Provisioning Services Versioning

Base

The first version, when creating the vDisk, is called Base (version 0). At file level, the Base consists of a .vhd file (the vDisk itself), a .pvp file (the vDisk properties file) and the .lok file (when the vDisk is in use).

Name +	Date modified	Туре	Size	
XA65.lok	23-6-2013 21:11	LOK File	0 KB	
📄 XA65.pvp	23-6-2013 21:11	PVP File	517 KB	
XA65.vhd	23-6-2013 21:12	VHD File	13.483.288 KB	

Creating a vDisk version

The first step is to create a new version to the current vDisk, this will be version 1. To do that, open the Citrix Provisioning Services console, browse to the vDisk, right click on it and select **Versions**.

:e
Promote
<u>B</u> evert
Merge
Dejete
Replication
Properties

Click New

/ersion	Lifeated	Heleased	Devices	Access	lype	New
%1	2013-06-25 14:07		U	Maintenance	Manual	Promote
9 0	2013-06-21 12:27		U		Base	
						<u>B</u> evert
						Merge
						Dejete
						Replication
						Properties
						Properties

Version 1 is now created. Notice that the default access type is Maintenance. Click **Done**.

Name *	Name - Date modifie		Туре	Size
XA69	5.1.avhd	25-6-2013 14:07	AVHD File	62 KB
📄 XA69	5.1.pvp	25-6-2013 14:07	PVP File	517 KB
XA69	5.lok	25-6-2013 14:07	LOK File	0 KB
XA69	5.pvp	23-6-2013 21:11	PVP File	517 KB
XA6	5.vhd	23-6-2013 21:12	VHD File	13.483.288 KB

At file level you see that there is a *.1.avhd and a *.1.pvp file created. These are the "delta files" for Version 1, all new changes are saved in these files.

Prepare the XenApp Master server for the vDisk update

Just like when creating the vDisk, I use a dedicated XenApp Master server for updating the vDisk. This Master server has no other active user sessions and have no policies applied to it. But any server in the farm can be used to apply the updates as long as there are no active user sessions on it.

Target Device Pro	perties	<
General vDisks /	Authentication Personality Status Logging	
<u>N</u> ame:	XAMASTER	
Description:		
<u>T</u> ype:	Maintenance	
<u>B</u> oot from:	vDisk 💌	
MAC:	FE - 68 - F0 - 62 - AB - 65	
<u>P</u> ort:	6901 🔅	
Cļass:		
🗖 Djsable thi	is device	
	<u> </u>	

Within the Provisioning Services console open the properties of the "Master" server and change the **Type** to **Maintenance**. Click **OK**.

Apply changes to the vDisk (version)

Make sure that the correct vDisk is linked to the XenApp "Master" server and start it.

Boot Menu	
1) XA65.: 2) XA65	[[maint]
 Selection	[1-2]:

Now that the vDisk version and the Master server are both in maintenance mode, a menu will appear at startup. Option 1 will start the server from vDisk version 1 in read/write mode. Option 2 will start the server from the base (read-only mode).

Press 1 and hit Enter

After the Master server is started, you can logon and apply the updates.

NOTE: Always reapply the steps that are needed to give certain software a unique ID or GUID as described in **Step 6** *AND* always run the "Prepare this server for imaging and provisioning" wizard as described in **Step 7** of <u>this blog</u> (link will be open in new window) before closing the vDisk / shutting down the master server.

After shutting down the master server, you see at file level that the *.1.avhd file has increased in size.

Name +	Date modified	Туре	Size
XA65.1.avhd	25-6-2013 16:03	AVHD File	1.849.858 KB
XA65.1.lok	25-6-2013 16:03	LOK File	0 KB
XA65.1.pvp	25-6-2013 16:03	PVP File	517 KB
XA65.lok	25-6-2013 14:07	LOK File	0 KB
📄 XA65.pvp	23-6-2013 21:11	PVP File	517 KB
XA65.vhd	23-6-2013 21:12	VHD File	13.483.288 KB

Test the new vDisk version (optional)

You have the ability to test the new vDisk version on different XenApp servers before promoting it to production. When promoting a vDisk version to test means also that you put it back to read-only mode, you can start multiple servers from a vDisk version in Test mode.

It is recommended to test the vDisk version on a server another then where you applied the updates. To promote the vDisk version to Test, do the following;

	Version	Created	Released	Devices	Access	Туре	New
	\$ 1	2013-06-25 14:07		0	Maintenance	Manual	
	0	2013-06-21 12:27		0		Base 🤇	Promote
							Revert
							Merge
							Delete
							Replication
							Properties.
rersion access to:							
Test							
Production							
Availability: =							
	P				_	Done Refr	esh He
C Immedia	~ –						

Open the Versions dialog of the vDisk and click on Promote. Select Test and click Ok.

21	2012 00 25 14 07			турс	14600
	2013-06-25 14:07	0	Test	Manual	
0	2013-06-21 12:27	0		Base	Promote
					<u>R</u> evert
					Merge
					Dejete
					Replication
					Properties
· · · ·		<u> </u>			

Click Done

Target Device Prop	perties	×
General VDisks 4	Authentication Personality Status Logging	
<u>N</u> ame:	XA1	
Description:		
<u>T</u> ype:	Test	
Boot from:	vDisk 💌	
MAC:	52 - DB - D3 - 2F - A9 - 65	
Port:	6901 🗄	
Class:		
🔲 Djsable thi	s device	
	<u>Q</u> K <u>C</u> ancel <u>H</u> elp	

Open the properties of the Target Device you want to test de new vDisk version on and change the Type to **Test.** Click **OK**.



Now when starting the Target Device in Test mode, on startup there will be a menu appear. Option 1 will start the server from vDisk version 1 in read-only mode. Option 2 will start the server from the base.

Promote the vDisk version to production

When al tests are successful you can promote the vDisk to production (when not you can revert it back to maintenance and apply new changes). All servers assigned to this vDisk will boot the next time from the latest vDisk version with production state (until then they remain using the base version of the vDisk).

1 2013-06-25 14:07 0 2013-06-21 12:27	Test	Manual Base	<u>P</u> romote Bevert
			Bevert
			<u></u>
			<u>M</u> erge
			Delete
			Replication
			Pr <u>o</u> perties

To promote the vDisk version to production, open the **Versions** dialog of the vDisk.

Select version 1 and click **Promote**.

Promote					×
Availability:	Zaterdad	6 iu	6 2013	13:03:57	
<u>so s</u> cheduleu.	Laterdag	0 u	. 2013		<u>C</u> ancel

Select Immediate or schedule the promotion for a later time. Click OK.

<u>sk versi</u> Boot prodi	ons uction devices from ve	rsion: Ne	ewest released	•		
Version	Created	Released	Devices	Access	Туре	<u>N</u> ew
0 1	2013-06-25 14:07		0		Manual	Descrite
0	2013-06-21 12:27		1		Base	Eromote
						<u>R</u> evert
						Merge
						Dejete
						Replication
						Pr <u>o</u> perties
			<u> </u>		Done Refr	esh <u>H</u> elp

Click Done

If you have more than one Citrix Provisioning Services servers in your environment, don't forget to copy the vDisk version to the other PVS servers. Check the vDisk replication status to see if all PVS servers are up-to-date.

vDisk version Merging

Each vDisk version depends on the underlying versions. For example, version 2 needs version 1 and the base to work well.

You can merge vDisk versions so that they are no longer dependent on underlying versions.

- With Merging vDisk versions, you have two options;
- Merged Updates All updates from last base
- Merged Base Last base + all updates from that base

In this blog I will show you both options, starting with "Merged Updates". For this examples I already created a second version so I can show you the difference better.

	Version	Created	Released	Devices	Access	Туре	New
	2	2013-06-29 13:04		1		Manual	
	1	2013-06-25 14:07		0		Manual	Promote
	0	2013-06-21 12:27		0		Base	<u>R</u> evert
						\langle	<u>M</u> erge
2				×			Delete
reate merge ve	rsion as:						Benlication
Merged Updates - All updates from last base						Tigpication	
C Merged B	ase - Last b	ase + all updates from	that base				Properties
et merge versio	in access to	c					
Maintena	nce						
Iest						Done Befr	esh Help
C Productio	n					<u>Four</u> Heli	
NOTE: I	previous ve vill also be se	ersion is set to test or pe et to match it.	ending, merge ver	sion			

Open the vDisk Versions dialog and click Merge. Select Merged Updates and click OK

ersion 2 o	2012 06 29 12:22	neleaseu	Devices	Moraina	Type Method Hodates	New
2	2013-06-29 13:04		1	weiging	Manual	Promote
1	2013-06-25 14:07		0		Manual	Record
0	2013-06-21 12:27		0		Base	never
			-			Merge
						Dejete
						Replication
						Properties
						Properties

There will now be created a third version which contains both updates from version 1 and 2. This process takes a few minutes.

/ersion	Created	Released	Devices	Access	Туре	New
Q 3	2013-06-29 13:33		0	Test	Merged Updates	_
2	2013-06-29 13:04		1		Manual	Promote
1	2013-06-25 14:07		0		Manual	Bevert
0	2013-06-21 12:27		0		Base	<u></u>
						Merge
						Dejete
						Replication
						Pr <u>o</u> perties

After a few minutes version 3 is ready.

13-06-29 13:33 13-06-29 13:04		0		Merced Undetex	
13-06-29 13:04				merged opdates	
		0		Manual	Promote
13-06-25 14:07		0		Manual	Bevert
13-06-21 12:27		0		Base	<u></u> 010101
					Merge
					Dejete
					Replication
					Properties
	13-06-21 12:27	13:06:21 12:27	13-06-21 12:27 0		13-06-21 14:07 0 Manual 13-06-21 12:27 0 Base

When promoting version 3 to production, version 1 and 2 become obsolete and can be deleted safely. (Indicated by the red X)

Version	Created	Beleased	Devices	Access		New
3	2013-06-29 13:33	110/03003	0	1100000	Merged Updates	<u></u>
0	2013-06-21 12:27		0		Base	Promote
						<u>R</u> evert
						Merge
						Delete
						Replication
						Properties
	<u> </u>		<u> </u>			

To merge the base with all the updates, select the latest version and click Merge

Me	erge		X
	- Creati	e merge version as:	٦
	0	Merged Updates - All updates from last base	
	۰	Merged $\underline{B}ase$ - Last base + all updates from that base	
	Setm	erge version access to:	-
	0	<u>M</u> aintenance	
	œ	<u>I</u> est	
	0	Production	
		NOTE: If previous version is set to test or pending, merge version will also be set to match it.	
		<u>Q</u> K <u>C</u> ancel <u>H</u> elp	

Select Merged Base – Last base + all updates from that base and click OK

isk Versi	ons					
<u>B</u> oot produ	uction devices from ve	ersion:	ewest released	•		
Version	Created	Released	Devices	Access	Туре	New
<mark>,</mark> 4	2013-06-29 13:44		0	Test	Merged Base	
Ø 3	2013-06-29 13:33		0		Merged Updates	Promote
0	2013-06-21 12:27		0		Base	<u>R</u> evert
						Merge
						Delete
						Replication
						Pr <u>o</u> perties
					<u>D</u> one Refr	esh <u>H</u> elp

There will now be created a fourth version which contains the base and all updates. After a few minutes version 4 is ready.

isk Yersi	ons					×
<u>B</u> oot produ	uction devices from ve	ersion:	ewest released	•		
Version	Created	Released	Devices	Access	Туре	New
V 4	2013-06-29 13:44		0		Merged Base	
🗱 З	2013-06-29 13:33		0		Merged Updates	Promote
X 0	2013-06-21 12:27		0		Base	<u>R</u> evert
						Merge
						Delete
						Replication
						Properties
					Done Re <u>f</u>	resh <u>H</u> elp

When promoting version 4 to production, the base and version 3 become obsolete and can be deleted safely.

Name *	Date modified	Туре	Size
XA65.4.lok	29-6-2013 13:48	LOK File	0 KB
XA65.4.pvp	29-6-2013 13:12	PVP File	517 KB
XA65.4.vhd	29-6-2013 13:48	VHD File	16.160.678 KB

After deleting the base and version 3, only version 4 is left. This will be the new base. On file level you have now one big file again.