

update images with patches, hotfixes, and drivers

The main thing to know is how to use the DISM tool. As of windows 2008 R2, you can use the WDS console to add drivers to boot images(useful for adding new network driver due to new hardware), and also they added a feature called dynamic driver provisioning(see 1.1.5). Let's start with DISM.

First thing about DISM is to mount the image:

First you want to get the index of the image you want to work with:

```
dism /get-wiminfo /wimfile:E:\WDSimages\install\windows7install.wim
```

If you would like to see specific info about this image, just add /index:

```
dism /get-wiminfo /wimfile:E:\WDSimages\install\windows7install.wim /index:1
```

Now we need to mount it:

```
dism /mount-wim /wimfile:E:\WDSimages\install\windows7install.wim /index:1  
/mountdir:E:\WDSimage\currentimage
```

This will expand the image into E:\wdsimages\currentimage.

To add packages, patches, hotfixes, etc that are in .cab or .msu format, use:

```
dism /image:E:\WDSimages\currentimage /add-package  
/packagepath:E:\WDSupdates\packages\newpackage.cab  
Instead of /add-package use /remove-package to remove from the image
```

To add drivers to a mounted WIM:

```
dism /image:e:\wdsimages\currentimage /add-driver /driver:e:\wdsupdates\drivers\newdriver.inf
```

you can add a lot of drivers at once with the /recurse switch.

```
dism /image:e:\wdsimages\currentimage /add-driver /driver:e:\wdsupdates\drivers /recurse
```

use /remove-driver to remove drivers

Now you must unmount the image and either commit or discard changes:

```
dism /unmount-image /mountdir:e:\wdsimages\currentimage /commit  
dism /unmount-image /mountdir:e:\wdsimages\currentimage /discard
```

About the Dynamic Driver Provisioning in WDS console(2008 R2+):

See the R2 objective 1.1.5.

Extra Note: you can also install drivers using an unattended install answer file.

1.1.4 install features for offline images

You can also install features into WIM images using the DISM utility.

Mount your dism image as explained in 1.1.3

List the features available on this image:

```
dism /image:e:\wdsimages\currentimage /get-features
```

Enable a feature:

```
dism /image:e:\wdsimages\currentimage /enable-feature /featurename:SMTP-SERVER
```

Disable a feature:

```
dism /image:e:\wdsimages\currentimage /disable-feature /featurename:SMTP-SERVER
```

Now you must unmount and **/commit** your mounted image as shown in 1.1.3

1.1.5 (R2) Configure driver groups and packages

Drivers are installed as the image is installed, not injected directly into the image. Keep in mind that you can also configure dynamic driver provisioning with wdsutil.

<http://technet.microsoft.com/en-us/library/dd348456.aspx>

Add driver packages by right clicking Drivers under the WDS server, and selecting "Add driver packages". You can select a package from an inf file, or select all packages in a folder. Click next to select drivers you want to add. Next you can select an existing group to add to, create a new driver group to add the package to, or leave it unassigned. If you added it to a group, you can edit the filters for the group.

Right click the "Drivers" sub-menu and select "Add Driver Group". You can configure a filter that takes into account the hardware of the client. Some example filter types: Manufacturer, Model, Bios Vendor, Bios Version, Chassis Type, UUID, and Device Group. Next, you can configure a filter by install image using the filter types: OS Version, OS Edition, OS Language, or Image ID.

(Example, OS Version requires Majorversion.Minorversion.Buildnumber.ServicePackNumber. Image ID requires GUID of image)

Finally, you can configure whether driver packages will only be installed if they match client hardware, or if all driver packages in the group will be installed.

Other options when right clicking Drivers: Enable/Disable Driver Packages, Delete Driver Packages. Let's

you search for drivers to disable/enable or delete.

Other options when right clicking a driver group:

Disable, Duplicate - Clone the group to a new one, Modify Filters, Add driver packages to the group, Delete, Rename

Properties - let's you enabled/disable group, set whether drivers only get installed if hardware exists on client, and edit filters on the Filters tab.

Clicking on All Packages will show you all driver packages. Right click on a driver package allows:

Add or Remove package to group, Disable, Delete, Rename

Properties - Rename, enable/disable, view package info like location and architecture;

Drivers tab lists drivers in package; Files tab lists all files in package;

Group Membership tab to update groups for package.