HP Data Protector / DDBoost Integration

This document provides instructions for how to operate the HP DataProtector application integrated with DD Boost. It is intended to serve as a Transfer of Information (TOI) document. It is based on using HPDP version A.08.10 integrated with the DDBoost Plugin SDK version 2.6.0.2-365315, and DDOS version 5.2.4.2-404896.

HP Data Protector / DDBoost Integration Topics covered

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Start HP DataProtector Manager

- 1) Select from the Windows Start menu: Data Protector Manager
- 2) Provide credentials:

Authentication		×
Enter your credentia Manager: rtp-ost-d	als to connect to the HP Data Protector Cell II360-3	
<u>U</u> ser name: <u>P</u> assword:	administrator.datadomain.com	
OK	Cancel Help	

Start HP DataProtector Manager (2)

Acknowledge OK if this appears,



Start HP DataProtector Manager (3)

This guidance could appear:



The next slide explains what this means.

Start HP DataProtector Manager (4)

Connection to CRS failed:

To start the Data Protector daemons on the Cell Manager host use the command omnisv –start on the Cell Manager or check if the communication between the Cell Manager and client is encrypted with the command onmicc –encryption –status –all on the Cell Manager

The command and response are: C:\Users\Administrator>omnisv -start HP Data Protector services successfully started.

Start HP DataProtector Manager (5)

3) In the next window "connect to a cell manager", delete the host name in the lower box, then enter Connect.



Start HP DataProtector Manager (6)

4) Acknowledge this message with OK:



Start HP DataProtector Manager (7)

5) When the Next Step Wizard pop-up appears, select Close:

Next Step V	ext Step Wizard			
Action set	lection			
	Set up additional <u>c</u> lients			
	Configure additional <u>u</u> sers			
	Configure additional de <u>v</u> ices			
8	Configure additional backup specifications			
→	Run an interactive <u>b</u> ackup session			
←	<u>R</u> estore data			
Do not	show wizard for this cell in future	Close		

Start HP DataProtector Manager (8)

6) The HP Data Protector Manager should now be operating with this window:

💼 Environment - HP Data Protector Manager	
Eile Edit View Actions Help	
🛛 🗹 Devices & Media 💽 🔄 🖳 👘 📖 🗂	1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Environment Automated Operations Device Policies Devices Devices Media	Name Devices Devices by host Media Automated Operations
	😘 rtp-ost-dl360-3.datadomain.

Basic Operations Supported

by HP Data Protector Manager are listed in the drop down selection box beneath the File button:

💼 Environment - HP Data Protector	Manager	
File Edit View Actions Help		
Devices & Media] 🖳 ⊗ 🛅 🛶 🖻 🗂 🦿 🖆 🚔 😹 🧝	与威也
Clients Users	Name	
Devices & Media		
Object Operations		
Monitor	Media	
Instant Recovery	Automated Operations	
Internal Database		
🙀 Objects	I 4 ▷ ▷ Environment	
	🔂 rtp-ost-dl360-3.	datadomain.

Enable DDBoost Plugin application call back message logging

From the previous
 HP Data Protector
 Manager window, select
 File/Preferences/Debugging.

This popup window should Appear \rightarrow

eferences				2
General	Connectio	n	Monito	ring
Restore sessions	Encoding	Advanced	Del	bugging
Debug options				
Debug r <u>a</u> nge:	1-200			
Debug <u>f</u> ile name	Debu	g, txt		
NOTE: Relaunch the G	iUI to apply your c	hanges.		
C Use these settings	for the next GUI s	ession only		
C Use these settings	permanently			
Do not use these s	ettings in future			
		Rela	unch GUI n	ow [
	04	Coursel	1	Hale
	UK	Lancel		нер

Enable DDBoost Plugin application call back message logging (2)

2) There are three options.

The first will capture the DDBoost Application call back messages for the current session only.

The second will capture the DDBoost Application call back messages as a **permanent behavior**, and over time could **fill up** storage on the client with log file information.

The third will disable logging of the DDBoost Application call back messages.

3) After making a selection, you must perform "Relaunch GUI now..." any time the preferences are changed.

Enable DDBoost Plugin application call back message logging (3)

The DDBoost Application call back message log will be placed in directory path: c:\\ProgramData\OmniBack\log\debug_ddboost:

🕌 log				_	
😋 🗇 🗸 🔹 Computer 🔹 Local Disk (C:) 🔹 ProgramData 🔹 OmniBack 🔹 log 🔹 🛛 🗧 🌠 Search log					P
Organize 👻 Include in library 💌	Share with 🔻 Burn New folder			· · ·	(?)
Pictures	Name *	▼ Date modified	Туре	Size 🔹	
🧺 Videos	AppServer	12/17/2013 10:16 PM	File folder		
🖳 Computer	- Userver	12/17/2013 9:46 PM	File folder		
🏭 Local Disk (C:)	Ctrace	12/17/2013 10:25 PM	Text Document	6 KB	
坖 backup (\\labservddr-rtp) (M:)	dcbf_profile	12/17/2013 10:25 PM	Text Document	6 KB	
Jacob 660-15	📄 debug	12/17/2013 10:25 PM	Text Document	773 KB	
📕 Boston	📋 debug_ddboost	12/17/2013 10:25 PM	Text Document	26 KB	
📁 builds_rtp	hpdp-idb-cp	12/18/2013 1:13 AM	Text Document	511 KB	
builds_survey	hpdp-idb-cp.pid	12/17/2013 10:16 PM	PID File	1 KB	
illos_sj_rep builds si rep temp	omniasutil_2013-12-12_21-54-02	12/12/2013 9:54 PM	Text Document	6 KB	
builds_sj_rep_tmp	omniasutil_2013-12-12_21-57-11	12/12/2013 9:57 PM	Text Document	12 KB	
鷆 cdrom	omniasutil_2013-12-12_21-57-56	12/12/2013 9:59 PM	Text Document	46 KB	
) cores	omnigencert_2013-12-12_21-56-49	12/12/2013 9:57 PM	Text Document	21 KB	
📕 crash	omnimigrate 2013-12-16 12-30-05	12/16/2013 12:30 PM	Text Document	10 KB	
🥼 dd620	opensslkevtool 2013-12-12 21-56-49	12/12/2013 9:57 PM	Text Document	13 KB	
ui dd620data		,,		/	
14 items					

Enable DDBoost Plugin application call back message logging (4)

The DDBoost Application call back message log will be placed in directory path: c:\\ProgramData\OmniBack\log\debug_ddboost:

🕌 log				_	
🚱 💿 🗸 🖡 🗸 Computer 🝷 Local Disk (C:) 🝷 ProgramData 🝷 OmniBack 🝷 log 👻 🖉 🗧 🚱 Search log					- 🔎
Organize 👻 Include in library 👻	Share with 🔻 Burn New folder			···· •	0
E Pictures	Name *	▼ Date modified	Туре	Size 🔹	
Yideos	AppServer	12/17/2013 10:16 PM	File folder		
🜉 Computer		12/17/2013 9:46 PM	File folder		
🏭 Local Disk (C:)	Ctrace	12/17/2013 10:25 PM	Text Document	6 KB	
坖 backup (\\labservddr-rtp) (M:)	dcbf_profile	12/17/2013 10:25 PM	Text Document	6 KB	
660-15	📄 debug	12/17/2013 10:25 PM	Text Document	773 KB	
Boston	📋 debug_ddboost	12/17/2013 10:25 PM	Text Document	26 KB	
uilds_rtp	📋 hpdp-idb-cp	12/18/2013 1:13 AM	Text Document	511 KB	
builds_si_rep	hpdp-idb-cp.pid	12/17/2013 10:16 PM	PID File	1 KB	
builds si rep temp	📄 omniasutil_2013-12-12_21-54-02	12/12/2013 9:54 PM	Text Document	6 KB	
i si	omniasutil_2013-12-12_21-57-11	12/12/2013 9:57 PM	Text Document	12 KB	
iii cdrom	omniasutil_2013-12-12_21-57-56	12/12/2013 9:59 PM	Text Document	46 KB	
) cores	omnigencert_2013-12-12_21-56-49	12/12/2013 9:57 PM	Text Document	21 KB	
👑 crash	omnimigrate_2013-12-16_12-30-05	12/16/2013 12:30 PM	Text Document	10 KB	
Ji dd620	opensslkeytool 2013-12-12 21-56-49	12/12/2013 9:57 PM	Text Document	13 KB	
udo20data	-				
	<u>11</u>				
14 items					

Enable DDBoost Plugin application call back message logging (5)

Regarding debug severities

For DDBoost HPDP has 2 severity options:

- 1) Log errors is on at all times
- 2) Log all callbacks and debug information is on when DP debugging is enabled regardless of the DP debugging severity

For DP debugging:

- choose either option:

use these options for the next GUI session only or use these setting permanently and then re-launch the DP GUI.

- Set the HPDP internal severity option level for debug as range 1-200, 1-300 or 1-400 to control the detail of logging in debug files that are saved in folder: ProgramData/OmniBack/tmp

This does not influence the debug_ddbost.log file present in folder: ProgramData/OmniBack/log folder.

Add Data Domain Storage Device

To add a DataDomain storage device, select the operation "Devices & Media", then select Devices and perform a right click, to access the operation: "Add Device ..."

📴 Devices - HP Data Protector Manager					
File Edit View Actions Help					
Devices & Media 💽 🛛 🕮 😒 🔁 🖛 📖 🞬	?] 🔿 🚓 💣	" 🖆 🕹 🔊	; ()		
	Show filter settings (Ina	ctive)	Items per page 50 💌	Page 1 / 1	4 >
Automated Operations	Name System	Policy	Media / Interface Type	Description Lock Name	Restore Policy Cop
Device Policies Devices	🗊 ddr_dd890	Backup To Disk	Data Domain Boost	DD980	
ter tij ddr_dd890					
J	4				
🔞 Objects					
<u></u>	I P P Devices			Chyle och a	1260-2 datadomain
				len up-osc-c	isou-stuatauomaint, //

Add Data Domain Storage Device (2)

The right side of the window will display:

💼 Add Device - HP Data Protector Manager		
File Edit View Actions Help		
Devices & Media 🔽 🛛 🕮 ⊗ 🔚 🗯 🞬	?] = = = 🖬 💐 🛃 🌛 🍕 🕚	
Environment Environment Device Policies	Specify the device name, the client s Optionally, add a description.	system where the device is connected, and the device type.
⊡ ∰ ddr_dd890	Device Na <u>m</u> e	
Hedia	Description	
	Device <u>T</u> ype	Standalone
	Data Format	Data Protector
	Client	rtp-ost-dl360-3
	NDMP Server	
	Management Console URL	
R Objects		< Back Next > Finish Cancel
<u> </u>	Add Device)	🔂 rtp-ost-dl360-3.datadomain.)

Enter the DataDomain storage device name in the Device Name box. You may enter an optional description in the Description box. This is a wizard that walks through the actions needed to add a DataDomain storage device to the client.

Add Data Domain Storage Device (3)

The selection of Interface Type "Data Domain Boost" causes the DDBoost Plugin library to be loaded. According to HPDP engineering, when the DDBoost Plugin library is loaded, the HP plugin is **NOT** loaded.

🔂 Add Device - HP Data Protector Manager		
File Edit View Actions Help		
Devices & Media	? = = = 🖬 🗟 >	· # 0
Environment Environment Environment Environment Device Policies Device Policies Devices	Specify the storage unit	and a list of gateways.
E 1 ddr_dd890	Storage Unit	
E Company and the second secon	D <u>e</u> duplication System	rtp-ost-arch1
	<u>U</u> ser Name	sysadmin
	Password	Supported characters: [a-z] [A-Z] [0-9] [+(){):#\$*;=?@[]^ ~]
	<u>S</u> torage Unit	Select/Create Storage Unit
	Gateways	
	Source-side deduplication	Properties
		Kext > Finish Cancel
🕼 Objects	🛛 4 👂 🖻 Add Device 🛏	
		🔂 rtp-ost-dl360-3.datadomain.) 🏑

On the next page, enter the host name of the DataDomain storage device in the "Deduplication System" box and also provide the "User Name" and "Password". The Storage Unit name must also be provided. This is the name of the Storage Unit HPDP will use on the DDR.

Add Data Domain Storage Device (4)

 \rightarrow

Pressing "Select/Create Storage Unit" should cause this window to appear if the credentials and access rights to the DataDomain storage device are valid

I Select storage unit 🛛 🗙 🗙
Select existing storage unit or create a new one
Select existing storage unit
Create new storage unit
Select existing storage unit
Name Device
Create new storage unit
Storage unit name HPDP_SU
OK Cancel Help

Add Data Domain Storage Device (5)

After creating the storage unit, we are back on the previous window, and it has been scrolled down to reveal additional specification fields. Note that HPDP supports its own deduplication that is **NOT** DDBoost deduplication; however, because a DataDomain storage device is selected, the HPDP plugin is **not loaded** and selection of Source-side deduplication (the HPDP algorithm) should have no effect.



NOTE: This is important, you must scroll down to make the

Add...

Add button to appear.

To cause the Add Device Storage Unit to be created, click on Add.

Add Data Domain Storage Device (6)

Note that when HPDP creates the gateway, it appends "_gw1" to the device name we provided earlier, to form the gateway name.

Gateway Na <u>m</u> e	ART_gw1	
Description	Archive retention device	
Device <u>T</u> ype	Backup To Disk	v
nterface Type	Data Domain Boost	~
<u>B</u> ateway System	rtp-ost-dl360-3	7
4 <u>D</u> MP Server		~
vlanagement C <u>o</u> nsole URL		
MultiPath device		
Virtual tape library - TB based licer	nsing (Advanced backup to disk)	

Add Data Domain Storage Device (7)

The interface shows it has a way to select DDBoost Deduplication; however, this has no affect and **should be ignored**. It was intended to work by clicking on the "Settings" tab, the Add Gateway window should change to look like this:

3 10.6.109.219 - Remote Desktop Connection					
Add Gateway	×				
General Settings Policies					
Specify the type of media used in the device and a Data Protector media pool for media in this device. This media pool will be used in all operations using media in the		6 2 5 0			
device unless some other pool is specified. Click Advanced to specify the advanced options for the device.		•••••	Suppo [a-2] (k	orted characters: A-Z1 [0-9] [+0}:#\$*:=?@[1^1~]	
Standard type of media used by the physical device.	Jnit	HPDP_DDBoost_Dedupe		Select/Create Storage Unit	
Data Domain Boost					
Default Media Pool	e-side deduplication	Properties			в
HPDP_DDBoost_Dedupe_MediaPool	360-3			Add	
Disable Gateway	Gatew	vay System Server-side deduplication Status	M	a Delete	
Advanced				Check.	
				Properties	
					_
			< Back Next >	Finish Car	
	Interactive 🛏	Add Device 📲			
				jug rtp-ost-dl360-3.datadomair	1.com //
Cancel Help					►

Add Data Domain Storage Device (8)

Then click on the "Advanced..." button and another window should appear:

5 10.6.109.219 - Remote Desktop Connection	Construction of the second	
Add Gateway	×	
General Settings Policies		
 Specify the type of media used in the device and a Data Protector media pool for media in this device. This media pool will be used in all operations using media in the device unless some other pool is specified. Click Advanced to specify the advanced options for the device. Media Type Standard type of media used by the physical device. 	Advanced Options > Settings Sizes Init Concurrency Concurrency Concurrency specifies a number of Disk Agents writing to the device in parallel.	Sorted characters: [A-Z] [0-9] [+()():#\$*;=?@[]^ ~] Select/Create Storage Unit
Default Media Pool Default media pool to which initialized or imported media is automatically added. HPDP_DDBoost_Dedupe_MediaPool Disable Gateway Advanced	e-sid Options Eject media after session GRC Check Rescan Detect dirty drive Drive-based encryption Max. Number of Parallel Streams per Gateway	Add Ma Delete Check Properties
		Finish Cancel
OK Cancel Help		
		►

From this new window, the user would select "Server-side deduplication"

Add Data Domain Storage Device (9)

From this new window, the user would select "Server-side deduplication"

5 10.6.109.219 - Remote Desktop Connection	
Add Gateway	
General Settings Policies	
Specify the type of media used in the device and a Data Protector media pool for media in this device. This media pool will be used in all operations using media in the device unless some other pool is specified. Click Advanced to specify the advanced options for the device. Media Type	Advanced Options X Settings Sizes I I I Specify gateway options and settings. I I I I I I I I I Specify gateway options and settings. I I I
Standard type of media used by the physical device.	Init Concurrency Select/Create Storage Unit Parallel.
Default Media Pool Default media pool to which initialized or imported media is automatically added. HPDP_DDBoost_Dedupe_MediaPool	re-sid Options 360:3 □ Eject media after session □ CRC Check □ ▲ Add
Disable Gateway Advanced	Rescan Ma Delete Detect dirty drive Check Drive-based encryption Check Max. Number of Parallel Streams per Gateway Properties
	Limit Gateway Network Bandwidth (Kbps)
	Image: Server-side deduplication Image: Server-side deduplication Image: Image: Image: Server-side deduplication Image: Server-side deduplication Image: I
OK Cancel Help	

And click OK on the two popup windows that were presented, to cause the original Add Device window to be revealed.

Add Data Domain Storage Device (10)

Under the Server-Side Deduplication column, a "Yes" should appear.

5 10.6.109.219	- Remote Desktop Connection	Sector Collinson and Sector	
5	B Add Device - HP Data Protector Manager File Edit View Actions Help		
Recycle Bin	Devices & Media	• = = = ? - + + • • • • • • • • •	
WinZip	Environment Environment Device Policies Devices Devices Devices by host Devices by host Device by host	Password Storage Unit HPDP_DDBoost_Dedupe	Supported characters: [a-z] [A-Z] [0-9] [+()0:#\$*,=?@[]^[~] Select/Create Storage Unit
		Gateways Source-side deduplication Properties	=
		No more gateways available.	Add
		Name Gateway System Server-side deduplication SI	atus Delete
			Check
			Properties
			<back next=""> Finish Cancel</back>
			🔂 rtp-ost-dl360-3.datadomain.com
<			

Again: This has no affect and should be ignored.

Add Data Domain Storage Device (11)

Click "Next" on the Add Device - HP Data Protector Manager window.

💼 Add Device - HP Data Protector Manager	
File Edit View Actions Help	
Devices & Media 🔽 🛛 🕮 😒 🖬 🖬 📰	?] = = = = = = = = = = = = = = = = = =
	Gateways
⊡ 🗃 Devices by host ⊡ 🔚 Media	No more gateways available.
	Name Gateway System Server-side deduplication Delete ART_gw1 rtp-ost-dl360-3 No Delete Image: Control of the server se
	Check
	Properties
	< Back Next > Finish Cancel
	N 4 D M Add Device -
	🔂 rtp-ost-dl360-3.datadomain.

In the above example, DDBoost Deduplication is **not** selected

Add Data Domain Storage Device (12)

If a new storage unit must be created, this message will appear:



Add Data Domain Storage Device (13)

After selecting "Yes", and then pressing "Next" this window will appear:

.6.109.219	- Remote Desktop Connection	Constant and an and a state of the second stat	
	BD Add Device - HP Data Protector Manager		
:le Bin	Devices & Media	■ = = = ? → → → → → → → → →	
Jung	Environment Automated Operations Gevice Policies Govices Govices by host Gevices by host Gevices by host	Settings Storage Unit Image: Max. Number of Connections per Storage Unit Backup Size Soft Quota (GB) 4500 Storage Unit Size Soft Quota (GB) 4500 Storage Unit Size Soft Quota (GB) 4500 Storage Unit Media	
		< Back Next > Finish	 Cancel
	R Objects	N 4 D Device - Add	
		🔂 rtp-ost-dl360-3.dat	adomain.com 🏿 🎢

Here we can set a limit to the number of connections allowed per storage device, and storage device size quota limit values can be set. For the above example some arbitrary values for a 4.5 Tbyte capacity storage unit have been provided. NOTE: In the case of DDBoost, Soft Quota setting are set for the whole DDR and not for a single storage unit.

Add Data Domain Storage Device (14)

After clicking "Next", this window should appear:

🔂 Add Device - HP Data Protector Manager		
File Edit View Actions Help		
Devices & Media 🔽 🛛 🕮 💌 📖	?] - = = = = = = = = = = =	
Environment Environment Device Policies Devices	Summary All storage sizes are in GB	
I I I I I I I I I I I I I I I I I I I	Storage Unit Used Size (0	B) Deduplication Ratio
 Image: Arrow of the second sec	Vrtp-ost-arch1.datadomain.com\HPDP_SU 0.000	0.0 : 1
	< Back	Next> Finish Cancel
	🛚 🖣 🖻 Add Device 📲	
		🔂 rtp-ost-dl360-3.datadomain.

The final step is to press the Finish button

Add Data Domain Storage Device (15)

When the "Finish" button is pressed, the new device name will appear in the left hand and right hand side of the window:

💼 Devices - HP Data Protector Manager	
File Edit View Actions Help	
🖌 Devices & Media 💽 🚽 🕮 😒 🔂 🖚 💷 🛍	? ⇒ ⇒ ∞ 🖼 酱 ≥ <i>§</i> ⊕
Environment Device Policies Devices ART ART Devices by host Media	Show filter settings (Inactive) Items per page 50 Page 1 / 1 Name System Policy Media / Interface Type Description Lock Name Restore Polin ART Backup To Disk Data Domain Boost Archive ddr_dd890 Backup To Disk Data Domain Boost DD980
🙀 Objects	
2 of 2 displayed	🔂 rtp-ost-dl360-3.datadomain.v 🎢

Add Data Domain Storage Device (16)

You can check the status of a DataDomain Device from the HPDP Manager, through this set of windows: Devices & Media / Settings / Advanced Options

10.6.109.219 - Remote Desktop Connection			
Properties for ART_gw1 - HP Data Protector Manager			
Recycle Devices & Media	╡ 🖀 ? 🗳 ८३ 📽 🙀 💰	Advanced Options	×
Devices & Media Image: Construction of the second	Image: Secting section of the secti	Advanced Options E Settings Sizes Image: Sizes Image: Sizes Image: Sizes Image: Sizes Image: Concurrency Image: Sizes Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurrency specifies a number of Disk Agents writing to the device in parallel. Image: Concurency specifies a number of Disk Agents agents writing	n all operations
	N 4 ▷ N [C: [C:] = M @ Restore = 1	Server-side deduplication	Apply datadomain.com

Add Data Domain Storage Device (17)

Special Notes about Deduplication

In the HPDP GUI DDBoost Deduplication is called "Server-side deduplication".

Note 1) HPDP deduplication is called "Source-side deduplication". If a DataDomain storage device is selected, the Plugin library that services HPDP deduplication is not loaded and selecting this algorithm has no affect.

If DSP (Distributed Segment Processing) is set as "enabled" on DDR, "Source-side deduplication" works, if it is turned on in this section.

Note 2) If a DataDomain storage device is selected, the DDBoost Plugin library is loaded. The "Server-side deduplication" field has no effect, whether it is set to "Yes" or "No" within the HPDP GUI to cause Data Domain Deduplication to occur. But if DSP is set as "enabled" on DDR, "Server-side deduplication" is on by default.

Note 3) For DDBoost deduplication to work, on the Data Domain Restorer, the dd shell command "ddboost status" must say "DD Boost status: enabled". To turn DSP on/off, run the command "ddboost distribted-segment-processing enabled/disabled".

Add Data Domain Storage Device (18)

You can get on the DDR and use the ddboost shell command (ddsh –a) to examine the storage units:

ddboost storage-unit show

The new storage unit should be listed:

Name	Pre-Comp (GiB)	Status
ART_LSU1	0.0	RW
ART_LSU10	0.0	RW
HPDP_SU	0.0	RW
SN_LSU1	10.0	RW
SN_LSU2	10.0	RW
SN LSU3	11.0	RW

To examine the ddboost status use command:

ddboost status DD Boost status: enabled

The command to enable DDBoost is: ddboost enable DD Boost enabled.

Backup

To define a backup job, from the HP Data Protector Manager, select the **Tasks** tab from the lower border.



Backup (2)

Then from the right panel, select Interactive Backup Wizard [Load Balanced], and doubleclick. The next view will tell you to "Select the items that you want to back up". This should present a display similar to the Windows Explorer file manager. The devices mapped to this client should be visible. Click on the directory structure to open a folder.



Backup (3)

For this example, Temp folder file aaa_readme.txt has been selected.

5 10.6.109.219	🔓 10.6.109.219 - Remote Desktop Connection				
Recycle Bin	Backup - Interactive Backup Wizard [Load Balanced] - HP D File Edit View Actions Help	ata Protector Manager			
	Backup Tasks Backup Tasks Backup Wizard [Load Balanced] Interactive Backup Wizard One Button Disaster Recovery Wizard	Select the items that you want to back up. Show: All systems Filesystem backup			
		Impost-d1360-3 Impost			
	Contracts And Tasks	N 4 D Devis Devis Deckup - Interactive Backup Wizard Deckup - Interactive Backup Wizard (Load Balanced) Deckup Wizard Deckup Wizar			

Backup (4)

The selected file is a 159 byte text file that describes HPDP trouble messages. After selecting the pathname to backup, click on **Next**. The available devices that can be used as the backup appliance should appear in the next window:

	Remote Desktop Connection		
	Be Backup - Interactive Backup Wizard [Load Balanced] - HP	Data Protector Manager	
De suela Dia	File Edit View Actions Help		
кесусіе ып			
	Gackup Tasks Gackup Mizard [Load Balanced] Gackup Wizard [Load Balanced] Gackup Wizard	Select the devices or drives to be used for the backup.	
	One Button Disaster Recovery Wizard	Show all devices	Set filter
winzip		Backup	Add Mirror
		Properti	es Remove Mirror
			. Move Mirror <
		Load balar	Incing Move Mirror >
		Min Man	
		Mag	
	2 Objects 📲 Tasks	Kack M. d. b. N. Pools Backup, Interactive Backup Wigard Backup Interactive Backup Wigard	e Backup Wigard II oad Balanced
) <u> </u>		the state of
•			بر ۱۹

Backup (5)

The checked box indicates the long term retention device, ART has been selected as the backup device

💀 10.6.109.219 - Remote Desktop Connection	
📴 Backup - backup to ART - HP Data Protector Manager	
File Edit View Actions Help	
Backup Source Destination Options Schedule Backup Object Summary	
Backup Specifications Select the items that you want to back up.	
3.52_GByte backup of HPDP_2013_12_11 APT archive of aga readme_txt	
Backup to ART Show: Selected systems Filesystem backup	•
Performance_test_backup	
Performance_test_backup_ART	Map Network Share
⊡ ⊡ Templates	Disconnect Share
	Add/Remove
	Cancel Apply
Backup - backup to ART	
	🚯 rtp-ost-dl360-3.datadomain. 🖉 🗸
	► <u>.</u>

Backup (6)

Expand on ART to select the ART gateway:

🎭 10.6.109.219 ·	Remote Desktop Connection
3	BD Backup - Interactive Backup Wizard [Load Balanced] - HP Data Protector Manager
Recycle Bin	Backup 🖸 📴 😼 🐼 📾 🖷 🖻 😤 🕺 📾 😵 🖑 👳 🕫
	Backup Tasks Interactive Backup Wizard [Load Balanced] Select the backup options for all objects in this backup specification. Interactive Backup Wizard Backup Specification Options Backup Specification Options
WinZip	Adjust general backup specification options.
	Description Advanced
	Filesystem Options Select the default protection period for all backed up files and directories. Protection: Permanent Advanced
	Disk Image Options Select the default protection period for all backed up disk images. Protection: Permanent Advanced
	Backup to Disk Device Options
	Source-side deduplication
	Kack Next> Finish Cancel
	Image: Outputs Image: Tasks <
•	

In the Description field this text was entered: "Small 159 byte file aaa_readme.txt". Then click next to proceed.

Backup (7)

Then Next > was selected and a calendar page appeared:



Note: If the calendar automatically schedules the job to run the next day, it could be because of a time-zone difference between the laptop and the client running HPDP Manager.

Backup (8)

After selecting **Next >** the **Review summaries** page appeared:

₱ 10.6.109.219 -	Remote Desktop Connection							x
0	De Backup - Interactive Backup Wizard [Load Balanced] - HP Da File Edit View Actions Help	ata Protector Manager						Â
Recycle Bin	Backup	iii ? ⊡ छ ⊕ ⊊ ∞						
	Backup Tasks Interactive Backup Wizard [Load Balanced] Interactive Backup Wizard One Button Disaster Recovery Wizard	Review summaries of the	backup specifications and m	nake last-minute cha	nges.			
WinZip		Client Source	Type	Description	Device	Manual add		
		Entrosediadora C.	rilesystem (windows)	U.		Delete		
						Change device		
						Change Mirror		
						Properties		Ξ
					-			
		T			Þ			
	Directs III Tasks			< Bac	ck Next>		ancel	
		J N N P P [Pools - P] Backup - Ir	teractive Backup wizard	т раскир - Interac	wve blackup wizard [L	oad balancedj 🔫 J Cortp-ost-dl360-3.datadom	ain.com	
								Ţ
•								۲. ا

In the Description field this text was entered: "Small 159 byte file aaa_readme.txt". Then click next to proceed.

Backup (9)

Selection of the **Properties** button caused an **Object Properties** pop-up window to appear, and the **Trees/Filters** tab listed the pathname of the file that the backup job is supposed to write to the storage device:



Backup (10)

After selecting **OK** to make the **Object Properties** page disappear, and **Next >** on the **Review summaries** page, this final page is displayed:



Backup (11)

Select **Save as**, and name the job Backup to something of your choice (for example "ART"). Then select **Start Interactive Backup** and respond to the pop-up with **OK**.

The initial backup should be a Full backup:

5 10.6.109.219 -	Remote Desktop Connection		
	📴 Backup - Interactive Backup Wizard [Load Balanced] - HP D	ata Protector Manager _	
Recycle Bin	File Edit View Actions Help		_
Recycle Bin	Backup Backup Tasks A function Disaster Recovery Wizard	 Perform finishing steps in your backup/template design. Save as Save the newly created backup/template. Start Interactive Backup Begin an interactive backup with the current backup specification. Start Interactive Preview 	
		Begin an interactive preview (test) of backup with the current backup specification. This option is available only for filesystem, Oracle, MS Exchange Single Mailbox, Sybase, Informix, IBM DB2, Lotus Notes/Domino, SAP and SAP MaxD backup. Preview is not supported for ZDB and direct backup.	DB
	Diects I Tasks	K Back Next> Finish Cano	
	<u> </u>		:om //
•			► a

Observe Backup Job In Progress

When the backup job starts, the Status display should look like this:

10.6.109.219 -	Remote Desktop Connection	
Recycle Bin	File Edit View Actions Help Backup Image: Second Seco	
WinZip	Backup Tasks Interactive Backup Wizard [Load Balanced] Interactive Backup Wizard One Button Disaster Recovery Wizard	Status Type Client System Source Device Size Done (%) Errors Warnings Description Image: Status Type Client System Source Device Size Done Done (%) Errors Warnings Description Image: Pending WinFS rtp-ost-dl360-3 C: ART 0 0 C:
		Status Device Client System Total Data Medium Label Inactive/Waiting ART_gw1 [GW 4196:0:8445014865146436325] rtp-ost-dl360-3 Image: Client System Image: Client System
		Backup session 2014/02/21-2 started.
	Tasks	Image: Market and Market a
•		III III III III III III III III III II

Observe Backup Job In Progress (2)

As the job progresses, additional status message will appear.

This is the interim job status for a 100 Gbyte backup while in progress:

5 10.6.109.21	19 - Remote Desktop Connection	
	Interactive - HP Data Protector Manager File Edit View Actions Help	
Б	ackup 🔄 📄 🖳 🔛 📰 🔄 🐒	
	Backup Tasks Interactive Backup Wizard [Load Balanced] One Button Disaster Recovery Wizard	Status Type Client System Source Device Size Done Done (%) Errors Warnings I Runn WinF5 rtp-ost-dl360-3 C: HPDP 100663297 KB 29676509 KB 29% 0
		Client System Total Data Medium Label Device Client System Total Data Medium Label Depart Deduce and ICW 4220-0-8445014 strengt-dl260-3 29700952 KB HDDB DDBoost Deduce
		[Normal] From: VBDA@rtp-ost-d1360-3 "C:" Time: 2/27/2014 9:57:58 PM Volume 'C:\' successfully added to snapshot set. The volume is now locked. [Normal] From: VBDA@rtp-ost-d1360-3 "C:" Time: 2/27/2014 9:57:58 PM Exiting snapshot definition phase.
		[Normal] From: VBDA@rtp-ost-d1360-3 "C:" Time: 2/27/2014 9:58:03 PM Creation of snapshot volume for C:\ succeeded. Proceeding with backup.
		Clearing archive flags is not applicable with Volume Shadow Copy backup.
	웹 Objects →III Tasks	N 4 > Properties for HPDP_combined_dedupe A Backup - Interactive Backup Wizard A Interactive
		🔂 rtp-ost-dl360-3.datadomain.com 🅢
• • • • • • • • • • • • • • • • • • •		

Observe Backup Job In Progress (3)

This is shown for the job completion status:

5 10.6.109.219 - Remote Desktop Connection	
Recycle Bin	
WinZip	Status Type Client System Source Device Size Done (%) Errors Warnings Description Packup Status Type Client System Source Device Size Done (%) Errors Warnings Description Packup Status Type Client System Source Device Size Done 000 C: Packup Status 1 KB 1 KB 100% 0 0 C:
Session Information	Status Device Client System Total Data Medium Label Inactive/Waiting ART_gw1 [GW 4196:0:8445014865146436325] rtp-ost-dl360-3
Session ID: 2014/02/21-2 Session Type: Backup	Throttled Gateways 0 Gateways Total 1
Interactive Session completed successfully! OK	Overall Deduplication Ratio 1.0 : 1
	Session completed successfully!
Ubjects High Tasks	K 4 ▷ K @ Interactive →
	۹ (۱۱) ۱۱۱

It says "Session completed successfully!"

Restore

A backup of the folder containing the original HPDP release of 12_11_2013 was made.



The folder was renamed to HPDP_2011_12_11_original, and then restored. These steps describe the restore process.

Restore (2)

From the pull down menu, select **Restore**. Then select the directory folder to restore:

ᠲ 10.6.109.219 - Rem	note Desktop Connection	
Recycle Bin	File Edit View Actions Help Pestore Image: Contract of Manager I	
WinZip	Restore Objects Disk Image Besystem CONFIGURATION: [CONFIGURATION:] Select the files and directories that you want to restore. <th></th>	
	Restore Preview Cancel Image: Concel Image: Concel Image: Concel Image: Concel	
•		▼ ++

It says "Session completed successfully!"

Restore (3)

Then select **Restore** and from the pop-up window that appears, select **Next**

퉣 10.6.109.219 - Rem	mote Desktop Connection	
Recycle Bin	Restore - HP Data Protector Manager	-
WinZip	Restore Disk Image Disk Image </th <th></th>	
	Normal] From: KhAgrtp-ost-dis60-3 "ART_gwl [GW 1412:0:844501486 STARTING Media Agent "ART_gwl [GW 1412:0:84450148651464366 [Normal] From: RMA@rtp-ost-di360-3 "ART_gwl [GW 1412:0:844501486 Loading medium from slot \\rtp-ost-arch1\HPDP_SU\2535247b Loading medium from slot \\rtp-ost-arch1\HPDP_SU\2535247b N 4 > M @ Interactive = @ Interactive = @ Interactive = C.[C.] = Restore = @ rtp-ost-di360-3.datadomain.com	
•	······································	

Restore (4)

If all goes well, the Successful Completion message should appear:

5 10.6.10	9.219 - Remote Desktop Connection		
3	File Edit View Actions Help		
Recycle I			
WinZip	Restore Objects Disk Image Disk Image D	Image: Status Type Client System Source Label Session From Device Done Errors Warnings Image: Status Type Client System Source Label Session From Device Done Errors Warnings Image: Status Type Client System Scatus Cient System 0 0 Status Device Client System Total Data Medium Label	Ш
		Diractive/Finished ART_gw1 [GW 1412:0:8445014865146436325] rtp-ost-dl360-3 3700687 KB ART_MediaPool_2	
5	ession Information	Failed Media Agents	
	Session ID: 2014/02/21-4 Session Type: Restore	Media Agents Total 1 Mbytes Total 3609 MB	
	Restore Session completed successfully!	Used Media Total 1 Disk Agent Errors Total 0	
	OK	Session completed successfully!	
	🕼 Objects 📲 Tasks 🛛 🕅	4 ▷ ▷ ⑧ Solution A the section of t	
			-
		4	н

It says Restore "Session completed successfully!"

Restore (5)

Here we can see the original directory structure has been restored :



Note: The Windows Explorer had to be exited and restarted before it would show the restored directory.