



Deploy an Operating System Image to Your Embedded Device Using 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 describes deploying an operating system image to an embedded device using an OEM device imaging solution.

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Introduction

Windows® Embedded Device Manager 2011 provides the ability to image embedded devices using device imaging solutions provided by device OEMs (referred to in this white paper as *OEM device imaging solutions*). This white paper covers deploying an operating system image to an embedded device using an OEM device imaging solution.

Deploying an Operating System Image Using an OEM Device Imaging Solution

While some embedded devices support familiar deployment technologies, such as Windows Deployment Services (WDS) and Preboot Execution Environment (PXE), and operating system image formats, such as Windows Imaging (WIM) file format, many device OEMs use their own image deployment technologies and image file formats. Device Manager 2011 enables you to take advantage of a variety of OEM device imaging solutions to image embedded devices from a variety of OEMs from the Configuration Manager console.

Device Manager 2011 device imaging requires:

- **An OEM device imaging solution.** A software solution created by the device OEM that handles requests to deploy operating system images to embedded devices.
- **The device imaging component.** A software plug-in created by the device OEM that implements a Component Object Model (COM) or Distributed Component Object Model (DCOM) interface to the Device Manager 2011 Device Imaging service. The component handles communication between the Device Imaging service and the device imaging solution. Device Manager 2011 will provide a software development kit (SDK) to the OEM to create this COM/DCOM plug-in.
- **The Device Imaging service.** This Device Manager 2011 service manages communication between the device imaging component and Device Manager 2011.

Note: For more information about the Device Manager 2011 Device Imaging service, see the Device Manager 2011 SDK.

The Device Manager 2011 device imaging process includes the following steps:

1. The Device Manager 2011 server uses the Device Imaging service to communicate with the device imaging component.
2. Communication occurs between the device imaging component and the device imaging solution.
3. The device imaging solution then deploys images to the OEM's embedded devices.

This device imaging process is shown in the following figure.



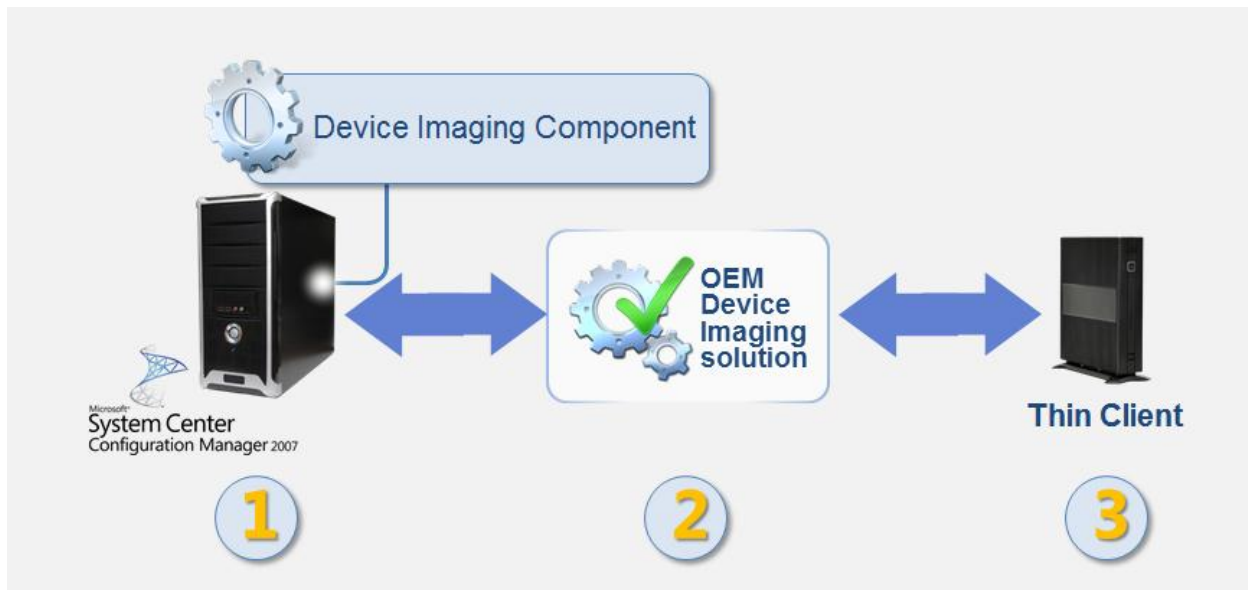


Figure 1. Device Manager 2011 device imaging process using an OEM device imaging solution

The New Device Imaging Request Wizard allows you to image collections of embedded devices by using the device imaging solution. On the **General** page of the wizard, an administrator performs the following steps:

1. Gives the deployment a name.
2. Adds an optional comment.
3. Selects the device imaging component.
4. Selects the OEM-provided image file for the embedded device.
5. Selects the device imaging solution server.
6. Selects the embedded device collection.

The **General** page of the New Device Imaging Request Wizard is shown in the following figure.

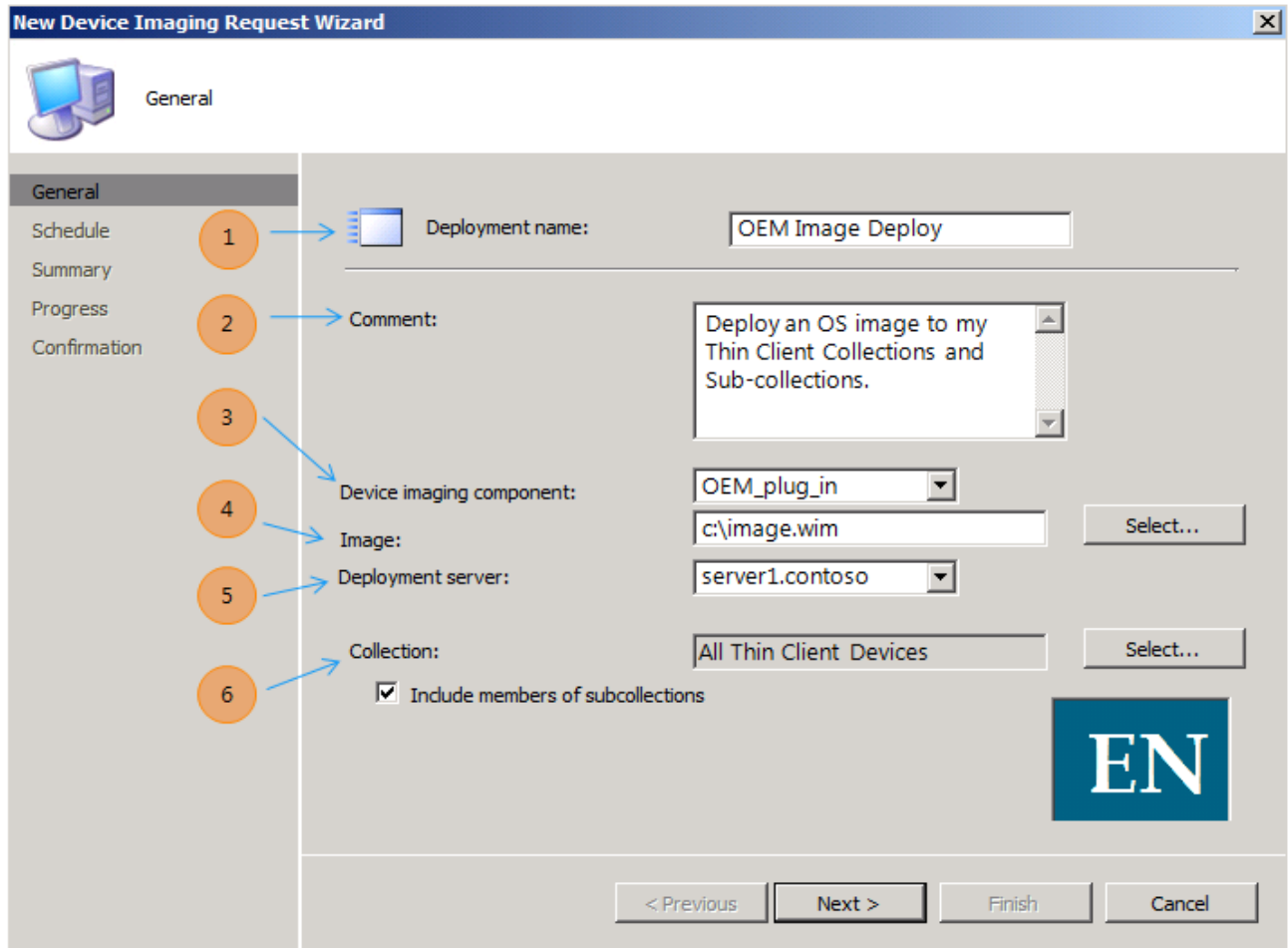


Figure 2. The New Device Imaging Request Wizard



After using the New Device Imaging Request Wizard to start the device imaging process, an administrator can use the New Image Request Summarizer to view the status of the device imaging deployments.

The Image Request Summarizer reports on the status of device imaging deployments to embedded device collections. The administrator can view image deployments as they progress through the imaging process.

The Image Request Summarizer is shown in the following figure.

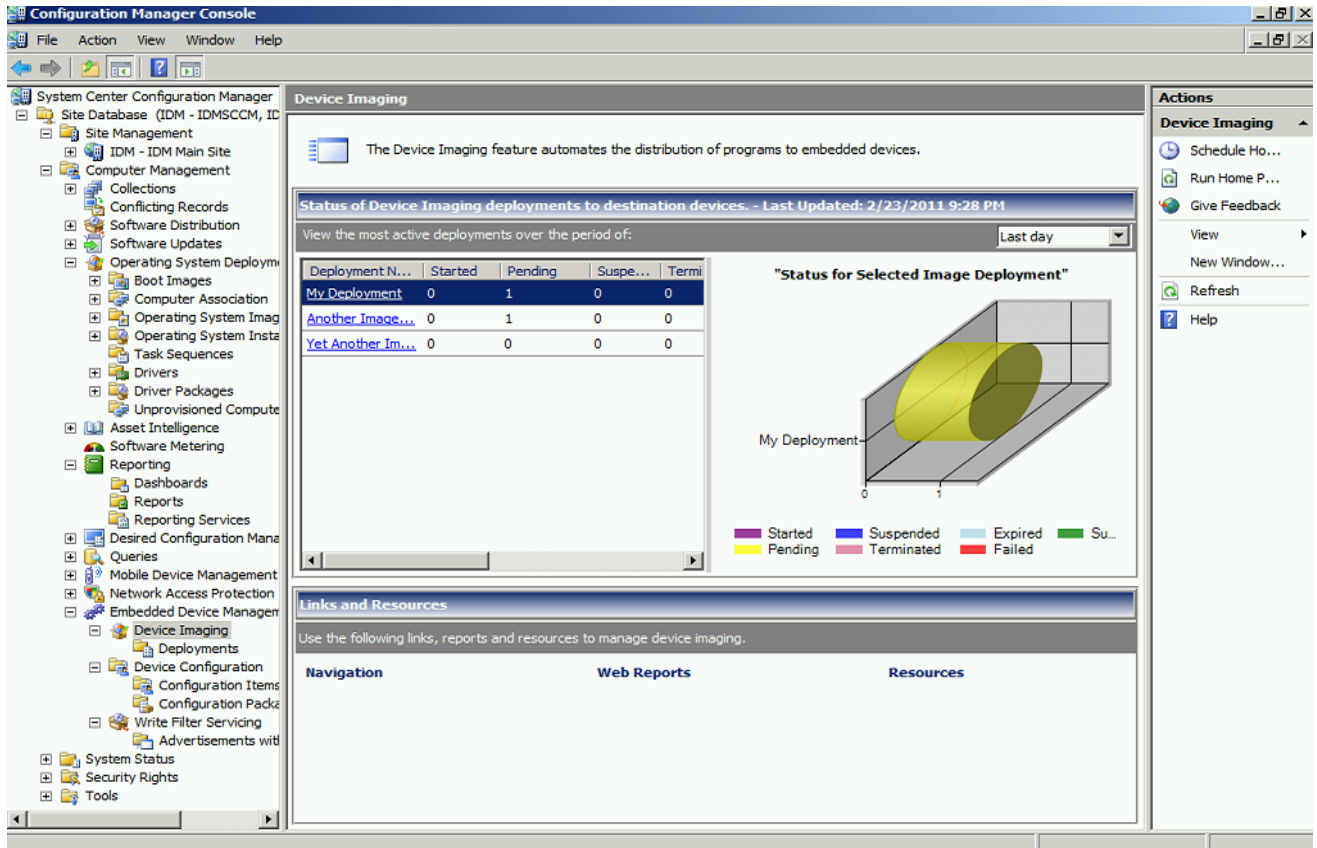


Figure 3. The Image Request Summarizer



Conclusion

Device Manager 2011 extends Configuration Manager 2007 to manage embedded devices. Device Manager 2011 provides the ability to image embedded devices using OEM device imaging solutions.

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

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



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"
- "Manage Your Embedded Devices with Windows Embedded Device Manager 2011"
- "Deploy Packages to Your Write Filter-Protected Embedded Devices Using Windows Embedded Device Manager 2011"



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