



# Is Office 365 giving your network heartburn? SD-WAN is the remedy.

Get optimal  
Microsoft Office 365  
performance with  
Citrix SD-WAN



# Boost workforce productivity with a software-defined network

Speed, scalability, economics, and the promise of innovation are driving companies to the cloud. By 2021 more than 70 percent of businesses will be hosting business applications in the cloud, with Microsoft Office 365 applications predicted to be the most widely used.<sup>1</sup> Office 365 with Microsoft Teams equips your enterprise with the most complete public cloud platform available for collaboration, communication, and productivity.

**The challenge for IT** is to provide the same user experience and performance of SaaS applications for all employees, regardless of their location—headquarters, branch offices, factory floors, call centers, or other remote sites.

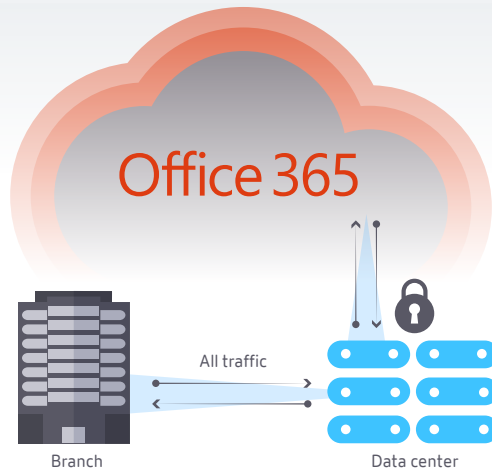
**The answer is Citrix SD-WAN**, a WAN edge solution that delivers local breakout of trusted, latency-sensitive Office 365 and Microsoft Teams traffic to ensure optimal functionality at all times, from anywhere.

*Here's how...*



# It's your network, not Office 365

Microsoft has optimized Office 365 cloud, but for Office 365 applications to perform to their full potential a new network paradigm is required to bridge the last mile to Microsoft Global Network. Citrix SD-WAN accomplishes this by optimizing and shortening the connection between users and Microsoft network edges, minimizing latency and inefficient routing.



*“22 percent of IT leaders identified networking problems as the root cause for performance issues with Office 365.”*

— Gartner<sup>2</sup>

## Why networking is the root cause

The main cause of poor Office 365 performance is latency and network congestion, due to outdated legacy network architectures and protocols.

Traditional Windows application protocols—like Server Message Block and MAPI— are chatty and bandwidth-hungry. They quickly use up any available WAN capacity, leaving SaaS applications like Office 365 fighting for every megabyte they can get.

In addition, sending network traffic from the branch to the data center over the WAN is inefficient. It is crucial to optimize how applications are routed and how they use bandwidth to achieve the best user experience.

Citrix SD-WAN does both with real-time, packet-based path selection, bi-directional QoS, and local breakout to the closest Office 365 point of presence (PoP).

## Four ways traditional network topologies slow down Office 365 are:

- 1| *Not prioritizing latency sensitive WAN traffic*
- 2| *Backhauling Office 365 traffic through the datacenter*
- 3| *Hairpinning (NAT loopback) Office 365 traffic instead of directly routing it to the nearest Microsoft Global Network edge*
- 4| *Sending web and SaaS traffic over the WAN, not directly to the internet*



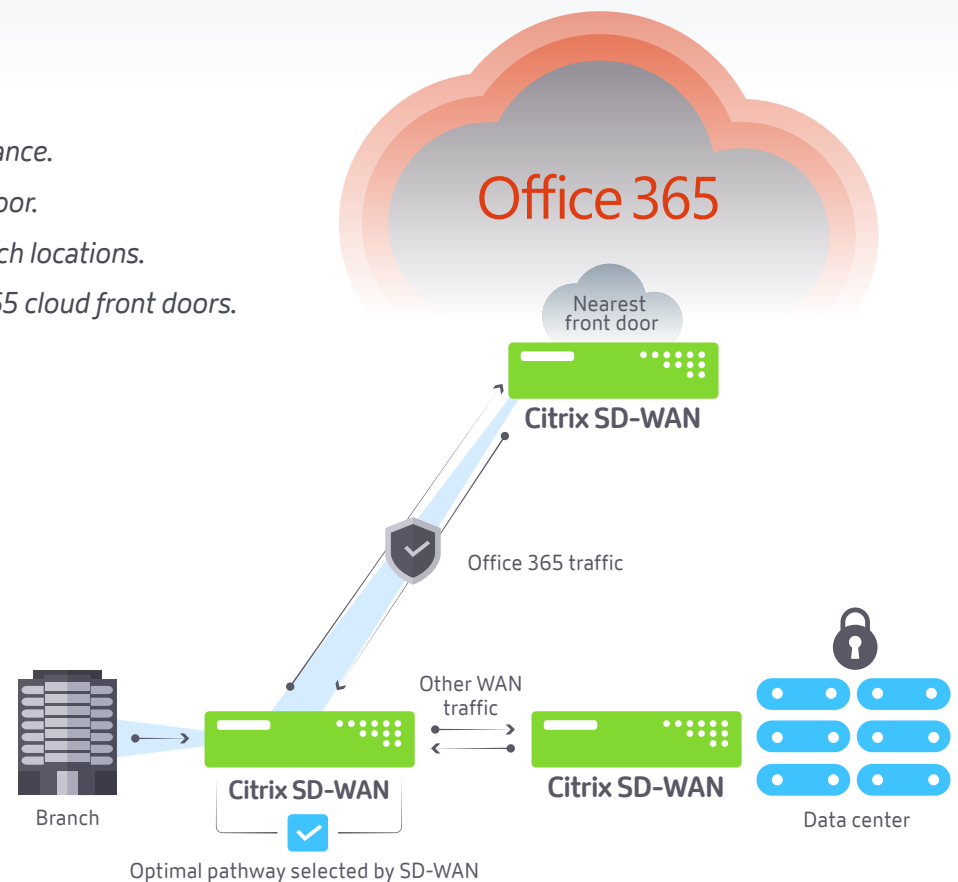
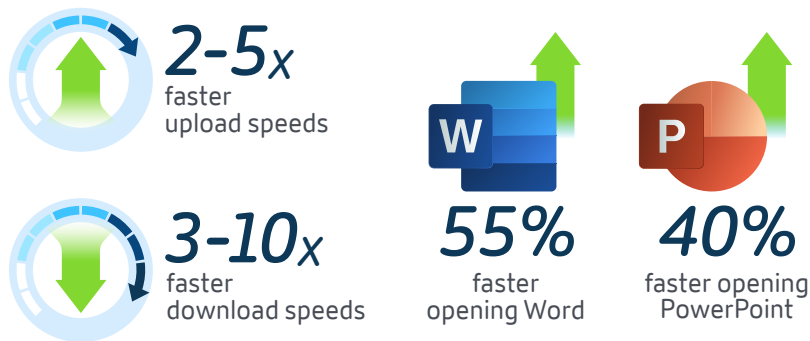
# Citrix SD-WAN ensures the best Office 365 experience

Citrix SD-WAN is a next-generation WAN edge solution tailor-made to offer the best SaaS, cloud, and Citrix Virtual Apps and Desktops experience. It adheres to Microsoft's Network Connectivity Principles and supports Microsoft REST APIs. What's more, Citrix SD-WAN has also been independently tested and qualified in Microsoft's official Office 365 Networking Partner program.

## Here's how Citrix SD-WAN improves Office 365 performance in four easy steps:

- 1| Citrix SD-WAN identifies Office 365 traffic with a physical or virtual appliance.
- 2| Citrix SD-WAN optimizes trusted traffic to the nearest Office 365 front door.
- 3| Citrix SD-WAN steers Office 365 traffic directly to the Internet from branch locations.
- 4| Citrix SD-WAN provides last mile connectivity with local DNS to Office 365 cloud front doors.

## Microsoft has verified dramatic improvements with Citrix SD-WAN including:



# SaaS apps are also faster with Citrix Cloud Direct service

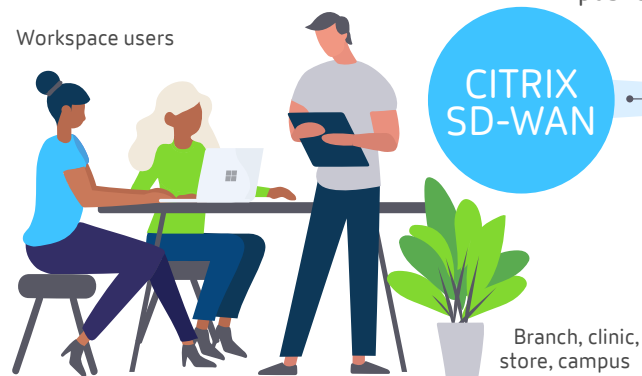
In addition to the inherent Office 365 benefits offered by Citrix SD-WAN, Office 365 and other SaaS apps can be enhanced even further with Citrix Cloud Direct service. Citrix Cloud Direct service provides high-performance access to cloud exchanges and SaaS applications over an enterprise-grade private network—turning traditional internet connections into SD-WAN-enabled WANs with QoS, link aggregation, and failover links.

Citrix Cloud Direct service delivers SD-WAN functionalities through reliable and secure delivery of all internet-bound traffic regardless of the host environment, i.e. data center, cloud, or internet. This level of performance is optimal for real-time communications such as voice and video as well as accessing applications over large geographic distances.

With Citrix Cloud Direct service enterprise-level SaaS is as simple as a subscription, providing direct peering to thousands of cloud and SaaS providers with a 99.99% guaranteed uptime SLA and latency less than 20ms for any cloud application.

## Optimize connectivity to SaaS

Workspace users



CITRIX SD-WAN

Citrix SD-WAN cloud direct: Enterprise-grade private network to bypass public internet

CITRIX CLOUD DIRECT SERVICE



Last mile optimization, sub-second failover  
Bi-directional QoS and connection load balancing



# Microsoft Teams is equally reliant on the network

Microsoft Teams is a cloud-native workspace architected around the Office 365 productivity suite. It's a virtual communications hub that combines chat, video meetings, calling, and files into a single integrated app. Teams is built on top of Office 365 groups and has the same enterprise-level security, compliance, and manageability as the rest of Office 365.

As adoption of Teams continues at a rapid pace, there is greater need to egress out of local internet points and onto the closest voice-optimized Microsoft Global Network peering location as quickly as possible for the best performance.

## Teams is the fastest growing Microsoft application in history

  
**20M+**  
daily users

Used by  
**500,000+**  
organizations 

Available in  
**53+**   
languages across  
**181+**  
markets



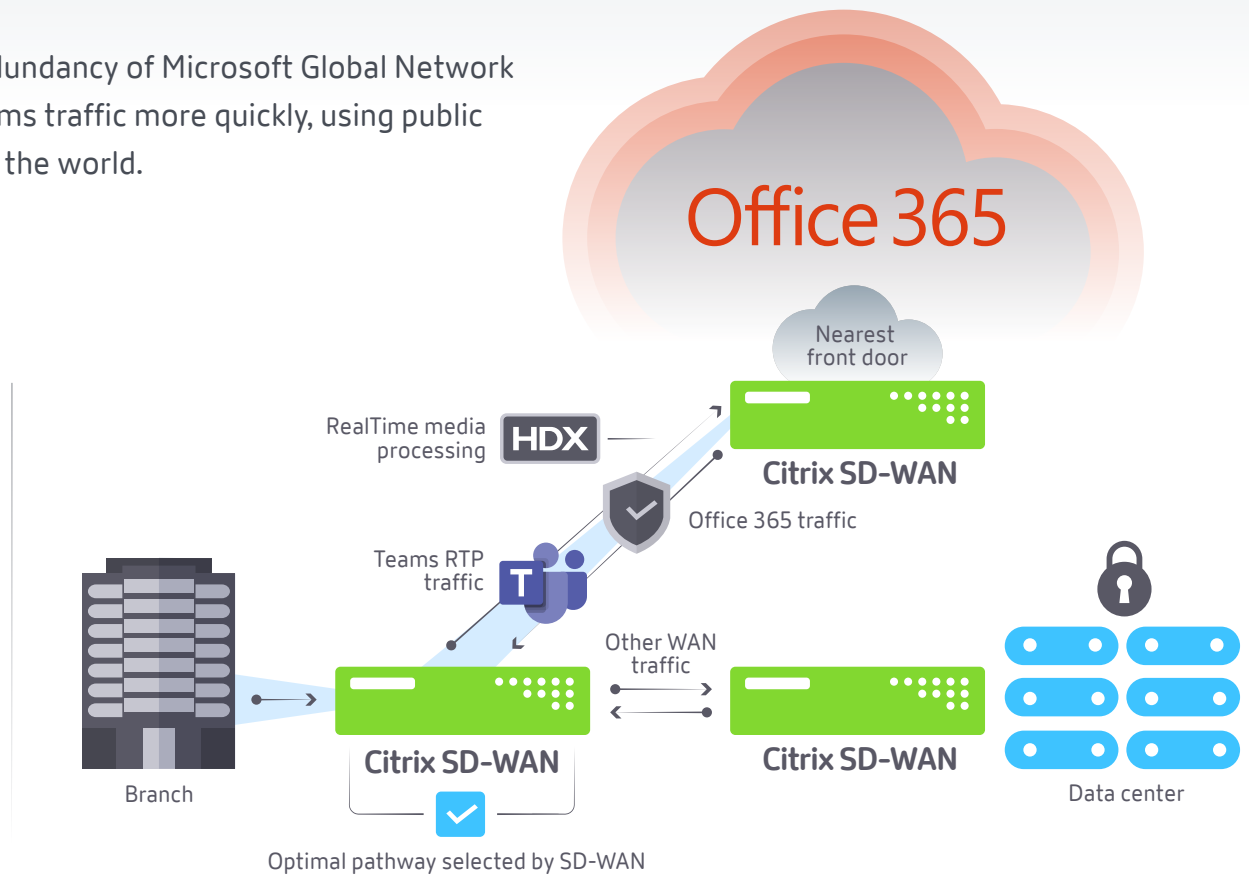
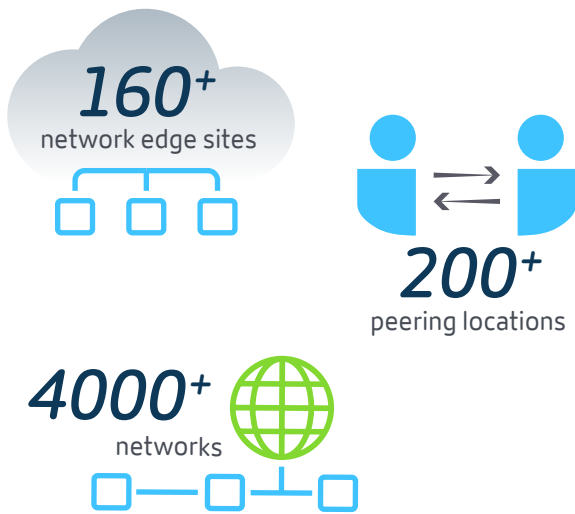
When the network isn't optimized, a subpar Microsoft Teams experience for branch offices is often the result. Citrix SD-WAN maximizes Microsoft Office 365 investments—and helps retain valuable employees—by ensuring an always-on virtual workspace with crystal-clear VoIP.

# Citrix SD-WAN optimizes Microsoft Teams too

Citrix SD-WAN optimizes Teams by routing data based on the type of traffic. Citrix Workspace app on the client device with built-in HDX Media Engine identifies and steers latency-sensitive video or audio from Teams directly to the cloud—mitigating jitter, packet loss, and congestion.

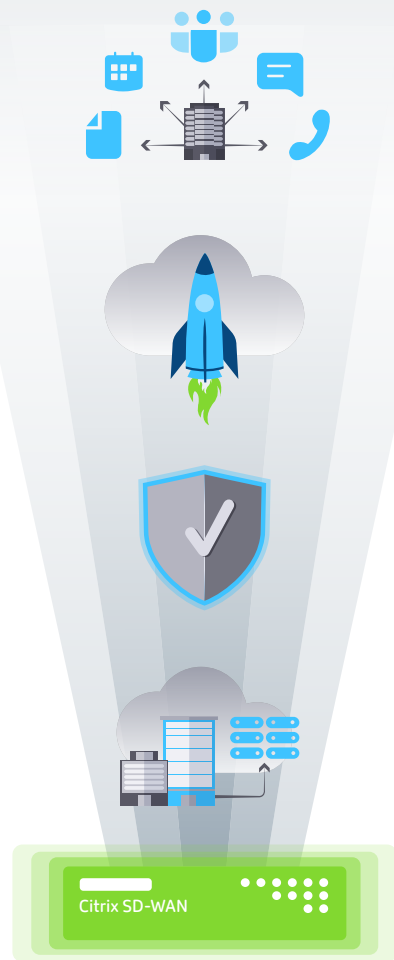
The massive scale, global footprint, and redundancy of Microsoft Global Network helps Citrix SD-WAN route preferential Teams traffic more quickly, using public cloud SaaS entry points spread throughout the world.

## Microsoft Global Network:



# Four Citrix SD-WAN remedies for the WAN

Citrix SD-WAN solves for a variety of complex network ills. Here are four remedies for common network challenges.



## *Modernize the WAN*

The WAN infrastructure is outdated and MPLS circuits are maxed out. With Citrix SD-WAN lower-cost broadband and mobile connections can be pooled with more costly MPLS—to prioritize and dynamically route SaaS, corporate, and internet-bound traffic to the most optimal connection.

## *Optimize the last mile*

Reliable SaaS apps require low to zero latency. Citrix SD-WAN Cloud Direct service leverages a private, enterprise-grade network to enable high performance SD-WAN access to thousands of SaaS apps and cloud exchanges. The PoPs are interconnected via a high-speed, fully redundant global IP network.

## *Secure the edge*

CIOs are worried about enterprise security and so is IT. Citrix SD-WAN ensures security for the data center, cloud, and branch offices with an integrated firewall (certified by ICSA Labs) that extends security to the WAN edge, and TLS encryption for direct breakout from branch offices to Office 365.

## *Simplify branch office IT*

Rapid growth propels expansion into new territories. With Citrix SD-WAN a branch office can be quickly connected to the cloud or data center without having to deploy a full infrastructure stack in every location.



# Citrix SD-WAN and Malux case study

## *The company:*

Established in 1972, Swedish firm **Malux** imports and exports lighting and electrical equipment for hazardous environments with branches across northern Europe.

## *The problem:*

IT infrastructure had evolved into a mix of PCs, thin clients, and outdated hardware. Office 365 applications were running slow with 40-50 milliseconds of latency making it difficult for employees to access the information they needed to be productive.

## *The solution:*

Malux partnered with Citrix Platinum Solution Advisor AcelQ to develop a more secure, scalable, and agile IT infrastructure with Citrix SD-WAN and Workspace. Rather than hairpinning traffic through Helsinki to get to the Office 365 cloud, it is now optimized and sent directly to the edge nodes closest to the applications, resulting in an 80 percent reduction in latency for Office 365 access.

*“When we turned on the Citrix SD-WAN VPX in Azure for Office 365, our traffic started going to the Office 365 front door in Amsterdam, latency went to under 10 milliseconds, a decrease of over 80 percent, and there was a significant improvement in the user experience.”*

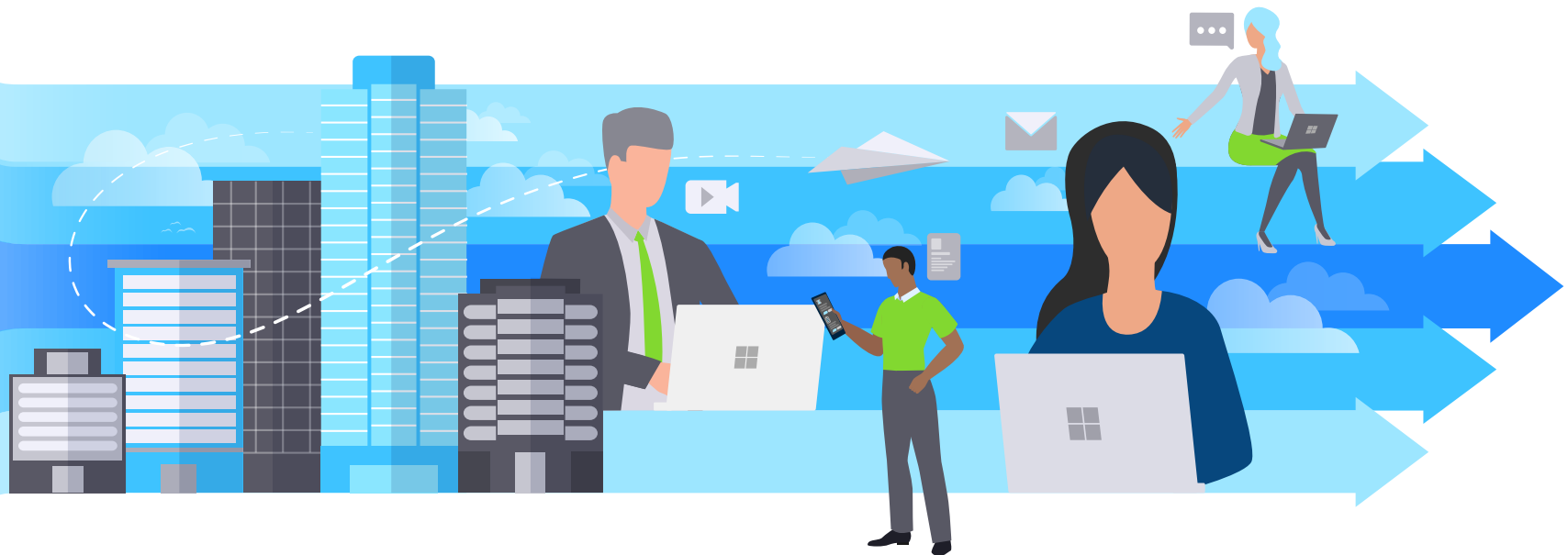
— **Jörgen Norman**  
CIO, Malux<sup>3</sup>

# Evolve your network to deliver the best Office 365 experience with Citrix SD-WAN

Enterprises are moving to the cloud at a rapid pace, and they're looking at the network to deliver the value that business demands. To ensure success in the global marketplace, CIOs are transforming their networks with fully managed SD-WAN services. Citrix SD-WAN optimizes Office 365 and Microsoft Teams network connectivity between branches, data centers, and the cloud, providing the highest quality user experience possible to users in any geographical region.

[Contact Insight for more information;](#)

- ▶ [Learn more about SD-WAN](#)
- ▶ [Request a demo](#)
- ▶ [Try SD-WAN in Azure](#)





- Sources:
1. Gartner, Widespread Adoption of Cloud Office Is Now Well Underway
  2. Gartner, Implementing Microsoft Office 365: Gartner Survey Results and Analysis, 2018
  3. Citrix, Malux makes growth easy with Citrix