The Migration Process Simplified

The Discover Process

The first step for customers is to discover and catalog all of the software and workloads they are running on Windows Server 2003/R2. Many customers will not know what they currently have running on Windows Server 2003/R2. A thorough discovery process is essential because customers cannot address the problem if they do not know what the problem is.

There are several self-service tools that can help with the discovery process. For example, the Microsoft Assessment and Planning (MAP) Toolkit is a free downloadable tool that provides customers with a secure, agentless, and network-wide inventory. It can scale from small businesses to large enterprises. Customers can use the MAP Toolkit to collect and organize system-wide information from a single, networked computer.

Third-party discovery products are also available for purchase, including Dell ChangeBASE and Lakeside Software SysTrack. System integrators also offer services for the discovery phase. Microsoft Services offers JumpStart for Windows Server 2003, and other Microsoft partner service providers have similar offerings.

Points to consider:

What does the company do now? What is their business plan? Do they expect growth or reduction in staff?

What hardware do they currently have?

- Servers
- Desktops
- Backup devices
- Networking devices, routers, switches
- File Servers
- NAS
- POS
- Special machinery, printers, scanners, CAD etc. – How is it controlled?
- UPS

What software are they currently running?

- Mail Services
- Accounting
- CRM
- ERP
- Productivity Suite
- LOB
- 3rd party that is specific to their business

- Virtualization software

Is there anything else that they or you can think of?

It's important to take a full inventory of all the current hardware and software. Once a full inventory has been obtained, you will be able to evaluate the list. From there, determine which apps are necessary for the business and which can be retired. Now that you have narrowed down the list, it's time to determine which apps can be migrated and if any modifications are required. If the app cannot be migrated, can it be replaced? Remember to take into account the costs associated with migrating.

Microsoft Tools

Microsoft Assessment and Planning Toolkit

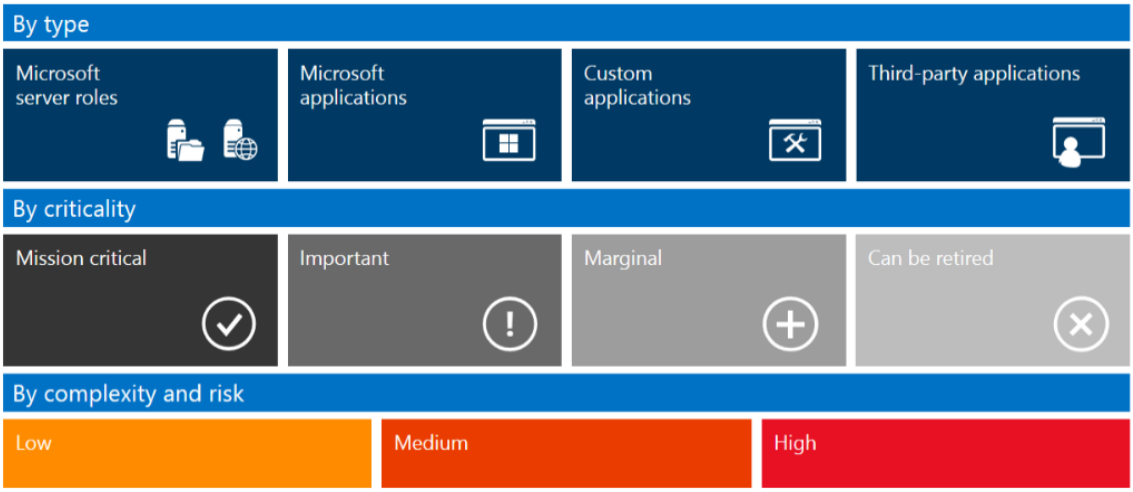
Application Compatibility Toolkit

3rd Party Tools

Partner	Discover	Assess	Target	Migrate	Additional information
AppZero				X	http://www.appzero.com/
Avanade	X	X	X	X	http://www.avanade.com
Citrix	X	X	X	X	http://www.citrix.com/products/appdna/overview.html
Dell	X	X	X	X	http://software.dell.com/products/changebase
HP	X	X	X	X	http://www8.hp.com/us/en/business-services/it-services.html?compURI=1079292
Lakeside Software	X				http://www.lakesidesoftware.com/
Nimbo			X	X	http://www.nimbo.com/

Assess Process

Once your customers have a catalog of their software (and possibly hardware), they will need to assess what they have by categorizing and analyzing their cataloged applications and workloads based on several factors, as shown below.

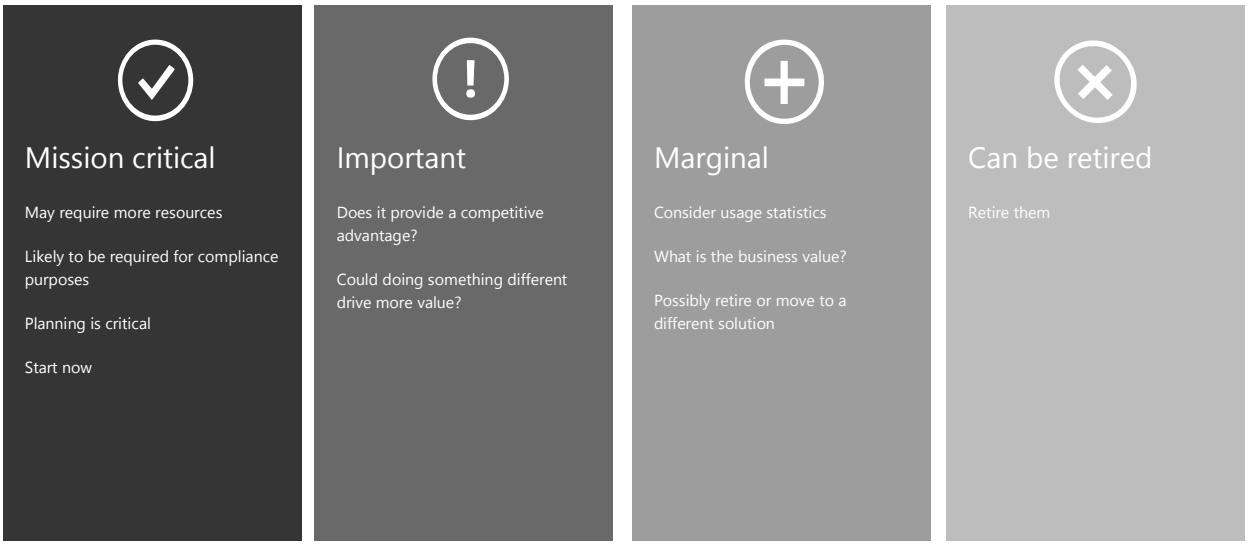


We suggest categorizing the applications and workloads by:

1. **Type:** Microsoft server roles, Microsoft applications, custom applications, or third-party applications
2. **Criticality:** Can be retired, marginal, important, or mission critical
3. **Complexity:** Low, medium, or high
4. **Risk:** Low, medium, or high

With this categorization complete, customers can begin to understand the scope of the plan, and can prioritize their workloads and applications for migration. The categorization will also reveal some potential issues as well as some budding opportunities to better fit the needs of the client.

The criticality category, for example, may raise the considerations and concerns shown in the diagram below:



The complexity and cost categories will indicate which migrations might be the easiest and quickest to accomplish. A cross-category analysis provides even more insight. For example, an important application with low complexity and only medium risk may be a good candidate for early migration.

Custom applications are potentially among the most complex migration scenarios. They should be reduced in number as much as possible during the DISCOVER and ASSESS cycles. The following diagram shows two key options:

Does the existing version run on Windows Server 2012?	Is there a packaged app or service that does the same thing?
• If not, consider a shim to make it work. • If yes, consider the app a short-term solution.	• This may be the lowest cost migration option.

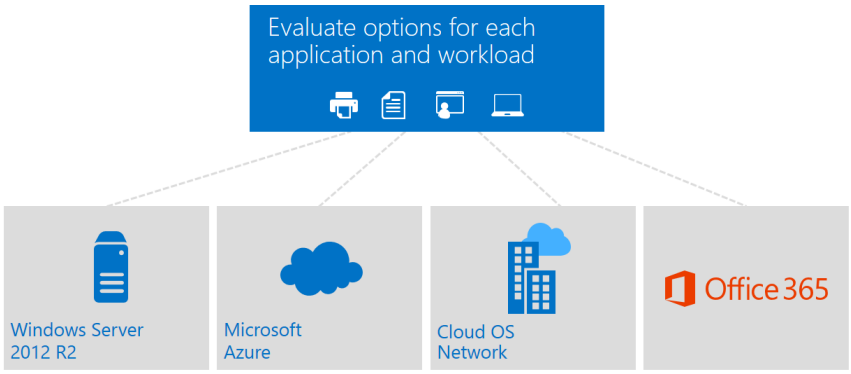
Custom applications have a reputation for being poorly documented, which can make them economically unfeasible to update. They may need to be rewritten if there is not a packaged application or service that provides the same functionality and can serve as a migration target.

Once you have completed the Assess Process, you can then proceed to the Target Process.

Target Process

Once all the applications and roles have been assessed, we can now look at where each application or role is going to be moved to.

Customers can choose a migration destination for each application and workload among the following migration targets: Windows Server 2012 R2, Microsoft Azure, Cloud OS Network, and Office 365.

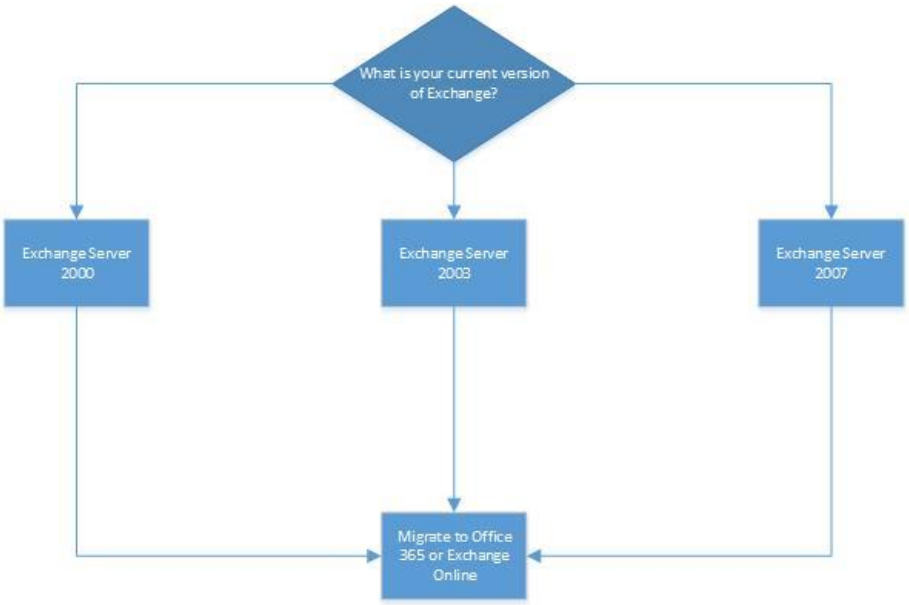


Different workloads and applications will logically lead to certain targets. Others could offer the possibility of migration to one or more of these destinations. The choice will be driven by factors such as speed, ease of migration, cost, and desired functionality.

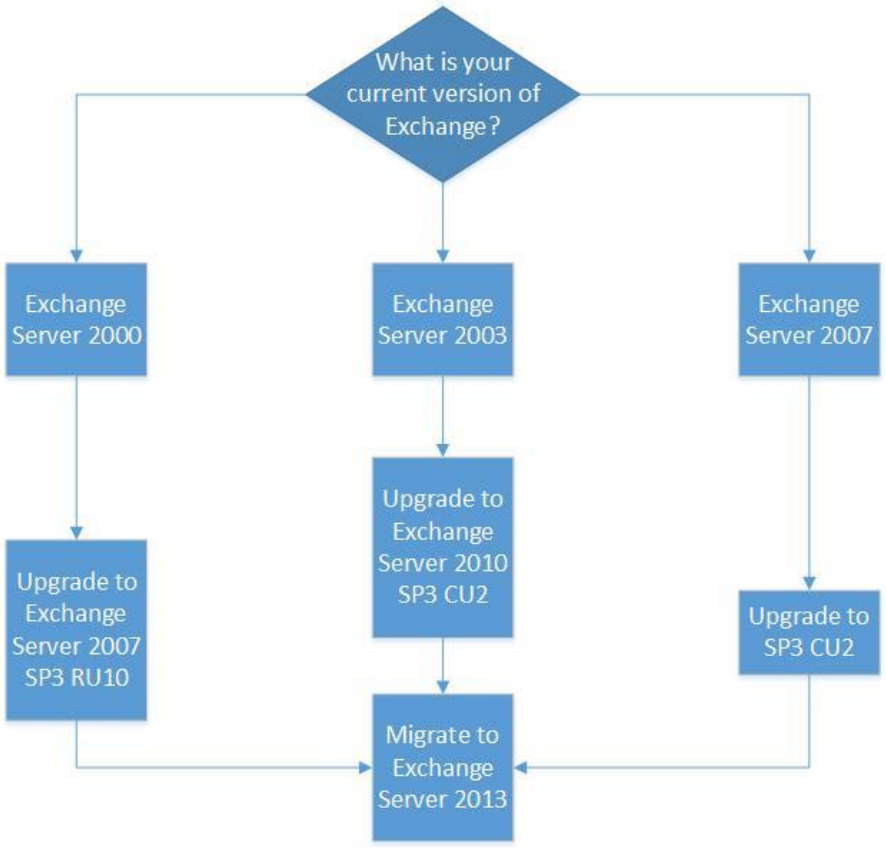
	Destination						Journey				
	Windows Server 2012 R2	Windows Azure IaaS	Windows Azure SQL	Windows Azure PaaS	Office 365	Partner cloud	Migrate as is	Upgrade version	Switch app vendor	Virtualize/shim app	Modify or rewrite app
Custom application	X	X		X			X			X	X
Microsoft workloads	X	X			X		X	X	X	X	
SharePoint	X	X			X		X	X			
Exchange	X				X		X	X			
SQL Server	X		X	X			X	X			
File, print, and Window Server features	X						X				
Hardware (OEM)	X					X					

The following flowcharts have been created to assist you in determining how to migrate SQL, Exchange, and SharePoint workloads to either on-premise, Azure, or Office 365 targets.

Exchange Online

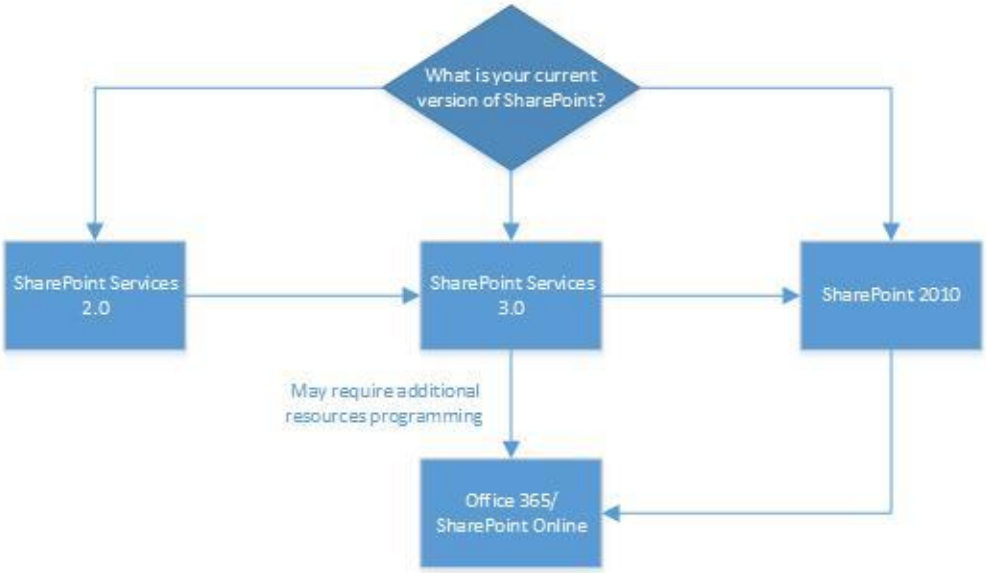


Exchange On-Premise



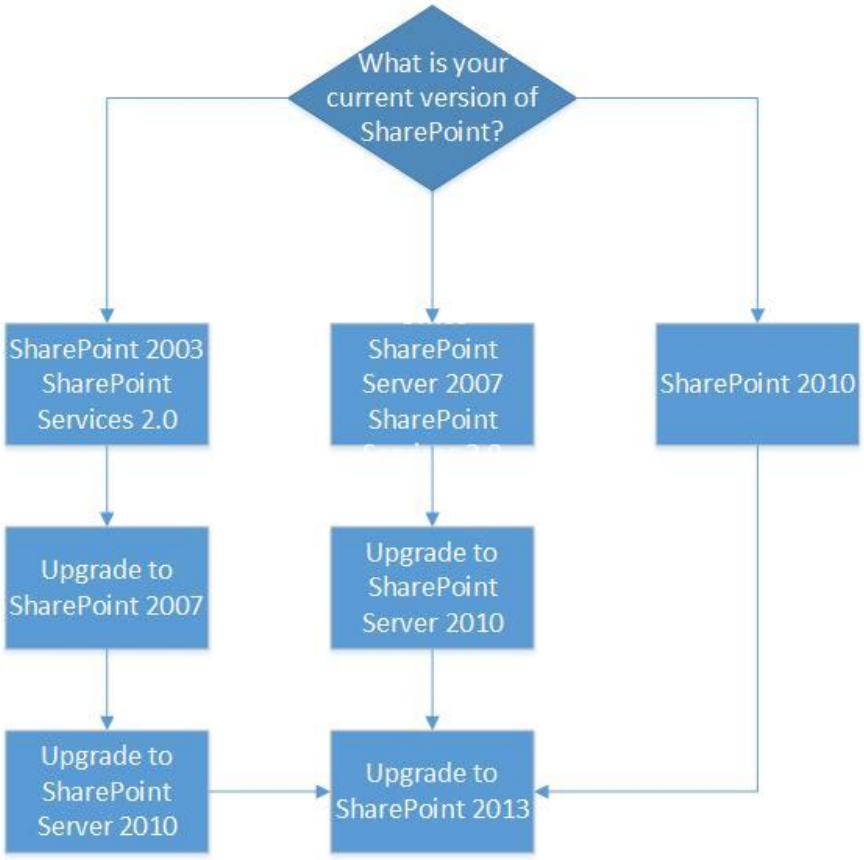
Microsoft

SharePoint Online

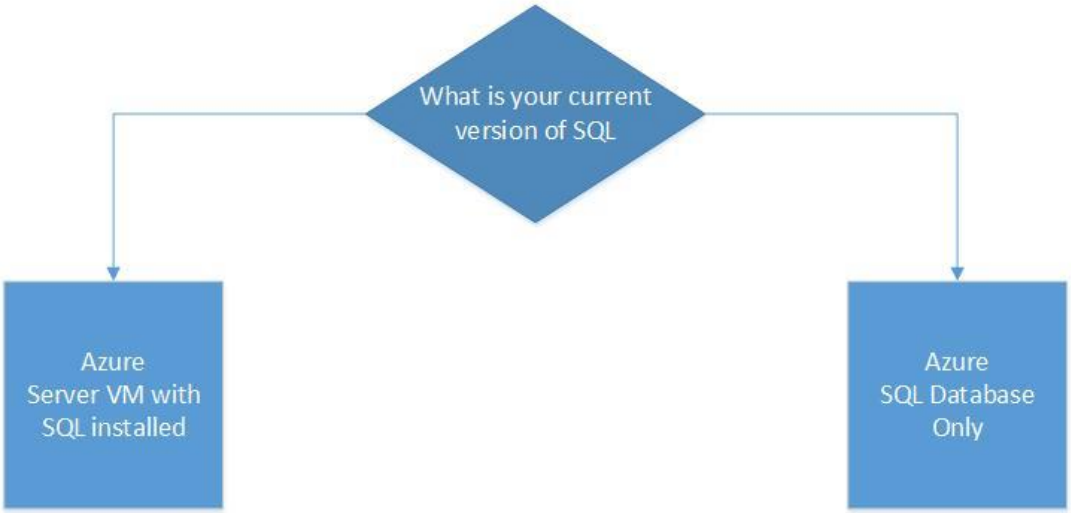


Microsoft

SharePoint On-Premise



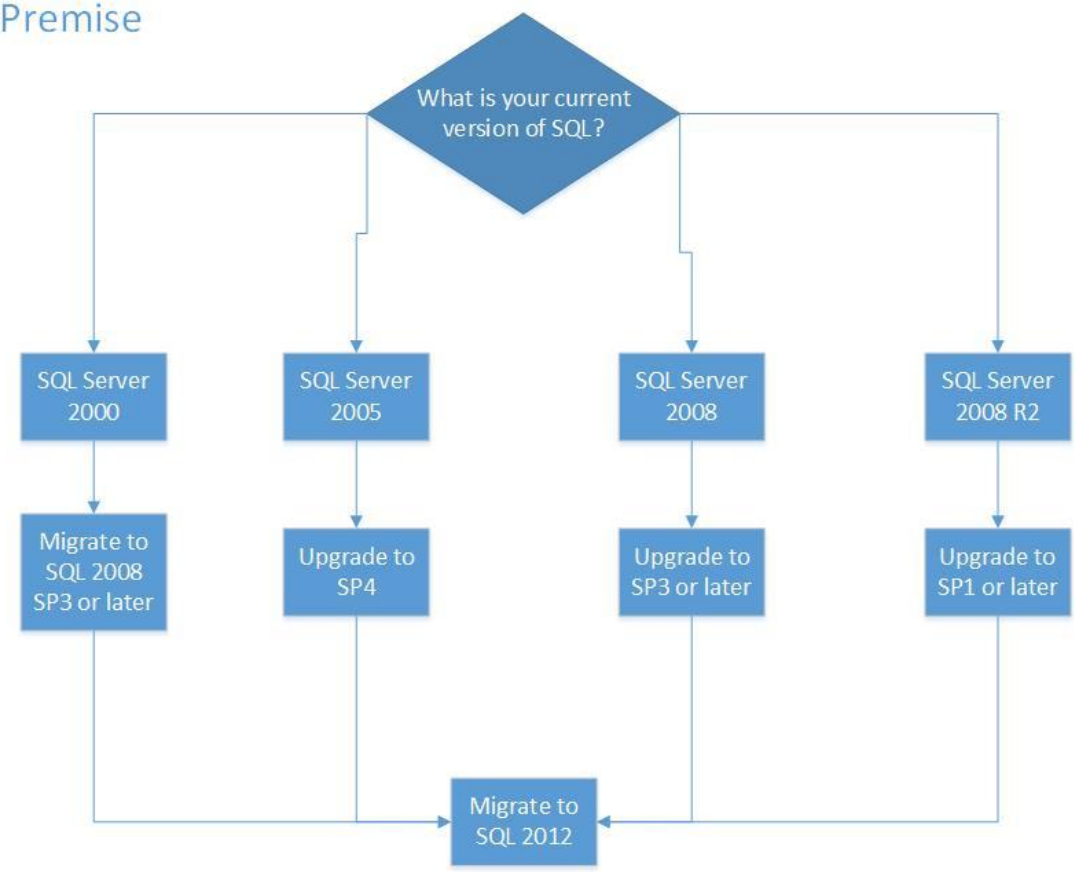
Azure SQL

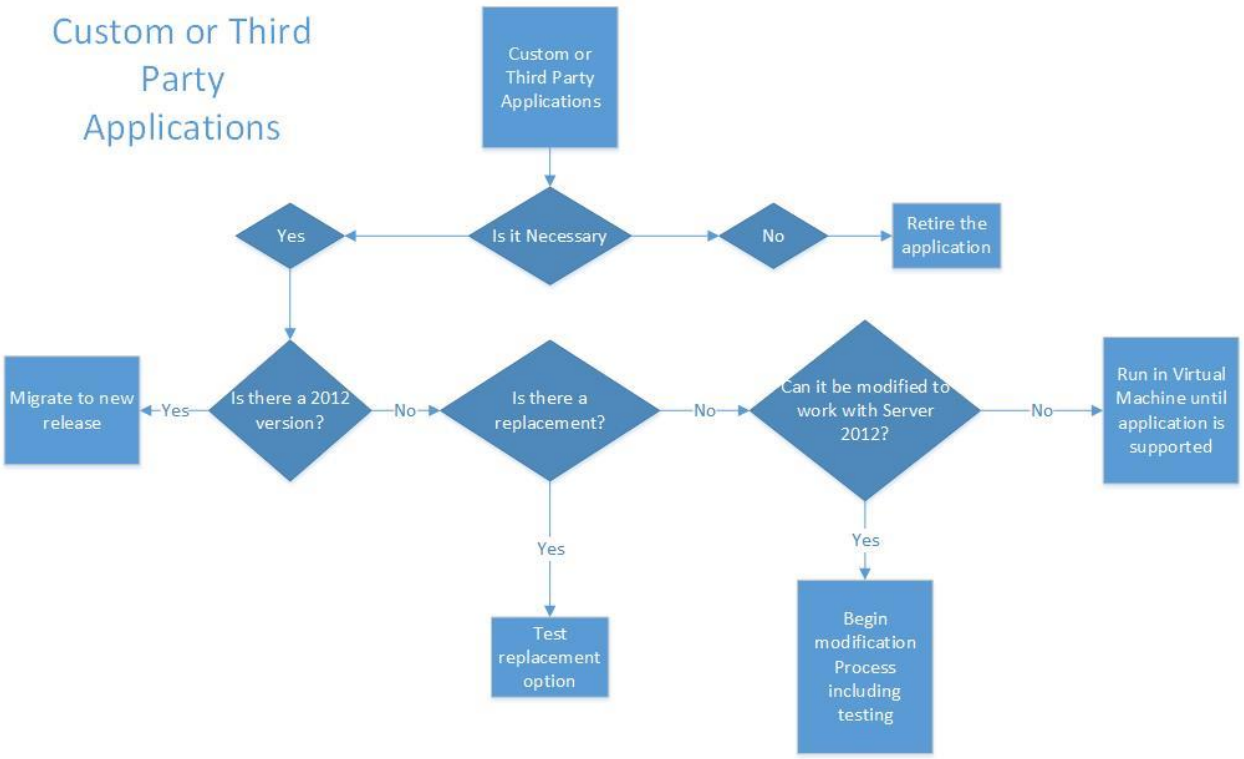


- Most flexibility
- Ease of migration
- SQL applications may need to be refactored

- Convenient
- Scalable
- Applications using SQL will require refactoring

SQL On-Premise




Custom or Third Party Applications
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Is it Necessary
Yes
No
Retire the application
Is there a 2012 version?
Yes
Migrate to new release
No
Is there a replacement?
No
Yes
Test replacement option
Can it be modified to work with Server 2012?
No
Run in Virtual Machine until application is supported
Yes
Begin modification Process including testing

Migrate Process

With an understanding of what is still running on Windows Server 2003, what needs to migrate when, and where to migrate to, customers can make a plan and begin to migrate. But arriving at this state may require some additional analysis and assistance.

The migration itself can be facilitated by both third-party products and services. Several vendors offer do-it-yourself tools to assist in the decision-making process and in the migration itself, including Dell ChangeBASE, Citrix AppDNA, AppZero, and JumpStart for Windows Server 2003. Other migration services are also available through system integrators, including several Microsoft partners.

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SQL Server	X		X	X			X	X			
File, print, and Window Server features	X						X				
Hardware (OEM)	X					X					

Third-party applications

Third-party applications are most likely to be run on-premises. There are simply too many factors outside the control of IaaS solution providers, making it nearly impossible for them to support these applications.

Customers should take into account the considerations in the diagram below when planning what to do with third-party applications running on Windows Server 2003/R2:

Does the existing version run on Windows Server 2012?	Is there a newer version that runs on Windows Server 2012?
• If not, consider a shim to make it work. • If yes, consider the current version on Windows Server 2012 R2 a short-term solution.	• Is the upgrade critical enough to justify migration? • If not, is there another product that provides the functionality?

Some third-party application vendors also offer SaaS options for their products. A third-party SaaS option may be the fastest and easiest option for migration. Windows Azure also offers independent software vendors (ISVs) the ability, through the Certified for Windows Azure program, to certify their applications to run as SaaS offerings on Windows Azure.

If your customer is stuck with a critical application that only runs on Windows Server 2003/R2 and the third-party ISV is still in business, there may be another option.

Custom Applications

On-premises	Cloud OS Network	Azure IaaS

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One final consideration with custom applications is to virtualize them. On-premises or IaaS (especially Windows Azure IaaS) virtualization may enable your customer to focus on application updates. If the customer is using VMware for virtualization, suggest they consider migration to Hyper-V, which provides

numerous benefits over VMware—starting with lower cost; the savings can be put back into the migration effort.