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Paragon Deployment Manager Client API

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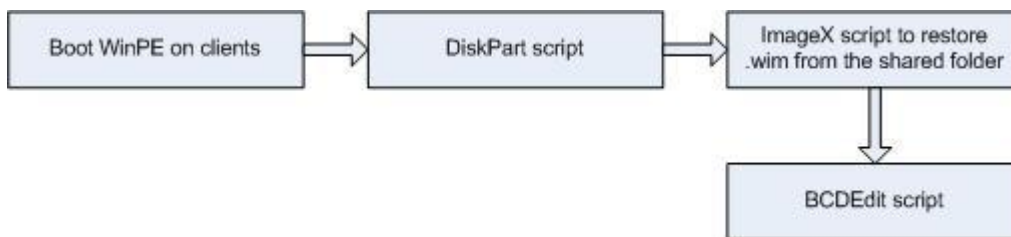
Introduction

Deployment Manager Client API enables to use the Paragon's multicast transport to effectively transfer large files via LAN simultaneously to several clients with the minimal load of the network infrastructure (for instance, already existed .WIM images to later restore or deploy them with the Microsoft's ImageX utility).

So let's see how Deployment Manager Client API can help you out.

Typical Use Case

- The Client has got scripts and batch-files to use command line utilities from Microsoft: ImageX, BCDEdit, DiskPart, etc.
- WinPE is taken as recovery/deployment environment (startup either from CD/DVD or PXE).
- The required .WIM image is placed on a network share.
- ImageX restores it via LAN.



Why Deployment Manager Client API?

The described above scenario has an unpleasant performance issue: As you increase the number of clients, you linearly decrease network traffic available for each recipient, thus facing slow-going recovery/deployment.

Deployment Manager Client API can help you do away with this problem – a **ConstantCast** session may be initiated directly from the client's side.



Let's see how easily Deployment Manager can be integrated into the process:

- Start Deployment Client from the command line with following parameters:
 - Source .WIM image
 - Destination (just an appropriate partition drive letter, for example C:\)

The ConstantCast session will be initiated automatically from the client's side if several clients try to get access to the same .WIM image simultaneously.

DM Client API in WinPE Environment

Boot Media Builder will help you prepare a custom WinPE 3.0 boot image (CD/DVD or PXE) to create a .wim image of the system partition using the Microsoft ImageX utility or deploy the previously created .wim image to several computers simultaneously. To create an appropriate boot media, please do the following:

- Select the **Load existing configuration** option on the first page of the wizard
- Choose **WIM Deploy Configuration** from the list
- If you need to create an image of the system partition, edit the network mount options. The image will be placed to a specified shared folder
- If you need to deploy a previously created .wim image, edit the deployment.cfg file (by default, it is placed in the **C:\Program Files\Paragon Software\Deployment Manager\Boot Media Builder\WinPE\winpe_custom\DMClientAPI** folder). Set a deployment server name or IP address, as well as an image to deploy. Do not modify the other parameters. The resulted file should look like this:

```
deployment_server= 10.0.0.1 (an IP-address of a network host where the required image is located)
deployment_image= test_image.wim (an archive name located on the network)
deployment_silent=on (whether to use GUI of Deployment Manager or not (must be set on for now))
deployment_target_file= Y:\test.wim (a directory and name of the target archive on the local machine
after the copy operation is over)
deployment_dynamic=on (whether to transfer the archive by several requestors simultaneously.
Possible values: on/off)
deployment_nographic= on (whether to use the user-friendly interface or not (must be set on for
now))
```

- When offered to add extra files, select the ImageX utility from the OPK/WAIK tools folder (e.g. **C:\Program Files\Windows OPK\Tools\x86\imagex.exe**).

At the target PC startup you will be able either to create or deploy image.

Operation Example

Let's assume that:

- Required image is located on a network share.
- Network host has got the following IP-address: **200.0.1.19**.
- Transfer file is named as **archive.rar**.
- You need to copy this file to your local PC, a hard drive with the drive letter **C:** and rename it then to **MyArch.rar**.

So let's see how this operation should be set up:

```

deployment_server=200.0.1.19
deployment_image=archive.rar
deployment_silent=on
deployment_target_file=C:\MyArch.rar
deployment_dynamic=on
deployment_nographic= on

```

Once our WinPE environment starts up, please launch the following menu item to copy the file with Deployment Manager Client API: **Deployment API -> Deployment API template**.

File Deployment Performance Test Results

There were accomplished several tests with a transfer file of 4.07Gb. This file was transferred first with Deployment Manager Client API and then with Windows Explorer. There were initiated one, two and finally three sessions simultaneously.

Please find below the obtained test results for a 100Mbps LAN:

Number of Simultaneous Sessions	Deploy Time	Copy Time
	(DM Client API)	(Windows Explorer)
	min:sec	min:sec
1 target	06:27	08:02
2 targets	06:31	13:45
3 targets	06:31	18:26

And for a 1Gbps LAN:

Number of Simultaneous Sessions	Deploy Time	Copy Time
	(DM Client API)	(Windows Explorer)
	min:sec	min:sec
1 target	02:43	03:32
2 targets	02:45	03:46
3 targets	03:41	04:27

So you can see for yourself that Deployment Manager Client API can significantly boost the overall operation performance.