

Transforming Windows Application Delivery

Foundational digital workspace journey milestones

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Executive Summary

Changing how Windows applications are delivered and managed is a necessary component of any digital workspace journey and an important step toward the modernization of IT operations.

The intent of a digital workspace is to unleash productivity, increase employee engagement, and enable new work styles. To provide employees a more consumer-like workspace requires the ability to deliver all applications, including legacy ones, on demand from anywhere to any device. Workspace design and management must address the diversity of platforms, application access, devices, and form factors, all of which undergo continuous updating and changes. The application architecture must enable IT to accommodate this diversity and stay current while still supporting “any application for any device” with low management overhead.

The end-user computer (EUC) technology landscape is a hybrid world where employees can access a mix of local, hosted, and software-as-a-service (SaaS) applications on a variety of devices. The ongoing need to support Windows applications across a diverse environment has been a major obstacle but can now be more easily addressed by transforming Windows application delivery to a cloud-based provisioning model.

Despite the ongoing commoditization of EUC technologies, endpoint infrastructure ownership and management remain costly and complex, tying up valuable resources. The prevalent model for provisioning end-user services is based on owning the data center infrastructure and maintaining IT staff to manage the endpoints and EUC applications. But now that viable alternative options have matured, this old model decreases organizational agility. Cloud-based end-user services have redefined the role of endpoint management by increasing agility and freeing up resources for other, more differentiating and strategic initiatives.

Moving away from traditional Windows applications delivery models can be challenging, but if you think you can ignore it, think again.

Recommendations

Supporting a personalized digital workspace requires adopting new principles for managing the delivery of Windows applications. Begin by establishing ubiquitous access to legacy Windows applications.

- Use Remote Desktop Services (RDS) published applications horizontally across all use cases to ring-fence legacy Windows applications, abstract them from physical devices, and make them both device and platform agnostic.
- Simplify PC management overhead by drastically reducing the number of applications installed on PCs and replacing them with published applications.
- Provide users only the applications that they need or enable self-service access to individual applications instead of provisioning all users with the same application stack.
- Manage the frequent cadence of Windows updates by thinning PC images and moving from provisioning devices toward an enrollment model.

To maximize agility for users, increase elasticity, and reduce IT labor requirements, adopt a cloud-based delivery model. When considering cloud-based services:

- Evaluate cloud-based application delivery services based on their maturity and their impact on agility and user experience.
- Analyze the scope of services offered to understand their impact on TCO and current and future staffing requirements.

Learn more about how your organization can meet the future and transform application delivery.

The Need for a New Application Delivery Model

Just 15 years ago, nearly all end-user applications were designed to be installed locally on machines to ensure the best performance and the most predictable management overhead. With the proliferation of end-user applications, organizations adopted software imaging by predefining the Windows, hardware, and software settings. The predefined images were often locked to prevent users from making changes and to simplify remote management. Since the late 1990s, organizations have used client management tools to track PC assets, mitigate security risks, deploy software updates, and simplify the delivery of operational and administrative support. This managed image model became highly successful because it enabled organizations to scale the use of PCs to thousands of users with relatively predictable costs.

More than 20 years later, the managed image model is still the prevalent model used to deliver and manage applications, but the model is broken.

EUC applications have moved beyond computers, and performance is no longer a problem for most business users. Moreover, the broadly available enterprise mobility management (EMM) tools are more efficient and responsive than PC lifecycle management (PCLM) tools and processes. Users now expect faster workspace evolution, more device choices, and the ability to access their applications anywhere and from any device. EMM has shown users and IT alike that the provisioning of images is neither necessary nor compatible with the level of improvements now needed.

Windows 10 exacerbated the situation because of its much faster cadence of updates compared to previous releases. By not changing your Windows application delivery approach, you will be forced to choose between increasing costs or struggling to keep up with the operating system.

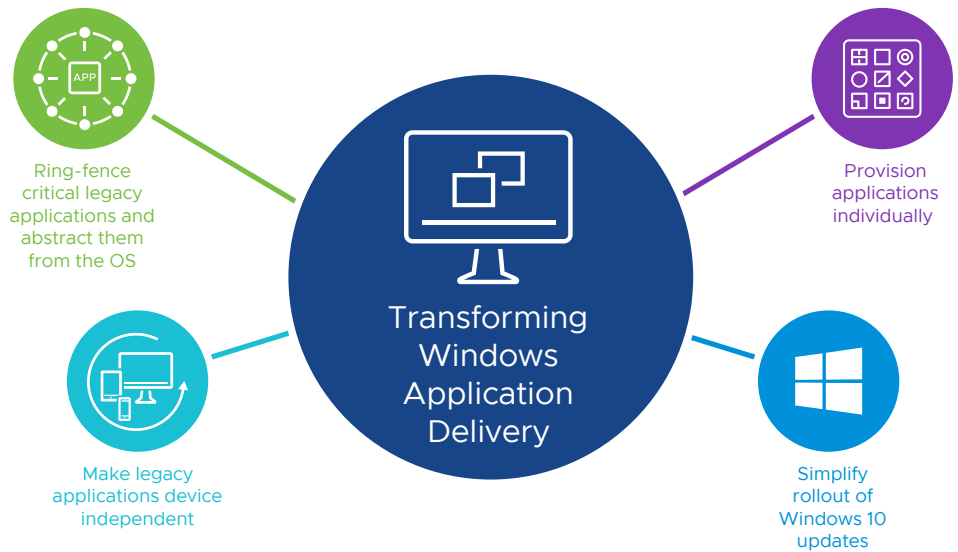


Figure 1: Transforming the Traditional Windows Applications Delivery Model: Main Drivers and Goals

Facing the Challenge of Legacy Applications

Legacy applications and applications that have dependencies on specific versions of operating systems and browsers are gradually decreasing in most organizations' portfolio mix, but often still make up between 30 and 40 percent. Although many legacy applications have either been or scheduled to be modernized, most organizations expect to continue using one or more legacy applications in the foreseeable future. In some cases, legacy applications require proximity to their back end and data and therefore are not optimized for distributed delivery. Typically, these applications were developed or modified in-house for specific requirements and perform business-critical functions. As the organization embarks on its journey toward a digital workspace, it will need to take these applications along.

This long tail of legacy is what provokes many IT organizations to perpetuate the existing PCLM management model and to accept a much slower pace of workspace evolution with fairly strict hardware standardization, much to the frustration of most users. But ensuring support for legacy applications does not necessarily mean preserving the status quo. Endpoint leaders can begin simplifying and improving how they manage and deploy Windows applications today by

- Publishing legacy Windows applications via RDS
- Modernizing management techniques to enroll rather than provision endpoints
- Moving to a unified endpoint management (UEM) model

RDS enables you to publish individual applications to users' workspaces. RDS benefits include scalability, faster rollouts for updates, and the ability to access individual corporate applications or full desktops remotely. Because RDS creates separation between the user's local device configuration and the application, you can quickly deploy applications across a variety of platforms and devices.

Moving to a UEM strategy is a major change in the endpoint computing management model and has the potential to significantly reduce management complexity and device TCO. UEM automates application provisioning to any device based on each user's individual requirements and in the context of the device's capabilities and posture. Reducing the number of applications installed locally on endpoints and moving the applications to the data center or cloud simplifies the shift to UEM. However, this transition requires more than just the deployment of new tools and technologies. It also requires retiring many of the processes used with desktop devices and replacing them with newer, more lightweight ones. Some IT professionals will see their job functions and responsibilities redefined, possibly requiring change management. It is important to carefully manage the transition to UEM to not compromise cost profiles by extending complex PC management principles to mobile devices or impede functionality by limiting the range of capabilities available to employees.

Why Host Applications and Desktops in the Cloud

Another step in transforming the application delivery model is to determine whether it makes sense to subscribe to a cloud-based service or to build the infrastructure for cloud application provisioning in-house, and when to do so and to what extent.

For many years, RDS and virtual desktop infrastructure (VDI) have been an integral part of many organizations' EUC strategy, typically to serve specific use cases. It could be more practical to leverage existing RDS and VDI investments to host legacy applications. Although the complexity of building and managing RDS and VDI deployments has decreased, the systems still require upfront investment and dedicated skills to maintain.

If you have not made such investments or cannot easily scale them to accommodate additional capacity, consider prioritizing investing in a cloud-based service for application delivery. A cloud-based service offers a higher degree of flexibility. For a fixed per-user fee, you can subscribe to applications or desktop environments from cloud providers as a monthly or annual service. This approach frees you from the time, initial expense, and infrastructure required to deploy Windows applications internally. Unlike on-premises deployments, cloud-based services do not require managing PC configurations and application packaging nor need to employ dedicated full-time staff or critical infrastructure skills in the areas of virtual machine configurations, load balancing, tools management, and network analysis. Instead, many organizations employ "centers of excellence" to provide the necessary skills.

Cloud-based services provide advantages to organizations with an international presence that are not ready to embrace an international data center strategy to ensure an adequate user experience in all locations. The elasticity of cloud-based application services also appeals to organizations with seasonal workforce requirements and those that need to flex their usage up and down, although some less mature service offerings still have fixed terms and minimum volumes.

As organizations are increasingly moving parts of the workspace to the cloud by adopting cloud office suites and enterprise SaaS, the appeal of moving applications to the cloud is also increasing. The market for cloud applications and desktop services is entering an early mainstream phase with offerings from large players, such as Amazon and Microsoft, as well as a myriad of small and very small players. A few companies offer a complete stack that includes facility hosting, servers, storage, network, and maintenance, while pure desktop-as-a-service offerings focus on licensing and application and desktop delivery. Cloud-based application service fees per user per month have declined over the past three years, although lower cost subscriptions are often narrow in scope and might not include setup or migration services.

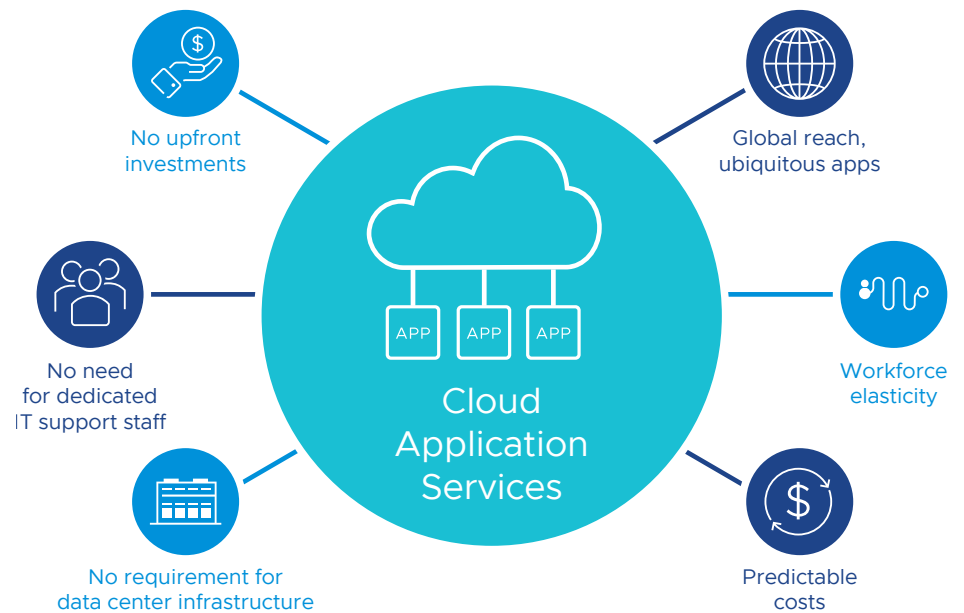


Figure 2: Reasons to Move to Cloud-Based Application Services

Transforming Your Application Delivery

Adopting an approach that enables you to deliver any application, including legacy ones, to any device or platform, is a critical component of embracing a digital workspace strategy. A flexible approach provides users ubiquitous access to applications and facilitates designing a more consumer-like workspace. Moving to a cloud-based application delivery approach helps modernize IT operations for the workspace and increase agility by freeing up IT resources.

To prepare for transforming your Windows application delivery process, consider the following EUC best practices.

- Review your application portfolio and determine the level of legacy you need to support. Classify applications by their dependencies, how critical they are to the business, and whether they are scheduled to be modernized.
- Evaluate the compatibility of your legacy applications with an RDS delivery mode in terms of their suitability for a multiuser environment, compatibility with other applications, and application dependencies.
- Consider adopting a cloud-based application delivery approach if you already have 50 percent or more of your end-user applications, including productivity and collaboration applications, hosted, web-based, or in the cloud.
- When opting for cloud-based application delivery, determine which legacy applications to move based on user experience. Most classic productivity and business applications are good candidates. For best performance, also consider moving data to the cloud.
- Invest in the necessary technical skills to specify requirements and move applications to the cloud, as well as the critical sourcing skills to negotiate and monitor cloud-based services contracts.
- Assess the cloud-based service's offerings and propositions in terms of maturity, the scope of service, migration options, and the level of input required from your organization.
- Build a business case to determine the service delivery impact on cost structure and overall TCO.
- Increase agility by asserting a preference for shorter term commitments and elasticity in new service contracts. Measure agility by the ability to revert to the previous state or move to newer or different options with a short lead time.
- Determine whether using new services reduces staffing requirements and personnel-related dependencies. Assess the impact of cloud-based services on having dedicated staff for managing endpoint computing.
- Deliver on users' requirements. Users want workplaces that enable a more rapid evolution and provide access to tools and information across a wide range of devices and locations. End users' mobile requirements is one of the biggest drivers for adopting cloud-based services.

