Challenges and Opportunities in Enterprise Office 365 Deployments

Zscaler Survey Report / May 2017
What Challenges and Opportunities Does Office 365 Present?

Office 365 is the fastest growing and most broadly used SaaS platform in the enterprise; organizations are adopting it to improve productivity, reduce cost and complexity, and focus internal resources on their core business.

But when you deploy Office 365 in a large enterprise, the work of thousands moves from the local network to the cloud, illuminating a unique set of challenges. As large scale adoption accelerates, organizations are learning a new set of best practices for operating in the cloud, at scale.

Read the results of this survey to understand how enterprise-class companies prepared their corporate networks for Office 365 and what they learned from their deployment experiences.
Enterprise
Meet the Cloud

Office 365 is undergoing massive adoption

"In a poll of IT decision makers, 78 percent indicated that they are currently using or planning to use Office 365 software and services.\(^1\)

Office 365 has more than **85 million users**, and is on course to surpass **100 million users** in 2017. This still represents only about **7% of Office users** worldwide.\(^2\)

However, we are still at **the early stages of the adoption trend** and best practices are just being established.


Office 365 is the Fastest-Growing SaaS Application Going through Zscaler Cloud

Average Daily Transactions (Billions)
TechValidate, on behalf of Zscaler, conducted a survey of 205 enterprise-class accounts that had deployed Office 365 Enterprises and large enterprises across vertical industries in North America.

Senior IT managers, directors, and C-level executives.

To understand how companies prepared their corporate networks for Office 365 and what they learned from their deployment experiences.
Survey Demographics

RESPONDENTS

- Senior Manager: 61%
- VP / Director: 25%
- CXO: 14%

RESPONSES BY COMPANY SIZE

- 39% Large Enterprise (>5k Employees)
- 61% Enterprise (1k-5k Employees)

RESPONSES BY INDUSTRY

- Technology: 29%
- Professional Services: 22%
- Financial Services: 14%
- Manufacturing: 12%
- Healthcare: 9%
- Educational: 4%
- Other: 10%

KEY FINDING 1:

Network Concerns Dominated Even Before Deployment

CONCERN ABOUT BANDWIDTH & LATENCY

Sixty-four percent of respondents were concerned about the impact of Office 365 on their bandwidth and latency before they got started.

INCREASE IN BANDWIDTH

69% of respondents expected to see a bandwidth increase of more than 50%. 48% expected an increase of 75% or more.

Cost Concerns Were Top of Mind for Executives and Staff Alike

Mid-level respondents were concerned about costs associated with deployment (77%)

C-level respondents considered cost their biggest concern (79%)

KEY FINDING 2:

Despite Planning Before Deployment, Actual Costs Came in Higher

**COST ESTIMATES WERE HIGH**

<table>
<thead>
<tr>
<th>Percentage</th>
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<td>&gt; 100%</td>
<td>6%</td>
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<td>75% to 100%</td>
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Organizations estimated the total cost of IT, security, and network infrastructure needed to deploy Office 365 as a percent of typical budget.

**REALITY WAS EVEN HIGHER**

48% reported that network infrastructure and equipment upgrade costs exceeded their estimates.

KEY FINDING 3:

Most Doubled Down on Their Existing Network Strategy to Prepare for Office 365

- Increased bandwidth allocations: 58%
- Upgraded firewalls: 65%
- Enabled direct Internet access from branch offices: 33%

Most organizations prepared for the onslaught of Office 365 traffic in the same way they prepared for earlier SaaS applications, **but a few took a different approach.**

Organizations that deployed Office 365 continue to be plagued by network issues on a daily and weekly basis, impacting business operations and productivity.

**OFFICE 365 OPENS FROM 12X TO 20X MORE CONNECTIONS**

and expects these connections to be long-lasting. *Existing infrastructures, such as firewalls and proxies, were designed for short-lived browser sessions, and they can be quickly overwhelmed by Office 365’s persistent connections.*

Executives Focus on the Impact of Latency on User Experience

Executives expressed concern over latency nearly 2:1 over their staff prior to implementing Office 365.

After deployment, execs also reported experiencing problems at higher rates than other respondents — almost twice the rate.

This disparity may point to an executive perception that a fast user experience is a productivity enhancer.

KEY FINDING 5:

Upgrading Firewalls Did Not Solve Network Issues

Despite nearly two-thirds of respondents upgrading their firewalls to prepare for Office 365 deployment, 69% still experienced post-deployment latency.

KEY FINDING 6:

Increasing Bandwidth Did Not Translate into a Faster Office 365 Experience

Despite bandwidth upgrades, organizations continued to experience issues on a daily and weekly basis, impacting business operations and productivity.

OFFICE 365 INCREASES NETWORK TRAFFIC from your branch offices and remote users. Enterprises are moving their most widely used applications to the cloud. As gravity shifts from the data center to the cloud, bandwidth changes must follow.

KEY FINDING 7:

Lack of Bandwidth Controls Compounded Network Challenges and Resulted in Poor User Experience

- 85% reported problems related to bandwidth controls.
- 57% reported that personal and entertainment traffic is favored over Office 365.
- 45% reported that they are unable to access business-critical applications including Office 365.

KEY FINDING 8:
Organizations Are Looking to New Approaches to Solve Problems Going Forward

Companies are beginning to realize that legacy appliances were not designed to handle the network demands of Office 365. As a result, they are looking to new solutions.

- 70% are looking to implement direct-to-Internet connections from their branch offices, as well as traffic shaping and intelligent bandwidth allocation.

- 18% want to implement additional appliances in branch offices to handle Office 365 traffic.

Recommendations
Office 365 Strains the Traditional Network

Before Office 365, most companies provided connectivity to SaaS applications by backhauling traffic from remote sites and mobile users to the on-premises data center. With Office 365, these services have migrated to the cloud, introducing two significant challenges for traditional hub-and-spoke network architectures:

1. **OFFICE 365 OPENS FROM 12X TO 20X MORE CONNECTIONS** and expects these connections to be long-lasting.

2. **OFFICE 365 INCREASES NETWORK TRAFFIC** from your branch offices and remote users.
Architect for a Faster User Experience with Direct-to-Internet Access

A fast and reliable Office 365 experience is key to a successful deployment. However, most organizations backhaul Office 365 traffic over a traditional hub and spoke network architecture that was never designed to support a fast user experience for modern cloud applications.

Office 365, like most cloud applications, was built to be accessed securely and reliably via a direct Internet connection. The goal, therefore, is to get to the Microsoft network as quickly as possible. You can avoid costly network upgrades and eliminate backhaul latency by using local breakouts to ensure the fastest path to the Office 365 network.

The challenge is that deploying local breakouts requires appliances at every branch location, is prohibitively expensive, and introduces excessive administrative overhead.
RECOMMENDATIONS

Make Sure Your Firewall Can Scale

Every Office 365 user creates anywhere from 12 to 20 long-lived (persistent) connections, which can overwhelm firewalls and lead to delayed deployments and premature hardware upgrades.

Further, Office 365 use will require more than Web browsing (ports 80 / 443) as it also uses ephemeral ports. Failing to plan properly can result in random hangs and connection issues.

Explore cloud firewalls that scale elastically to provide a seamless user experience.

Zscaler file download times for Office 365 were independently tested by Catchpoint and found to be 40 percent faster than going direct.

Learn more about the results of the Catchpoint analysis and the Zscaler solution for Office 365 in “Connectivity Options for Office 365” white paper.
Bandwidth management can make or break the Office 365 user experience. Our view is to broadly assume that Internet bandwidth consumption might increase by at least 40 percent, but sufficient bandwidth does not guarantee a fast user experience for Office 365.

That bandwidth could be diverted to YouTube or other streaming and social media sites. Given network demands of Office 365, organizations must make sure they are prioritizing critical applications over non-essential ones.

Don’t try to make bets on what your traffic will look like in the cloud. Accept some rational guidance and focus on managing the traffic to prioritize the most important applications.

**Implement sophisticated bandwidth management controls to guarantee prioritization of Office 365 traffic, especially during times of contention.**
As you break traffic out locally, it’s imperative to secure Internet bound traffic with the same security controls (or better) that exist in your centralized internet gateway.

The cost of deploying the full security stack in all locations is prohibitively expensive, and consequently organizations often sacrifice security by only deploying a UTM or next gen firewall that cannot scale.

Office 365 also requires frequent firewall updates. Missing an IP / URL update will cause connectivity issues. It is important to automate this process as missing an update will cause connectivity issues and impact the user experience.

It’s crucial to maintain full security controls with central management and automation capabilities.
More Resources on Office 365

• Learn how to prepare your network for Office 365 with the Zscaler Office 365 Network Readiness white paper

• Understand the network performance issues related to Office 365 with the white paper from Catchpoint, Office 365 Performance Report

• Read how a cloud gateway will both simplify your direct Internet breakout deployments and improve Office 365 performance: Zscaler for Office 365 solution brief