

Understanding the Trends, Challenges & Performance Expectations When Upgrading to Citrix XenApp & XenDesktop 7.x

2018

CITRIX MIGRATION
SURVEY ANALYSIS
REPORT





Welcome to the 2018 Citrix Migration Survey Report

With Citrix XenApp 6.5 reaching EOL (as of June 30, 2018), there is growing interest in Citrix XenApp and XenDesktop 7.x. Considering all the architectural changes it introduces and the new functionalities it includes, a migration to Citrix XenApp and XenDesktop 7.x is probably one of the most significant and also challenging projects that Citrix professionals have undertaken recently.

eG Innovations and DABCC conducted an industry survey between December 2017 and February 2018 to shed light on this migration trend, and understand the plans, challenges and performance expectations from Citrix professionals.

This report is a compilation of the survey responses from 795 Citrix professionals, including learnings, trend analysis, and predictions. This is intended to be useful to any IT professional going through the migration/upgrade to Citrix XenApp and XenDesktop 7.x.

Thanks to everyone who contributed to this report.





Survey Highlights

Key Findings: Migration to Citrix XenApp and XenDesktop 7.x

1

2018 will be the year of Citrix XenApp and XenDesktop migration. 70% of organizations are expected to complete the migration to XenApp and XenDesktop 7.x by the end of the year.



2

The main driver behind the migration to 7.x is the fact that older versions are nearing EOL/EOM. Extended support with LTSR is a secondary factor driving the adoption trend. New platform support in 7.x is a tertiary factor.



3

Migration from 6.x to 7.x is not a simple in-place upgrade. In addition to new Citrix components that are introduced by the FMA architecture in 7.x, supporting infrastructure tiers, such operating systems, hypervisors, and server hardware are often upgraded as well.



4

The actual migration process itself is considered to be simple, but **78% rate the pre-migration and post-migration phases to be much tougher in comparison.**



5

Citrix Cloud deployments are in their infancy. **Only 5% of organizations are currently using Citrix Cloud services,** but 45% are likely to be considering Citrix Cloud in the future.





Survey Highlights

Key Findings: Citrix Performance Expectations

1

When migrating to XenApp/XenDesktop7.x, the biggest concern for Citrix admins is **ensuring that applications and desktops work as expected, and that user experience does not degrade post-migration.**



2

Slow logon continues to be the most common complaint faced by Citrix administrators. Measuring logon slowness is rated the most important aspect of Citrix user experience.



3

Performance monitoring for Citrix administration teams has become increasingly reactive and admins are constantly in a firefighting mode. **86% of respondents feel faster problem diagnosis and troubleshooting is their most critical need.**



4

Despite using many infrastructure monitoring tools, a **major performance challenge** during the migration to XenApp/XenDesktop 7.x is **pinpointing how infrastructure issues are affecting Citrix performance.**



5

One of the main reasons for slow and lengthy problem diagnosis is that **organizations are using too many tools (up to 10 tools)** for monitoring their Citrix infrastructures. 91% agreed that having a single-pane-of-glass monitoring solution would simplify troubleshooting.

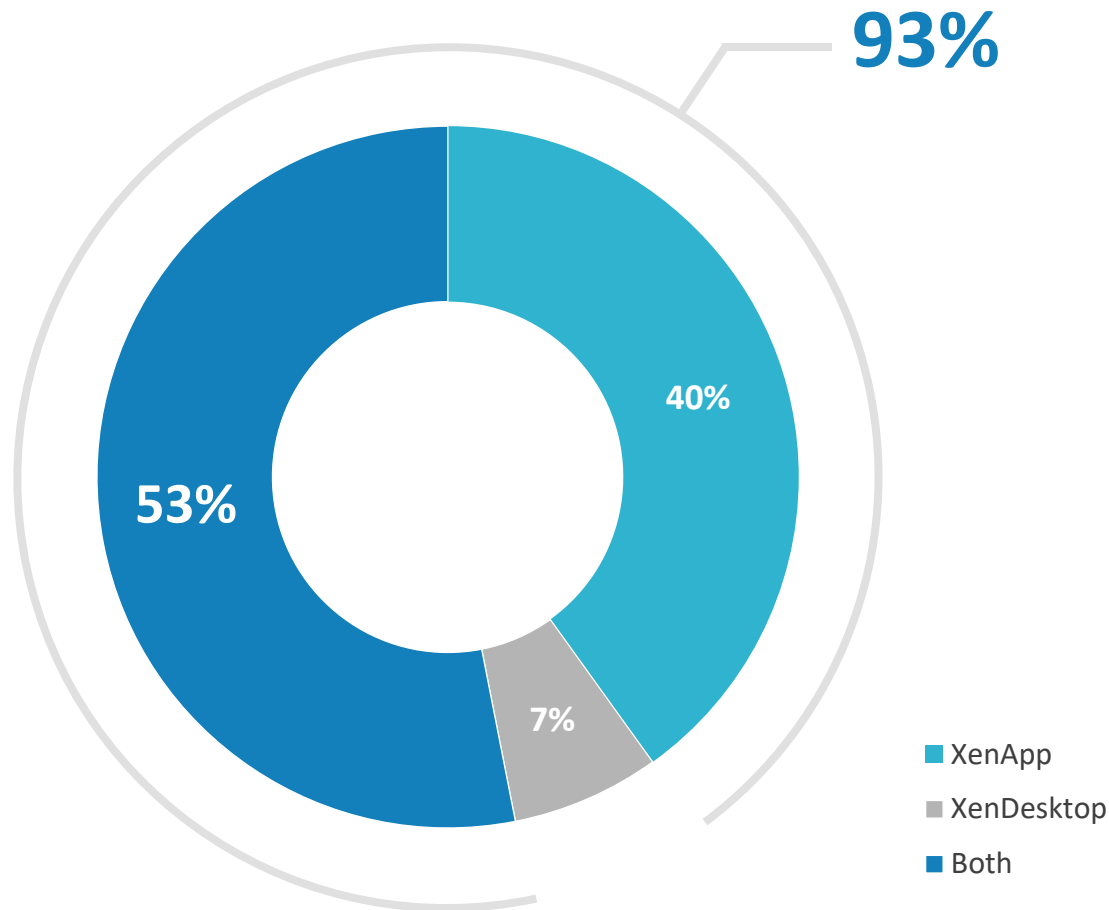




Migration/Upgrade to Citrix XenApp & XenDesktop 7.x

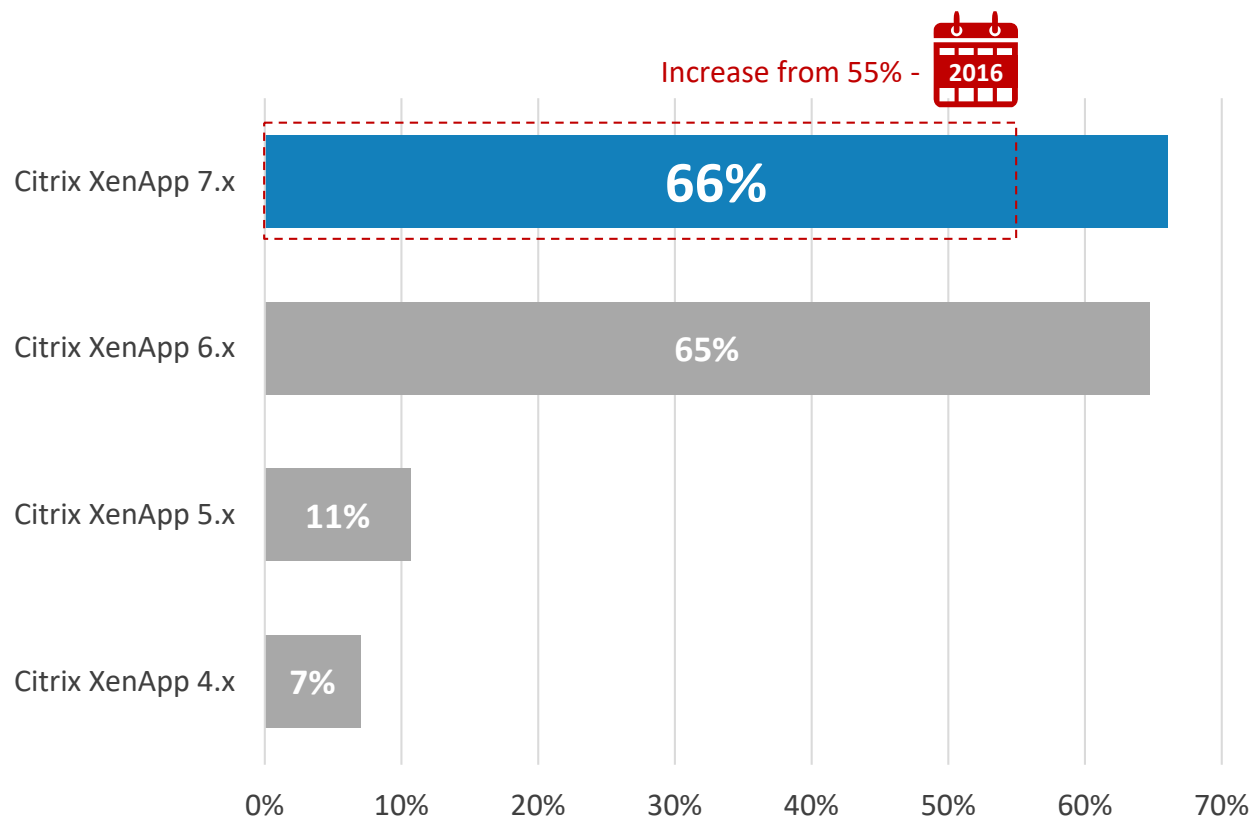


Are you running Citrix XenApp, or XenDesktop, or both?



- Most respondents (93%) are running XenApp
 - 53% are running both XenApp and XenDesktop
 - 40% are running only XenApp
 - 7% are running only XenDesktop
- Compared to the 2016 Citrix Performance Management Survey, adoption of:
 - XenApp has increased by 6% (from 87% to 93%)
 - XenDesktop has remained the same at 60%

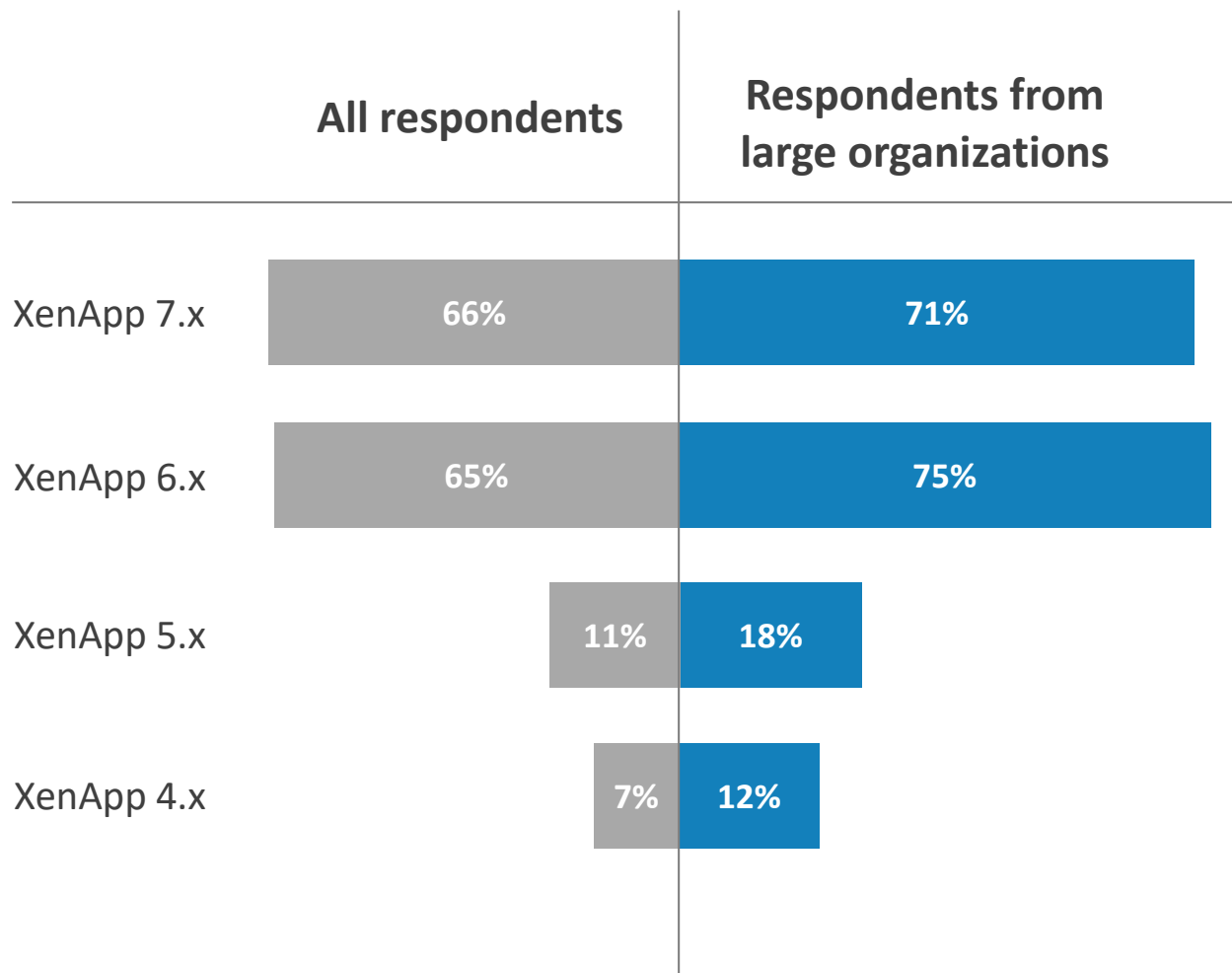
Which version(s) of Citrix XenApp are you currently running in your infrastructure?



Compared to the 2016 Citrix Performance Survey, the number of 7.x users has increased (from 55% to 66%), while the users of 5.x and 4.x have significantly reduced.

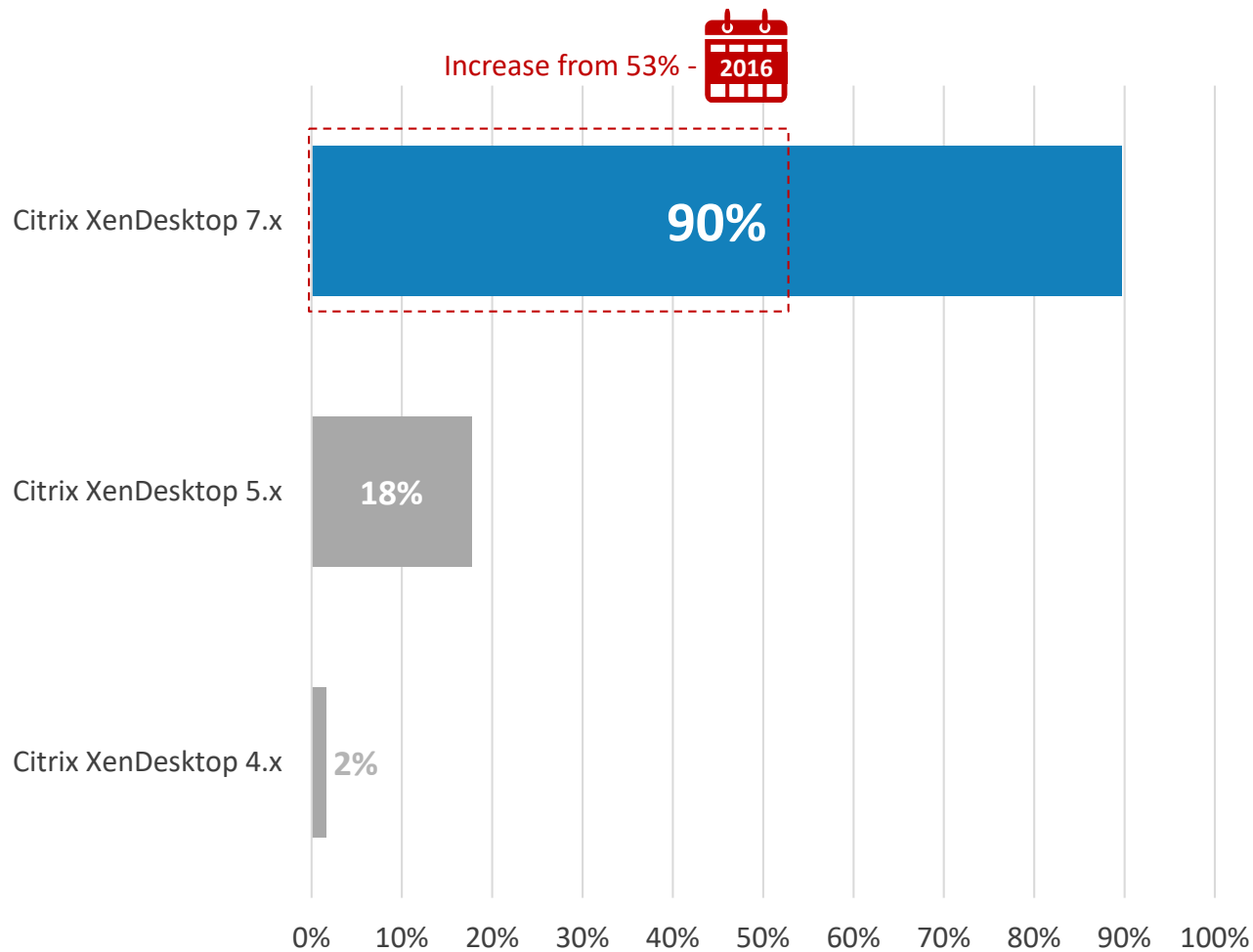
- 66% of respondents are running XenApp 7.x, and 65% are running 6.x.
- There is a significant overlap between organizations using 7.x and 6.x. This indicates that organizations have deployed newer workloads on 7.x and they have continued on 6.x for the older applications and workloads.
- 18% of respondents are still running very old versions of XenApp. The main reasons for this include legacy, 16-bit applications that do not run on modern operating systems and servers supporting non-core applications.

Which version(s) of Citrix XenApp are you currently running in your infrastructure? (contd.)



- In large organizations (5,000+ employees), usage of 6.x, 5.x, and 4.x is comparatively higher.
- Reasons why 7.x migration is slower in large organizations:
 - Infrastructure size, scale and complexity; requires extensive testing before the migration
 - Larger base of users and administrators that need to be trained on the newer version
 - Customizations that may need to be redone for the newer version
 - Greater use of legacy applications, and those that are only supported on older versions of XenApp

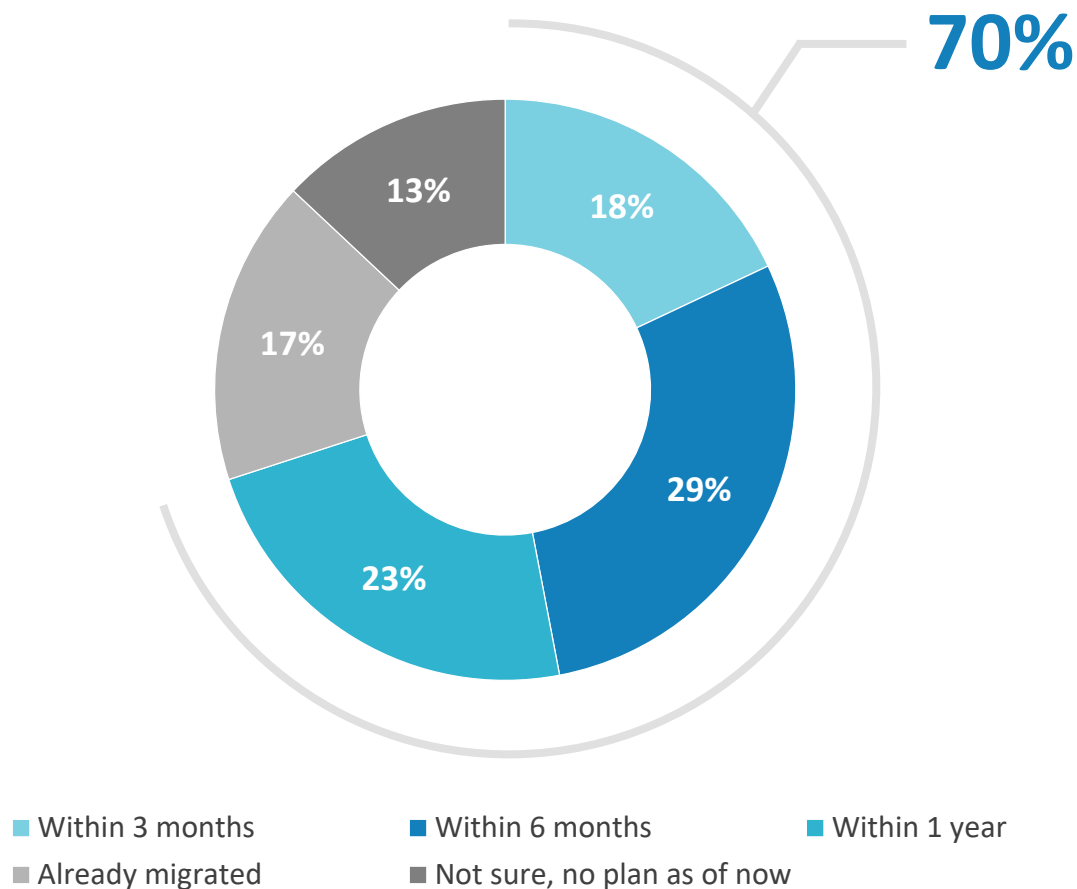
Which version(s) of Citrix XenDesktop are you currently running in your infrastructure?



- Most XenDesktop deployments (90%) are on 7.x.
- Compared to the 2016 Citrix Performance Survey, there is a remarkable increase in 7.x adoption (from 53% to 90%).
- This is a testament to the maturity of XenDesktop. 7.x is a more stable release compared to the earlier versions of XenDesktop.
- XenDesktop's architecture was always FMA based. Hence, the upgrade is much easier as well.
- Only 20% of respondents are still using older versions of XenDesktop.

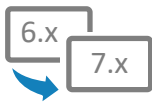
When do you expect to complete the migration to the latest version of XenApp/XenDesktop 7.x?

2018: The Year of Citrix Migration

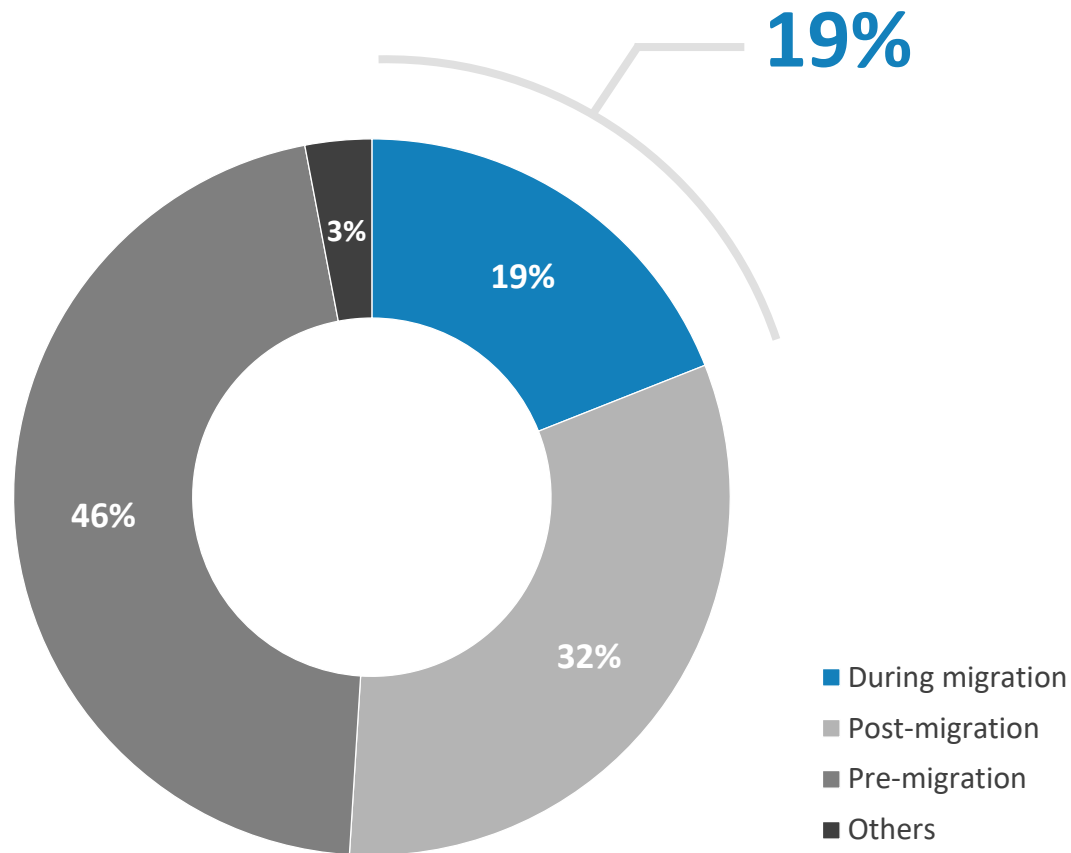


- In 2018, 70% of organizations will migrate to XenApp & XenDesktop 7.x. 87% are expected to be on 7.x by the end of the year.
- 80% of large organizations will migrate to 7.x in 2018, and 90% are expected to be on 7.x by year-end.
- Over the last two years, the rate of migration to 7.x has been slow. This is mainly due to the feature gap that existed between XenApp 6.x and 7.x (e.g., Zones, Local Host Cache, Worker Groups, Session Sharing, Lingering and Pre-launch). Citrix has closed this gap over successive releases of 7.x.

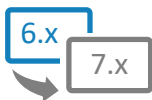
What is the toughest part of the XenApp/XenDesktop migration process?



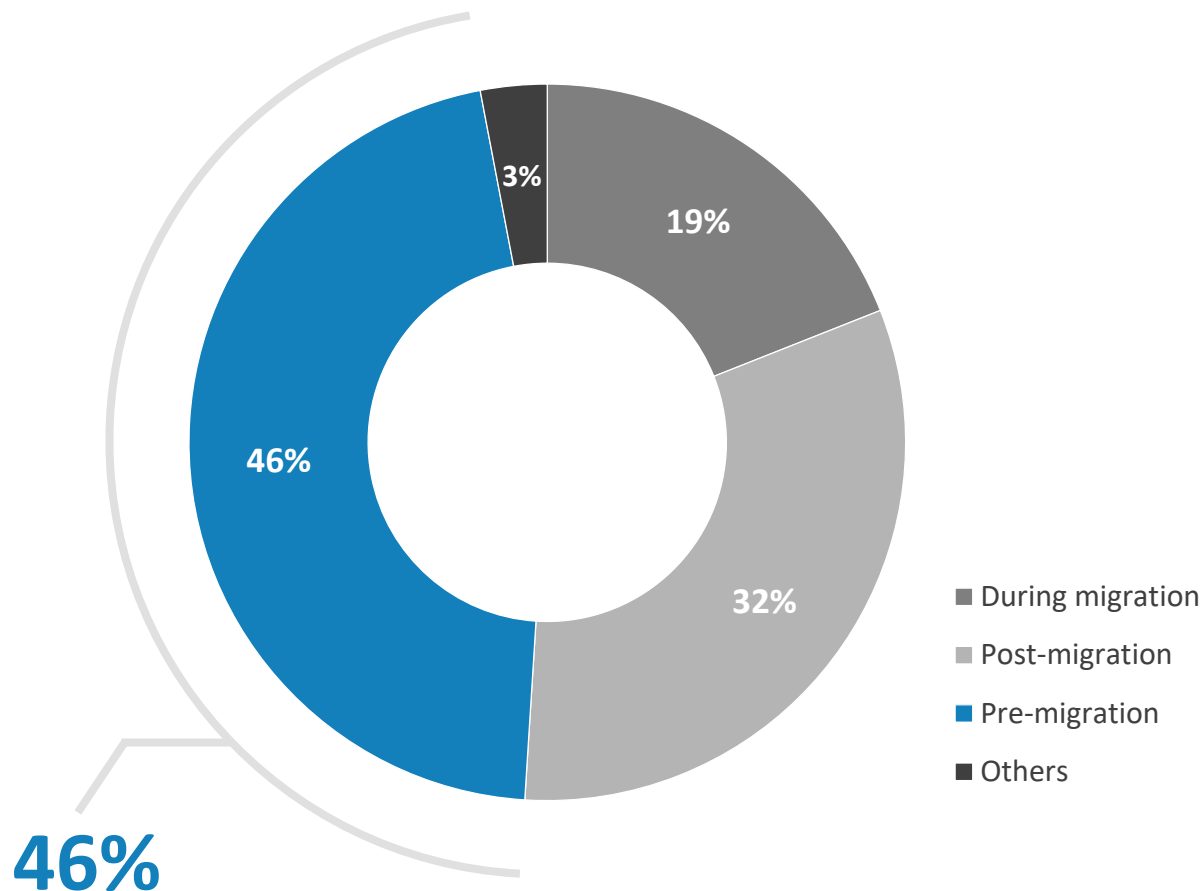
During Migration



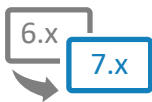
- The actual migration process does not seem to be a big concern for Citrix professionals.
- Many find an in-place upgrade from one version of 7.x to another to be an easy process.
- Only 19% have some reservations and fears about the steps involved during migration. This mainly applies to those migrating from 6.x to 7.x.
- Majority of the concerns are about the pre-migration and post-migration phases.



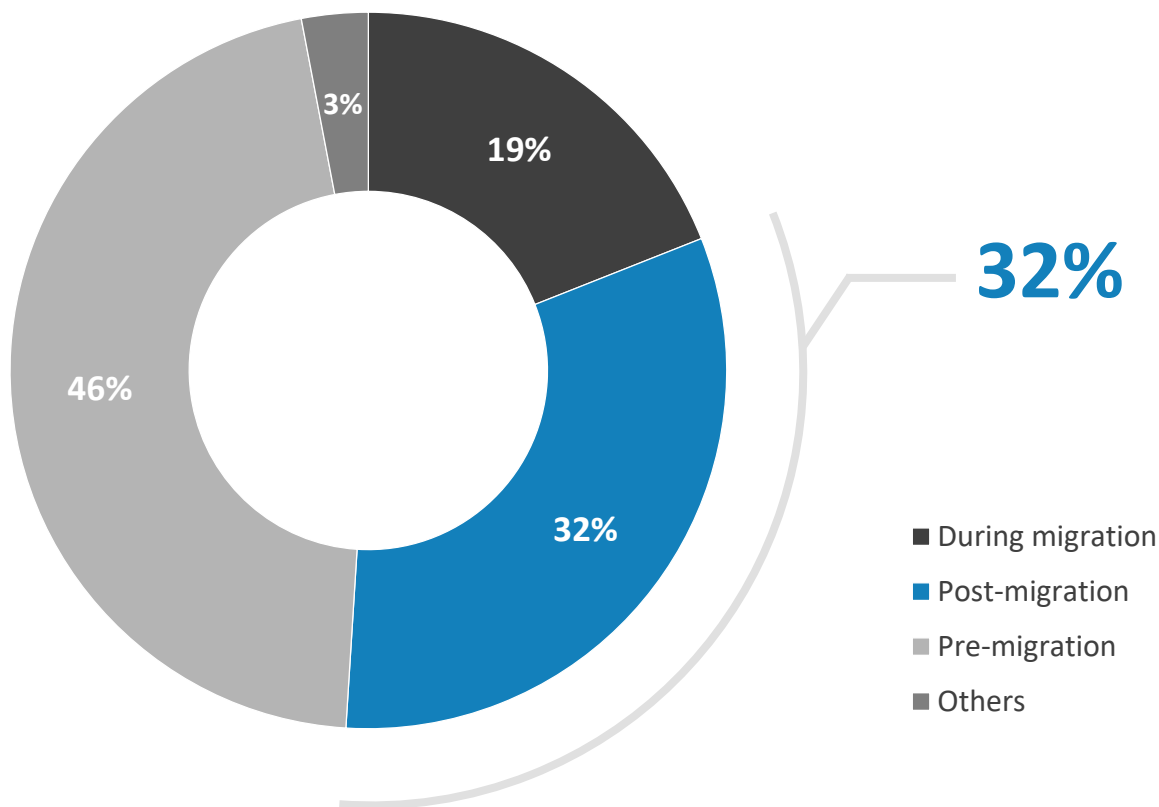
Pre-Migration Fears



- 46% of respondents consider the steps and issues involved in the pre-migration phase as their toughest part of the migration process to 7.x.
- Specific concerns include:
 - Application compatibility issues
 - Licensing and pricing changes
 - Cost of new hardware to stand up a parallel farm for migration
 - Time, effort and resources needed for planning and testing before the actual migration
 - Moving to the cloud



Post-Migration Fears



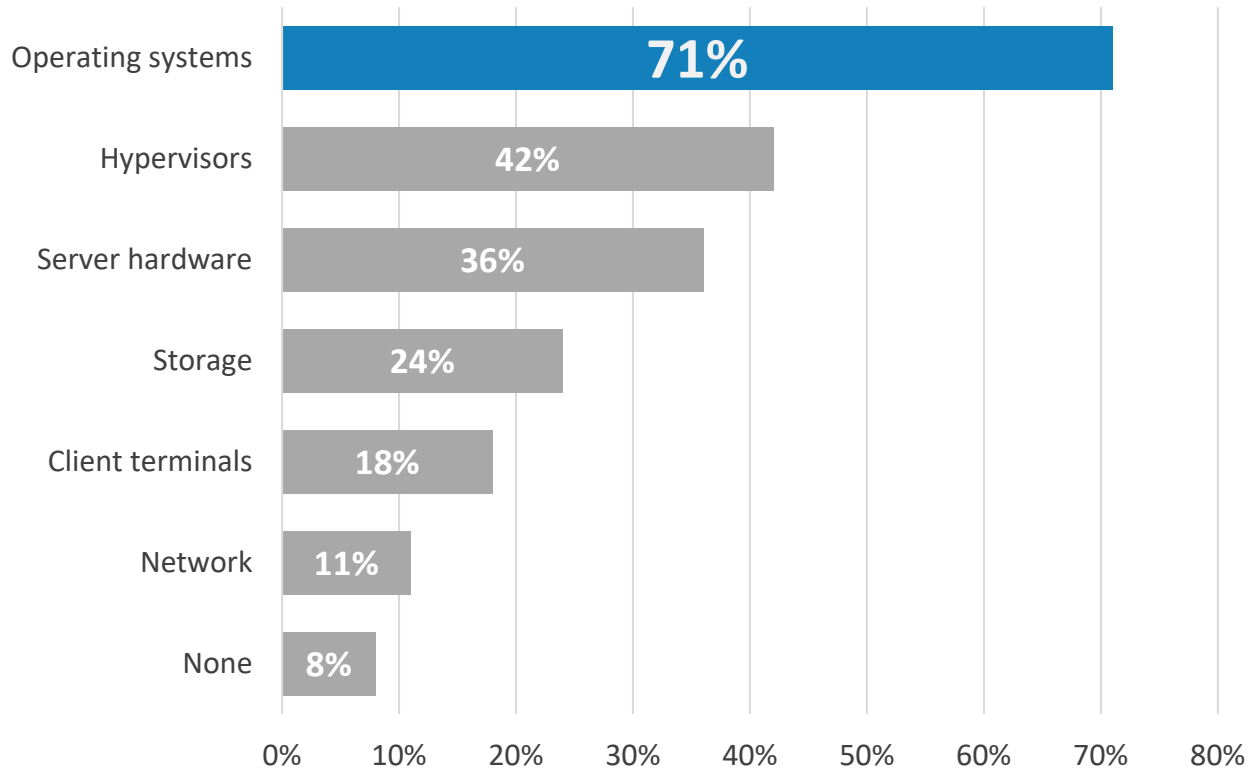
32% are concerned about post-migration issues:

- Functionality loss when moving over from 6.x to 7.x
- Changes in customization and policy settings
- Loss of performance baselines and benchmarks
- Addressing the changes in architecture and infrastructure components

- IMA to FMA
- Application profiling to layering
- Web interface to StoreFront
- Zones and data collectors to delivery controllers
- EdgeSight to Director

- Effort required to train and reskill the workforce
- Support from Citrix

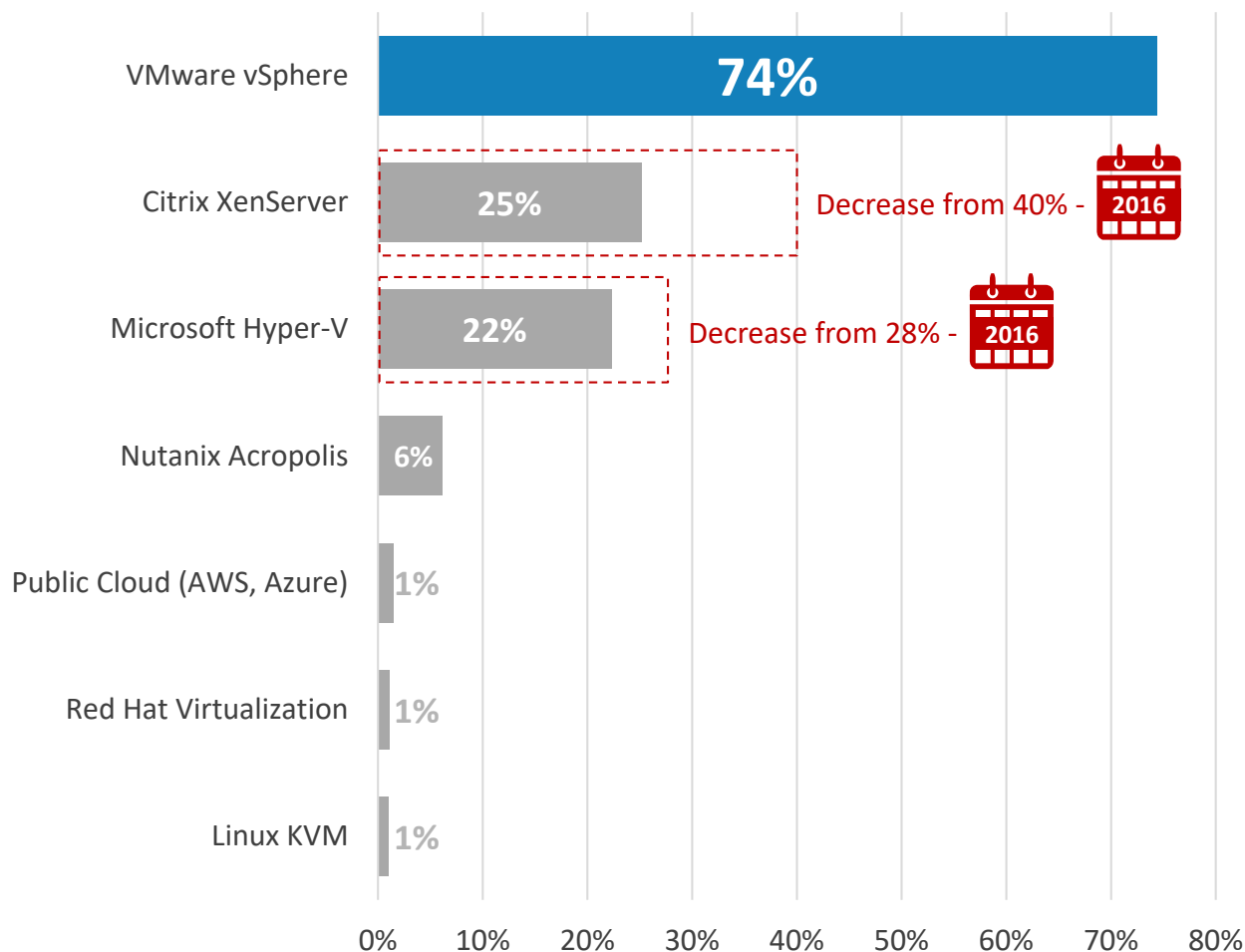
Which other parts of your infrastructure will you upgrade during the migration to XenApp/XenDesktop 7.x?



Besides XenApp and XenDesktop, there are other Citrix components that need to be upgraded alongside, such as Receiver, PVS, License Server, etc. New components like StoreFront and NetScaler replace Web Interface and Access Gateways used in the past.

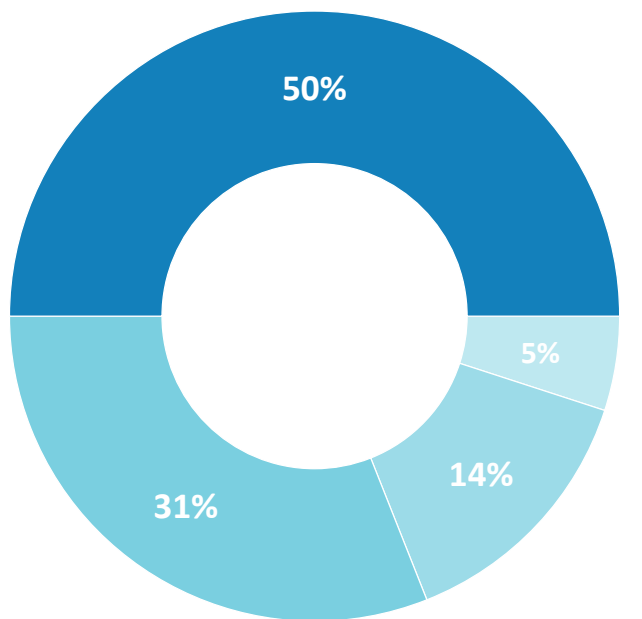
- Migration from XenApp 6.5 to 7.x typically involves an upgrade of the supporting hardware and software across different infrastructure tiers.
- Operating system upgrade tops the list at 71%. This is because:
 - The latest version of XA/XD 7.17 is only supported on Windows Server 2016 and 2012 R2
 - Support for older versions of Windows Server has been deprecated
- The second on the list is hypervisor upgrade (42%).

Which hypervisor will you be using for virtualizing your upgraded Citrix XenApp/XenDesktop 7.x environment?



- VMware vSphere remains the more popular hypervisor for XenApp and XenDesktop 7.x deployments. 75% respondents are considering using vSphere.
- Compared to 2016, market share has reduced for:
 - XenServer (from 40% to 25%)
 - Hyper-V (from 28% to 22%)
- In large organizations (5,000+ employees), vSphere stands tall (82%) as the preferred hypervisor.
- About 15% of respondents are considering using multiple hypervisors (2 to 3) after migration to XenApp and XenDesktop 7.x.

Do you use Citrix Cloud or XenApp/XenDesktop Essentials in your Citrix environment?

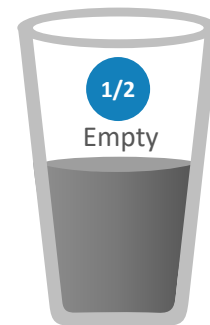


- Yes, currently using cloud services
- Yes, considering cloud services
- Plan to look at cloud services in the future
- No plan for cloud services

The Glass is Half Empty

50% of respondents don't have any plan for Citrix Cloud services now or in the future. Reasons include:

- Organizations are not acquainted with the cloud deployment model
- Many feel Citrix Cloud services are more expensive
- There are also fears about security and compliance

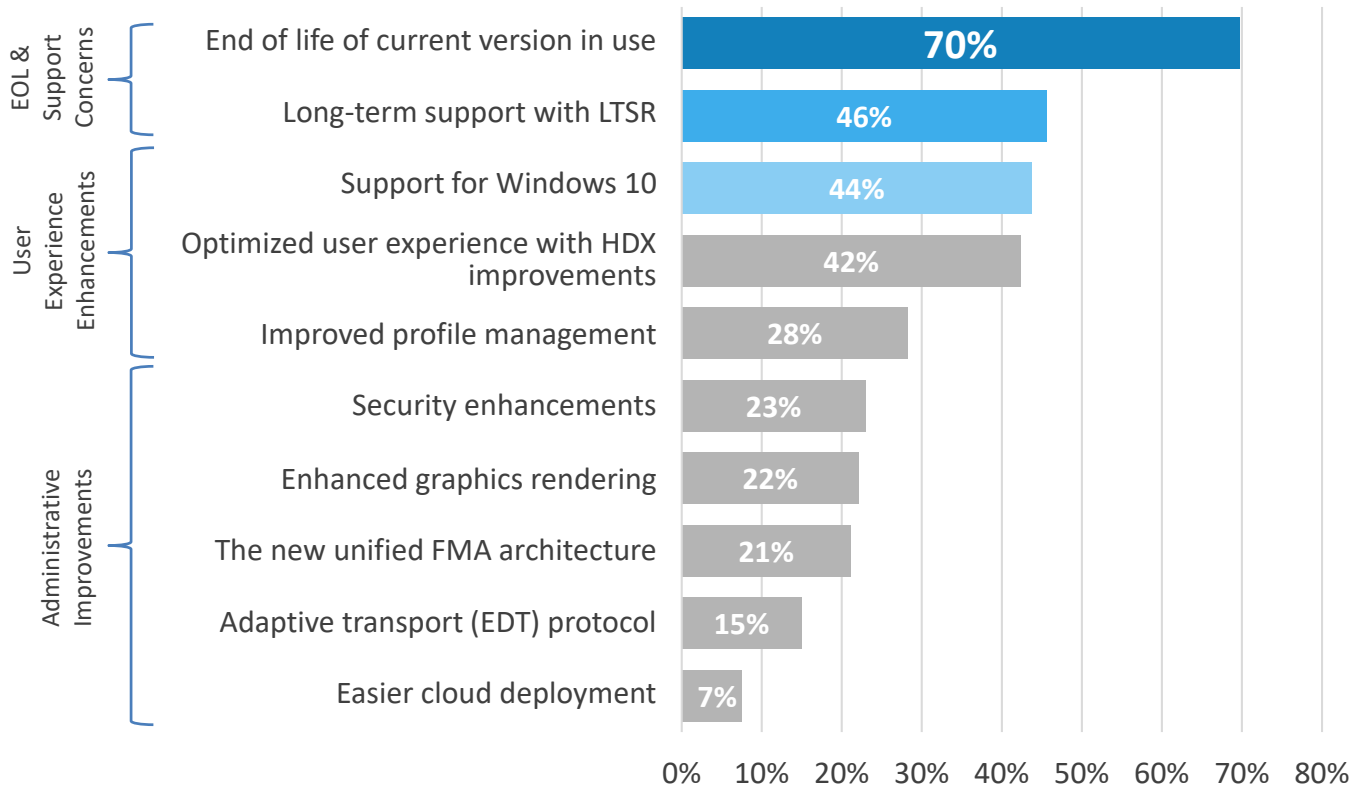


The Glass is Half Full

- Only 5% are currently using Citrix Cloud
- However, 45% are considering using it in the future. The migration to 7.x will drive more Citrix Cloud adoption.
- In large enterprises (5,000+ employees), about 60% are considering using Citrix Cloud in the future



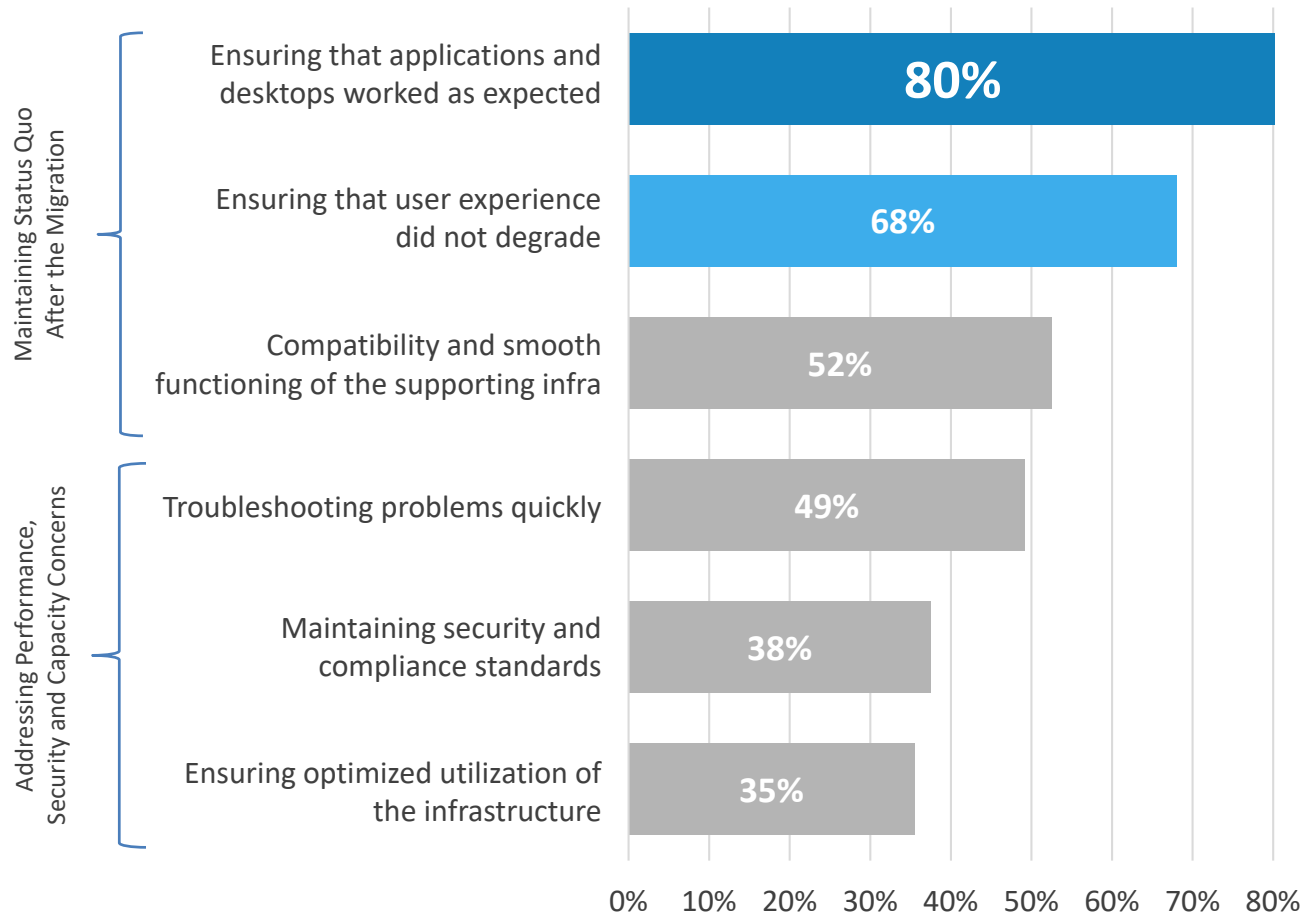
What is your primary driver for migrating to Citrix XenApp and XenDesktop 7.x?



- EOL of older versions of XenApp and XenDesktop (70%) is the primary reason driving the migration to 7.x.
- The second reason is LTSR (46%). Organizations are concerned about support post-migration to 7.x and want to get extended support through LTSR.
- Support for Windows 10 (44%) is another important driver for 7.x adoption. Organizations are looking to upgrade their operating systems to the latest versions.

The various versions of XenApp and XenDesktop 7.x have introduced a number of new functionality improvements (e.g., adaptive transport, adaptive display, app layering, WEM, Director, etc.) that are also contributing factors towards the migration trend.

What are/were your biggest concerns when migrating from an older version of XenApp/XenDesktop to the current one?



- The top concern for organizations with the 7.x upgrade is ensuring performance of applications and desktops in production (80%).
- Making sure that there are no user experience degradation (68%) came out as another major concern.
- Feedback from respondents included concerns, such as:

- Losing customization post-migration
- Missing support for legacy applications
- The need for additional training and reskilling
- Loss of XenApp 6.5 functionality

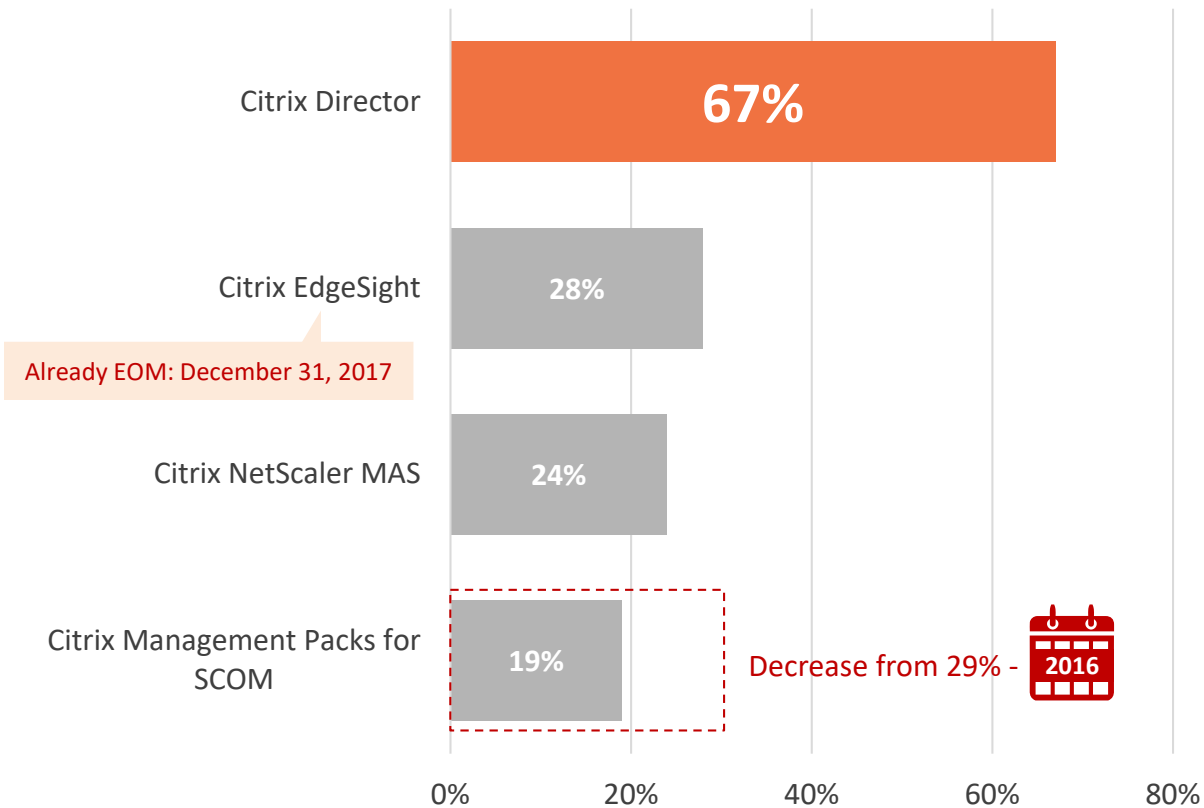


Citrix Performance Management

Challenges & Expectations



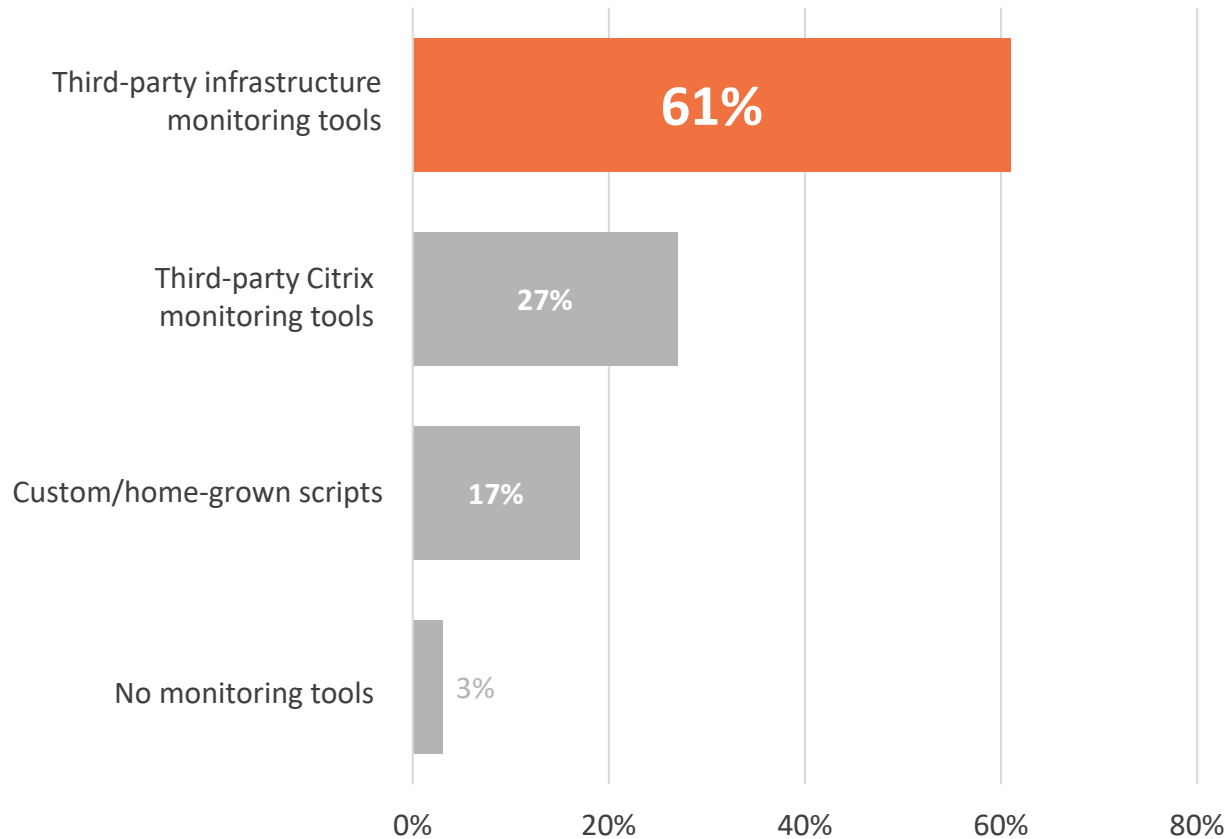
What performance monitoring tools do you use for Citrix environments today?



- Majority of respondents (67%) are using Citrix Director.
- 28% of respondents are still using EdgeSight, which reaches EOL on June 30, 2018.
 - In large organizations, 42% are still using EdgeSight
 - This number will start shrinking in the future as 7.x migration steams ahead
- 19% of respondents are also using Citrix SCOM Management Packs.

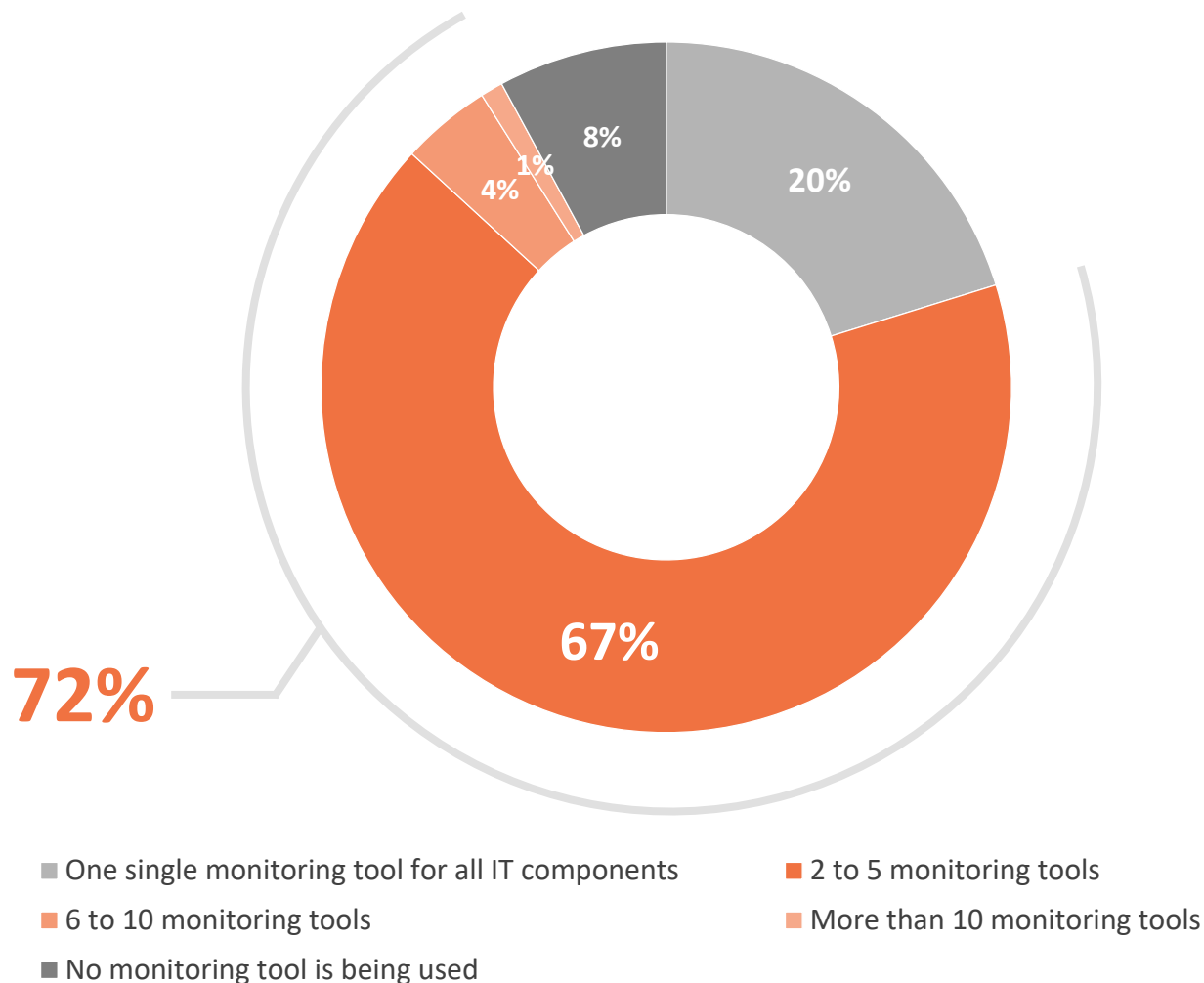
Compared to 2016, usage of Citrix SCOM Management Packs has decreased from 29% to 19%.

What performance monitoring tools do you use for Citrix environments today? (contd.)



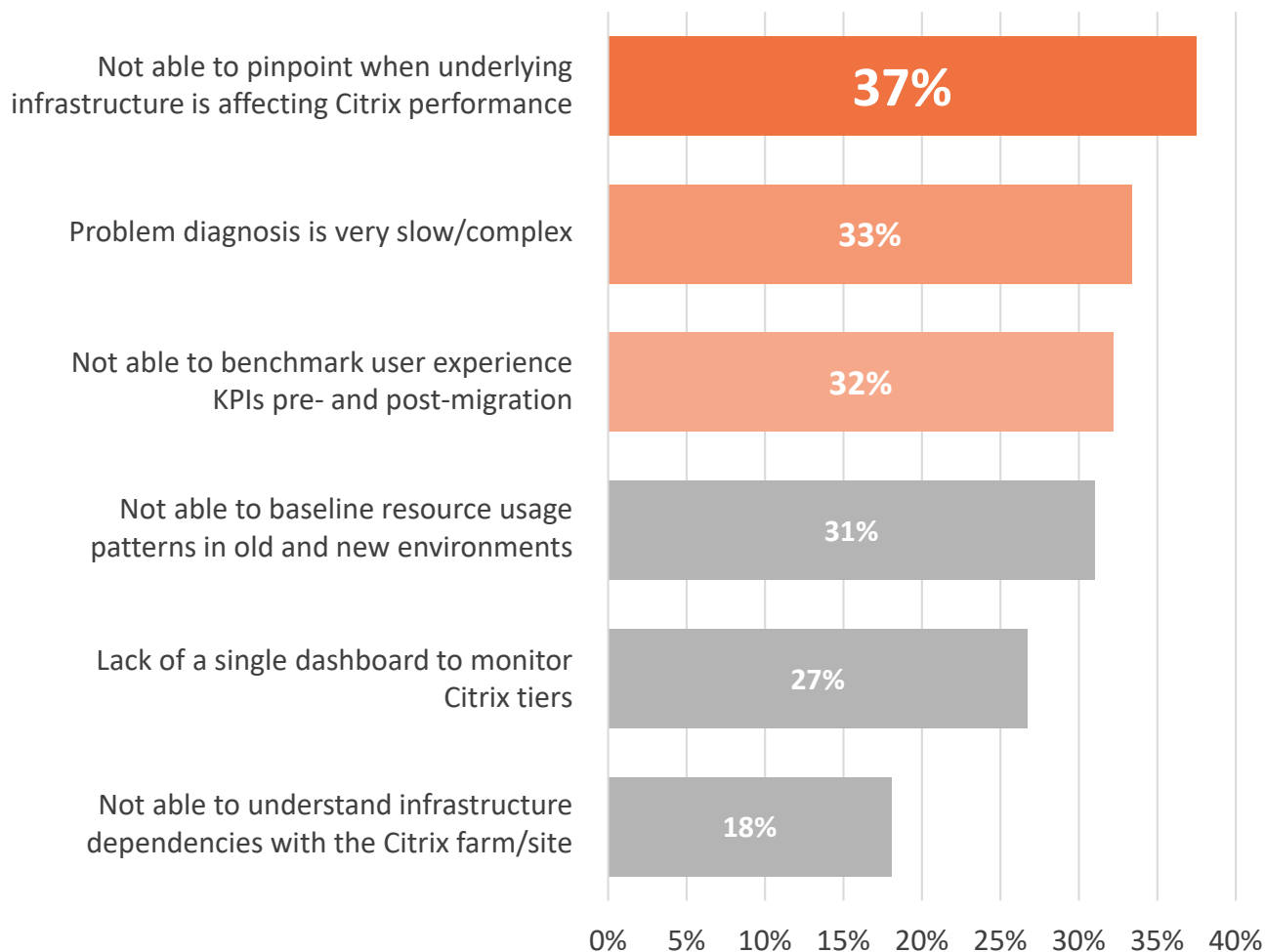
- 61% of respondents are using infrastructure monitoring tools for Citrix monitoring.
- This is part of the reason why Citrix performance monitoring and troubleshooting is challenging.
- Without adequate domain expertise built into it, a network or server monitoring tool will not be sufficient for Citrix performance troubleshooting.

How many different tools and consoles do you use for monitoring of your Citrix environment?



- 72% of respondents are using 2 to 10 tools for monitoring their Citrix infrastructures.
- 83% large organizations (5,000+ employees) are using up to 10 tools for Citrix performance monitoring.
- Using multiple tools is one of the main reasons why Citrix performance monitoring remains complex and time-consuming for administrators.

What performance challenges did you face (or you expect to face) during the migration to Citrix XenApp/XenDesktop 7.x.?



The top performance challenge that organizations face or expect to face during migration to 7.x is around problem diagnosis and troubleshooting:

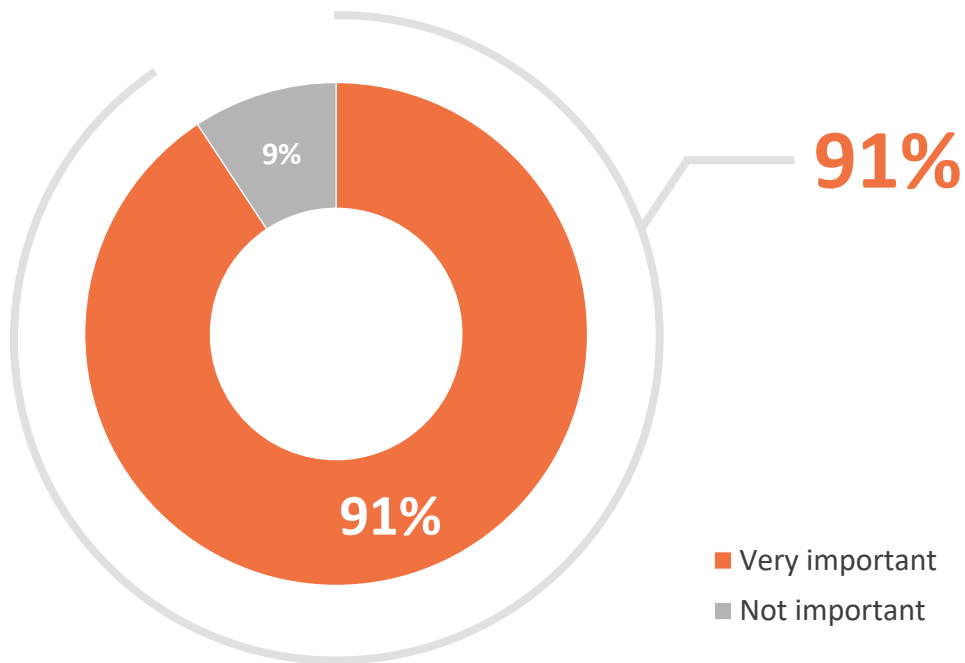
- 37% are not able to pinpoint infrastructure issues affecting Citrix performance



Citrix admins want to prove it is not Citrix that is causing a problem!

- 33% find problem diagnosis to be too slow and complex. This can be attributed to the fact that they are using too many monitoring tools.
- 32% find that benchmarking of performance, user experience, resource usage is a big issue.

How important is it for you to have a single console from which you can monitor all of your Citrix tiers and non-Citrix tiers?



A Citrix delivery infrastructure typically consists of many supporting infrastructure tiers (such as network, virtualization, storage, AD, etc.) in addition to all the Citrix servers.

A problem in any of the supporting tiers would directly affect Citrix performance.



Centralized and correlated visibility of Citrix and non-Citrix tiers from a single pane of glass would help simplify root cause diagnosis and problem troubleshooting.

- 91% of respondents agree that having a single-pane-of-glass solution would simplify performance monitoring and root cause diagnosis.
- Citrix built-in tools provide visibility into different aspects of performance and usage. But, visibility beyond the Citrix stack is missing.
- For the complete Citrix stack, there is no central console. New components – such as StoreFront, Delivery Controller, NetScaler, – have been added in 7.x and need to be monitored.
- This further necessitates centralized visibility across all tiers.

What aspect of Citrix user experience is most important for you to monitor?



Logon



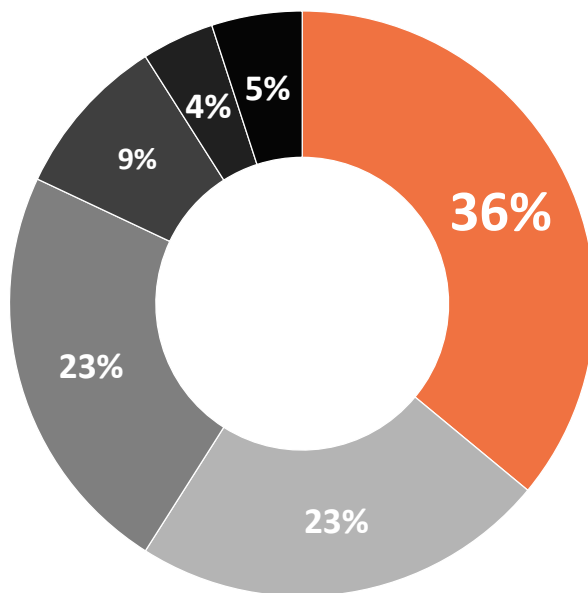
Application Launch



Screen Refresh Latency



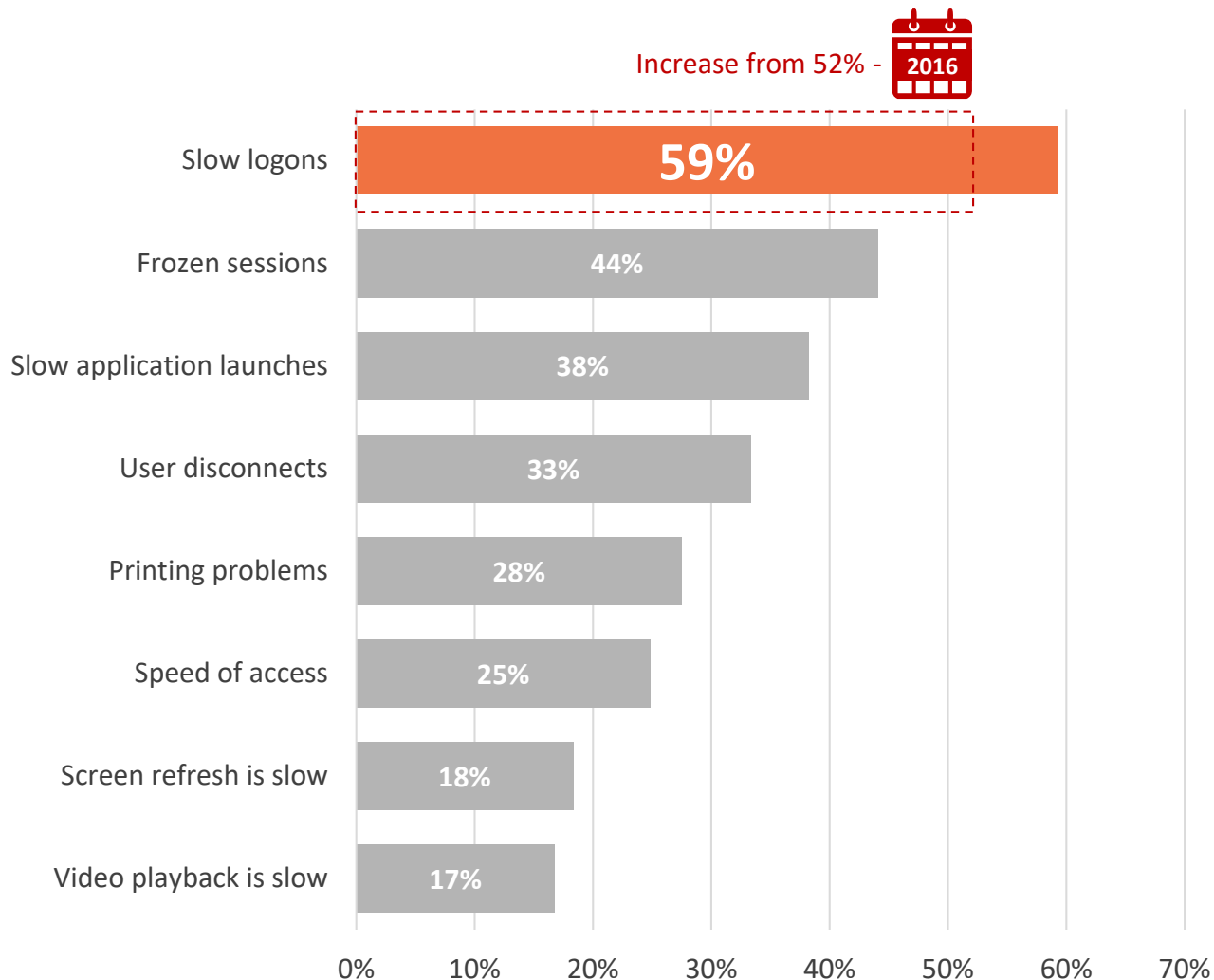
Client Network Latency



- Logon time and breakdown into sub-components
- Application launch time
- Screen refresh latency
- Network latency to client end points
- HDX bandwidths
- Others

- Measuring Citrix logon time is one of the most important aspects of user experience monitoring, as rated by 36% of respondents.
- The logon process in XA/XD 7.x is different from that in 6.x. A Delivery Controller is now involved. Part of the logon processing happens here and the rest on the XenApp server and XenDesktop VMs.
- Director provides some level of logon time visibility, but not the complete picture that Citrix admins seek.
- Respondents also see application launch time and screen refresh latency monitoring as important.

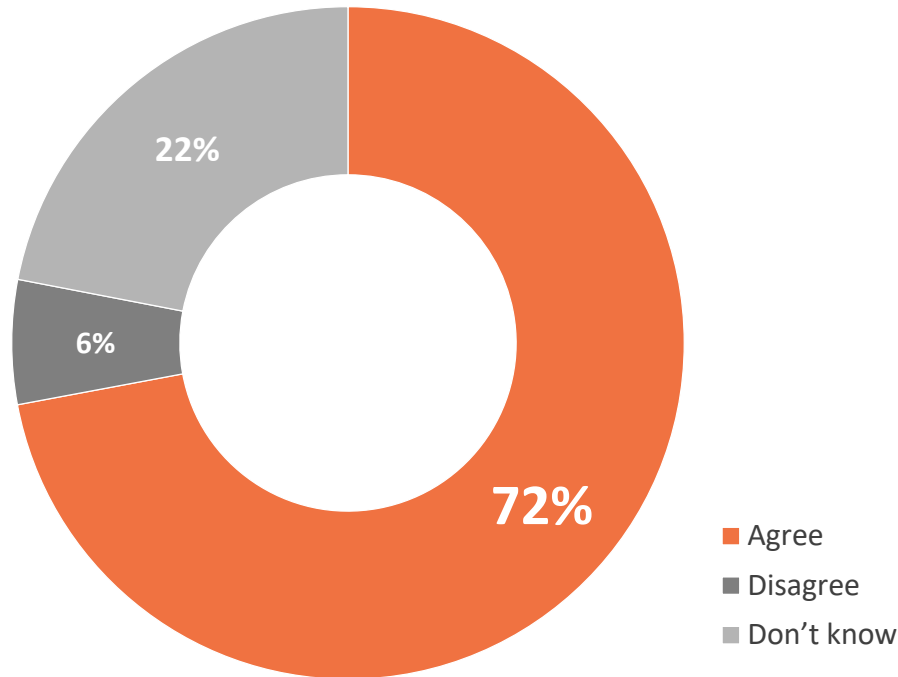
What are your most common Citrix performance complaints from end-users?



- At 59%, slow logon continues to top the chart of common Citrix performance issues faced by Citrix admins.
- In the 2016 Citrix Performance Management Survey, slow logon was the most common user complaint. This trend continues in 2018 also.
- Other common performance issues cited by Citrix admins include:

- Slow applications
- Slow sessions
- Corrupt user profiles
- High profile load time
- Issues due to add-ins
- Session start-up failure

Do you agree that a logon simulation tool will help proactively detect user experience issues during and after Citrix migration?

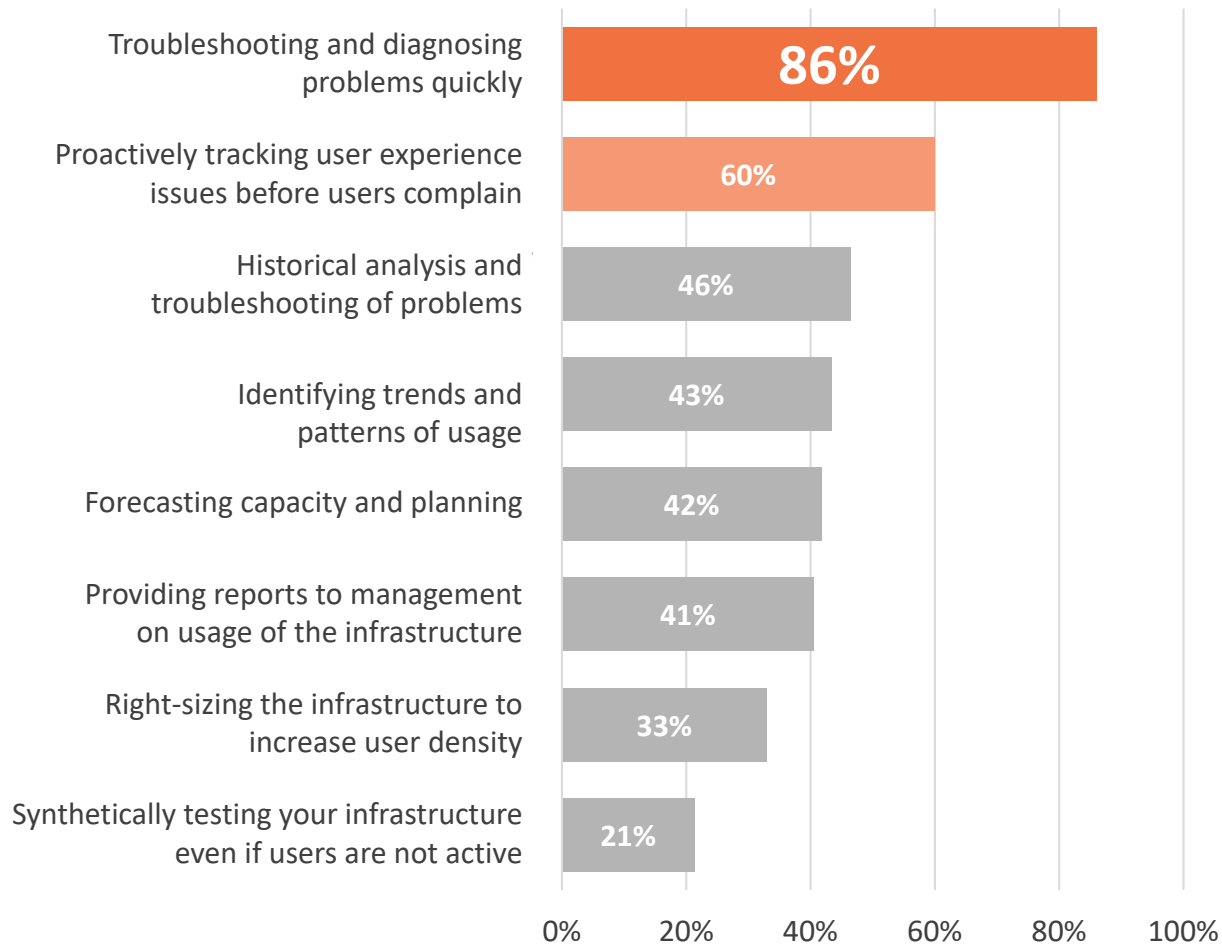


- 72% of respondents agree that proactive monitoring using synthetic logon simulation will help troubleshoot user experience issues during and after Citrix migration.
- Given the concerns with losing benchmarks pre- and post-migration, logon simulation tools will help establish baselines and identify performance deviations.

Key use cases for a Citrix logon simulation tool include:

- Logon availability and performance testing
- Application availability monitoring
- Application enumeration and launch time tracking
- Ensuring proper functioning of all tiers of the Citrix infrastructure to enable user logon
- Benchmarking logon performance, and comparing across different locations

What are the main reasons you deploy performance monitoring tools for your Citrix infrastructure?



- Performance monitoring for Citrix administration teams has become increasingly reactive and admins are constantly in a firefighting mode.
- 86% of respondents feel faster problem diagnosis and troubleshooting is their most critical need.
- There are increasing concerns about monitoring Citrix user experience (60%) as well.
- Optimizations, right-sizing, reporting, etc. are not seen as being at the same level of importance.

**Best Practices for
Successful Migration
to XenApp and
XenDesktop 7.x**





5 Best Practices for Peak Performing Applications & Desktops During and After Migration to XenApp and XenDesktop 7.x



Benchmark user experience before and after migration



Monitor real user experience continuously



Baseline resource usage patterns for every tier of the Citrix site/farm



Understand dependencies to isolate infrastructure issues affecting Citrix performance



Analyze capacity needs and right-size the 7.x infrastructure

Free White Paper: 5 Best Practices to Ensure Stellar Post-Migration Citrix Performance



**DOWNLOAD
WHITE PAPER**

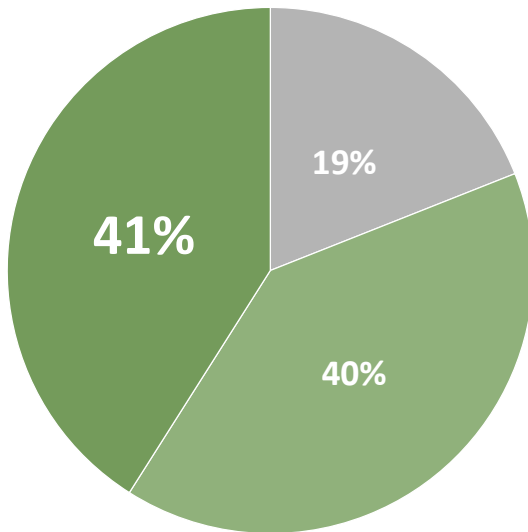
Demographics of Survey Respondents





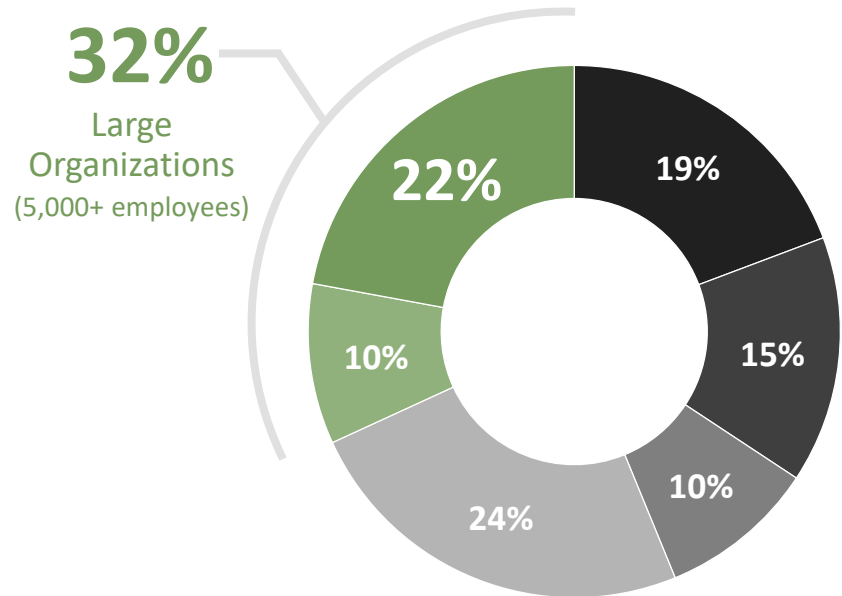
Demographics of Survey Respondents

Geographical Distribution



- Asia Pacific
- EMEA
- Americas

Size of Organization

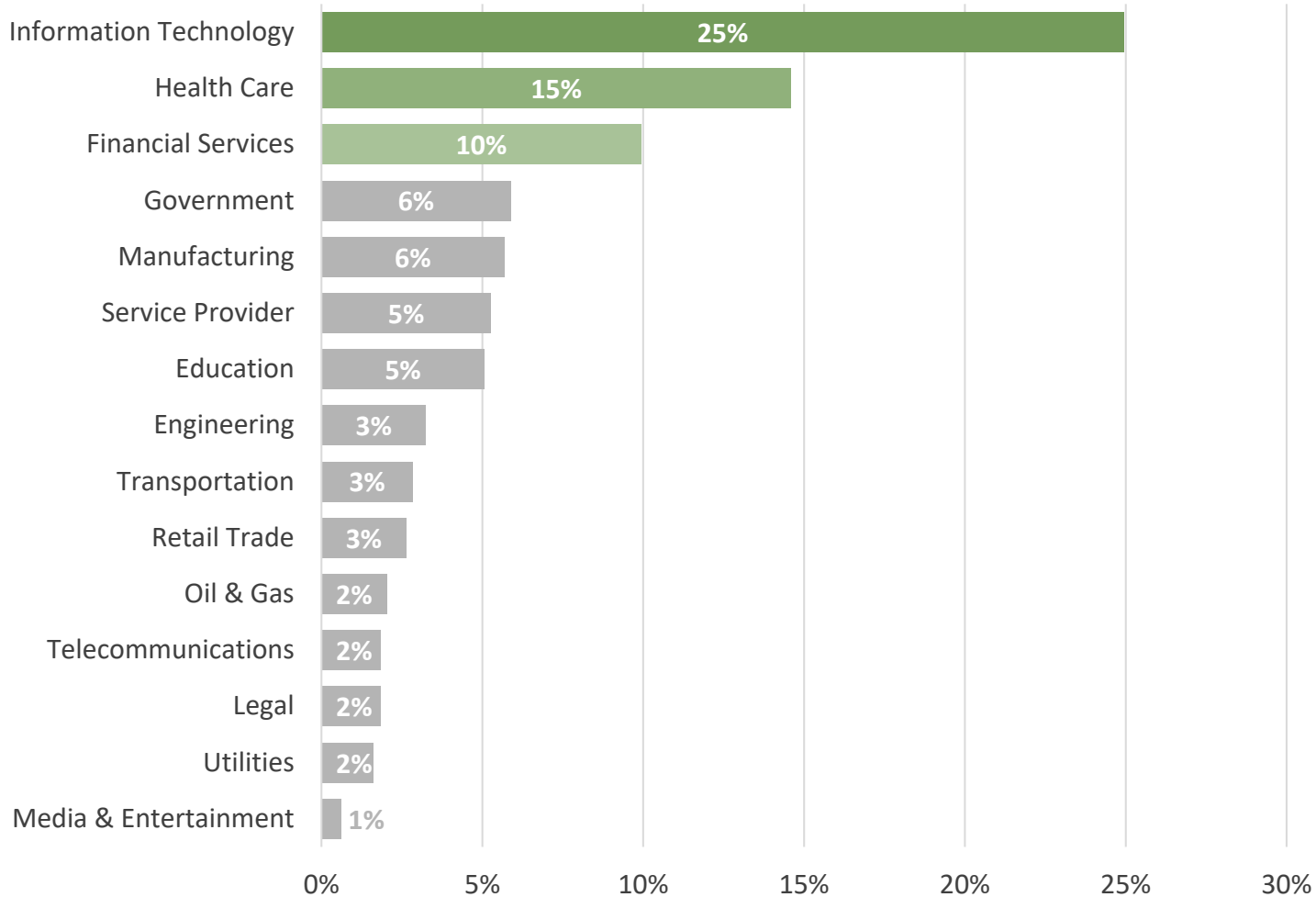


- 1-100 employees
- 101-500 employees
- 501-1000 employees
- 1001-5000 employees
- 5000-10,000 employees
- 10,000+ employees



Demographics of Survey Respondents

Type of Industry



Information
Technology



Health Care

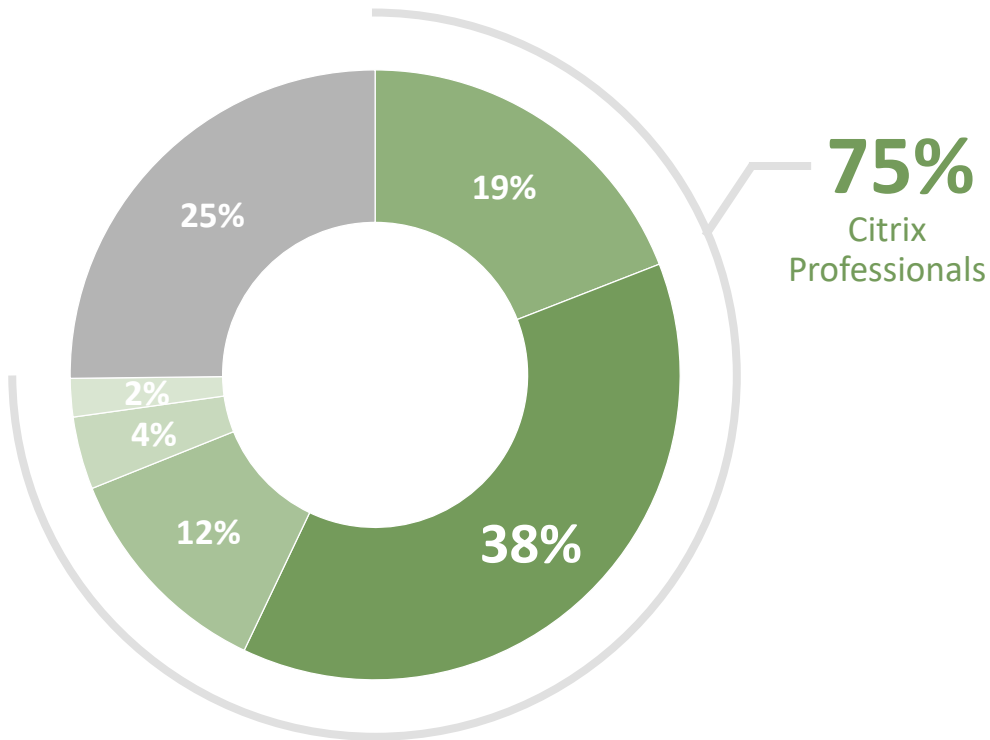


Financial
Services



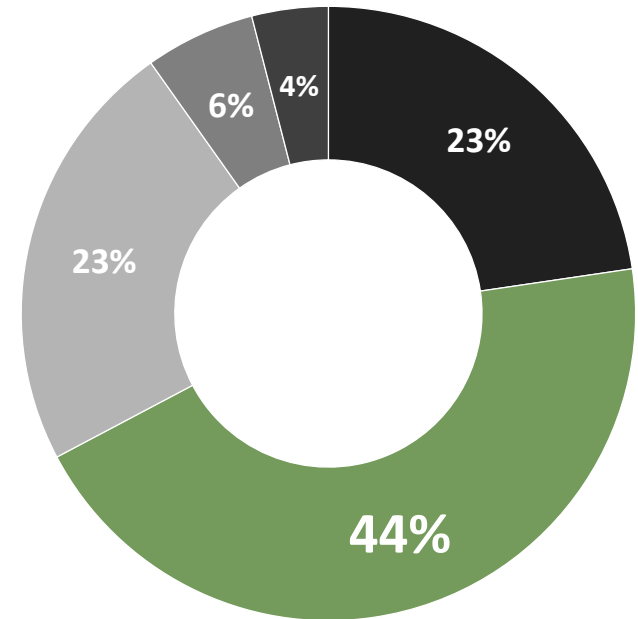
Demographics of Survey Respondents

Primary Role of Respondent



- Citrix admin
- Citrix consultant
- Citrix reseller
- Citrix architect/engineer
- Citrix service provider
- IT/Ops

Job Title of Respondent



- Consultant
- Manager
- C-level executive
- Specialist
- Director



Company Description

About DABCC

DABCC was founded by Douglas Brown on January 12, 1999 with one simple goal, to find and share the important news and support resources. Thus giving the IT Professional one location to find the industries best information.

Over the years, DABCC has kept to its vision and today it has truly become one of the most popular destinations to stay up-to-date with what's new and to find the research information you need in a simple, powerful, and beautiful experience.

www.dabcc.com



About eG Innovations

eG Innovations is dedicated to helping businesses across the globe transform IT service delivery into a competitive advantage and a center for productivity, growth and profit.

eG Innovations' Citrix monitoring solutions help ensure high-performing applications and desktops and stellar user experience across physical, virtual and cloud infrastructures.

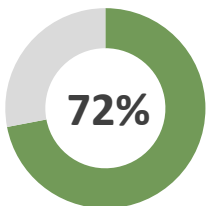
eG Innovations is a Global Citrix Technology Partner and its solutions are Citrix Ready certified.

www.eginnovations.com





Here's a FREE Tool to Help You During Your XA/XD Upgrade



Are you one of the 72% of Citrix professionals who view synthetic logon simulation tools as important for proactively detecting user experience issues before and after Citrix migration/upgrade?

See. Solve. Prevent. Free.

eG Enterprise Express Free Logon Simulator for Citrix XenApp and XenDesktop

Fast, free and incredibly useful. Get started today.

- Simulates the exact steps that your users experience when they log on to Citrix XenApp and XenDesktop
- Tracks the time taken for every step of the logon process: Browser access, authentication, session establishment, enumeration, and application launch
- Detects logon issues proactively and helps troubleshoot them before end-users are affected
- Tests whether the entire delivery infrastructure is working in concert
- Optimized for Citrix XenApp 6.5/7.x and XenDesktop 7.x environments
- SaaS deployment – free forever, no ads, no credit card details required



START MONITORING LOGONS NOW
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Thank You!



A big thanks to all the 795 IT pros that took our survey! Your inputs have helped us compile this informative report. Hope these industry insights were useful to you. Please do share this report with your colleagues and friends.



For more information on Citrix performance monitoring and best practices for XenApp and XenDesktop migration/upgrade:

Visit www.eginnovations.com | Contact info@eginnovations.com

