Windows® Embedded

Manage Your Embedded Devices with Windows Embedded Device Manager 2011

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Windows® Embedded Device Manager 2011

Windows Embedded Device Manager 2011 extends the capabilities of Microsoft® System Center

Configuration Manager 2007 to enable the centralized management of Windows Embedded devices, such as

thin client, point-of-service (POS), and digital signage devices. Embedded devices are typically task-specific and

present unique deployment, maintenance, and service challenges. Device Manager 2011 provides an extensible

management solution for embedded devices that includes embedded device collections, the deployment of

packages to write filter-protected devices, and the imaging of embedded devices using OEM device imaging

solutions.

This white paper discusses the management capabilities of Device Manager 2011.

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Introduction

Embedded devices such as thin clients, point-of-service (POS) terminals, and digital signs are typically task-specific and present unique deployment, maintenance, and service challenges. Windows® Embedded Device Manager 2011 provides embedded device management capabilities that streamline these administrative tasks.

This white paper covers the following topics:

- Device Manager 2011 collections

- Device Manager 2011 inventory

- Device Manager 2011 features

Device Manager 2011 Collections

Previously, an administrator could not differentiate an embedded device from a personal computer on the Configuration Manager console. The administrator could not easily deploy a package specific to an embedded device or a collection of embedded devices as there was no predefined collection of embedded devices.

With Device Manager 2011, embedded devices can now be grouped into device collections unique to each embedded device type. Thin clients appear in an **All Thin Client Devices** collection, POS devices appear in an **All Point of Service Devices** collection, and digital signs appear in an **All Digital Signage Devices** collection. Now you can deploy packages intended for embedded devices specifically to these embedded device collections.

The embedded device collections that are added to the Configuration Manager console are shown in the following figure.
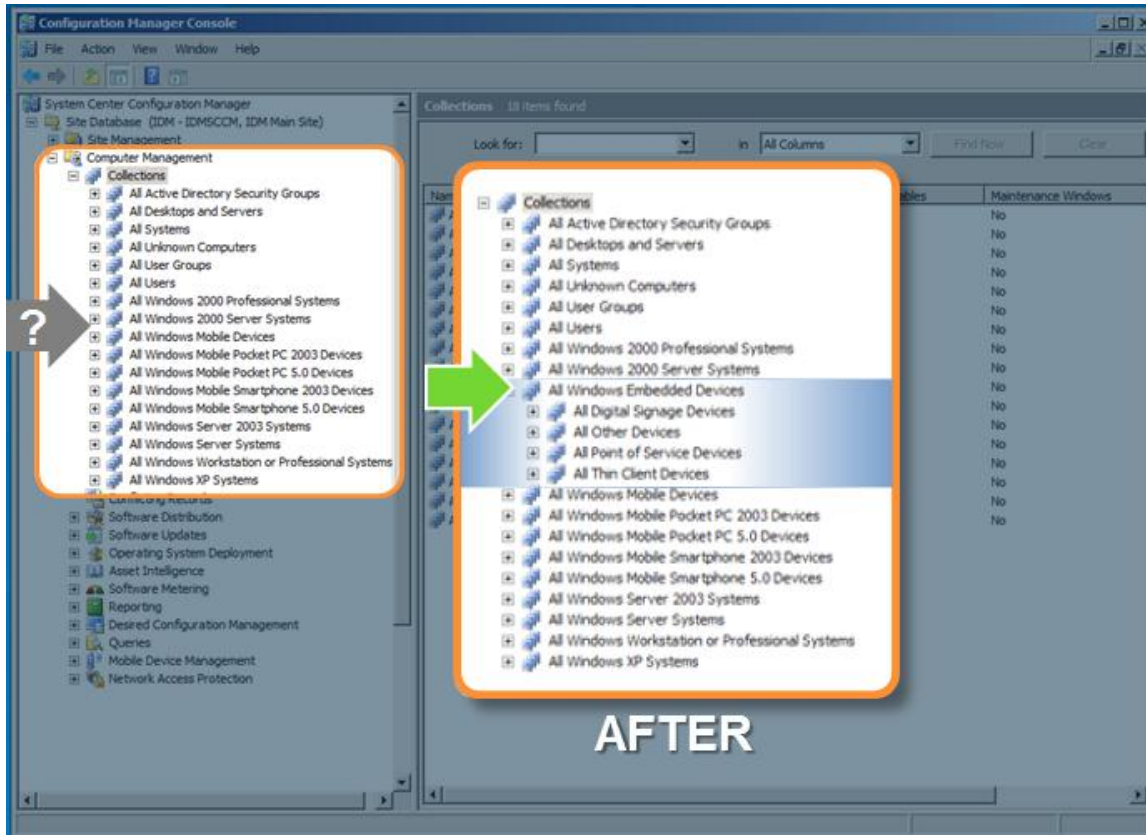
Figure 1. **Embedded device collections added to the Configuration Manager console**

Supported Device Categories and Operating Systems

Embedded device collections allow you to centrally manage embedded devices. The following table lists which device categories can be managed by Device Manager 2011.

Table 1: Device Categories and Required Operating Systems

Device category	Operating systems
Thin client	Windows® XP Embedded, Windows® Embedded Standard 2009, Windows® Embedded Standard 7
Point of service (POS)	Windows XP Embedded, Windows® Embedded for Point of Service, Windows® Embedded POSReady 2009
Digital signage	Windows Embedded Standard 2009, Windows Embedded Standard 7

Note: It is required that you keep the operating systems you use on embedded devices current with the latest service packs.

Device Manager 2011 Inventory

Device Manager 2011 extends the Configuration Manager 2007 client hardware inventory feature by adding Windows Management Instrumentation (WMI) classes and class attributes, registry keys, and other customizations to Configuration Manager 2007.

You can view device inventory data in Resource Explorer or through several new predefined inventory reports. Both methods allow you to view important hardware inventory information about devices, such as hardware attributes and write filter status. The following list includes the types of information gathered by Device Manager 2011:

- Basic device information

- Password settings

- Proxy settings

- Wi Fi settings

- Deployed configuration package settings and related information

- Enhanced Write Filter (EWF) and related settings

- File-Based Write Filter (FBWF) and related settings

- Windows® Internet Explorer® settings

- Remote Desktop Protocol (RDP) settings

- Virtual private network VPN settings

- Device start/restart status

- POS peripherals

Device inventory reports are scheduled and viewed in the same way as all other reports in the Configuration Manager console. Device Manager 2011 installs a number of predefined reports that are unique to embedded devices. These include reports on embedded devices with Internet Explorer settings, password settings, and write filter settings. The following figure includes the list of installed reports.

Devices with an image deployment in progress	Embedded Device Management	408
Devices waiting for image deployments	Embedded Device Management	409
Devices with successful completion of an image deployment	Embedded Device Management	410
Devices retrying an image deployment	Embedded Device Management	411
Devices not able to complete an image deployment	Embedded Device Management	412
Devices reporting WiFi Settings	Embedded Device Management	413
Devices reporting VPN Settings	Embedded Device Management	414
Devices reporting PXE status	Embedded Device Management	415
Devices reporting Proxy Settings	Embedded Device Management	416
Devices with FBWF path exclusion list settings	Embedded Device Management	417
Devices reporting password settings	Embedded Device Management	418
Devices with Internet Explorer settings	Embedded Device Management	419
Devices with File-Based Write Filter and related settings	Embedded Device Management	420
Devices with Enhanced Write Filter and related settings	Embedded Device Management	421
Devices with deployed configuration package settings	Embedded Device Management	422

Figure 2. Device Manager 2011 reports

Device Manager 2011 Features

Device Manager 2011 provides the following features to manage embedded devices:

- **Device Imaging**. This enables OEM device imaging solutions to be used for imaging an OEM's embedded devices.

- **Device Configuration**. This service enables configuration of embedded device settings, such as Internet Explorer settings, password settings, and registry settings; as well as deployment of these configuration packages to embedded device collections.

- **Write Filter Servicing**. This enables software deployment to write filter-protected devices. Device Manager 2011 can programmatically disable and enable write filters as part of the package deployment process. When packages are deployed, write filters are disabled and then enabled again after the package has been received and processed on the embedded device.

These features display in the Configuration Manager console and are shown in the following figure.

Figure 2. Device Manager 2011 features

Conclusion

Device Manager 2011 extends Configuration Manager 2007 to manage embedded devices. Device Manager 2011 provides embedded device management capabilities, such as embedded device collections, embedded device inventory, and embedded device management features that include device imaging, device configuration, and write filter servicing.

For more information about Windows Embedded Device Manager 2011, see:

Windows Embedded web site: www.microsoft.com/windows/embedded/default.mspx

Additional Resources

Device Manager 2011 installation, deployment, and management are discussed in greater detail in the following white papers:

- "Extending Microsoft System Center Configuration Manager 2007 with Windows Embedded Device Manager 2011"
- "Deploy Packages to Your Write Filter-Protected Embedded Devices Using Windows Embedded Device Manager 2011"
- "Deploy an Operating System Image to Your Embedded Device Using Windows Embedded Device Manager 2011"

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