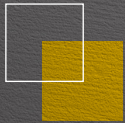


Preparing for Windows Server, SQL Server 2008 and Windows Server 2008 R2 End-of-Life

Avoid business disruptions and seize the opportunity
to transform your organisation



Windows Server 2008 and SQL Server will no longer be supported by Microsoft from July 2019.

Avoid challenges and vulnerabilities caused by end-of-life support.

With the End of Support (EOS) for Windows Server 2008 and SQL Server effective from 9th July 2019 and 14th January 2020 respectively, IT teams need a plan of action sooner rather than later. You should already have a basic upgrade or migration plan in place before EOS becomes a reality. In any migration plan, IT teams need to balance upgrade path options against business needs around compliance, security and productivity. Wanstor can help you on your server migration journey to a modern data centre, and be responsive to your server upgrade needs. We provide Microsoft server upgrade solutions that offer performance effectiveness, efficiency and security.

What does end of support actually mean?

SQL Server and Windows Server 2008 EOS mean that Microsoft will no longer offer product improvements, accept warranty claims or provide security patches and upgrades. Each of these fall under mainstream support agreements with Microsoft. Windows Server 2008 and SQL Server will remain usable, but without access to mainstream support services they may usually rely upon.

What end of support means

No security updates:

- + There will be no access to critical security updates, opening the potential for business interruptions and loss of data.

Compliance concerns:

- + As support ends, your organisation may fail to meet compliance standards and industry regulations.

Higher maintenance costs:

- + Maintaining legacy servers, firewalls, intrusion systems & other tools can get expensive quickly.

Missed innovation opportunities:

- + Leaders embracing digital transformation outperform the competition.

Preparation is crucial

Organisations must first roadmap specific data centre needs regarding Windows 2008 servers. Additionally, IT teams should seek guidance on migration, and find resources to help streamline their efforts. The good news is that Microsoft recommends two options for enterprise upgrades: migrating to cloud infrastructure, or migrating to an on-premises upgrade. Most IT teams will likely opt for an infrastructure upgrade, taking advantage of new features in modern operating systems.

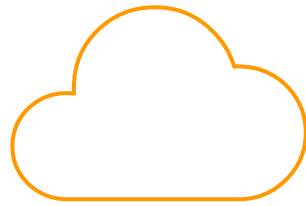
It is important to begin planning the infrastructure upgrade process as soon as possible, as these can take a significant amount of time. Wanstor recommends creating detailed upgrade roadmaps before executing such upgrades. These should of course outline any challenges, blockers or potential issues which may cause delays. Organisations which opt for keeping servers on-premise must first upgrade to newer software integrations. Moving to Windows Server 2016, organisations will need an upgrade to Windows Server 2012 or 2012 R2. As your IT team commences the upgrade, they will have the option of migration to a cloud platform via re-hosting. Regardless of your upgrade path, consider all factors before implementing a migration. Organisations waiting too long to implement and update their Windows or SQL Server 2008 environments will be racing to avoid security gaps, potential breaches and regulatory risks.

What are the consequences of using outdated and unsupported platforms?

Outdated or unsupported platforms expose networks to potential security attacks, introducing compliance concerns for organisations who handle customer, patient or stakeholder data. Failure to take action can increase legal liability. In particular organisations in the legal, professional services, medical and financial industries are required to comply with a range of strict regulatory standards surrounding privacy and customer information. Failure to refresh outdated data software presents major non-compliance risks. Additionally, introduction of the General Data Protection Regulation (GDPR) has significantly increased the obligations of business, charity and not-for-profit organisations that collect or process data. Failure to refresh data software could mean additional penalties under GDPR privacy laws.



What are your Upgrade options?



Transform with **Wanstor Private Cloud** or Azure



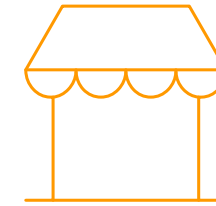
Rehost

Migrate Windows Server, SQL Server 2008, 2008 R2 workloads to **Wanstor Private Cloud** or Azure VM

Refactor, Rearchitect or Rebuild

Innovate with Windows Server containers and Wanstor or Azure data services

OR



On-Premises



Upgrade

Upgrade to Windows Server 2016 or SQL Server 2017 to become cloud and DevOps ready

MIGRATE TO WANSTOR PRIVATE CLOUD OR AZURE

Migrate applications to Wanstor or Azure VMs

- + Get free Extended Security Updates for Windows Server 2008 and 2008 R2 VMs for three years after deadline

Migrate data to Wanstor or Azure managed instances or VMs

- + Azure SQL Database Managed Instance offers version-free option
- + Get free Extended Security Updates for SQL Server 2008 and 2008 R2 in Azure VMs for three years after deadline

Modernize when ready

- + Upgrade in **Wanstor Private Cloud** or Azure when ready or transform apps and data with Azure or **Wanstor Private Cloud** services

UPGRADE ON-PREMISES

Upgrade to latest version

- + Windows Server 2016 or 2019
- + SQL Server 2017

Can't meet the deadline? Protect server workloads

- + Buy Extended Security Updates to get three more years of security updates for Windows Server and SQL Server 2008 or 2008 R2
- + Upgrade when ready

Why should you upgrade to Windows Server 2016?



Introduce extensive new layers of security to combat emerging threats



Support application innovation with Windows Server containers



Evolve to software-defined data centre efficiency



Accelerate move to a hybrid cloud environment

Windows Server 2016 was designed for today's data centres, helping IT teams adopt and manage new infrastructure models that deliver faster time to value and innovation.

It's a fact today's data centres have strict compliance and business requirements placed on them. For organisations that require robust security, efficiency, and innovation, Windows Server 2016 delivers it as a cloud-ready operating system. It supports your current workloads while introducing new technologies that enable you to become DevOps ready and transition to cloud computing.

Security: Windows Server 2016 includes built-in breach resistance to thwart attacks on your systems and meet compliance goals. Layers of security built into Windows Server 2016 limit the damage that attackers are able to cause and help with the detection of suspicious activity.

App innovation: Increasingly, organisations use apps to help differentiate themselves from the competition. Windows Server 2016 supports application innovation using container technology and microservices.

Software-defined efficiencies: As organisations push the boundaries of highly virtualized environments, they can use Windows Server 2016 capabilities to meet operational and security challenges. This helps to free up IT resources to plan a strategy that uses the cloud for future applications and solutions. Windows Server 2016 makes possible affordable, high-performance storage and Azure-inspired networking capabilities.

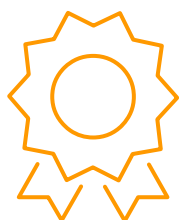
Why upgrade to SQL Server 2017

Industry-leading performance and security on LINUX and DOCKER

Choice of **platform**
and **language**

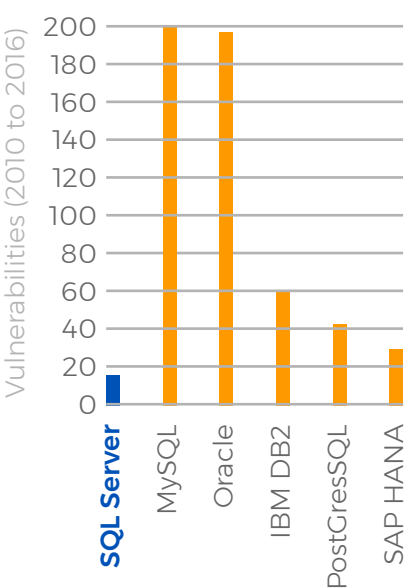


Industry-leading
performance



- ① OLTP performance
- ① DW performance
- ① price / performance

Most secure over a
7 year period



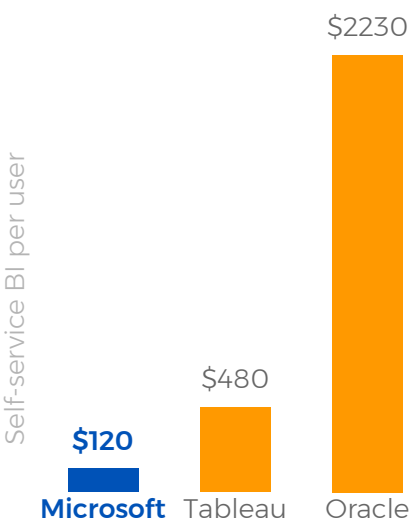
Only **commercial**
DataBase with **AI built-in**



Microsoft R & Python
+ in-memory
at massive scale

Native T-SQL scoring

End-to-end **mobile BI**
on **any device**



A fraction of the cost

Wanstor Private Cloud

At Wanstor, we provide a range of private cloud services to help business, charity and not-for-profit organisations at every stage of their cloud journey.

We can help you with planning, deployment and in-life management of private clouds, giving you access to best practices we have deployed with other customers. The end of life support for Windows Server & SQL Server 2008 presents a unique opportunity to explore private cloud computing for your organisation. Take advantage of Wanstor's best in class private cloud infrastructure that delivers data securely, quickly and to the right people at the right time.

Wanstor's Private Cloud Solutions for customers



fig. 1. The main Private Cloud Solutions that Wanstor provides

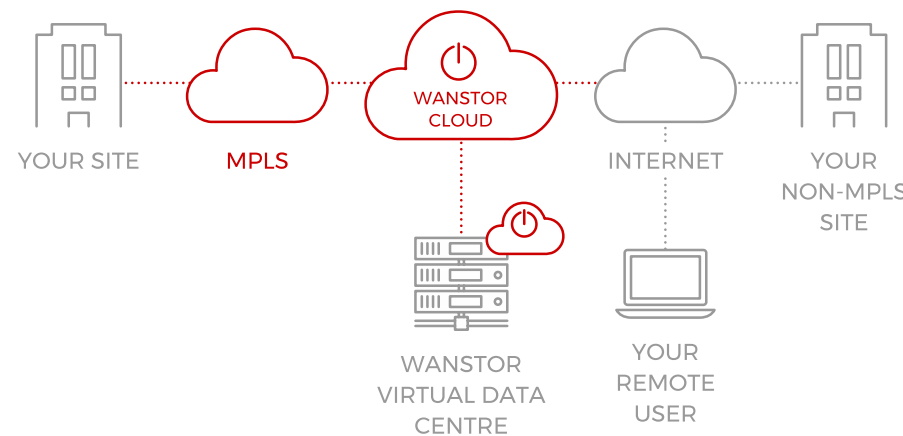


fig. 2. How Wanstor's Private Cloud Solution works

Benefits of moving to Wanstor's Private Cloud

- + Predictable monthly cost model
- + Time savings
- + Reduced capital costs
- + Scalability
- + 24 / 7 Technical Support
- + Single supplier to manage
- + Customized Options
- + Controlled Access

Accurate and up-to-date IT asset details

The first task an IT administrator must undertake when starting a server refresh programme is an inventory covering both software and hardware used across the organisation. Manual compilation and reconciliation of IT assets is effort-intensive and error-prone. Wanstor use and recommend ManageEngine Desktop Central's web-based inventory management tools, helping automate asset inventory and management tasks, whilst providing a range of network inventory reports.

Desktop Central Inventory Management features:

- + Perceive audit ready hardware and software inventory details
- + Schedule scanning of systems to collect inventory data
- + Manage software licenses, category, and compliance
- + Detect, block, auto-uninstall prohibited software on the network
- + Inspect software usage statistics
- + Automate alerts on events (installation or removal of software or hardware)
- + Out-of-the-box reports or Custom reports across different formats

Scheduled inventory scanning

Desktop Central scans Windows desktops and servers on your network periodically, collecting hardware and software details and storing these in a database. Inventory scanning intervals are flexible, and can be configured to meet real-time needs, providing IT administrators with current inventory information at any time without manual intervention.

Software inventory in Desktop Central gives IT administrators:

- + **Software metering:** Usage details of specific software including open rate, total usage duration, systems installed
- + **Software details:** View commercial and non-commercial software information including vendor name, installation date, and software version
- + **License compliance:** View compliant (over-licensed) and non-compliant (under-licensed) software used on the network
- + **Prohibited software:** Blacklist software, block executables and auto-uninstall prohibited software on the network
- + **Warranty management:** Track warranty information for hardware assets managed by your organisation

Hardware inventory tool provides details for hardware used on the network:

- + Sort computers by memory
- + Sort computers by OS and Service Pack version
- + Sort based on hardware manufacturers
- + Sort by age, disk usage, type and more

Desktop Central offers these Hardware Inventory Reports:

Computers by OS

Details computers by operating system including name, OS version, service pack, virtual memory, visible memory

Computers by Memory

Details computers based on RAM size including computer name, manufacturer, model, system type, physical memory

Computers by Device Type

Details individual computers based on specific hardware type including laptops, portable computers, desktops

Hardware Types

Provides a list of hardware detected across entire network

Computers by Manufacturer

Details computers by manufacturer including computer name, manufacturer, model, system type, physical memory

Computers by Age

Details computers by year of manufacture including computer name, installation details, domain name and description

Hardware Manufacturers

Provides a list of hardware manufacturers along with itemised product count and software installation count

Alert Notifications

Enables sending of email notifications to IT administrators once new hardware is detected being added to the network

Operating System: Windows Server

Service Pack: Windows Server

Language: English

Health Status: Healthy

Last Patched Time: April

NetBios Name

Remote Office: Server

Logged on User

Last Successful Scan: Apr 5

Last Boot Time: Apr 1

ApplicationsMissing PatchesInstalled Patches

Show Patches: AllOS and ApplicationsThird Party

Filter By: ApplicationSeverityDeployment Status

Uninstall PatchDecline Patch

Total: 201 | 🔍 📄 👤

<input type="checkbox"/>	Patch ID	Bulletin ID	Patch Description	Vendor	Patch Type	Remarks	Deployed Time	Download Status	Release Date	Severity	Supported Date	Approved Time	Approve Status
<input type="checkbox"/>	10000	MS	2019 Update for Windows Server 2008 R2 for x64-based Systems	Microsoft	Optional Updates	The operation completed successfully.	Apr 3, 2019	Downloaded	Mar 2019	Unrated	Mar 26, 2019	Mar 27, 2019	Approved
<input type="checkbox"/>	10000	MS	2019 Preview of Monthly Quality Rollup for Windows Server 2008 R2	Microsoft	Optional Updates	The operation completed successfully.	Mar 27, 2019	Downloaded	Mar 2019	Unrated	Mar 20, 2019	Mar 21, 2019	Approved
<input type="checkbox"/>	10000	MS	2019 Update for .NET Framework for Windows 7 and Server 2008 R2	Microsoft	Optional Updates	The operation completed successfully.	Mar 27, 2019	Downloaded	Mar 2019	Unrated	Mar 20, 2019	Mar 21, 2019	Approved
<input type="checkbox"/>	10000	MS	Update for .NET Framework 4.6 for Windows 7	Microsoft	Optional Updates	The operation completed successfully.	Mar 27, 2019	Downloaded	Mar 2019	Unrated	Mar 20, 2019	Mar 21, 2019	Approved
<input type="checkbox"/>	10000	MS	Windows Malicious Software Removal Tool x64 - February 2019	Microsoft	Security Updates	The operation completed successfully.	Mar 20, 2019	Downloaded	Mar 2019	Moderate	Mar 12, 2019	Mar 15, 2019	Approved
<input type="checkbox"/>	10000	MS	Monthly Quality Rollup for Windows Server 2008 R2 for x64-based Systems	Microsoft	Rollups			Downloaded	Mar 2019	Critical	Mar 12, 2019	Mar 15, 2019	Approved

System Health Report

This view displays the health status and the number of missing OS and third-party patches in each system.

System Health Graph

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Healthy | Vulnerability database updated on : Apr 5

Computer Name	Operating System	Domain	Missing OS Patches ?	Missing TP Patches ?	Installed OS Patches	Health	Service Pack	Remarks	Last Patched Time	Critical ?	Important ?	Moderate ?
<input type="text"/>	<input type="text" value="server"/>	<input type="text"/>			<input type="text"/>		<input type="text"/>					
	Windows Server 2008 R2 Standard Edition (x64)	D	0	0	0	Healthy	Windows Server 2008 R2 SP1 (x64)	--	Apr, 2019	0	0	0
	Windows Server 2008 R2 Standard Edition (x64)	D	0	0	0	Healthy	Windows Server 2008 R2 SP1 (x64)	--	Apr, 2019	0	0	0
	Windows Server 2012 R2 Standard Edition (x64)	D	0	0	0	Healthy	Windows Server 2012 R2 Gold (x64)	--	Apr, 2019	0	0	0
	Windows Server 2008 R2 Standard Edition (x64)	D	0	0	0	Healthy	Windows Server 2008 R2 SP1 (x64)	--	Apr, 2019	0	0	0

Server Upgrades: Best Practice

Pre-Upgrade Tasks

The checklist timeline listed below is a great starting point for any server upgrade project. This forms the foundation for gathering information about the server and any databases you require prior to any upgrades taking place. With this information you will save yourself time and avoid issues or blockers at the upgrade or post-upgrade stage of the process.

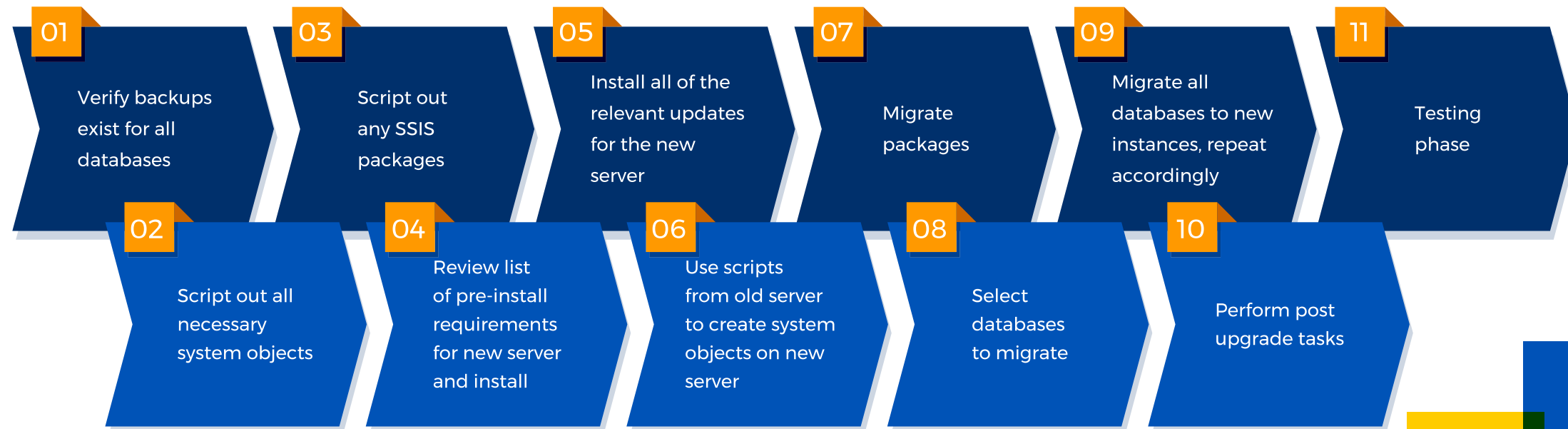


Server Upgrades: Best Practice

In-Place Upgrade: In-place upgrades are the easiest to perform, but the most difficult to rollback. This why Wanstor recommends either a side by side or rolling upgrade path.

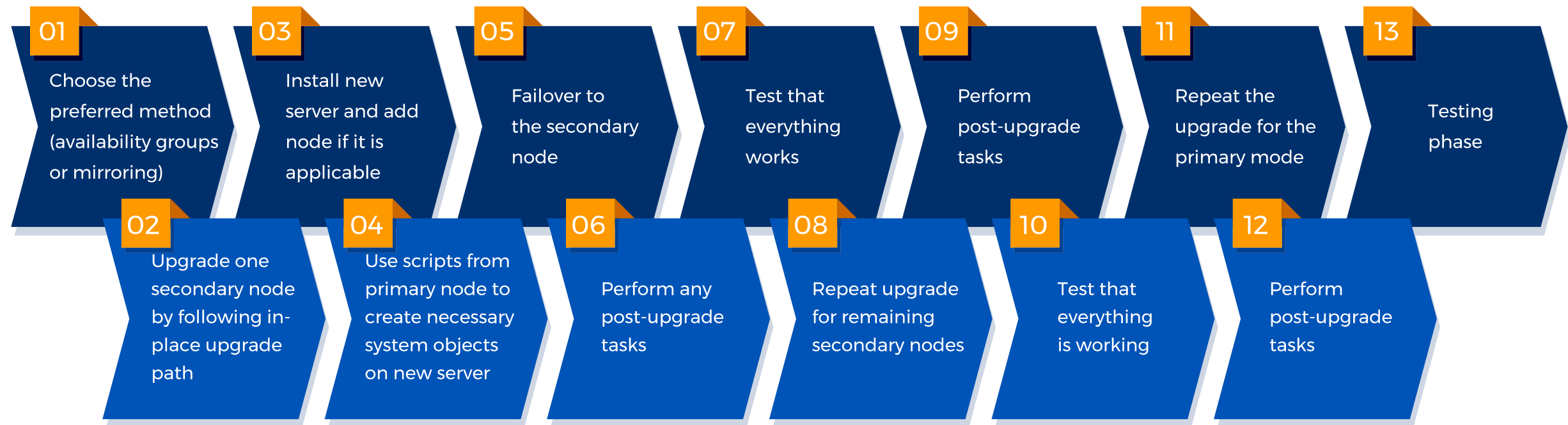


Side-by-Side Upgrade Path: Side-by-side upgrades have more steps and are more complex. They also give more flexibility for rolling back, because you are not touching the original system while it is still in use. The steps involved in a side-by-side upgrade are similar for both an existing or new database server.



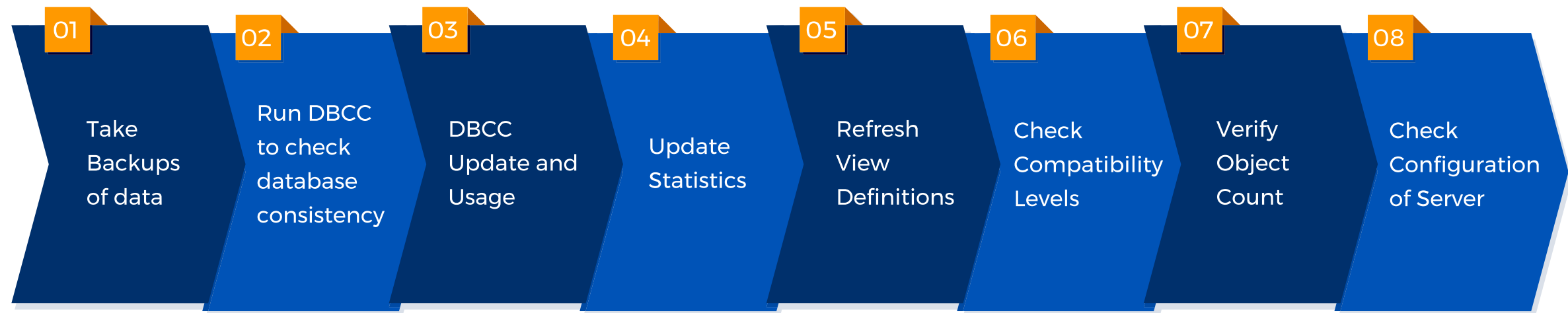
Server Upgrades: Best Practice

Rolling Upgrade Path: Rolling upgrades can reduce downtime during upgrades. Database mirroring is generally the preferred method for doing Server upgrades. You could also use log shipping or Availability Groups - the choice of which feature you prefer is up to you. Do ensure that you have a solid rollback plan for whichever feature you are using.

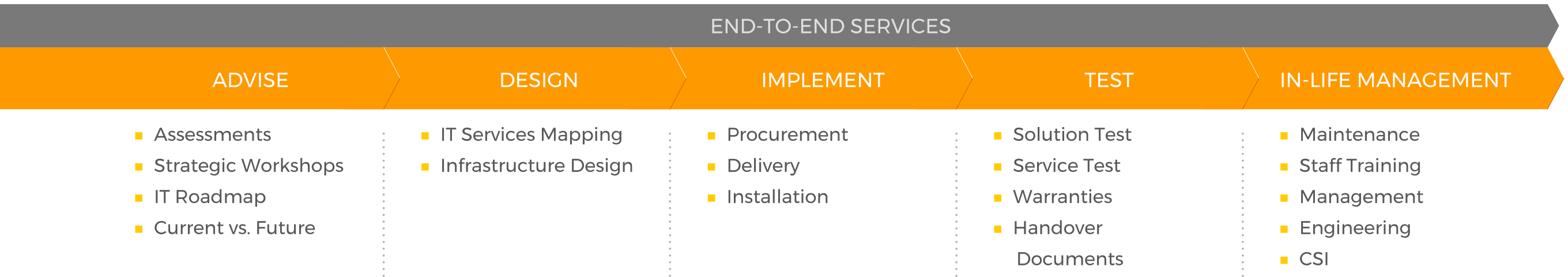


Server Upgrades: Best Practice

Post-Upgrade Tasks: After upgrading servers, you will need to perform a series of tasks to verify that databases are ready. You want to do this before the server is handed over to the end users for further testing.



Wanstor upgrade services for SQL Server 2008 and 2008 R2



Assess	Migrate	Optimise
+ Assess on premise applications and architecture	+ Choose right migration tools and strategy	+ Policy Management
+ Discover and evaluate applications	+ Re-hosting: Move applications between servers	+ Continuous security assessments and updates
+ Undertake an inventory of IT infrastructure	+ Move databases and protect business critical data	+ Integrated security solutions
+ Understand licencing position	+ Undertake regular backups	+ Machine backups
+ Know your upgrade options	+ PM with relevant change control procedures in place	+ Site recovery
+ Identification of application and server dependencies	+ Application testing	+ Machine disk encryption
+ Define required features, desired business outcomes	+ Rapid development for scalability	+ Proactive recommendations
+ Configuration analysis	+ DevOps practices	+ Priority tickets assigned to incidents and alerts
+ Cost to benefit analysis		+ Application insights
+ Impact on stakeholders across business (now vs. future)		+ Log Analytics
		+ Performance Monitoring
		+ In-life cost management

Benefits of Data Software and Hardware refresh

The end of extended support for SQL Server 2008 and windows Server 2008 needs to be urgently addressed by IT teams. The dates of change are upon us now and doing nothing is not an option. Keeping servers on premises and upgrading database software is a great opportunity to enhance security, adopt new cloud technology and modernise existing infrastructure. Benefits include:

- + Less reliance on legacy infrastructure in delivering business critical services
- + Take advantage of cloud agility and innovation
- + Improved data security and compliance
- + Support for expanding workloads and DevOps

Migration to a hybrid infrastructure

If you want to keep specific deployments on premise, Microsoft recommends upgrading to Windows Server 2016 and / or SQL Server 2017. Both include built-in security features that strengthen existing infrastructure platforms.

Upgrading to '*next generation*' hardware solutions will better equip your organisations' employees for the challenges they face today and ensure your data, devices and organisation are protected from hardware failures and costly downtime. Refreshing hardware or software can yield benefits quickly but may leave vulnerability gaps if not upgraded correctly. When opting for a full-scale transformation or refresh, organisations should examine their investments in future innovation as well as in-life performance and maintenance.



Why choose Wanstor for your Windows Server, SQL Server 2008 and 2008 R2 End-of-Life upgrade programme?

- + We are a Microsoft Gold Partner
- + We have over 15 years experience in Microsoft technologies
- + Over 100 Microsoft accredited engineers and support staff
- + We can assess your existing SQL Server 2008 and Windows Server 2008 workloads to determine the right migration path
- + Real time view of projected versus actual migration progress
- + Dedicated project management teams
- + Consistent security standards maintained throughout the upgrade process
- + Proactive end user communication around upgrade progress
- + We can help you estimate the cost of running different workloads in different clouds
- + Migrate different workloads at different times depending on your organisations needs

Why your organisation should upgrade their Windows 2008 Server and SQL Server 2008 now

- + Reduce CapEx by moving to cloud based computing models
- + Free up data centre space, improve network data performance
- + Take advantage of Microsoft automated security updates: reducing business risk and IT administrator time
- + Be able to deploy faster more scalable applications: improving the end user computing experience
- + Make sure your business databases are industry compliant
- + Gain access to scalable infrastructure models which respond to your business needs in real time
- + Easier adoption of new cloud capabilities
- + Accelerate business innovation by giving users enhanced compute capacity and improved application performance
- + Standardise your infrastructure making it easier and more cost effective to support
- + Improve and automate many existing IT processes

Wanstor provides user centric, cost effective and secure ways to migrate to the cloud or upgrade your on-premise server estate in preparation for Windows Server and SQL Server 2008 End-of-Life Support. In today's modern workplace, business, charity and not for profit organisations cannot afford downtime throughout major migration projects and programmes of work.

We can help your IT team to migrate their Server and SQL Server 2008 with the right tools and support. We recommend and use best in class cloud and on premise server solutions to give our customers the right infrastructure mix.

At Wanstor we take a holistic approach to infrastructure investments and management. Every infrastructure migration project we undertake helps our customers to see the value from their IT infrastructure investments.

“Wanstor can guide you through the upcoming EOL support for Windows Server 2008 and SQL Server 2008. The server upgrade paths we recommend offer optimal performance for your IT infrastructure investments.”

*Ferdie Koukakis, **Technical Director Wanstor***

For more on Wanstor Windows Server 2008 and SQL 2008 migration services, call us on **0333 123 0360**, email us at **info@wanstor.com** or visit us at **www.wanstor.com**

A portrait of Ferdie Koukakis, Technical Director at Wanstor. He is a middle-aged man with short brown hair, wearing a blue and white striped button-down shirt. He is looking slightly to the left of the camera with a neutral expression. The background is dark and out of focus, with a brick wall visible on the right side.

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