

An in-depth look into how organizations and people work today—exploring employees, partners, contractors and customers, and the apps and services they use to be productive.



This is the third edition of our Businesses @ Work report. The first was released in October 2015 and the second in March 2016. Businesses @ Work does just what its name implies: it examines how organizations and the people who work for and with them get work done. To create this report, we anonymized customer data from our network of thousands companies, applications, and custom integrations, and millions of daily authentications and verifications from countries around the world. Our customers and their employees, contractors, partners and customers use Okta to log in to devices, apps and services, and leverage security features to protect their sensitive data. Our customers span every industry and vary in size, from small businesses to enterprises with tens of thousands of employees.

As we dug into the data, one thing became clear: IT will never be the same. The traditional role of IT is expanding beyond simply managing employees. The clear distinction between corporate apps and personal apps is fading away. And, we're seeing early signs of a potential shift away from Microsoft Active Directory.

As you read this report, keep in mind that this data is only representative of Okta's cloud-forward customers, the **applications that we connect to**, and the ways in which users access these applications through our service.









KEY FINDINGS

Bulls, bears and everything in between

Bulls: Office 365 increased its lead as the most popular app in our network in 2016. Office 365 is also the number one lifecycle management app today (but Box and G Suite are not far behind). And, Office 365 is far and away the most popular app accessed by Okta customers on mobile devices. **Bears:** Based on our data, no two apps have been more impacted by Slack's success than Yammer and HipChat. Both have continued to steadily decline in popularity throughout 2016. Microsoft even **announced** plans to discontinue selling Yammer as a standalone product in 2017, and is attempting to reinvent itself in this space with the **introduction of Microsoft Teams**.

In Between: Video and web conferencing platform, Zoom, is zooming to the top! The app was the fastest growing app in the past six months. It wasn't even in the top 25 in our last report! Zoom grew 67% in the past six months, followed by Cisco Umbrella, which grew 47%. Slack came in third with 44% growth, an impressive feat after holding the "Fastest Growing App" title for the past two reports.

It's not just business, it's personal

We've always known that Okta is used for personal apps and services, but we were surprised by the extent of it.

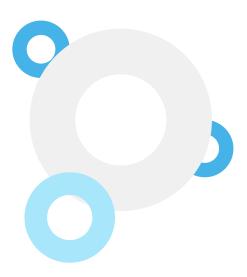
More than 50% of apps that are accessed via Okta are not provided by IT¹. This means people are using Okta to secure more than just corporate apps and data—the Okta Identity Cloud is also keeping personal data secure. As the lines blur between work and personal lives, businesses clearly understand the importance of securing employee access to all apps. And security isn't the only reason businesses are allowing end users to add apps themselves. Joe Turbett, Senior Director of Global Operations and Infrastructure at McGraw Hill shared, "We have a newer, kinder, gentler IT where we're trying to encourage and be flexible with our employees' ability to be productive. I need them to be productive in everything they do."

G Suite customers: in a league of their own

We discovered that G Suite customers use 30% more apps on average than Office 365 customers (29 apps compared to 22). More isn't always better, but it certainly can be. Our data shows G Suite customers are employing a best-of-breed IT strategy to build out their cloud ecosystem. G Suite customers are more likely to use apps like Salesforce, Slack, Amazon Web Services and GitHub than their Office 365-subscribed counterparts. They're adopting apps to meet specific needs versus investing in an entire cloud app stack up front.

Are we united or are we divided?

We know our country is more politically divided than ever before. But, with the upcoming inauguration, we were curious: how do blue, red and swing states differ with respect to app usage? While the data was less polarizing than the 2016 presidential election, there were some interesting findings. We discovered that blue states, on average, use more apps (22) than both red (18.5) and swing (18) states. And, customers in blue states tend to be more cloud-forward than their red and swing state counterparts, with higher adoption of 12 out of the top 15 most popular apps, including Box, ADP, G Suite, JIRA, Slack and Zendesk (among others).





^{1.} This includes shadow IT.



KEY FINDINGS

With external identities comes great responsibility

In our 2016 Businesses @ Work report, we shared that the number of external identities (partners, customers and suppliers) in Okta's network had surpassed the number internal identities for the first time. The number of external identities continues to increase. External identities grew 294% and 540% in 2015 and 2016 respectively. It's clear that technology is playing a bigger role than ever before as nearly every company thinks about how they become a technology company in their own right. Our data tells us that the responsibility for these initiatives is falling at least in part on the CIO. The digital transformation is happening —and it's sitting on IT's desk! IT doesn't just manage employees anymore, they manage entire ecosystems of employees, customers, partners and distributors.

SMBs explore an AD alternative

Microsoft Active Directory (AD) has been the defacto standard directory in the working world for more than a decade. 95% of the Fortune 1000 use Active Directory today (source). But, as nearly every business system moves (or has moved already) to the cloud, it raises the question: will enterprises continue to use an on-premises directory? Maybe not. Roughly 16% of customers in our network don't use AD or LDAP today, a slight increase from 2 years ago. And more than 30% of SMB customers in the Okta Identity Cloud don't use AD or LDAP. As these companies grow and mature, they may never deploy a traditional on-premises directory, an indicator that usage in large organizations may decline.

A new breed of unicorns

It seems like the reputation of private software companies hinges too much on whether or not they have achieved "unicorn status", and not enough on things that actually matter, like adoption or utilization within the enterprise. So, we took it upon ourselves to redefine what a unicorn is. We identified the 10 most popular private enterprise software companies based on the number of customers using these apps. Slack, not surprisingly, is number one, followed by Dropbox, DocuSign, GitHub, and Smartsheet. Check out our full list of unicorns below.







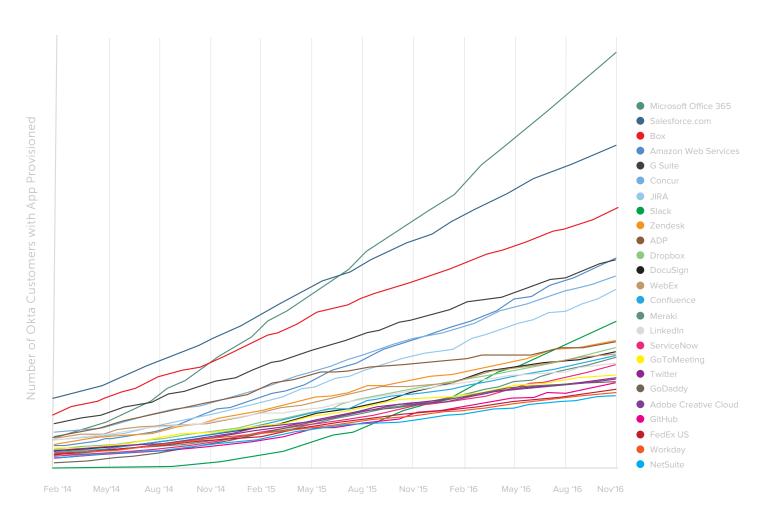




What are the most popular apps?

Office 365 remains the number one app in our network, followed by Salesforce and Box. Amazon Web Services *just* surpassed G Suite for the number 4 spot, and Slack jumped from 12th most popular app to 8th in less than a year. Will Slack's meteoric rise top out as some critics are suggesting? We don't think so. While Slack's rate of growth is slowing, we predict the app will continue to move up this pecking order.

O Popular apps over time



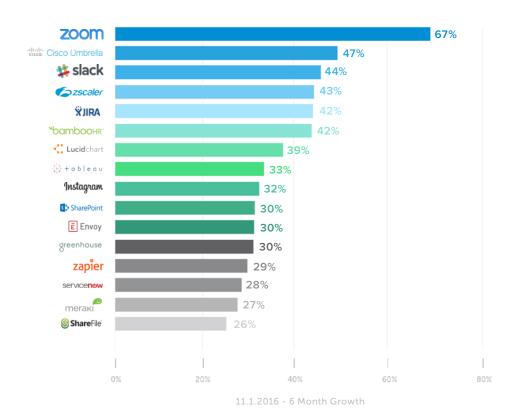




What are the fastest growing apps?

Zooming to the top! The cloud video-conferencing platform, which was not even in the top 25 fastest growing apps in our 2015 report, became number one in the past six months. Cisco Umbrella, also not in the top 25 in our 2016 report, followed. Slack's growth has continued to slow from 77% in the second half of 2015 to 44% in the past six months, moving the powerhouse to the #3 position. For a company of its size and maturity, this is still a very impressive feat!





Note: This graph shows the change in rank of each app over time based on Okta's number of customers that make that app available to their constituents.

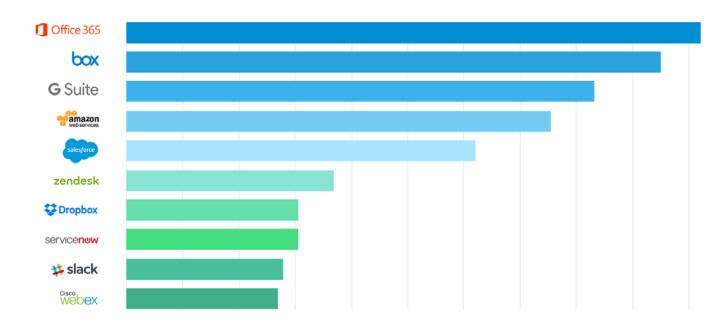




What are the top lifecycle management apps today?

IT is all about getting the biggest bang for their buck when it comes to lifecycle management. (Through our lifecycle management integrations, Okta enables customers to automate the provisioning and de-provisioning of applications). Our data shows that IT is most often automating the apps that are typically issued companywide: Office 365, Box, and G Suite. What's after that? Our data also suggests that automating lifecycle management is critical with apps containing sensitive data, where users can be immediately deprovisioned if need be. This includes Amazon Web Services (with new code), Salesforce (sales figures), Zendesk (customer service issues and requests) and Dropbox (documents stored).





Number of Okta Customers

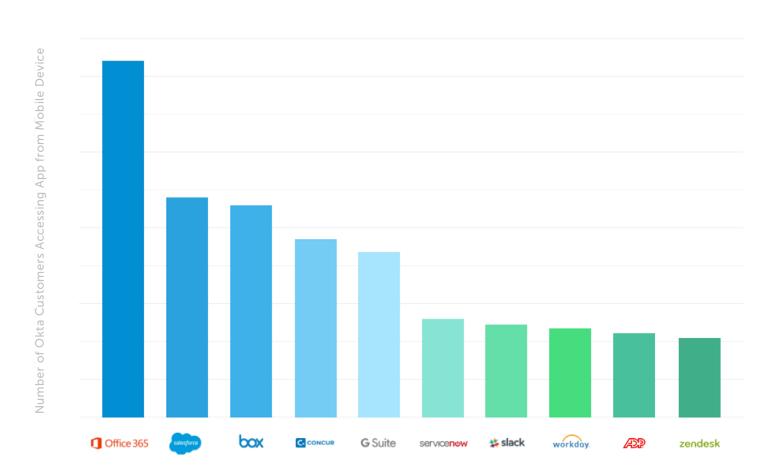




What are the top apps on mobile?

More than 80% of Okta customers are accessing apps from a mobile device today. (This figure has steadily increased over the past two years.) What are they accessing? Those same popular apps they access while in the office: Office 365, Salesforce, Box, Concur, G Suite, etc.

Most Popular Apps Accessed on a Mobile Device





What are the most popular personal apps?

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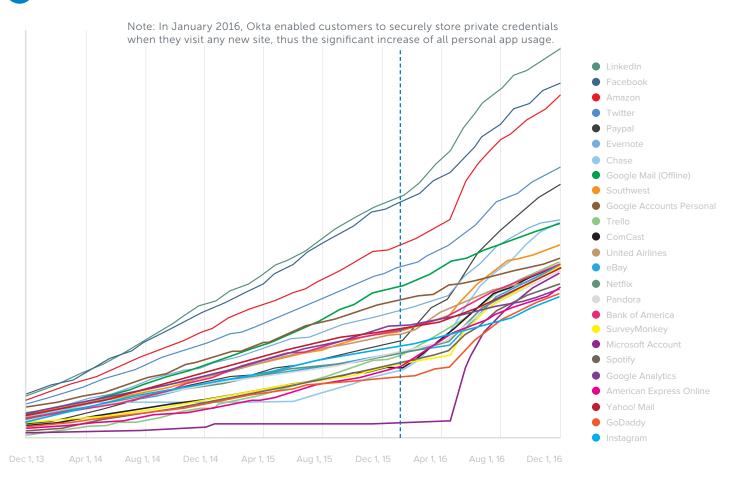
FIfty-six percent of apps used by Okta customers are not provided by IT, compared to 48% in November 2015. While some of these apps (Amazon, PayPal, Comcast, Netflix, etc.) are very likely for personal use, others including LinkedIn, Facebook, Twitter, Evernote, and a multitude of travel sites show this very blurry world in which we now live.

Customers realize security, end user adoption, productivity, and even shadow IT benefits by allowing their end users to add personal apps to Okta. Aaron Finnis, Associate Director of Information Security and Risk at Flinders University in Australia, states, "if we see hundreds of users using [an

app], we would certainly use that information to inform our decision making with regard to purchasing an app as an enterprise solution. We also use that app data, which is extremely powerful, to prioritize the existing enterprise apps we intend to integrate with Okta next to ensure maximum user benefit."

Note: 89% of customers in our network allow end users to add personal apps to Okta.

Popular Personal Apps Over Time



Note: On January 9th, 2017, Atlassian announced that it had acquired Trello. The deal is expected to close March 31, 2017.



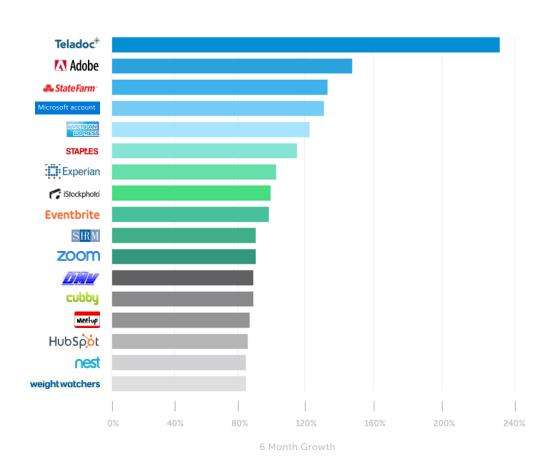


What are the fastest growing personal apps?

Teladoc, a telehealth company that provides on-demand remote medical care, was the fastest growing personal app in the Okta Identity Cloud in the six months ended November 1. After that, the list becomes fragmented, with a mix of truly personal apps (State Farm Bills, Experian, Eventbrite, the CA DMV) and personal productivity apps (Adobe, American Express, and Microsoft Account—formerly known as Windows Live).



Fastest Growing Personal Apps in Six Months Ended November 1





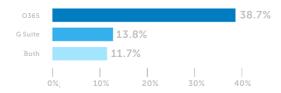


What are the top apps for customers with G Suite and/or Office 365?



As mentioned **above**, Office 365 remains the most popular app in our network, with 39% of customers exclusively using the app and over 12% using both it and G Suite together. That means over 50% of our customer base is using Office 365. G Suite usage is also significant, with nearly 14% of our customers using the app exclusively and over a quarter using it either alone or with Office 365.

Percentage of Customers Using O365, Google Apps, or Both

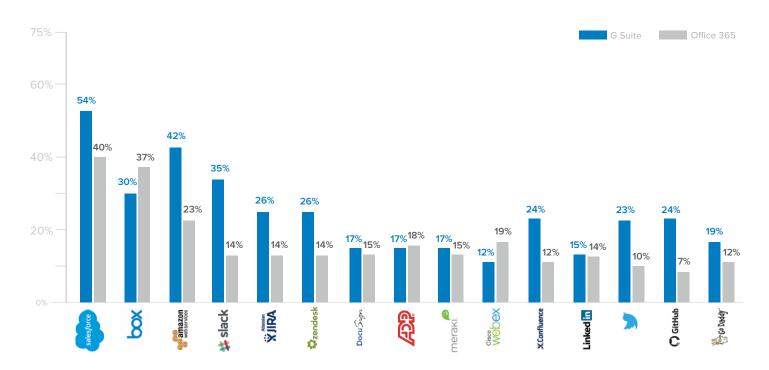


With the vast Office 365 and G Suite usage, we started to wonder: what other apps do these customers use? Is there a significant difference between the app profile of a G Suite customer and that of an Office 365 customer? Turns out there is.

First, G Suite customers use more apps than Office 365 customers. The average G Suite customer has 29 apps, compared to the average Office 365 customer who only has 22. We believe this is in part due to the way in which Microsoft builds its stack. The "Microsoft stack" can include products like Dynamics CRM, Yammer, Skype, Azure, and OneDrive for Business, which customers can access via a single app. Thus, their app count is reduced.

But are Office 365 customers missing out on the latest cloud apps? Our data suggests, in many cases, they are. G Suite customers are more likely to select newer apps as they build out their cloud ecosystems. 42% of G Suite customers are using Amazon Web Services, 35% use Slack, 26% use Zendesk, and 24% use GitHub compared to Office 365 customers where 23% are using Amazon Web Services, 14% use Slack, 14% use Zendesk and only 7% use GitHub. Office 365 customers are more likely to adopt established apps like Box (37% vs. 30%), and WebEx (19% vs. 12%) than G Suite customers.

Popular Other Apps for Customers with G Suite and/or Office 365







Who's suffering at the hands of Slack?



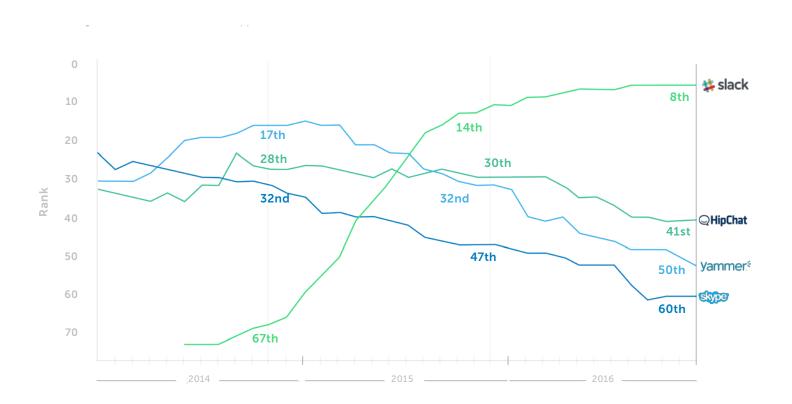
Slack's rise in popularity over the past two years is nothing short of jaw-dropping. Just two years ago, Slack was the 67th most popular app in our network. Today, it's 8th. Slack has surpassed the likes of LinkedIn, Twitter and DocuSign, and we would argue it's not stopping there.

But, not everyone is applauding Slack's success. HipChat, Yammer and Skype in particular have suffered as a direct consequence. These apps have seen a significant decline in popularity over the past two years. Yammer, the 17th most popular app in our network 2 years ago, has fallen to 50th. While users can log into Yammer with their Office 365 credentials today, this has only been true since February 2016 (source); the app had already had a precipitous decline

at that point. Furthermore, in October, Microsoft **announced** plans to discontinue sales of Yammer as a standalone product, presumably as a way to phase out the product.

But the race is far from over. New entrants like Facebook's Workplace continue to challenge Slack. And with the recent **announcement** of Microsoft Teams, is Slack about to feel the heat? We'll have to wait and see, but in Slack's own words, "we're genuinely excited to have some competition" (**source**).

Change in Rank of Communications Apps Over Time







What are the top apps by political color?

With the recent election and impending inauguration, we were curious; does app usage differ by political color? In a word: yes. Our data shows that customers in blue states tend to be more cloud-forward than their red and swing state counterparts. Blue state customers have higher adoption in 12 out of the top 15 most popular apps. The largest disparities include Box, ADP, G Suite, JIRA, Slack and Zendesk. For example, 45% of Okta customers in blue states, 47% of Okta customers in red states and 51% of Okta customers in swing states use Office 365.





% of Okta Customers with App

Note: Companies are defined by where they are headquartered. Top apps are for US companies only.





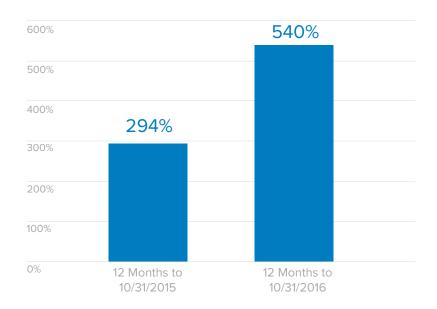
What percentage of identities are outside the workforce?

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"Digital transformation" is the trendy catchphrase in companies today. And it's not just hype. Nearly every company is thinking about how to become a technology company in its own right, so they can be competitive in today's world. It's clear that digital transformation is a real thing. But what hasn't been clear for a lot of these companies is who owns this transition. Many large enterprises are hiring "Chief Digital Officers," to manage their digital transformation initiatives. For companies that don't have the luxury of expanding their executive team, the responsibility for these initiatives has often been scattered. Until now. Our data suggests IT will be running the show. Why do we say this? IT manages Okta.

And Okta helps employees securely connect to the tools they need to get their jobs done. On average, IT is managing over 2,000 employee identities. But, that's not all IT is doing. We're seeing a massive increase in the number of external identities managed by Okta as well. External identities grew 294% and 540% in 2015 and 2016 respectively. And IT is managing those as well!

Growth of External Identities





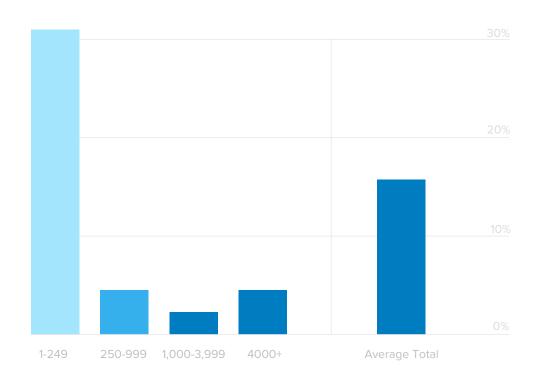


What percentage of customers aren't using AD or LDAP?

Ninety-five percent of the Fortune 1000 use Active Directory today. But this may not always be the case. According to Forrester Research, "the on-premises model worked well when the majority of a firm's applications consisted of on-premises client/ server apps, but the rapid adoption of SaaS is straining this traditional on-premises directory infrastructure."

Forrester asserts that "there is growing interest in new AD in the cloud." And, we're seeing the first indicators of this trend today. Over 30% of our SMB customers are not using AD or LDAP as a directory. As these companies mature, they may never deploy AD.

Percent of Okta Customers Not Using Active Directory (AD) or LDAP





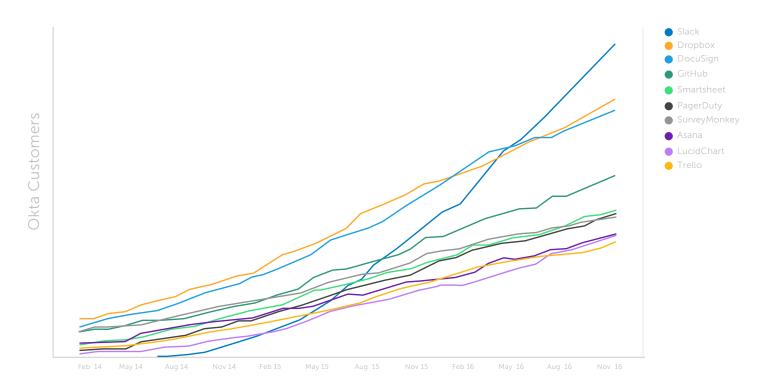


Who are the "real" unicorns?

Much of the world looks at private tech companies through a "unicorn" lens. A unicorn is defined as a private company valued at over \$1 billion. We think a more meaningful way to measure the value of private enterprise software companies is how widely the application is adopted and utilized. Here's a look at the new breed of Unicorn:



Popular Private Enterprise Software Companies Over Time



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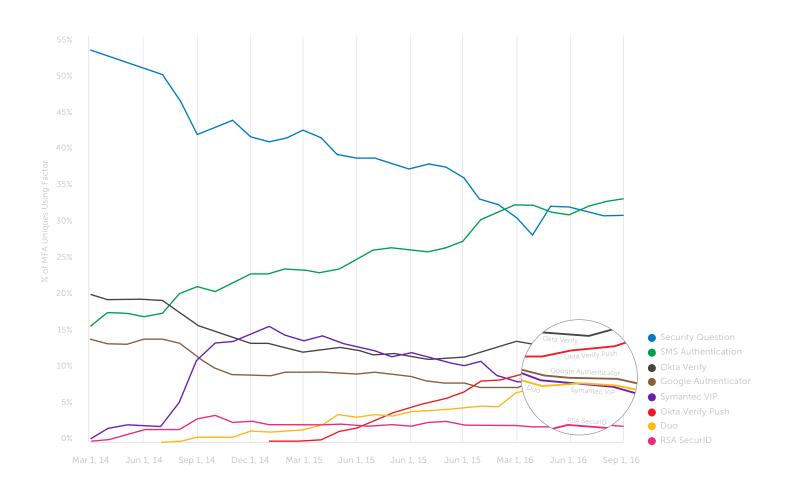
What are the most popular verification factors?



The verification factor race continues! Traditionally popular verification forms like SMS and security questions have converged and flatlined since **our 2016 report**, but remain the two most popular factors in our network. And Okta Verify with Push usage is steadily increasing. We expect these trends to continue throughout 2017. And with the NIST's **recent recommendation** not to use SMS as a second factor, we anticipate SMS usage in particular to decline.

In general, companies aren't choosing just one verification factor. Among the customers using MFA, roughly 80% are using more than one factor type today. While this figure has remained flat over the past several years, there has been a steady increase of customers using four and five factors in particular. People want choices. And when it comes to security, they have plenty!

Trend of Verification Factors by Percent of Users (% of MFA Uniques Using Factor)





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