



## Migration of Applications to the Cloud

- Rob van Steenbergen

In the previous part of this article I've explained about virtualization of infrastructure concerning applications and listed some advantages. I started with categories for applications that I recognized from projects. The first category mentioned was the category 'unsupported'. We continue with the other categories in this article.

### Categories of applications

#### *Graphics*

This is about applications such as Photoshop, Illustrator and other photo editing software, video editing, graphic mathematical software. With virtualization, various problems occur.

- Performance issues may arise because it could be video is playing badly
- I've also seen colour schemes completely screwed up with the result that each photo had a haze of green.

Test and discuss these applications as early as possible in a project, because finding out a solution can give a lot of headaches.

#### *Self-made*

Little Visual Basic software or scripts within software like MS-office macros. These are not always in focus with administrators of the company. Always ask if these are used in the company. Normally, you would expect the creators of these scripts to do their own testing and adapting to the new situation, if needed. Not all of this category of software has to be virtualized and will probably run in the new environment when there is no installation needed.

#### *Works in a browser*

- Java versions and plugins: It could be that a specific Java version is needed for an application. Sometimes you see web based applications work with older versions of Java and not working yet with the newest. An application may need a specific plug in for web browsers. Well known plugins are Silverlight or Flash, but

there are a lot of other plugins that are specific to some software.

- Web certificates: Some specific websites require certificates. This is maybe installed once in an old environment and forgotten.
- Pre downloaded software: For banking applications with a token, it could be that software must be installed before it works.
- Multiple browsers: Are multiple browsers used in the organization? You should test all in combination with the desired web applications

#### *Installed*

These are installed in the virtualized OS and not streamed as mentioned earlier in this article. Problems could arise when a streamed application integrates with an installed VDI application. This applies for example to MS Office. Some applications want to do a mail merge with MS-Word to create letters. Some applications have specific plugins for MS-Office (or other VDI software).

#### *Linked*

Sometimes applications are linked together and communicate in one way or another. It could be that this is not recognized by users or system administrators. Also among those who package applications it can be something that is missed out and as a result virtualized applications are packaged separately. If two applications communicate or work together, special actions are needed by the packagers. Reviewing applications that maybe fit into this category is needed. Keep attention to shared functionality, data, login names or export and import files.

#### *Updates*

It could be that applications must be migrated before virtualization because an older version is not working or supported when virtualized.

Beware with upgrades of applications of the back end (databases). It could be that it is needed to upgrade the underlying database. This is almost a separate project where you should look to the backend. Furthermore, an application could be so different after an upgrade that it is not easy to compare with the old software.

So for software that is updated, don't use a basic test script that you use for other applications, but check them out one by one and work out a separate test plan accordingly to their separate situation.

### Drivers

If an application requires a driver, for example Dymo label printers, or specific input devices, this will not always work after virtualization. Important is to make an inventory and discuss with the packagers the risks. Probably these kinds of applications will need a local installation and should not be streamed.

### So to summarize

- Unsupported & Graphics : Plan these for test as soon as possible, high failure risk
- Self-made: Let the creators test & fix in your test environment
- Works in a browser: Check on possible plugins that are needed, check the version, address certificates as risks and inventarize if user needs to download and install software.
- Installed: Integration of streamed applications with VDI applications. Beware of plugins in MS-Office products.
- Linked: Review applications if they are linked because of sharing functionality, data, login names or export and import files.
- Updates: Create separate test plans, see these as mini projects. Certainly if it is a major upgrade or a backend (database) needs to be upgraded too
- Drivers: Discuss driver installation with packagers before testing.

### Overview of applications

Now you can create an overview of the applications in the company and categorize them. If you know the priority of the applications (from business perspective), that would be an important attribute too to notice. From here you can create your test planning and start building up the test plan.

Nr	Application	Installed	Drivers	Update	Graphics	Linked	Prio
1	PDF reader	x					1
2	PDF Printer	x	x				2
3	Winrar	x					1
4	Chickenwings					x	1
5	Internet banking		x				3

There is more than this about infrastructure testing for cloud migrations. If you have questions or want to discuss this somewhat more, don't hesitate to contact me.



Rob van Steenbergen is an independent software test consultant from the Netherlands. He has over 15 years of experience in software testing with several organizations. Currently Rob is working for Rabobank international. The domains he has experience in are banking, software houses, government, embedded software, infrastructure and public transport. Besides projects with clients, he is involved with a Dutch test magazine as an editor, runs a website about test

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