



The WaaS-readiness **strategy guide**

A white paper that tells you all about Windows-As-a-Service (WaaS), introduced by Microsoft for Windows 10. How it affects the enterprise and how you can work out an approach to gain control of the update process in large and complex organisations. In short: how to become WaaS-ready.

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Management summary

The Windows-as-a-Service concept was launched in 2015 – and it is definitely here to stay. The WaaS model does make sense, but it is a true paradigm shift for both Microsoft and all Windows users. WaaS is still relatively new and Microsoft is still making considerable changes. WaaS still is a learning experience – for both Microsoft and enterprises.

To keep up with the changes in Windows 10, most organizations will choose the Semi-Annual Servicing Channel for general deployment. Doing so forces them to 'get with the game': they need a strategy to stay up to date, stay supported and avoid the nosedive of increasing technical debt and extended support costs.

We believe that few enterprises will roll out each new Feature Update released by Microsoft. It is expected that most enterprises will prefer to deploy the Autumn Feature Update that is now in service for 30 months. As a result, it is now possible to establish a much more manageable bi-annual release rhythm.

Because most enterprises will skip Feature Updates releases for deployment, all changes and new features of those omitted releases are now accumulated (two releases every year) when a new release is chosen for deployment. As a result, the impact of upgrading your desktop estate to a new Windows 10 Feature Update should never be underestimated. Although the overall risk potential is smaller than you may be used to in a typical OS migration, the scope remains almost the same: all applications and hardware are potentially affected and need to be validated before rollout.

Upgrading to a new Feature Update cannot be addressed like a regular service pack update, but also should not need the definition of a new migration project, as each Feature Update project would require too much overhead and effort.

Microsoft's generic 'Evergreen' approach for WaaS does not recognise the unique and heterogenic, pluriform nature of many of the world's enterprises, in which the Business priorities are leading IT, not the other way around.

Microsoft's support tools will not automatically solve compatibility issues that come with a new Feature Update. They do help assessing potential problems and help manage the rollout. Microsoft's support tools do not actively manage the effort of compatibility testing and remediation, which is a vital component of preparing the deployment of a new Feature Update.

Without support of the Business, it is simply impossible to rollout Feature Updates: the Business needs to be involved, WaaS is not an IT

department-only exercise. Together with IT, the Business is responsible for application validation, finding solutions and funding required for upgrades or development of fixes.

Because of the inherent WaaS complexity, conventional desktop management tooling does not suffice. Enterprises are advised to look for a solution that allows them to build a WaaS-readiness service.

eReadiness offers a (Windows Desktop Analytics-integrated) process management tool that helps IT and Business to be WaaS-ready and tightly control the processes that are associated with WaaS. It does so in a hands-on and flexible way, acknowledging that all enterprises are different.

Why you should read this white paper – and take action!

We are living in the Windows-as-a-Service (WaaS) era. A time frame in which every company will need to find a way to safely and effectively stay up to date with the way Windows 10 is evolving. WaaS, and the way Microsoft has chosen to further develop and distribute this operating system, has been recognised as highly impactful. Although WaaS is here since 2015, the way both Microsoft and organisations deploy Windows 10 Feature Updates is still, unquestionably, a learning experience.

To put it clearly – conventional methods of Windows maintenance and upgrades do not fit a Windows-as-a-Service model. To stay on par with Windows, larger enterprises will have to develop a revised approach: a practical strategy that addresses the 'new normal' that WaaS is.

Enterprises will have to get ready. WaaS-ready.

The impact of WaaS is easily underestimated. This is especially true when organisations are still migrating from Windows 7 or have not yet upgraded their Windows 10 install base to a new Feature Update release. The real-world effect of a consistent stream of Windows 10 Feature Updates, combined with the expectation that businesses need become and to stay up to date, is often not recognised in advance.

Enterprises are at risk of facing costly consequences. Enterprises will have to get the processes, tooling and governance in place to empower their IT and Business departments to become WaaS-ready. WaaS needs to be embedded in the organisation and not just on a technical level. As a result, it is critically important to implement WaaS processes, support services

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and solutions to simplify the preparation and accelerate the rollout of Windows 10 Feature updates in a responsible and safe way. A way that helps Business take informed decisions and to be in the driver's seat.

Acting now starts by reading this white paper.

If your enterprise does not have a WaaS strategy nor the proper governance in place, nor the processes and tooling to handle the WaaS processes, get to work right now.

You may (continue to) underestimate it. You may postpone your actions. You may think of building your own tools. You may even expect a solution to present itself or that the standard Microsoft tooling will suffice.

Read this white paper and you will know - it is time to act.

Why you need a plan to be WaaS-ready

Microsoft offers plenty of technical information, tooling and best practices on WaaS, but these are predominantly technical and aimed at the IT department. The cycle of preparing and adopting new versions of Windows 10 is an effort that impact all aspects of business. When looking for guidance on an organisational or governance level, public information is limited.

If you had or have worries about Windows upgrades, you may be in for a surprise: getting your IT up to par with the Windows operating system will not get automatically easier in the Windows as a Service era. While WaaS adaption is often portrayed as straightforward, in large-scale enterprises it is not. Being in control of your desktop estate, with the peace of mind that comes from knowing that your business is safe, will require careful planning and an effort on all levels.

In this white paper, we will help you make the first step towards WaaS-readiness. Why you should be concerned how your enterprise should deal with WaaS. We will explain you how WaaS came about and why it makes sense. We will educate you about what it is, what it means and its challenges. In this white paper, you will get an honest answer on the why-question. And first, and foremost: you will learn about how WaaS connects to enterprises, and how enterprises can make WaaS work for them, in a secure, sensible and efficient way.

Please note; Windows 10 has proven to be a reliable, efficient and secure operating system, and users enjoy being productive on it. As an operating system for the desktop, it is incredibly powerful and highly flexible. Over the years Windows has matured considerably; this is a remarkable accomplishment by Microsoft if you consider how much Enterprise (legacy) applications and hardware are still supported. This paper is not about Windows 10 as an operating system, it is about how you can plan for your organisation to be ready for the WaaS era.

For whom?

Is your organisation currently using Windows 10 or migrating to Windows 10? And are you looking for real-world strategies on how to adopt WaaS for the enterprise desktop environment? Our aim is to make this white paper helpful to everyone looking for the practical WaaS strategy in the enterprise.

The paper is aimed at CIO's, IT managers, Program- and Project Managers, IT architects and any other IT professionals involved in service management. But maybe even more, this paper is geared towards the needs of the business leaders/managers in enterprises. They 'own' the problem when IT does not perform, when apps don't work, when work in business units and divisions is hindered, and continuity may be at stake. This aspect of WaaS is often overlooked. In fact, business-engagement is a critical component of success with WaaS.

What's in it for you?

You will get a better understanding of Microsoft's execution of their inherently complex WaaS vision. You get to know about how MS WaaS strategy impacts large & pluriform enterprises. You will find out which strategies help you achieve WaaS-readiness in the enterprise. By the time you get to that point, you will appreciate some clear suggestions on how to get your organisation ready for WaaS. That is why we will add a word on how we at IDM can help you implement WaaS-readiness with eReadiness.

About the company

We are IDM, *IT Delivery Management*. We are workplace migration experts, with over ten years of experience in supporting medium (10,000+ users) to extra-large (200,000+ users) corporates take control of migrations and upgrades. eReadiness was born in these environments. eReadiness is specifically targeted to control and manage the Windows 10 migration and upgrades. That focus allows eReadiness to be spot-on and straightforward to use in enterprises, without the complicated add-ons that make other products hard to implement and use.

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The road ahead – road signs you should not miss

Before we hit the road, let us look ahead. Working towards a strategy – in other words: getting WaaS-ready – will require a good understanding of the concept of WaaS and how it has evolved since its launch. Along the path we follow, you will notice that for many enterprises it will be hard – if not impossible – to handle the WaaS update process without some form of support. Enterprises that seek to be in full control of this process, will need real-world, proven solutions that offers a way to efficiently manage and simplify this process in a way that fits their organisation.

As WaaS has been around for some time now, you will probably at least have a basic knowledge of what it stands for. Be aware that, over time, the WaaS architecture was overhauled several times. The world of Windows 10 has changed since its launch and Microsoft is frequently finetuning its WaaS proposition.

Enterprises need to find a way to deal with this and to define a strategy for a moving target. We will go into that process to a certain extent and help you get started in that area. Before we set out to do that, we need to be aware of the huge impact that WaaS has on large enterprises. Enterprises that are not just big but also complex and handling WaaS will continue to be a learning process.

Windows-as-a-Service and why it changes everything

Let us take you on a brief tour of WaaS and the challenges it brings to every organisation. To come right to the point: you will be very much on your own. There is not a lot of guidance for enterprises that want to get a grip of their update processes and governance in the context of WaaS. Many enterprises are still occupied with the Windows 10 migration from Windows 7, some have already moved on to finding a solution to the big question: how to deal with those recurring Feature updates in the Windows as a Service world? To offer some consolation: you are not the only one that is on a continuous learning path. So is Microsoft. The roots of WaaS lay in the conception of the original Windows operating system. In the 'early days' Microsoft launched new versions of Windows every 3 to 6 years – this started with Windows NT/95/98 and Windows 2000 Professional. Then came the widely adapted Windows XP, to a lesser extent Windows Vista and currently broadly adopted Windows 7. Windows 8 received plenty of criticism (and also Windows

Vista) and were not popular with consumers and businesses alike. As a result, many organisations skipped Vista and Windows 8, leading to big bang desktop migrations every 5 to 8 years. This was the practice up to Windows 8 and to stay up to date, every organisation, small or big, was to orchestrate large, stressful and costly desktop migrations.

This is now forever different with Windows 10. Instead of releasing a completely new version with large functional and architectural OS changes under the hood, Windows 10 is kept up to date with two Feature Updates per year. The large big-bang OS migrations we were so accustomed to are about to be a thing of the past.

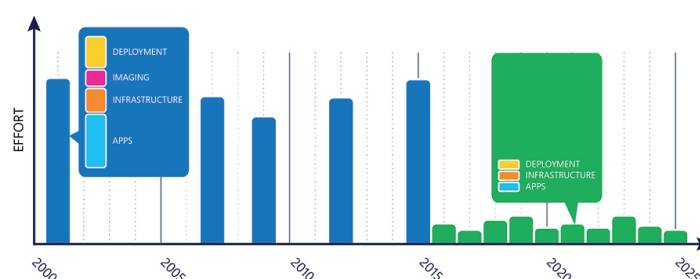


Figure – Microsoft vision on the difference between main OS releases and Windows 10 feature updates

Microsoft designed Windows 10 as a Service, where the 'WaaS' part is very similar to most modern cloud-enabled applications that are consumed as-a-service. Instead of launching large releases with many functional and technical improvements every 5 years or so, Windows feature and architecture updates are now rolled out in smaller 'chunks', twice per year. The concept makes sense: smaller changes, in a higher frequency have less impact. This change makes sense but gets lots of criticism and push-back from enterprises and its watchers. Microsoft is still finetuning its approach of releasing smaller bite-size updates for Windows 10 that was – we should not forget that – under the hood originally designed for classic, big-bang new releases. Windows 10 is not a completely rebuild OS, Windows 10 foundation is built on more than 20 years of previous Windows versions.

Does WaaS make sense?

Very much so. The 'big bang' OS migrations of the past, including the latest migration to Windows 10, are a massive burden. Typically, Desktop OS migrations are lengthy 'all hands-on-deck' projects, throughout the organisation. Desktop migrations characteristically impacted all users,

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applications, client hardware and back-end infrastructure. Often, these migrations forced organisations to invest considerably in hardware refreshes; in addition to many applications which required fixes and upgrades. Enterprises have struggled – and many still are – to get to the next level. Let's face it: classic desktop migrations take time, money and a lot of effort, including the mitigation of potential business impact.

There is more. WaaS allows the Business to benefit significantly faster from new features and more importantly fundamental security improvements than we were used to with the lengthy release intervals of classic Windows. After a couple of years 'old-school' Windows felt out-of-date and was lagging innovation. With WaaS this is now changed, and Windows 10 is now much better aligned with the requirements of current times.

No matter how you look at it, there is no way around WaaS. Enterprises need to embark on this trip, even though the Business owners in the enterprise would rather invest in new releases of their CRM app, or in anything else that makes their operation more competitive right away. Nevertheless, it always be difficult to directly quantify the value of migrating to a new desktop OS in tangible business benefits.

One thing is not very helpful. Although WaaS has been launched as a concept that will make everything easier, the concept and the way it is deployed is confusing and it is not easy to fully understand its meaning and consequences. So if you are confused: you are not alone.

Here is how Microsoft 'sells' WaaS to the world. According to Microsoft, it "provides a new way to think about building, deploying, and servicing the Windows operating system. The Windows-as-a-Service model is focused on continually providing new capabilities and updates while maintaining a high level of hardware and software compatibility."

One big benefit, says Microsoft, is that WaaS makes deploying new versions of Windows "simpler than ever before". "Microsoft releases new features two to three times per year rather than the traditional upgrade cycle where new features are only made available every few years. Ultimately, this model replaces the need for traditional Windows deployment projects, which can be disruptive and costly, and spreads the required effort out into a continuous updating process, reducing the overall effort required to maintain Windows 10 devices in your environment."

With so many Feature Updates, it makes sense that Microsoft forces their customers, both consumer and business, to 'get with the game'. As many releases of Windows 10 are functionally and technically considerably different, Microsoft needs all users to update to recent releases within a reasonable timeline. If Microsoft would not do this, too many different and legacy Windows 10 releases would need to be supported. This

would be a nightmare scenario for both Microsoft and all Windows users, resulting in a support hell, that would slowdown innovation and make Windows 10 less secure, without doubt.

There is another reason why you should get with the game soon. The Windows 10 End User Licence Agreement (Win 10 EULA) requires the users to stay up to date in order to remain supported by MS. If you don't, Microsoft will charge Enterprises an additional support fee after the grace period has expired. And this extended support will cost you big-time! This is what enterprises are facing:

- During the first year of ESUs (January 2020 to 2021), those using Windows 7 Enterprise will pay \$25 per device. This doubles to \$50 in the second year and goes up to \$100 for the third year.
- Staying on Windows 7 Pro is going to cost even more. ESUs will start at \$50 before going up to \$100 in year two and \$200 during year three.

New terms and concepts related to WaaS

Let's take a closer look on Microsoft's plans and ideas regarding WaaS. We go right to the source: Microsoft's own quick guide to the most important concepts of WaaS². With WaaS, Microsoft introduces some new terms and concepts.

- **Feature updates** will be released twice per year, around March and September. As the name suggests, these will add new features to Windows 10, delivered in bite-sized chunks compared to the previous practice of Windows releases every 3-5 years.
- **Quality updates** deliver both security and non-security fixes. They are typically released on the second Tuesday of each month ("Patch Tuesday"), though they can be released at any time. Quality updates include security updates, critical updates, servicing stack updates, and driver updates. Quality updates are cumulative, so installing the latest quality update is sufficient to get all the available fixes for a specific Windows 10 Feature Update. The 'servicing stack' is the code that installs other updates, so they are important to keep current.
- **Insider Preview** builds are made available during the development of the features that will be shipped in the next Feature Update, enabling organisations to validate new features as well as compatibility with existing apps and infrastructure, providing feedback to Microsoft on any issues encountered.
- **Servicing channels** allow organisations to choose when to deploy new features.
 - The Semi-Annual Channel receives Feature Updates twice per year.
 - The Long Term Servicing Channel, which is designed to be used only for specialised devices (which typically don't run Office) such as those that control medical equipment or ATM machines, receives new feature releases every two to three years.
- **Deployment rings** are groups of devices used to initially pilot, and then to broadly deploy, each Feature Update in an organisation.

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How is Windows 10 upgraded in the WaaS era? Two options: SAC and LTSC

- Windows 10 has two main channels (previously named branches):
- The Long-Term Servicing Channel (LTSC), which is designed to be used only for specialised devices (which typically don't run Office) such as those that control medical equipment or ATM machines. LTSC is stripped of many features, only essential functionality remains. It is supported for 10 years. Feature updates for LTSC only occur every 2-3 years. Important note: adopting new features is not mandatory. Microsoft will not force you to adopt/participate. LTSC does receive monthly quality updates with fixes and security improvements.
 - The Semi-Annual Servicing Channel (SAC) receives Feature Updates twice per year – it is mandatory to closely follow Microsoft's lead – only recent Feature Update releases will be supported. 18 Months after the Spring release and 30 months after Autumn release, Microsoft requires you to update to a new Feature Update release. If you don't, Microsoft will charge significant additional support costs that will increase every year.

What does this mean for your enterprise?

At first, you may find that the LTSC option looks attractive, as you will not be forced to join the Feature Update race and save a lot of time and effort. There is a downside, which is why many experts will advise not to choose this option; its limited support (e.g. Office 365 is not officially supported) will become a burden and missing out on the essential security features poses a risk that not many enterprises are prepared to take. In the early days of Windows 10, many organisations have tried to use LTSC (then known as the Long Term Servicing Branch) for broad adaption. This minimised the effort required to manage Windows 10 Feature Updates. However, in practise, LTSC has proven to be too limited for the general desktop population.

That brings many enterprises back to square one: the Semi-Annual Servicing Channel. Most organisations opt-in for the Semi-Annual Channel for Windows 10. That means that they have to follow/comply with Microsoft's Spring and Autumn releases. These offer a rich array of 1) new functionalities for end-users – e.g. the new clipboard functionality that includes history; 2) improved IT management features for enterprises; 3) security and performance updates, which can have a serious impact on applications and can require additional driver updates.

When choosing SAC, it is highly recommended to also include LTSC as a deployment option, especially when Windows 10 is deployed on (often business-critical) single purpose machines. Don't make the mistake to feel forced to choose either SAC or LTSC, both servicing channels have their value and should be deployed accordingly.

About Feature Updates

"Prior to Windows 10, Microsoft released new versions of Windows every few years. This traditional deployment schedule imposed a training burden on users because the feature revisions were often significant. Windows as a Service will deliver smaller Feature Updates two times per year, around March and September, to help address these issues. In the past, when Microsoft developed new versions of Windows, it typically released technical previews near the end of the process, when Windows was nearly ready to ship. With Windows 10, new features will be delivered to the Windows Insider community as soon as possible — during the development cycle, through a process called flighting — so that organisations can see exactly what Microsoft is developing and start their testing as soon as possible." - Microsoft

More issues to address testing, feedback, insider builds

In the 'old days' when new releases came out every couple of years, Microsoft used to spend much time and effort on testing, followed by a long beta-period. Today, as you may have read in the media, Microsoft's test teams' capacity has been reduced to half or a third of the original capacity. Nowadays the company first launches its Feature Update releases as an 'Insider Build' to which Windows 10 users, early adopters who are interested to preview Windows 10 changes, can offer comments and suggestions.

In addition – and this has also caused criticism – testing of Windows 10 is done on consumer devices, before windows 10 versions are declared 'fit for business'.

Microsoft has implemented telemetry solutions, from which it can deduct which features or functionality fail or have serious problems. In addition, big data and deep learning are used to track problems and confirm which third-party applications and drivers are compatible. The user feedback by 'Windows Insiders' and real-world data provided by telemetry, and deep learning have allowed Microsoft to efficiently test the official launch of its Spring and Autumn releases.

This seems like a very good idea, but in practice, enterprises face interesting challenges with this novel approach. Many of the self-developed enterprise applications will not benefit from this telemetry-based compatibility assessment. The beta testing of Insider Builds is mainly performed by consumer users using generic applications, not by users in businesses, let alone enterprises. This limits the scope and the quality of the feedback – that may often be irrelevant to the often-complex IT situation of enterprises that use niche and in-house developed custom applications. Over time, new Windows 10 releases have taken a long time to become solid and stable, due to this new approach by Microsoft.

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How to deploy? Enter the ring deployment

For the general deployment of Windows 10 Feature Updates, Microsoft invented the ring strategy. Microsoft uses this for Windows 10 Feature Updates in the consumer space, but also recommends businesses to use the same method for Feature Update roll outs. Here we see the application of deployment rings, as Microsoft – Technet³ explains. “Deployment rings in Windows 10 are similar to the deployment groups most organisations constructed for previous major revision upgrades. They are a method by which to separate machines into a deployment timeline.

With Windows 10, you construct deployment rings a bit differently in each servicing tool, but the concepts remain the same. Each deployment ring should reduce the risk of issues resulting from the deployment of the Feature Updates by gradually deploying the update to the entire company.”

This is how Microsoft initially visualised the Windows deployment process. Deployed in rings, first to ‘insiders’, then targeted, then semi-annual channel:

To be honest: the new approach for deploying Windows in the WaaS era does make business sense from a Microsoft point of view. The direction that Microsoft took with Windows is consistent within the overall strategy of transforming into a (cloud)services company.

And they make it seem easy, as we can learn from the QuickStart document⁴:

“Because app compatibility, both for desktop apps and web apps, is outstanding with Windows 10, extensive advanced testing isn’t required. Instead, only business-critical apps need to be tested, with the remaining apps validated through a series of pilot deployment rings. Once these pilot deployments have validated most apps, broad deployment can begin. This process repeats with each new Feature Update, twice per year. These are small deployment projects, compared to the big projects that were necessary with the old three-to-five-year Windows release cycles.”

Windows as a service: Deploying Windows

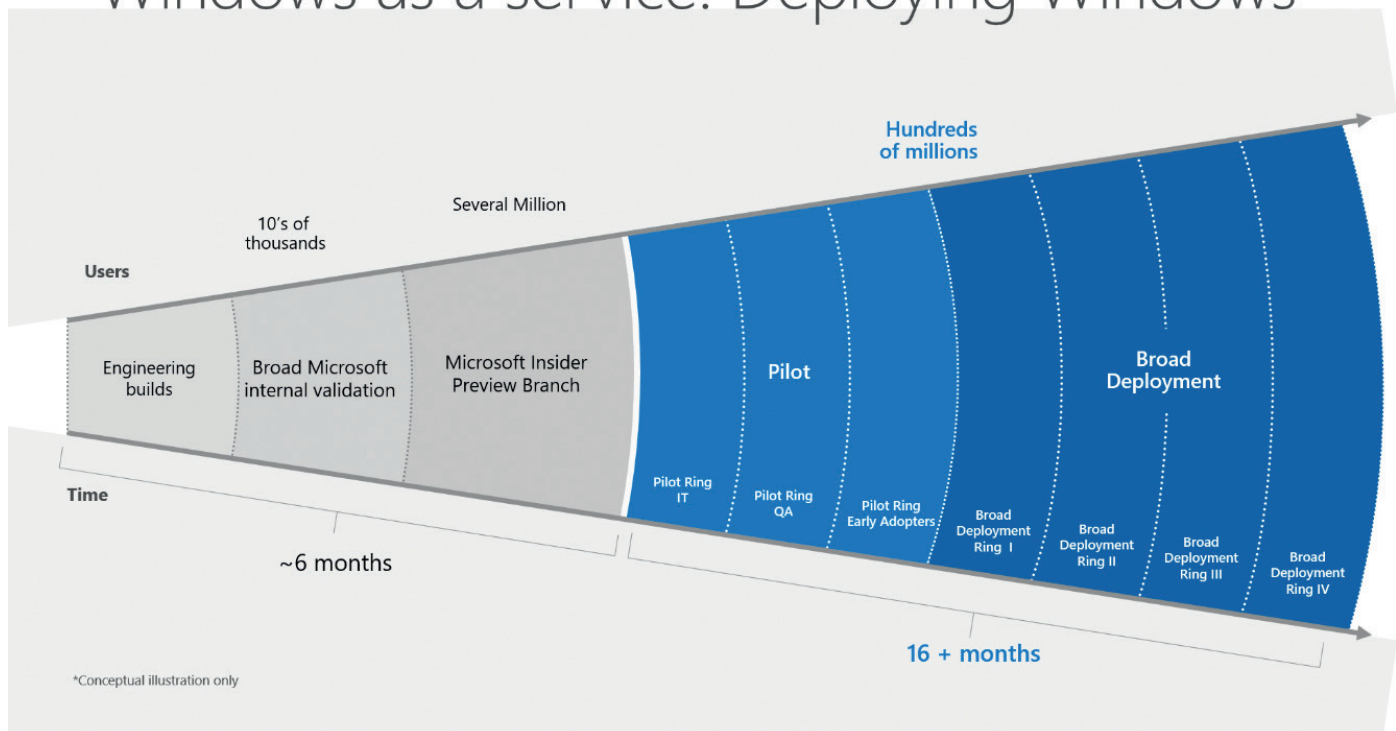


Figure – Microsoft vision on using deployment rings to scale up the release of an feature update

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Easy? Maybe not

Initially, Microsoft advised its customers to establish a changes and Feature Update release 'rhythm' that looks like this:

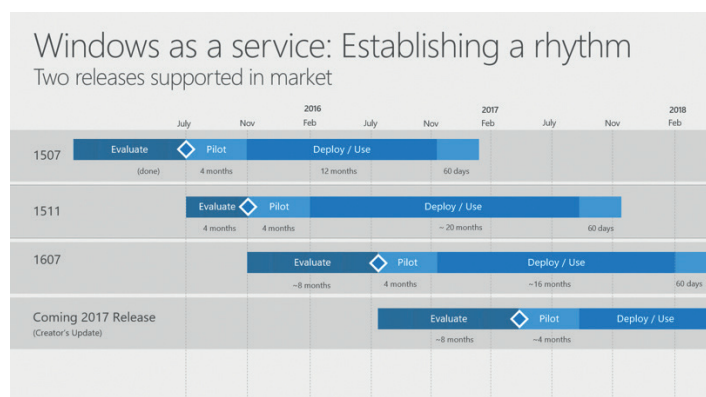


Figure – Microsoft original vision on Windows as a Service releases

To better understand what is new in each release:
<https://docs.microsoft.com/en-us/windows/whats-new/>

But ring deployment may not be that easy. Microsoft does provide clear guidance for large, distributed enterprises. It aims for a ring deployment type, which in the reality of large enterprise is often preferred. However it is very much a top-down approach that often is not compatible within the pluriform enterprise. Specific departments have different priorities and the worst thing any IT department can do is trying to force a Feature Update down the throat of Business (especially when it is actually already too late).

This may work effectively in the consumer market, but in practice no business will try to adopt every single Feature update release – it would be way too costly. Instead, organisations will choose a specific release, focus on its deployment, and upgrade this Feature Update before its official support-term is ended. Originally, this was only 18 months after the official release of a Feature Update, which is in practice way too fast for large organisations. Understandably, this received much criticism from

Enterprise users, only 18 months is too short for the average enterprise. After much feedback, Microsoft announced in September 2018 that the Autumn Feature Updates are now serviced for 30 months, giving organisations essential breathing room in Feature Update adoption.

While currently supported releases of Windows 10 Enterprise and Windows 10 Education (e.g. versions 1703, 1709, and 1803) will be serviced for 30 months from their original release date, per the Modern Lifecycle Policy, Windows 10, version 1903 and future March-targeted releases will be serviced for 18 months for all editions.

Important: Because Feature Updates in the Semi-Annual Servicing Channel introduce both substantial and small changes to improve security, manageability, performance and user experience, Feature Updates potentially have an impact on all applications and all hardware, both desktops and laptops. Application and hardware (driver) compatibility may be at stake. This impact should not be underestimated and deserves to be properly tested and validated to prevent unexpected issues, costs and frustration.

Without doubt: Windows 10 Feature Updates have a considerably smaller footprint in comparison to typical OS migrations. The overall amount of change is significantly smaller and evidently more manageable. Nevertheless, the biggest mistake is to compare Feature Updates to traditional Windows Service Packs (which consolidated hundreds of hotfixes into a single update) we have seen the last decades.

The truth is, the scope of a Feature Updates is similar to OS migrations. Because Feature Updates do introduce changes on a functional and architectural level, compatibility for all applications and drivers are potentially at risk and must be investigated. Yes, the risk potential of issues is only a fraction in comparison to a complete Windows OS migration, but that potential does still exist and needs to be addressed. Especially considering the fact that hardly no enterprise will roll out every Feature Update. Consequently, a new Feature Update will inherit all the changes of the Feature Updates that were skipped: making the scope of change considerably larger.

Edition	March* Feature Updates	September* Feature Updates
Windows 10 Enterprise Windows 10 Education	Serviced for 18 months from release date	Serviced for 30 months from release date
Windows 10 Pro Windows 10 Pro for Workstations Windows 10 Home	Serviced for 18 months from release date, however based on your setting, the latest Feature Update may be automatically installed on your device upon availability.	Serviced for 18 months from release date, however based on your setting, the latest Feature Update may be automatically installed on your device upon availability.

* Feature updates will be released twice annually with a target of March and September.

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Most organisations would like to rollout the September Feature Update every two years, because it is supported for 30 months. Upgrading Windows 10 actually includes also the changes that were introduced with the three Feature Updates that were released in the meantime. Those 'bite-size' chunks of Windows updates have then accumulated into all the changes of four releases for instance, making its risk potential considerably larger.

Beware: new update methodology

In the Summer of 2019, Microsoft announced a new method for updates, more specifically in the autumn update. This update generally contains a wide array of new features, but not all of them are activated at rollout. The idea is that organisations can choose to activate these features in their own time and pace, step by step. This clearly allows for more control of the impact of the updates. As a result, the Autumn releases resemble a service pack release with mostly quality and security fixes developed for the Spring release. This is an opportunity for many enterprises to start early preparing for an Autumn release, by starting the first tests and pilot on the spring release.

A lot of criticism – and a lot of it justified

WaaS has been controversial in the past four years since it was introduced. Some critics say that Microsoft has made a mess of its update policy. Its set of rules for IT pros are hard to understand and have been changed more than once. One example⁵: "Effective with version 1903, Microsoft is no longer supplying updates on separate channels for consumers and business customers. Instead, the initial public release goes to the Semi-Annual Channel, with no more Semi-Annual Channel (Targeted) option."

After a lot of critical feedback from the market, both consumer and businesses, Microsoft is continually finetuning its WaaS strategy. As an example, the 1909 is a service pack with features included but disabled, these features will be enabled by 'enablement packages'.

Conclusion:

- The WaaS model does make sense, but it is a true paradigm shift for both Microsoft and all Windows users. WaaS is still relatively new and Microsoft is making considerable changes to its strategy.
- Most organisations will choose the Semi-Annual Servicing Channel for general deployment and forces them to 'get with the game': stay up to date, stay supported and avoid the nosedive of increasing technical debt and extended support costs.
- It is expected that most Enterprises will prefer to deploy the Autumn Feature Update that is now in service for 30 months. As a result, it is now possible to establish a much more manageable bi-annual release rhythm.
- Because most enterprises will skip Feature Updates releases for deployment, all changes and new features of those omitted releases

are now accumulated (two releases every year) when a new release is chosen for deployment. As a result, the impact of upgrading your desktop estate to a new Windows 10 Feature Update should never be underestimated. Although the overall risk potential is smaller than you may be used to in a typical OS migration, the scope remains almost the same: all applications and hardware are potentially affected and need to be validated before rollout.

Never underestimate WaaS. Start working towards an enterprise strategy now.

We have seen that WaaS offers a challenge for any organisation. Both technical and organisational. Because of all the issues that we described in the first chapters of this white paper, one thing becomes abundantly clear: enterprises need a new and different approach, a paradigm shift. Treating Feature Updates as a typical hotfix or service pack does not address the complexity, scope and risk potential these Feature Updates have in the real world.

For those in charge of IT at large enterprises, there are many questions that need answers. Two examples:

- What is the impact of the updates from the Semi-Annual Channel and the Long-Term Servicing Channel?
- How to deal with these updates in a way that is safe and effective, allowing the Business of the enterprise to have a say about 'what', 'how' and 'when'? Or better, how to create a partnership between IT and Business to that effect?

The context for large, complex enterprises

Most enterprises have several business units that have very different needs. They utilise many different applications as well as legacy systems. Often, enterprises have hundreds of thousands of employees and desktops, working in many different countries across the globe across different divisions and business units.

WaaS offers a huge challenge and raises big questions about compatibility of devices and about how an organisation can keep up with the updates of the supplier of its ever-important operating system. Feature updates have a huge impact on organisations and on application compatibility and drivers.

This means that Windows Feature Updates require organisations to approach them a bit as OS migrations, similar to Windows 7 to Windows 10. Quite often these projects are very stressful for both IT and Business and require loads of time, budget and planning.

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True, a Windows 10 Feature Update is not as complicated a full-on platform migration like moving from Windows 7 to Windows 10. While from a functional point of view changes are way less dramatic (so much so that functional questions are often supported by peer users), it is still essentially important to:

- validate and test all generic apps, business applications, security software and access solutions
- make sure (older) desktop and laptops, including connected devices are fully supported.

Some may use the term 'evergreen IT' in which it expects the complete IT environment to be up to date – always. But that will only work in organisations that are young, have no old-school legacy applications and that operate Windows in a very standard way.

The technical tooling that Microsoft offers to support, is aimed to empower the IT service organisation that goes to the Business of the enterprise to roll out and test Feature Updates time after time. Typically, Windows 10 Feature Updates are not what the Business wants to spend its resources on. It is therefore no surprise that the practice of testing, investing in costly updates to only fix compatibility issues and eventually the roll out of Feature Updates will result in opposition.

Don't underestimate the importance and effort of technical and functional testing. Many enterprises operate legacy, non-standard hardware and apps that need support and that may turn out to be showstoppers in Feature Update projects. The IT department can offer technical testing, but especially for functional testing and (funding of) remediation of compatibility issues, the cooperation of the Business is required. If this is not done, every Feature Update release poses a potential threat to business continuity.

In short: the concept of evergreen IT does not offer the Business of the organisation control over their situation. Over time, it has become clear that handling Feature Updates should no longer be an only an IT department issue. The Business of the enterprise needs to be involved – and empowered – to avoid the risk of lagging behind on Feature Updates, with the technical debt and the cost that can be a result of that.

What about MS' support?

What support (tools) does Microsoft offer?

1. Windows Update for Business allows IT professionals to utilize the cloud-based Windows Update service to deploy and manage Windows updates. You can use Group Policy or MDM solutions such as Microsoft Intune to configure the Windows Update for Business settings that control how and when Windows 10 devices are updated.
2. Microsoft Intune is a cloud-based service that focuses on mobile device management (MDM) and mobile application management (MAM). Intune is included in Microsoft's Enterprise Mobility + Security (EMS) suite, and enables users to be productive while keeping your organization data protected. It integrates with other services, including Microsoft 365 and Azure Active Directory (Azure AD) to control who has access, and what they have access to, and Azure Information Protection for data protection.
3. Microsoft Configuration Manager, the most widely used management platform for Windows in the enterprise. System Center Configuration Manager (SCCM) is a Windows product that enables administrators to manage the deployment and security of devices and applications across an enterprise. SCCM is part of the Microsoft System Center systems management suite.
4. Desktop Analytics (original name: Windows Analytics or Upgrade analytics). This agent on desktops gathers data and compares it to Microsoft's databases to help identify known incompatibilities and other issues for generic applications and hardware. This solution has proven to be of value to organisations migrating to Windows 10 or upgrading to a new Feature Update. Using the vast telemetry data Microsoft collects from all Windows 10 machines, Desktop analytics helps organisations to quickly assess all their software and hardware assets, allowing to focus their effort on only unknown and known compatibility issues.

Unfortunately, these tools don't offer the support that enterprises (and more specifically: their business departments) need. These tools are not segmented; there is only one overall view of all assets and application compatibility issues; the tools do not manage the process of compatibility testing and remediation.

***'Don't underestimate
the importance and effort of technical
and functional testing'***

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Will the transition of Windows Analytics to Desktop Analytics bring the necessary change? It will not, as Desktop Analytics is still much more an inventory tool (albeit extremely useful for finding potential issues), not a process solution. Not if the solution/tool will be offered exclusively to customers that have a (more or less) full license and to users of Microsoft Configuration Manager. That is the catch... and a costly one. The Microsoft business case of subscription models does not fit the needs of every enterprise.

Because of all this, many enterprises will start looking for alternative solutions. They want a tool that helps manage the process. That puts the Business in the drivers' seat. That adjusts to the enterprise instead of the other way around.

Conclusion:

- Upgrading to a new Feature Update cannot be addressed like a regular service pack update, but also should not need the definition of a new migration project, as each Feature Update project would require too much overhead and effort.
- Microsoft's generic 'Evergreen' approach for WaaS does not recognise the unique and heterogenic, pluriform nature of many of the world's enterprises, in which the Business priorities are leading IT, not the other way around.
- Microsoft's support tools will not automatically solve compatibility issues that come with a new Feature Update. They do help assessing potential problems and help manage the rollout. Microsoft's support tools do not actively manage the effort of compatibility testing and remediation, which is a vital and labour-intensive component of preparing the deployment of a new Feature Update.

Enterprise WaaS strategy, according to Microsoft

This is the short version:

- Configure test devices
- Identify excluded devices
- Recruit volunteers
- Update Group Policy
- Choose a servicing tool
- Prioritise applications

This is what the IT department should do when a new Windows 10 Feature Update comes out. "The IT department should use the following high-level process to help ensure that the broad deployment is successful."

1. Validate compatibility of business-critical apps.
2. Target and react to feedback.
3. Deploy broadly.

How to get in the driver's seat: first steps towards a strategy

What should a proper WaaS strategy look like?

The first building blocks

When adopting a WaaS strategy it is crucial to give Business a sense of control. This requires a fundamental change, which can be complicated in many enterprises. Each enterprise has its very unique supply-demand organisation for IT. How IT and changes are delivered by the IT department and how they are consumed by the Business varies greatly. This is defined by how old an organisation is, how it grew and expanded by mergers and acquisitions, how many departments and Business units it has, the amount of people, locations, states and countries they operate.

Typical for such large organisations, core IT services and specific IT business are delivered by a central governing IT department, that is also responsible for standard and overall IT strategy. Quite often on the Business IT end, decisions are made decentralised based on region or specific business unit or department. Without support of the Business IT, it is simply impossible to roll out Feature Updates on Windows: Business IT needs to be involved!

What you should be aware of

Feature updates cannot be handled like regular changes, while the monthly quality upgrades often only require technical tests and limited technical tests. Feature updates potentially impact every user, device and application. This is what you need to be aware of:

- Feature Updates can have a high impact on clients/productivity when being rolled out:
 - Currently Microsoft aims to have only a single reboot on the client
 - But when skipping Feature Update releases, catching up requires more reboots
 - Expect 'downtime' per client of 20 – 60 minutes
- You need to be aware of device compatibility
 - Drivers updates are usually available, but need to be implemented, especially when they are not in-box
 - > Legacy drivers (that are not serviced by the vendor anymore) are a big risk!
- Application compatibility requires both technical and functional tests
 - Technical: deployment, configuration and basic test (IT department)
 - Functional: functional tests by test engineers, application owners and end users
 - Typical weak spot, area of attention
 - > Legacy apps
 - > Custom enterprise apps

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What you should avoid: known bad practices

- Coming in unprepared: impact on security and high risk of escalating support costs. When organisations delay or ignore Windows 10 servicing, the technical debt incurred by all the updates waiting to deploy quickly adds up, which yields bigger and more complicated upgrade projects.
- Underestimating the risk-potential of Feature Updates: although not the same as an OS migration all the risks are still there, and all apps, devices and users are potentially affected. Too often Feature updates in Windows 10 are treated like service pack updates in Windows 7, assuming only a limited scale pilot is needed is a recipe for disaster.
- Not treating Business as a partner in WaaS: pushing Feature Updates while the Business has different priorities. The Business needs to be involved in testing and has a big role in finding and funding the remediation of compatibility issues. Especially when too late or pushing updates with the wrong timing because of other priorities, Business will push back.
- Using the conventional project approach: only meet resistance by Business because of past experience and massive effort and risk. Especially for IT services: the matrix of applications, users, devices, departments, locations and stakeholders is simply daunting.
- Traditional tooling is not good enough, traditional project approach will not be accepted. Typically, such projects are planned and managed by endless and highly inaccurate Excel sheets, custom-built in-house compatibility databases where in hindsight the result is a mixed bag.

The costly alternative: hiring an IT partner to take charge of your migrations

Because of the complexity and the impact of the job, it is quite imaginable that businesses leaders look to IT partners to help them. This is often an expensive exercise, in which over-ambitious projects introduce highly complicated project management solutions that need way too much effort and lead-time to implement. Let alone the effort and cost, such solutions require customisation to fit the enterprise needs.

Too often it is attempted to fit the enterprise to the third-party solutions and/or services, whereas everybody knows it should be the other way around.

As a complicated challenge like WaaS becomes considerably more difficult in complex large-scale enterprises, the strategy, services and solutions to approach WaaS need to be as easy and effective as possible, without oversimplification.

Take control, part 1: shifting to 'WaaS-readiness'

Now that we know that a true Evergreen IT is not a feasible approach in most large-scale enterprises, and we need to define an alternative: a strategy and approach that works for large and complex enterprises. We will cover the what & how step by step. For your convenience, we will offer you checklists and do's & don'ts lists.

Let's define: the qualities of an enterprise WaaS-readiness service

- It must be based on the understanding that WaaS is genuinely new and requires a different strategy and processes – different from what has been done before.
- It must address the complexities of enterprise environments. Overly simplifying WaaS will not fit. Feature updates cannot not be handled as a regular change, as its scope and risk potential are too great.
- Implement WaaS as a recurrent service, as defining WaaS as a one-off project would require too much overhead (and resistance) and would not adhere to the fact that WaaS requires a continued effort on assessing, validation and remediation of compatibility issues with the rollout of new Feature Updates.
- Implementing WaaS-as-a-Service is not an IT-only expedition; Business (IT) is a major partner for testing and (funding) compatibility fixes. Because the Business is aligned in the WaaS service, the service should give the Business side of your organisation a solid sense of control, which dramatically increases adoption of WaaS.
- The service should be transparent, lightweight, spot-on and straightforward to everyone involved. Every service will require effort and attention to detail, but to be effective as simple as possible to understand and implement.
- It should allow efficient communication and collaboration with all stakeholders, with information as transparent and specific as possible, to everyone.
- A WaaS-readiness service should avoid guesswork, make the risks and required effort quickly understandable and planning suited for specific organisations.
- Also, the service definition should be flexible, as MS regularly introduces servicing changes and optimisations for WaaS. You need to be able to adapt to these changes.

When executed right, the approach should positively affect the relation between the IT delivery and the Business.

The WaaS-readiness **strategy guide**

Let's define: What should an enterprise WaaS-readiness service be capable of?

Because of the inherent WaaS complexity, conventional tooling does not suffice. Look for a solution that allows you to build a WaaS-readiness service, that is able to:

- update governance, implement Windows Feature Updates as an internal service⁶
- quickly generate an overview of application and device readiness with the release of a new Feature Update, to quickly assess issues and 'hot spots'
- easily overview all devices and apps, compatibility issues and its progress on testing and remediation
- support planning and organising multiple feature releases; especially in large organisations rollout phases can vary considerably per department or region
- define your own specific waves schedules for deployment that fits your organisation
- delegate control of wave assignments and migration readiness management to people 'on the ground'
- present specific and actionable planning and progress views for all stakeholders so they can fully focus on their own scope
- easily align with existing user-facing services (self-service and communication solutions) and Windows management/deployment solutions used by the IT department
- get an always up-to-date and actionable overview of affected devices during the rollout of Feature Updates
- minimise the dataset where possible (too often too much data leads to an information overload (which is a real problem with so many affected devices and applications))
- easily introduce business identifiers of (users), devices, app and progress, so it fits each unique enterprise organisation
- offer different views for different roles: from CIO to Business IT stakeholder, application owner and application tester, to program manager, service owner or IT admin
- make exceptions for specific devices or applications; you don't want a process tool that is too rigid when flexibility is required

Beware of green field

It is also important to understand that no approach should assume a green field situation. The far majority of enterprise are still migrating from windows 7. And those actively using Windows 10, are still figuring out how to approach WaaS. It is very clear that in practice you need a strategy that aligns in the current state of IT.

What information and tools does a CIO/Service Owner/VP IT Operations need?

- Early estimation of Feature Update impact on devices and apps
- Review overall progress on devices and app readiness
- Review deployment progress of Feature Updates

What information and tools does a Program Manager/Project Manager/Service Owner need?

- Review and manage app and devices readiness
- Plan for ring/wave deployment
- Configure and assign application test groups
- Review deployment progress

What information and tools does a Business Stakeholder/Deployment manager need?

- Review and control app and devices readiness specific to their business unit
- Plan for device assignment to waves
- Configure and assign Application Test Groups
- Review deployment progress

What information and tools does an Application Owner/Application Tester need?

- Overview of applications which he/she is responsible for that need further investigation, testing and possible remediation
- Report issues as being tested and/or fixed. This makes clear that compatibility hurdles are being addressed or stagnant

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Let's define: the do's – best practices

Essential #1: educate business, stakeholders and users on WaaS. Make sure everybody understands that this is a learning process.

Essential #2: the quality of the inventory data is super important. Act upon this.

Essential #3: use tooling that helps manage the processes, that provides the necessary and relevant information for all stakeholders – especially for business owners, application owners and testing groups. This information should be accurate and actionable.

1. Get the basics right:
 - Ensure the integrity and quality of the inventory data
 - Create an inventory and documentation of data flows for inventory data used
 - Establish and formalise governance first: this is not a standard project!
 - Update change processes to establish WaaS
 - Test and adapt processes based on feedback, continuously.
 - Implementing WaaS will be a learning experience.
 - Update/tune/change the support organisation to be "faster"
 - Remove as much as complexity as possible, keep doing this (e.g. historic image customisation)
 - Assign an owner for the inventory data (-quality)
 - Communicate, act, react and communicate again
2. Start small, preferably with a business unit with a high willingness to participate
3. Prioritise: which apps are business-critical, and which are not?
4. Gradually increase scope
5. Use testers that provide feedback, the more the better, and: make them responsible for this important task
6. Maintain and communicate application lists/fact sheets/known issues
7. Don't be shy to use LTSC where it makes sense
8. When designing the upgrade solution, don't forget to add 'markers' to be able to track progress

Let's define:

The don'ts – often-made mistakes

- Starting (too) big
- Not thinking of WaaS already when migrating to Windows 10
- Starting without proper governance in place
- Not educating the broadness of the change that comes with WaaS
- Not categorizing and assigning criticality to applications
- Don't use the same pilot groups you used for patch deployment in Windows 7

Take control, part 2: building a WaaS-readiness service with eReadiness

There is no shortage of tooling in the world to manage upgrade and update procedures. Many products operate in a rather complex fashion and do not offer an overview nor a decent outlook at all of what lies ahead. Nor do they allow organisations to stay in control of their migration and upgrade processes – at their own pace. Some providers even require enterprises to adapt to their tool – it should be the other way around.

Enterprises are looking for a process management tool that actually helps organise and monitor the full process of updates in a way that is required in the WaaS era.

This is how the concept of a WaaS-readiness service was born: from within the enterprise world. In fact, the foundation was laid in a high-level enterprise IT environment, in close collaboration with a global logistics company. This enterprise wanted to choose its own order or actions and its own road map & time path, instead of compulsively following the deadlines that Microsoft's end-of-life messages dictate.

This enterprise has been using the solution ever since – it has full control of its migration and upgrade processes thanks to the benefits of Intelligent Deployment, offered by the eReadiness solution.

Development of the concept of a WaaS-readiness service was constantly guided by experiences from inside this and other enterprises. When the developers got it right after over a year of hard work and testing, they called their set of tooling eReadiness.

Ever since the launch, eReadiness impressed the most demanding test experts for how it makes complex operations uncomplicated – and how it makes an organisation ready to start migrating. Such a process can only start with a good overview of the size and complexity of the project of migrating and updating before the end of life date.

The planning/monitoring solution shows which clients are active, on what software, with the actual and future support status. Depending on how you configured the tool, it offers insight in the total project load and in the progress of the actions you have taken towards migration or update. And above all: eReadiness helps achieve full control of the entire process that is necessary to deal with the WaaS requirements and provides actionable information to all stakeholders.

In short, eReadiness offers a (Windows Desktop Analytics-integrated) process management tool that helps enterprises to be WaaS-ready and tightly control the processes that are associated with WaaS. It does so

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in a hands-on and flexible way, acknowledging that all enterprises are different. eReadiness empowers the Business in testing and deployment.

eReadiness – what does it help you to do?

From the ground up, eReadiness is designed to augment your existing IT service and device management solutions to plan and prepare WaaS upgrades. eReadiness will not replace them. Also, it will only integrate where needed.

Note: If your enterprise agreement includes the right to use Desktop Analytics, eReadiness can integrate the Desktop Analytics results seamlessly. When your current enterprise agreement is not eligible to use Desktop Analytics, eReadiness will support alternative methods for a quick scan of potential compatibility issues. This will help you to instantly identify possible compatibility problems, validate them and start looking for solutions to overcome these hurdles for deployment.

The key benefit of eReadiness is that it fully supports all aspects of setting up an efficient WaaS readiness service:

- The initiation of a build (aka project) that includes a new Feature Update for deployment.
- Collect inventory data from all relevant data sources for applications and devices.
- Establish an overview all applications, devices and hardware types, including known and unknown compatibility issues.
- Organise testing of compatibility issues and monitor progress on compatibility issue remediation.
- Define your own wave schedules for the deployment of a new build.
- Control and monitor the progress of the deployment of a build on all Windows clients.
- Display actionable and role-specific data for all stake holders (e.g.):
 - CIO/Service Owner/VP IT Operations
 - Program Manager/Project Manager/Service Owner
 - Business Stakeholder/Deployment manager/IT administrator
 - Application Owner/Application Tester
- Implement delegation of control: create users and groups that have only access to relevant data (for example: a test user or application owner can only view and modify authorised applications, and a regional deployment manager only sees the client devices that are under his administrative control).

Specifically, eReadiness allows you to:

Manage and orchestrate your Builds, Waves and Schedules

- Easily create and configure different 'Build upgrade projects'
- Clear overview of important dates and statistics
- Enabled/Disable Deployment Waves, configure "wait time" for deployment start
- Create and Configure Deployment Waves for Deployments
- Keep historic data of previous upgrades

Analyse, Monitor and accelerate applications readiness

- Simple overview of application readiness per deployment project
- Focus on applications that need to be tested
- See Application details with configurable categories, criticality and division
- The applications are used by view readiness status per deployment project
- Sort by installed base to see which application are used the most
- Details of different application versions used
- Easy overview of test results
- Readiness information per deployment project / Windows 10 version
- Define application categories and criticality
- Configure and assign Application Test Groups
- Add 'custom application lists' to monitor and manage readiness for
- Configurable Readiness status based on Ready for Windows data
- Configurable tester groups per application
- Allow application testers to report on their progress and update the status of issues

Review and supervise progress on a device level

- Statistics and overview of devices status Assigned to Deployment projects
- Overview of unassigned / excluded devices
- Overview of Readiness and progress per deployment project
- Detailed overview per device
- Device details, corporate details and Upgrade details visible

Communicate role specific actionable status and progress information

- Throughout the interface, statistics show the actual progress (coloured and numbers) per clients, applications, waves including remaining devices or applications
- Easily see progress against configured schedules
- Main interface shows warning (e.g. unsupported applications for that version)
- Main page shows statistical overview of assigned and unassigned devices



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To get a better understanding on how the eReadiness dashboard presents the data and how it can support your WaaS readiness service to specific stake holders, the following high-level examples are included.

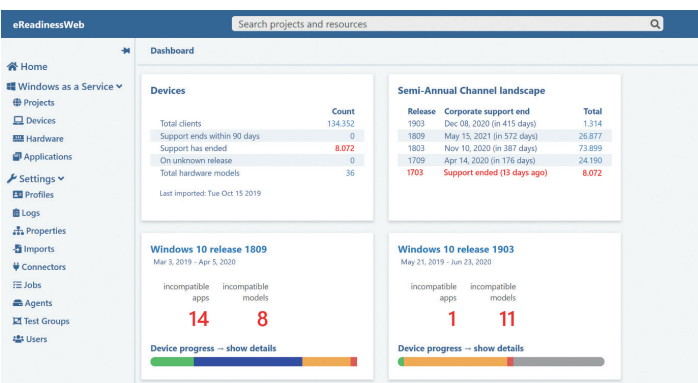


Figure – eReadiness home page

The home page is the starting point, with a quick overview of important dates, high level statistics and progress of active builds. From here you can configure all settings (which is not detailed in this document), create a project for a new Feature Update release, zoom in on a specific build and get an overview of all projects (Feature Update specific builds), applications, devices and hardware types.

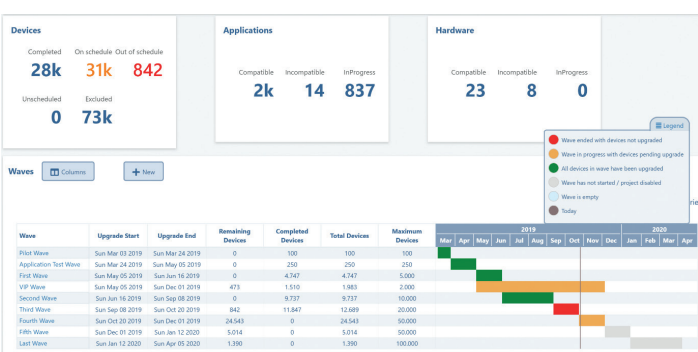


Figure – eReadiness project overview

In the project overview all the important project-specific data is available: progress on all devices, the status of all applications, and the status of specific hardware devices. In addition, an overview of all waves shows the planning and the progress made so far. In this example also a custom VIP wave is included with a deployment time frame of six months: this can be useful for users (often highly mobile laptops) that are more difficult to plan for an upgrade in a specific time frame that is normal for regular Windows 10 devices.

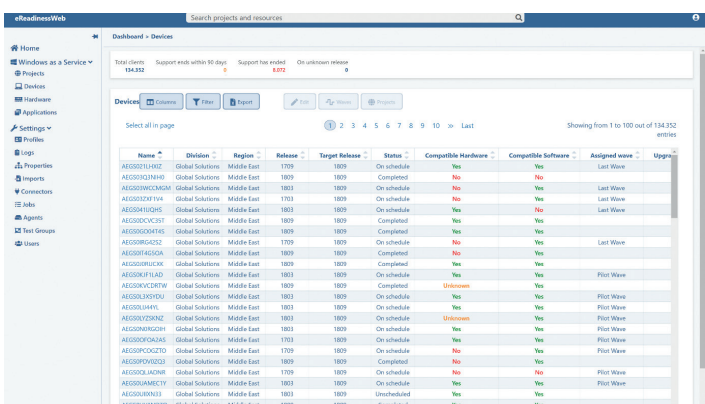


Figure – eReadiness devices overview

The devices overview above details all devices and their status. Because eReadiness includes the possibility to model business specifications, devices can be classified and organised in any way that fits the organisation. In this example the properties 'division' and 'region' are used: this is easily customised and expanded to the specific standards of the enterprise.

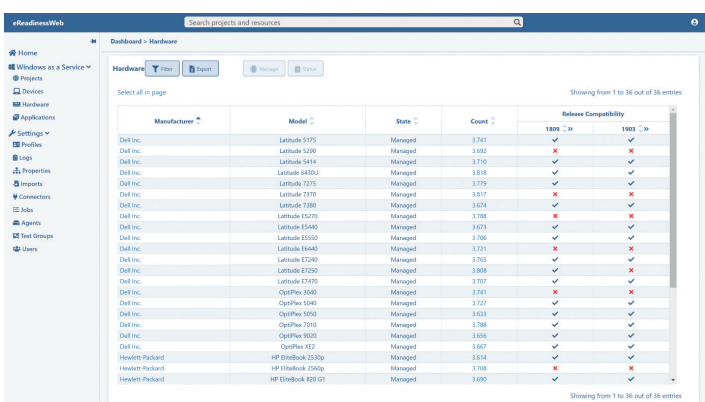
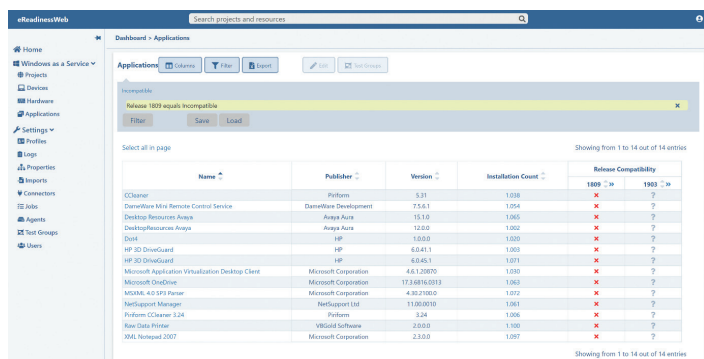


Figure – eReadiness hardware types overview

eReadiness also allows to model hardware types to easily get an overview of which models are not compatible and not suited for a specific Feature Update release. In this example only managed hardware is listed. eReadiness also allows review of unmanaged hardware that is connected to the enterprise network and to collect their inventory data: this is important as many organisations do allow external and BYO client devices.

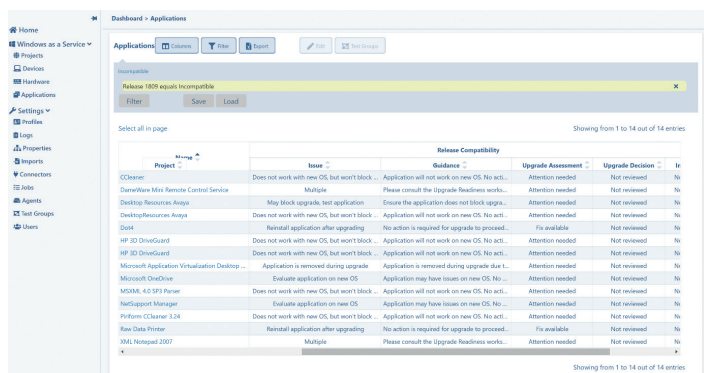
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Name	Publisher	Version	Installation Count	Release Compatibility
CCleaner	Piriform	5.31	1,038	✗ ?
Devware Mini Remote Control Service	Devware Development	7.5.1.1	1,054	✗ ?
Desktop Resources Anylog	Anylog Acura	15.1.0	1,065	✗ ?
DesktopResources Anylog	Anylog Acura	12.0.0	1,062	✗ ?
Disk	HP	1.0.0.0	1,062	✗ ?
HP 3D DriveGuard	HP	6.0.41.1	1,063	✗ ?
HP 3D DriveGuard	HP	6.0.45.1	1,071	✗ ?
Microsoft Application Virtualization Desktop Client	Microsoft Corporation	4.4.1.23070	1,060	✗ ?
Microsoft OneDrive	Microsoft Corporation	17.3.0.1013	1,063	✗ ?
MSXML 4.0 SP3 Parser	Microsoft Corporation	4.30.2100.0	1,072	✗ ?
NetSupport Manager	NetSupport Ltd	11.00.0010	1,061	✗ ?
Perforce Client 3.24	Perforce	3.24	1,066	✗ ?
Real Data Printer	VBUILD Software	2.0.0.0	1,100	✗ ?
XSL Notepad 2007	Microsoft Corporation	2.3.0.0	1,097	✗ ?

Figure – eReadiness application readiness overview

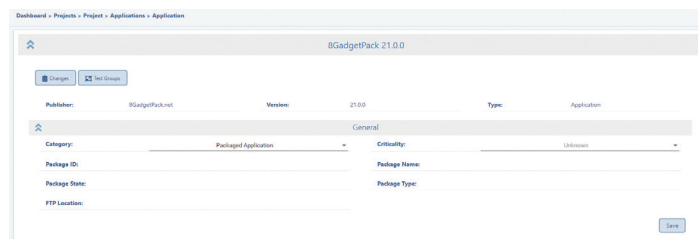
No self-respecting WaaS readiness solution can exist without a complete application overview. In the example above, status information on all applications is available but filtered to display only applications with compatibility issues with Feature Update release 1809.



Project	Issue	Guidance	Upgrade Assessment	Upgrade Decisions	In
CCleaner	Does not work with new OS, but won't block...	Application will not work on new OS. No act...	Attention needed	Not reviewed	No
Devware Mini Remote Control Service	Multiple	Please consult the Upgrade Readiness work...	Attention needed	Not reviewed	No
Desktop Resources Anylog	May block upgrade, test application	Ensure the application does not block upgr...	Attention needed	Not reviewed	No
DesktopResources Anylog	Does not work with new OS, but won't block	Application will not work on new OS. No act...	Attention needed	Not reviewed	No
Disk	Reinstall application after upgrading	No action is required for upgrade to proceed...	Fix available	Not reviewed	No
HP 3D DriveGuard	Does not work with new OS, but won't block	Application will not work on new OS. No act...	Attention needed	Not reviewed	No
HP 3D DriveGuard	Does not work with new OS, but won't block	Application will not work on new OS. No act...	Attention needed	Not reviewed	No
Microsoft Application Virtualization Desktop ...	Application is removed during upgrade	Application may have issues on new OS. No...	Attention needed	Not reviewed	No
Microsoft OneDrive	Evaluate application on new OS	Application may have issues on new OS. No...	Attention needed	Not reviewed	No
MSXML 4.0 SP3 Parser	Does not work with new OS, but won't block	Application will not work on new OS. No act...	Attention needed	Not reviewed	No
NetSupport Manager	Evaluate application on new OS	Application may have issues on new OS. No...	Attention needed	Not reviewed	No
Perforce Client 3.24	Does not work with new OS, but won't block	Application will not work on new OS. No act...	Attention needed	Not reviewed	No
Real Data Printer	Reinstall application after upgrading	No action is required for upgrade to proceed...	Fix available	Not reviewed	No
XSL Notepad 2007	Multiple	Please consult the Upgrade Readiness work...	Attention needed	Not reviewed	No

Figure – eReadiness application readiness detailed overview

In addition, the eReadiness application readiness overview can also display the compatibility details retrieved from Desktop/Windows analytics: this includes issue details, guidance to better understand the potential problem and upgrade assessment & upgrade decisions status.



8GadgetPack 21.0.0

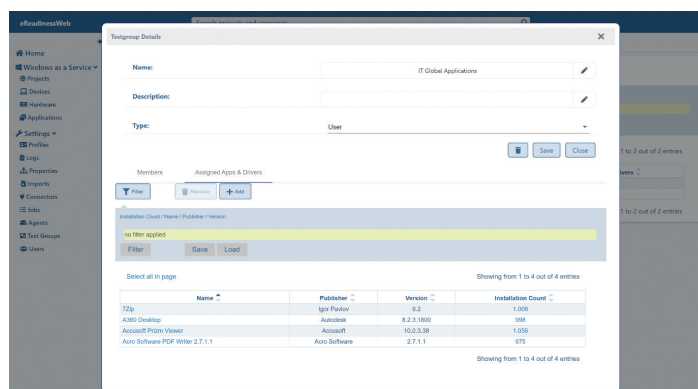
Publisher: 8GadgetPack.net Version: 21.0.0 Type: Application

Category: Packaged Application Criticality: Unknown

Package ID: Package Name: Package Type: Package Date: FTP Location:

Figure – eReadiness application details

Important application details are available and can be customised and categorised to your own enterprise standards. Test groups can be assigned to investigate potential issues and update the compatibility status accordingly.



Testgroup Details

Name: IT Global Applications Description: User: Save Close

Members: Assigned Apps & Drivers

Installation Count / Name / Publisher / Version

Name	Publisher	Version	Installation Count
7Zip	Igor Pavlov	9.2	1,058
ASIO Desktop	Autodesk	8.2.3.1800	988
Account Entry Viewer	Account	10.0.0.0	1,058
Aero Software PDF Writer 2.7.1.1	Aero Software	2.7.1.1	975

Figure – eReadiness test group definition

This example shows the test group configuration pane. Here, test groups are configured, and members and the specific applications are assigned. The users responsible for testing in this group will also use eReadiness to report on their testing progress. Once applications are validated and/or remediated, they automatically will be flagged to be ready for deployment.

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Name	Description	Type	Has Scope	Assigned Apps And Drivers
IT Global Applications	Corporate IT test group for testing corporate applications used ...	User	Yes	21
PARL Application Testers	PARL test group for applications used inside PARL domain	User	Yes	28
SQUIRL Application Testers	SQUIRL test group for applications used inside SQUIRL domain	User	Yes	9
SQUIRL Sales Testers	Testing custom SOVIANT Sales application	User	No	1
Technical Support	Technical test group for known problematic applications	Technical	Yes	33

Figure - eReadiness overview test groups

Finally, this is the eReadiness test groups overview. These groups can be configured for testers in the IT department, outsourced testing organisations and testers/application owners within the Business. The ability to configure multiple test groups allows the engagement of the Business to be structured and transparent. It is now clearly visible who is responsible for the validation and remediation of compatibility issues. This is truly a critical success criteria of an effective WaaS-readiness service.

The aim of these examples is to give a high-level insight on how eReadiness can support your WaaS-readiness service. These examples are not extensive and do not aspire to be complete. To better understand all eReadiness capabilities, visit www.itdeliverymanagement.com and request a demo.

eReadiness in practice

The eReadiness solution improves the relationship between IT and the Business, as it supports a partner approach. The way the large logistics enterprise that was the early adopter of eReadiness manages its update processes for 5,000 applications and 250,000 employees with eReadiness, speaks for itself. In this chapter, we will share with you how eReadiness performs in this environment, what requirements were essential, what choices were made and how the enterprise is benefitting.

True, the eReadiness solution requires an investment for the enterprise. But it is a necessary investment for an enterprise like this, as standard tools in the market don't empower the enterprise to do what it needs to do. Furthermore, it is a sound investment, as eReadiness brings down the huge cost of migrating to Windows' next levels and it reduces the risk of non-compliance and security problems. The higher-quality management of processes that eReadiness brings, pays out in more predictability and less stress than the complexity of WaaS usually brings.

How is eReadiness used in practice within a large international logistics company?

Within this company, eReadiness is used as the primary tool to plan and manage Windows 10 WaaS upgrades. The tool is used by stakeholders of different local, regional and global divisions to manage readiness of Devices and Applications within their scope. In addition, the global cross-divisional IT team creates projects and waves and manage readiness of hardware and global applications.

eReadiness users use the tool to manage and report on device- and applications readiness, after which they add those devices to the pre-created deployment waves. The integration with the deployment tool then upgrades the devices, and progress data is returned to eReadiness.

eReadiness is integrated within the company's Active Directory, inventory- and deployment tooling, where data is synchronised on different schedules, including data on progress of the upgrades (and failure details if any).

The WaaS-readiness **strategy guide**

What was the company looking for, what was the need?

This enterprise was looking for a solution to plan (slice and dice) servicing the Windows 10 WaaS upgrades during the design and implementation of the internal WaaS processes and service. Within the enterprise, it was realised that there is no 'out of the box' solution for tools like this, and customisation of interfaces etc. is always needed but requires to be easy and straight-forward.

Like in many large enterprise, different stakeholders of internal IT supply and Business IT initially had different views and requirements on the processes and tooling that was needed. The most important stakeholders were brought together to define and describe requirements for these. Thanks to the vision and leadership role of the key stakeholders, the work progressed relatively fast.

The choice was made to let the people that would use the tool most have a large vote in the selection, instead of a global team that would not actively use eReadiness. It was decided that it was important that the tooling and data flows and interfaces would be implemented relatively simple and fast.

During the process, different tools were selected that could fulfil requirements, after which a pilot was conducted with two of these tools. Users of different divisions and central IT used both and compared them. An exhaustive comparison of functional, non-functional requirement and cost showed eReadiness as 'best fit for purpose'.

What requirements were essential

One of the most important requirements, even though not initially mentioned, was simplicity. The tool was to be used by people of different divisions in almost all countries in the world – people that are busy and are not dedicated to the new work introduced by WaaS.

In addition, role-based delegation was critical, as different people of different (countries and regions) of division needed to have the ability to be delegated control over their devices and applications. Another requirement was that the tool had an option for rule-based readiness status calculations (configurable) as well as import options from different data sources. Last but not least, affordability (a good and fair price) was also a requirement, as there was limited budget foreseen.

Today, what are the practical benefits that the company mentions in feedback?

Based on the feedback from within the company, the most outspoken benefits are the fact that eReadiness is a lightweight tool that is simple to use and configure and has a flat learning curve. There is not an overload of functionality that confuses and distracts users.

What are the risk benefits mentioned?

By using eReadiness, this company has less risk of having unforeseen devices out of support, is less likely to migrate devices that are not ready to be migrated with outages as a result, and has the visibility, transparency and control of doing wave assignments based on when the (local-) Business is ready.

Overall conclusion

eReadiness has played a crucial role in making the WaaS readiness service clear. This large enterprise would not have been WaaS-ready without eReadiness. eReadiness has enabled the organisation

to actively participate in the process. Success is determined by two crucial components: on one hand, the right service structure with the right tooling. On the other hand, the degree of commitment that the organisation shows when participating in the process.

'eReadiness is a lightweight tool that is simple to use and configure and has a flat learning curve'

The WaaS-readiness **strategy guide**

Read some more about WaaS and what it means to your enterprise

LTSC reading list

- LTSC: What is it, and when should it be used? (blog by MS): <https://techcommunity.microsoft.com/t5/Windows-IT-Pro-Blog/LTSC-What-is-it-and-when-should-it-be-used/ba-p/293181>
- FAQ: Windows 10 LTSB explained (COMPUTERWORLD article): <https://www.computerworld.com/article/3250464/faq-windows-10-ltsb-explained.html#targetText=Officially%2C%20LTSB%20is%20a%20specialized,every%20two%20or%20three%20years.>
- Deploying Feature Updates mission critical devices: <https://docs.microsoft.com/en-us/windows/deployment/update/feature-update-mission-critical>
- Opinion: LTSC: What is it, and when should it be used? <https://techcommunity.microsoft.com/t5/Windows-IT-Pro-Blog/LTSC-What-is-it-and-when-should-it-be-used/ba-p/293181>
- Video: Top ten reasons to use Windows 10 Current Branch vs. Long Term Servicing Branch <https://channel9.msdn.com/Events/Ignite/Microsoft-Ignite-Orlando-2017/THR2010R>
- Real-world issues: Is Windows 10 Enterprise LTSC 2019 incorrectly (repeatedly) offered a Feature Update? <https://borncity.com/win/2019/09/15/is-windows-10-enterprise-ltsc-2019-incorrectly-repeatedly-offered-a-feature-update/>

WaaS has been controversial and is changing continuously, some examples

- Has Microsoft cleaned up its update mess? <https://www.zdnet.com/article/windows-10-has-microsoft-cleaned-up-its-update-mess/>
- It's Patch Tuesday — time to block Windows automatic update: <https://www.computerworld.com/article/3437019/tomorrows-patch-tuesday-time-to-block-windows-automatic-update.html>
- Update behavior for the better in Windows 10 1903: <https://www.ghacks.net/2019/09/06/surprise-microsoft-changed-windows-update-behavior-for-the-better-in-windows-10-1903/>
- Windows 10 Update Study: too complex and not enough control (consumer): <https://www.ghacks.net/2019/02/27/windows-10-update-study-too-complex-not-enough-control/>
- The way Microsoft plans to roll out the next version of Windows 10 this fall is almost certainly a precursor for future autumn upgrades. <https://www.computerworld.com/article/3436618/what-we-know-so-far-about-the-unusual-windows-10-1909.html>
- Recommended Link to overview Feature update releases: <https://docs.microsoft.com/en-us/windows/release-information/status-windows-10-1903>
- The 1909 is a servicepack with features included but disabled, these features will be enabled by “enablement packages”: <https://techcommunity.microsoft.com/t5/Windows-IT-Pro-Blog/Moving-to-the-next-Windows-10-feature-update-for-commercial/ba-p/732968>
- An official MS overview of whats new: <https://docs.microsoft.com/en-us/windows/release-information/>

Footnotes, in this white paper:

- ¹ <https://www.techspot.com/news/78629-microsoft-reveals-how-much-windows-7-extended-support.html>
- ² <https://docs.microsoft.com/en-us/windows/deployment/update/waas-quick-start>
- ³ https://blogs.technet.microsoft.com/uspartner_learning/2017/03/27/windows-as-a-service-deployment-rings/
- ⁴ <https://docs.microsoft.com/en-us/windows/deployment/update/waas-quick-start>
- ⁵ <https://www.zdnet.com/article/windows-10-has-microsoft-cleaned-up-its-update-mess/>
- ⁶ <http://www.checkyourlogs.net/?p=60793>



Use the QR code or go to bit.ly/waasready for the latest WaaS strategy guide (frequently updated) and an curated overview of interesting and relevant links to online information about WaaS.