device	Approximately 1MB	Specified by Service Provider
	Other-Branded Device	Not Captured	

*Job history components are selectable or can be masked.

Data Retrieved by the CCA from the MDS Cloud Server

The following table outlines the data collected by the CCA, the frequency of that collection, as well as the approximate size of the data packets.

CONTENTS	DATA AMOUNTS	RECEIVING FREQUENCY
List Of Managed Devices	Approximately 0.40KB	Once a Day
Device Discovery Settings	Approximately 0.63KB	Every 8 Hours
MDS CC Agent Management Information	Approximately 0.25KB	Once a Day
Device Setting	Approximately 1MB	Specified by Each of the Service Providers
Event Occurrence Information	Approximately 1KB	Whenever an Event Occurs on the Device
The Most Recent Version Number of the MDS CC Agent	Approximately 5KB	Once a Day

Note: Some services are optional and data will vary based on options selected.

Server Security

The Canon Business Imaging Online data center uses AES128 encryption to secure physical storage. In addition, Canon's virtual servers for CBIO applications, such as Authentication Services and Print Services, further enhance data security by encrypting end-user data with AES256 using separate authentication keys for each person.

ITEM	SECURED WITH
Data Center Certification	ISO9001/ISO14001/ISO20000/ISO27001
Network Protocol	HTTPS (SSL3.0)
Authentication	ID; Password Required to Log-in
Single Sign-on Protocol	SAML 2.0
Data Center Security	Data Separation, Access Control, Encryption of Print Data (AES256)
Data Center Facility Security	• Palm and Vein Authentication for Entrance • 24-Hour Monitoring • Whereabouts Tracking Using RFID Tags Monitors All Employees and Visitors • Locked Racks

If you require additional information on the performance and specifications of Canon MDS Cloud, please contact your Authorized Canon representative and request the document entitled, *Canon MDS Security White Paper.*

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