ENHANCING SKYPE QUALITY
through QoS & the Network

LiveAction™

INTRODUCTION

## Skype® for Business:
How Much Control Do You Truly Have?

Quality of communication plays a critical role in your enterprise's business success. The impression you make during initial contact with potential prospects determines whether or not they will successfully make their way down the sales funnel. This prime window of opportunity can close in an instant. On the other hand, quality of communication also radically affects internal collaboration and productivity. Between company meetings, teamwork efforts, and project deadlines—there is zero room for communication errors.

Of course, you can control your physical presence—the way you speak, the formality in your language, how you look...but what if you're not physically present? In most instances, you'll be speaking with clients or collaborating with team members through Voice & Video conferencing, IP telephony, instant messaging, and other collaborative tools. So, when it comes to "quality of communication" how much control do you really have? Is there a way to gain full control?

In this eBrief, you'll get all the explanations you need and a simple walkthrough on:

- **What impact the network has on Skype and what issues this can cause**

- **Why it's necessary to prevent these issues from reoccurring**

- **How you can overcome Skype challenges and keep productivity and collaboration on the move**

THE WIDESPREAD CORPORATE TREND OF VIDEOCONFERENCING

TYPES CURRENTLY USED

27.8%
52.8%
77.6%
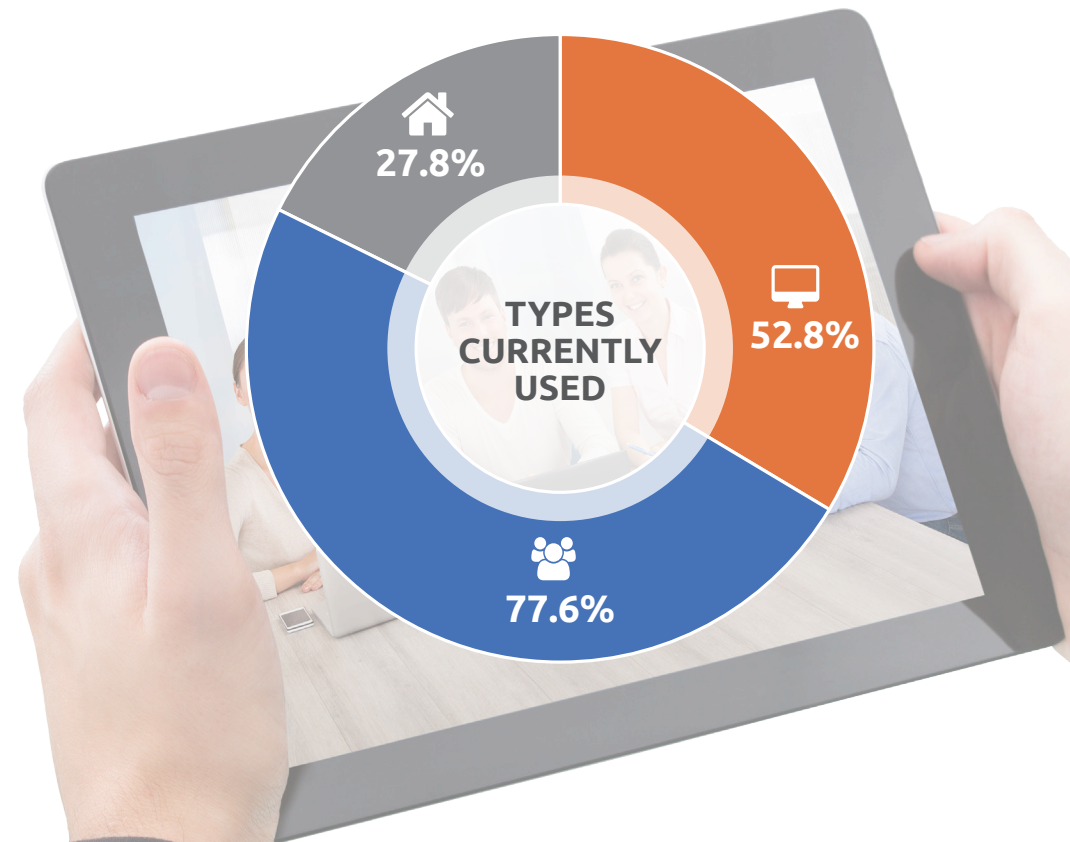
🖥 Desktop   👥 Room-based   🏠 Telepresence

*Source: Nemertes Research Group, Inc., 2015

THE NETWORK'S IMPACT ON SKYPE

Massive amounts of content, media and other digital sources are being transferred across your enterprise network on a daily basis. Therefore, between the heavy recreational traffic and hefty business traffic, your enterprise network is working hard to support your business initiatives—and this causes multiple performance challenges for the network, as well as Skype.

This is especially important for enterprises to consider as they continue to turn to Skype for Business (previously known as Microsoft® Lync) for their Voice & Video needs. As Skype usage continues to increase in the corporate world (not just in your enterprise alone), it becomes truly apparent how much Skype quality (i.e. the performance of videoconferencing, audio calls, instant messaging) affects day-to-day business operations.

And that's how the network comes into play:

Multiple issues can affect your network performance, from traffic congestion, configuration to human error, which often leads to an unpleasant Skype experience. And the more downtime you and your employees have, the more your business productivity, collaboration and ROI will suffer.

THE SKYPE ADOPTION RISE IN THE ENTERPRISE WORLD

100 million+ people use Skype to communicate for work

Skype sees **50 billion minutes** of traffic per month (1/3 of the world's long distance traffic)

Over 50% of Skype enterprise users utilize video

*Source: Serafin, Zig., Skype for Business Team. "Skype for Business is here—and this is only the beginning." 2015.

THE NETWORK CAUSE & EFFECT: COMMON SKYPE PROBLEMS

So, as you're using Skype to communicate, here are just a handful of common discrepancies you may be experiencing. Of course, all due to slow network performance:

WHAT HAPPENS WHEN SKYPE INTERRUPTS YOUR PRODUCTIVITY

- Uneven audio quality

- Pixelated video quality

- Dropped Calls

- Delays in sharing content or desktop views

- Lag time during PowerPoint presentations

WHEN YOUR SKYPE IS WORKING EFFICIENTLY, EVERYONE CAN BENEFIT

There are many benefits to having a collaborative tool like Skype—especially when your network is running at peak performance and your Skype is finally working properly. One primary benefit, revolves around all the business advantages you gain by enabling Voice & Video capabilities.

Voice & Video means collaboration is possible anywhere, anytime. So, if you're planning to videoconference your boss who's on business in a different state, you shouldn't have a problem. As long as the quality of communication through Skype is top-notch, employees and clients can stay connected face-to-face—without enduring the inconvenience of travel. With a high-performing network, enterprises worry less about collaboration interruptions caused by network delays, downtime or traffic congestion.

Here's how a high-performing network can help your enterprise take back full control of Skype performance and overall communications. You'll be able to:

Improve customer experience

Customer satisfaction is the key—specifically in the early stages of initial contact. With more network efficiency and quality of communication, new leads can become loyal customers.

Build a borderless enterprise

When your network isn't interfering, high-quality Voice & Video tools empower collaboration and connectivity across your entire workforce.

Save time and costs

After minimizing spending on network bandwidth and troubleshooting to prevent traffic congestion, you can invest additional funds in Voice & Video or other collaborative tools.

Maximize overall productivity and profit

An excellent performing network supports strong decision-making, innovation, knowledge-sharing and cross-company collaboration. When business operations are running with the utmost effectiveness, your organization can turn ideas into revenue and generate more leads.

WHAT CAN I DO NOW?

The QoS Breakdown

In a perfect world, your network traffic could be easily monitored and managed and you'd have optimal network performance…which means your Skype capabilities would never fail you. Most importantly, business productivity would run like a fully well-oiled machine.

Well, good news! This ideal world doesn't have to be a dream. You can make it a reality.

Here's what you can do to get your network performance and Skype working the way you want.

Quality of Service (QoS). Whether you may or may not be familiar with this solution—QoS is a suite of technologies that manages bandwidth usage as data crosses computer networks. Most commonly, QoS is used to protect real-time Voice & Video communications and high-priority data applications. QoS technologies, or tools, each have specific roles that are used in conjunction with one another to build end-to-end network QoS policies.

Skype + QoS = A Powerful Duo

Together, Skype and QoS make a powerful duo for two reasons:

1. QoS has a significant impact on the network when it comes to high-bandwidth video and multimedia transmissions. So, it's especially important for enterprises to consider QoS when using Skype, which as you know, primarily delivers Voice & Video capabilities.
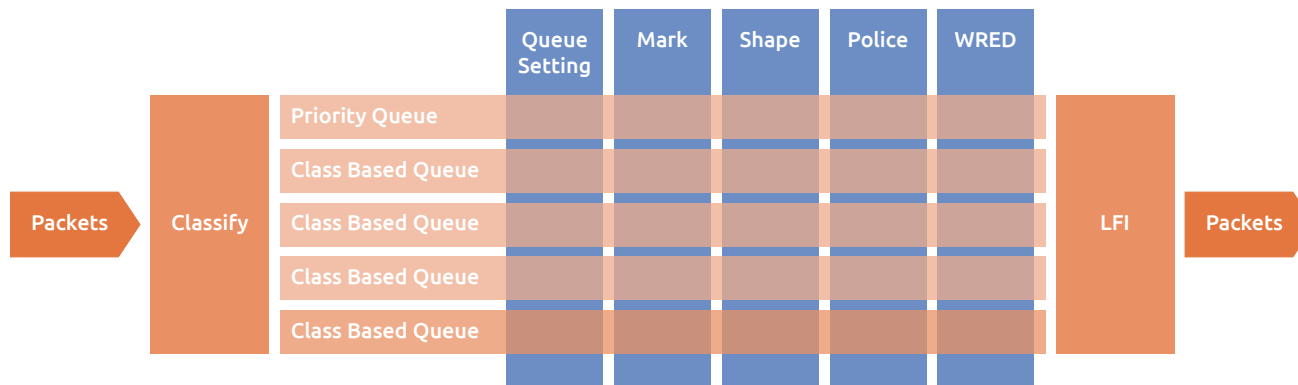
2. When you use QoS tools like classification and queuing, you can finally control and manage network traffic, so your Skype experience is never interrupted.

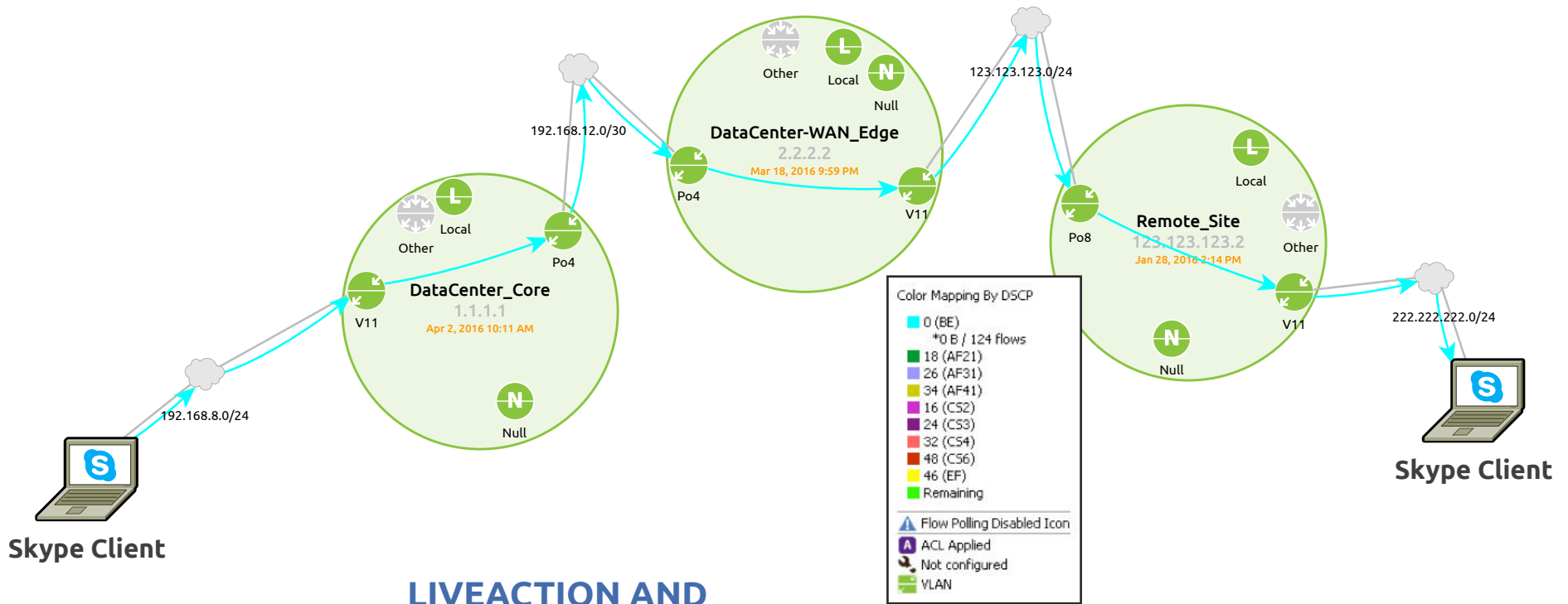If you don't know what "queuing" or "classifying" means, here's a quick explanation:

Classification identifies and marks traffic to ensure network devices know how to identify and prioritize data as it traverses a network.

Queues are buffers in devices that hold data to be processed. Queues provide bandwidth reservation and prioritization of traffic as it enters or leaves a network device. If the queues are not emptied (due to higher priority traffic going first), they overflow and drop traffic.

To summarize, using QoS to protect Skype quality only ensures better Voice & Video performance—increasing end-to-end enterprise productivity and collaboration in the long-term.

Control and manage network traffic with Classification and Queuing tools

Other Local Null
DataCenter-WAN_Edge
2.2.2.2
Mar 18, 2016 9:59 PM

Po4 V11

192.168.12.0/30

123.123.123.0/24

Other Local Null

DataCenter_Core
1.1.1.1
Apr 2, 2016 10:11 AM

Po4 V11

Null

192.168.8.0/24

Skype Client

Local
Remote_Site
123.123.123.2
Jan 28, 2016 2:14 PM

Po8 Other V11

Null

222.222.222.0/24

Skype Client

Color Mapping By DSCP

■ 0 (BE)
　　*0 B / 124 flows
■ 18 (AF21)
■ 26 (AF31)
■ 34 (AF41)
■ 16 (CS2)
■ 24 (CS3)
■ 32 (CS4)
■ 48 (CS6)
■ 46 (EF)
■ Remaining

⚠ Flow Polling Disabled Icon
Ⓐ ACL Applied
🔍 Not configured
▦ VLAN

LIVEACTION AND QOS CONTROL

Now that you know what Skype and QoS can do together, you can start searching for the right network performance management platform. Find one that will help you to prevent network traffic congestion by quickly classifying and queuing traffic—and give you the ultimate Skype QoS protection you need to maximize productivity and collaboration.

For example: to give higher priority to Skype traffic in the network, an administrator can effectively instrument Skype QoS protection utilizing a solution like LiveAction's LiveNX.

LiveNX, is a software solution that employs Cisco's advanced features to help implement management controls through an easy-to-use Graphical User Interface (GUI). It provides a complete management solution for monitoring, troubleshooting and provisioning Skype QoS to ensure that bandwidth is properly allocated to support your enterprise's needs.

Users can take advantage of LiveNX to virtually go back in time to perform analysis and troubleshooting for real-time or historic Skype calls using unique features like Performance Monitoring Path Analysis.

TIP: Check in with your IT teams, technical support, or system and network administrators to evaluate what equipment or additional resources are needed.
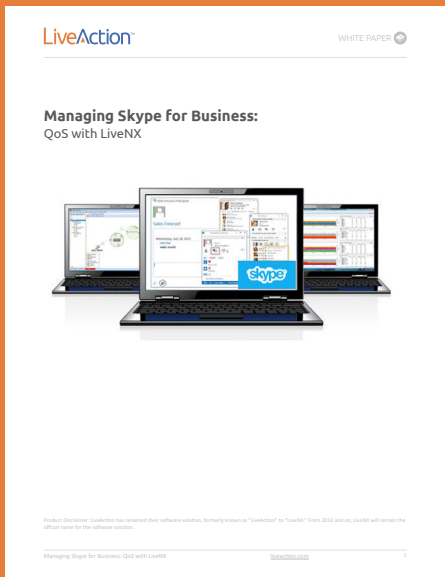
TO GET A DEEPER, TECHNICAL WALKTHROUGH OF SKYPE, THE NETWORK AND QOS, CHECK OUT THIS WHITE PAPER:

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ABOUT LIVEACTION

LiveAction provides comprehensive and robust solutions for Network Performance Management. Key capabilities include Cisco Intelligent WAN visualization and service assurance, best-practice QoS policy management, and application-aware network performance management. LiveAction software's rich GUI and visualization provide IT teams with a deep understanding of the network while simplifying and accelerating management and troubleshooting tasks.

Product Disclaimer: LiveAction has renamed their software solution, formerly known as "LiveAction" to "LiveNX." From 2016 and on, LiveNX will remain the official name for the software solution.

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