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It's all about Experience

The Eight Essential Components of
End-to-End User Environment Management

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Simon has spent most of his professional life specializing in desktop, application and Citrix delivery for some of the largest organizations around the world. Initially working for a leading UK Citrix Distributor and a Citrix Gold Partner before moving to Ivanti over 11 years ago.

During his 11 years at Ivanti, Simon has assisted in growing the Pre Sales and Professional Services teams at a global level, and has run Product Management for the DesktopNow products. Having returned to a field based role as the EMEA chief technologist Simon continues to work with some of the largest customers and partners around the world, helping them to seamlessly adopt UEM solutions across their entire estate of physical desktops, virtual desktops and Citrix environments. Simon is involved in the strategic direction of Ivanti and is also a keen presenter at many leading industry events.

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A seasoned technology executive with experience ranging from field to board level. Maintains a deep technology understanding while operating at both C-level and strategic positions.

As chief technologist for Ivanti, focuses and leads the software strategy beyond the current enterprise stack. Was responsible for the original foundations, principals and designs of the Ivanti DataNow technology, a leading Enterprise data orchestration platform.

Maintains a strong public profile within the desktop virtualization industry and is a highly ranked speaker on a diverse range of subjects.

For Windows Desktops; It's All about Experience

User Environment Management (UEM) is an established technology, yet, for some, its true value-add is misunderstood. To many, it solely means the effective implementation of profile management so roaming users can have a familiar screen with their personalized "kitty-cat" wallpaper and desktop icons. For others it means a fast logon to the desktop. While UEM technology provides these features, for the 10 million desktops it has been deployed to, it enables so much more.

Ultimately, UEM is about optimizing the total user computing experience while reducing IT management complexity and cost. To meet this objective, complete end-to-end UEM delivers comprehensive management capabilities across key areas such as profiles, policies, configurations, privileges, user data and performance – all in a single platform that works seamlessly, regardless of how the desktop or applications are delivered. As users move between physical PCs, terminal servers, virtual desktop infrastructure or Desktop-as-a-Service, end-to-end UEM delivers a consistent experience that will improve user acceptance and the adoption of new technologies, ensure the success of desktop projects, reduce costs, and remove existing pain points from the desktop estate.

At its core, UEM should enable a focus on the complete user experience. Not just the right wallpaper or icons, but also the right environment that enables the highest levels of user productivity without compromising cost, security or control. As a result, UEM makes innovation easier, enables higher levels of desktop project success, and removes tedious desktop issues all while lowering both capital and operational expenses.

Get User Experience Right and Achieve:

- ✓ Maximum user productivity
- ✓ Lowest cost (Capex and Opex)
- ✓ Easy access to new innovation
- ✓ Successful desktop transformation and migration projects
- ✓ The removal of desktop problems around user profiles, privileges and configuration

Ultimately, UEM is about optimizing the total user computing experience while reducing IT management complexity and cost.

Terms often mistaken for UEM

Before we can truly explore the capabilities and value offered by end-to-end UEM, it's important to first expand on what end-to-end UEM isn't. These are the technologies that can often be mistaken for delivering true UEM and how they are different.

Profile Management

Profile management technology such as Citrix User Profile Management or VMware View Persona Management work to manage and mitigate the problems associated with roaming profiles, such as profile bloat, corruption and slow log on times. They also do go some way to apply a user's personal settings to virtual desktops, however they are not designed to be an enterprise-scalable cross platform UEM solution.

What profile management technology doesn't offer is a robust set of security policies and configuration features to better manage user's application privileges, data and performance. Without features like context- and location-based controls, software licensing enforcement and granular system resource entitlement, environments that only rely on profile management technology are not able to realize the full benefits and return on investment an end-to-end UEM solution can offer. Furthermore, profile management is not designed to scale across multiple delivery mechanisms, computing platforms or locations. As a result, they can contribute to added complexity and increased storage costs to manage the resulting data sprawl. Ultimately, profile management solutions can be effective for completely virtual environments that are under 1,000 users, but in environments where virtualization is only one of the desktop delivery tools, more advanced UEM solutions are required.

User Environment Virtualization (UE-V)

Microsoft User Experience Virtualization (UE-V) is another technology often mistaken for UEM. UE-V delivers a user's personal settings across managed devices through the use of templates for common applications. This can be effective when used in major migrations where all users are moved to a new operating system at the same time, without the need to revert back to previous platforms and without the need to maintain a version of the previous operating system for some legacy applications.

The limitations with UE-V come into play when organizations cannot withstand migration downtime or have a mix of operating platforms that need to be managed. UE-V also doesn't effectively support large environments where one-time migrations simply won't work. Any environment where there is risk that the migration may require a roll-back of a subset of users won't be properly supported with UE-V capabilities alone. Furthermore, UE-V doesn't address areas of context-aware policy, privilege management or license management. End-to-end UEM enables organizations to achieve a faster time-to-value and the more timely IT assistance that improves user productivity and satisfaction.

Good for…

✔ 100% virtual environments

✔ Environments with less than 1,000 users

Not good for…

✘ Mixed environments where virtualization is only one of the desktop delivery tools users use

✘ Environments with more than 1000 users

Good for…

✔ Single big-hit migrations where all users are moved to a new OS at once and never need to go back

✔ Lower risk environments where some downtime is not an issue

✔ Environments that have separate technologies to manage user privilege, policy, configuration and data

Not good for…

✘ Large environments where one-hit migrations won't work

✘ Environments where legacy applications still run on Windows XP

✘ Environments where any risk it present and a migration may need to be rolled back

User Persona Management (UPM)

User Persona Management (UPM) is a term coined by Gartner to define technologies that have moved beyond roaming profiles to more actively manage the user profile. While they often support user profile management, as well as some user personalization and user monitoring or auditing capabilities, they still typically fall shy of offering true application access control, robust application delivery and resource management features. Without these capabilities UPM cannot support a truly end-to-end UEM feature set for organizations seeking to realize the most efficiency from their desktop environment.

UPM can effectively support smaller environments where users run a minimal number of business applications and don't rely heavily on roaming profiles. However, for larger organizations that must make use of multiple platforms simultaneously, or that rely heavily on roaming profile management and have a need to support user portability between different workstations, UPM will only produce limited results.

Good for…

✔ Small environments where users run a minimal number of business applications

✔ Small environments where roaming profiles are a problem but not a massive issue

Not good for…

✘ Large organizations that make use of multiple platforms simultaneously

✘ Large organizations that rely heavily on roaming profile management or users moving between different workstations (such as in call center environments)

Group Policy and Logon Scripts

Native Microsoft tools including Group Policy and Group Policy Preferences provide good capabilities for managing computers and the user environment. They establish some solid capabilities for managing policies and preferences for items such as Drive Maps, Printers and Shortcuts. This can be effective enough for smaller environments where administration is limited to a small group of individuals or larger environments that are segmented with individual IT teams that are responsible for select groups or functions. However, when managing large volumes of users on multiple devices and operating systems, Group Policies can become very cumbersome to manage and create unwanted performance delays. To deliver workarounds for organizations managing users on multiple operating systems, it's common to develop custom logon scripts to overcome Group Policy limitations. But this only yields a short-term fix. As new devices and operating systems are added into the environment, it expands the number of Group Policies and resulting Logon Scripts to manage, making the environment ever more complex.

Comprehensive UEM solutions overcome the challenges of complicated Group Policies and logon scripts. They will streamline scripts and policies on both a conditional and contextual basis so that they load exponentially faster and can be delivered on-demand within the desktop session. This eliminates long logon times and improves user satisfaction.

Good for…

✔ Small environments where administration is limited to a small group of individuals

✔ Large environments that are segmented with individual IT teams responsible for select groups or functions

Not good for…

✘ Large environments where IT is responsible for the management of multiple assets and technology deployments

✘ Large environments where there are many different requirements, ultimately resulting in substantial complex scripts and/or policy sets

The Eight Essential Components of End-to-End User Environment Management

1 Efficient Profile Management & Personalization

2 Policy Management

3 Configuration Management

4 Privilege Management

5 Application Control

6 Data Management

7 Performance Management

8 Discovery and Intelligence

Now that we've explored many of the technologies and terms that are often confused with UEM, it's time to dig deeper into features that make up an end-to-end UEM solution. A UEM solution should provide complete management of the user's desktop experience – always ensuring that the experience remains productive, responsive and secure across physical or virtual Windows desktop environments. The value is that with end-to-end UEM, organizations can reduce total cost of ownership and risk while increasing user satisfaction and productivity. To achieve these benefits, be sure to select an end-to-end UEM solution that includes the following eight essential components.

1. Efficient Profile Management & Personalization

UEM needs to very efficiently manage user profiles without adding complexity or increasing storage costs. End-to-end UEM achieves User Profile Management through evolved persona management technology that delivers consistent and predictable user experience regardless of how the desktop and/or applications are being delivered or the version of operating system being used. This allows the user to freely roam between physical desktops, to virtualized desktops or sessions. It allows users to move from OS versions removing the pain and challenges faced during a migration. And, it allows new application delivery technologies, such as App-V to be deployed to users seamlessly.

It's important to also note that a profile management solution should scale across multiple datacenters and scale out to the most remote end offline endpoints. In addition to scale, management of users' profiles is even more important. The ability to find, edit, snapshot and delete users' profiles allows support to diagnose and solve user experience support calls with ease. Support tools and self-service tools around profile management can both negate the need for profile related support calls or move what has been regarded as a third line call to first line. A comprehensive profile management solution will also personalize an environment on a per-user, per-application basis, delivering user and application settings "just in time" opposed to "just in case" at logon. In summary, profile management works to improve the user experience and increase productivity while helping to reduce the cost of storage and support calls.

2. Policy Management

To overcome the complexity of Group Policy, end-to-end UEM solutions provide contextual policy control, when and where it's wanted. Using a flexible rules-based approach to policy management, end-to-end UEM solutions enable organizations to define easy-to-understand logic of when a policy needs to be applied based on simple, yet powerful, workflow utilizing triggers, conditions and actions. This allows for the events to be processed as needed, rather than in a forced, pre-defined way, to assure the best user experience possible.

3. Configuration Management

Today's enterprises are comprised of many different operating systems and desktop configurations, yet the ideal of deploying "one master image" per environment can help reduce operational costs significantly. In VDI this concept plays a key part in delivering a non-persistent desktop. The need to configure an environment to a specific business unit or tailor the desktop based on the user's role or context can compromise the ability to deliver this concept of the master image. Complex logon scripts can be used to achieve some of this, but this complexity leads to increased management costs and affects user experience as they are typically the cause of slow painful user logs. End-to-end UEM solutions allow for IT to centrally manage their configuration management – abstracting the user's configuration settings away from the underlying device and operating system – allowing users to receive a customized desktop by dynamically configuring the machine at start up or user logon. This allows the non-persistent to appear consistent and also allows the user's environment be tailored based on their context.

4. Privilege Management

With privilege management, end-to-end UEM solutions enable the elimination of admin rights from users that don't need them throughout the organization. By implementing the concept of least privilege, users can be given the rights they need to perform their job without exposing the environment by allowing users to have elevated rights to applications they don't need. This can dramatically reduce desktop management and support costs while also enhancing user productivity. It also helps the organization to better align with IT compliance and governance requirements and minimizes organizational risk.

5. Application Control

Application control is an important complement to privilege management technology. By effectively controlling access to applications, unauthorized executable code is prevented. This unauthorized code can be a key contributor to instances of poor desktop stability, security threats, and breaches in licensing compliance. Efficient application management technology will ensure that only trusted applications are installed and executed, while unauthorized user-introduced applications or unknown code is automatically prevented from launching. This improves overall security, enforces application licensing to ensure compliance, reduces costs, and preserves configurations of the environment in its best-known state.

6. Data Management

As users work more freely throughout the enterprise and on the road, they want to access their data from wherever they are. They also need to share data, securely, with peers and collaborators. Yet, achieving secure data access and sharing in a cost effective way can be a challenge. End-to-end UEM solves this problem by enabling simple, secure access, sync and sharing of enterprise files while providing granular policy control over how data is accessed. The best UEM solutions also ensure that data is secured both in transit and at rest on endpoint devices, including tablets and smartphones, with 256-bit AES encryption. This results in end-to-end data security, improved governance and compliance and increased user productivity.

7. Performance Management

If the environment isn't responsive, it isn't useful. End-to-end UEM needs to produce immediate, out-of-the-box performance improvements. By optimizing the user experience through resource prioritization, UEM solutions can limit resources to poorly behaving applications and increase user density by as much as 40%. This means that as a user drifts between desktop and application delivery technologies they can continue to enjoy the seamless and responsive experience they expect, regardless of what else the server is processing. As a result, hardware lifespan is prolonged and upgrade requirements can be reduced. In addition, enterprises can benefit from increased server capacity and user density for noticeable user productivity improvements.

8. Discovery and Intelligence

Finally, to truly understand and evaluate the whole user experience, end-to-end UEM solutions must perform real-time analytics on end user computing environments and desktop activity to precisely monitor the quality of the user experience being delivered to employees. With a detailed and accurate understanding of endpoint performance across their estate, using metrics such as user log-on times, privileges, CPU and memory usage, IT teams can remediate in real time and optimize the user's experience overall.

The Fastest, Easiest and Lowest-Cost Desktop Ever

By supporting all eight essentials of end-to-end UEM, Ivanti DesktopNow Plus helps organizations across multiple industries deliver the fastest, easiest and lowest-cost desktop ever – regardless of the mix of physical and virtual devices or combination of multiple devices, locations or delivery mechanisms. Using a unique concept of interchangeable building blocks delivered on demand, Ivanti enables IT to produce a consistent, personalized experience regardless of device, operating system or application.

The benefits of using the end-to-end UEM solution, Ivanti DesktopNow Plus, are both pervasive and persistent. Not only does it produce a better user experience, but it also lowers both capital and operational expenses providing a return on investment not seen by any other UEM product. This is a direct result of the solution's ability to achieve higher levels of desktop project success, power easier access to new innovation, eliminate troublesome desktop problems, and deliver the highest possible levels of user productivity. As a result, it improves not only user experience, but business experience as well. Among the benefits of Ivanti DesktopNow Plus are:

- Seamless User Experience

    DesktopNow Plus achieves the seamless user experience enterprises demand across all desktops and devices. This includes efficient access to both applications and data without slowing server performance or increasing storage requirements.

- Easier Migration and Upgrades

    When using DesktopNow Plus, enterprises never have to worry about migrations and upgrades again. Because the user has been decoupled from the underlying system, it's effortless to migrate the user profile and data to new devices and operating systems. This reduces the time, cost and complexity of migration, a process that has traditionally been very tedious, and eliminates user disruption with literally zero-downtime migrations.

- Better IT Control

    DesktopNow Plus puts granular control into IT's hands so that they may more effectively and efficiently manage corporate and application policies, assure accurate use of user privileges and work to prevent costly security breaches.

- Better-Performing Desktops

    DesktopNow Plus dramatically speeds the user environment experience, improving acceptance and productivity. With more efficient distribution of profile and application policies, users no-longer need to wait for pieces of their environment to load that they don't need. In addition, smart controls allocate CPU, memory and disk resources to improve the overall quality of service, increase user density and reduce hardware requirements.

- Comprehensive Cost Reduction

    DesktopNow Plus reduces costs across the board for desktop infrastructure. It dramatically reduces desktop and support costs, conserves infrastructure expenses and optimizes application license expenditures. In addition, it fuels user productivity for greater workforce efficiencies overall.

- Efficient Data Management

    With DesktopNow Plus, enterprises further benefit from seamless access to data via secure and efficient processes that offer additional granular policy control and end-to-end security. As a result, users can access their work content on any Windows PC, Mac, iPad, iPhone or Android-based device with confidence and ease. Furthermore, data is future-proofed as storage needs change without the need to ever migrate data when new devices are deployed.

When it comes to the user acceptance of new desktop implementations, it's all about experience. To power user adoption while producing the greater IT efficiencies that will result in exponential value both today and into the future, select an end-to-end UEM solution such as Ivanti DesktopNow Plus. It will lower overall desktop costs, deliver the fastest logon and in-session performance and give users the consistent, reliable experience they expect, every time they log on.

For more information, please visit:
www.ivanti.com.

Ivanti.com

About Ivanti

Ivanti is the global leader in user environment management (UEM) with over 3,000 enterprise customers worldwide that have deployed to over 7 million desktops. Ivanti DesktopNow and DataNow enable IT teams to deliver the ultimate user experience and productivity across physical and virtual desktops while optimizing security and reducing operational and infrastructure costs.

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