

GSX Solutions for Office 365

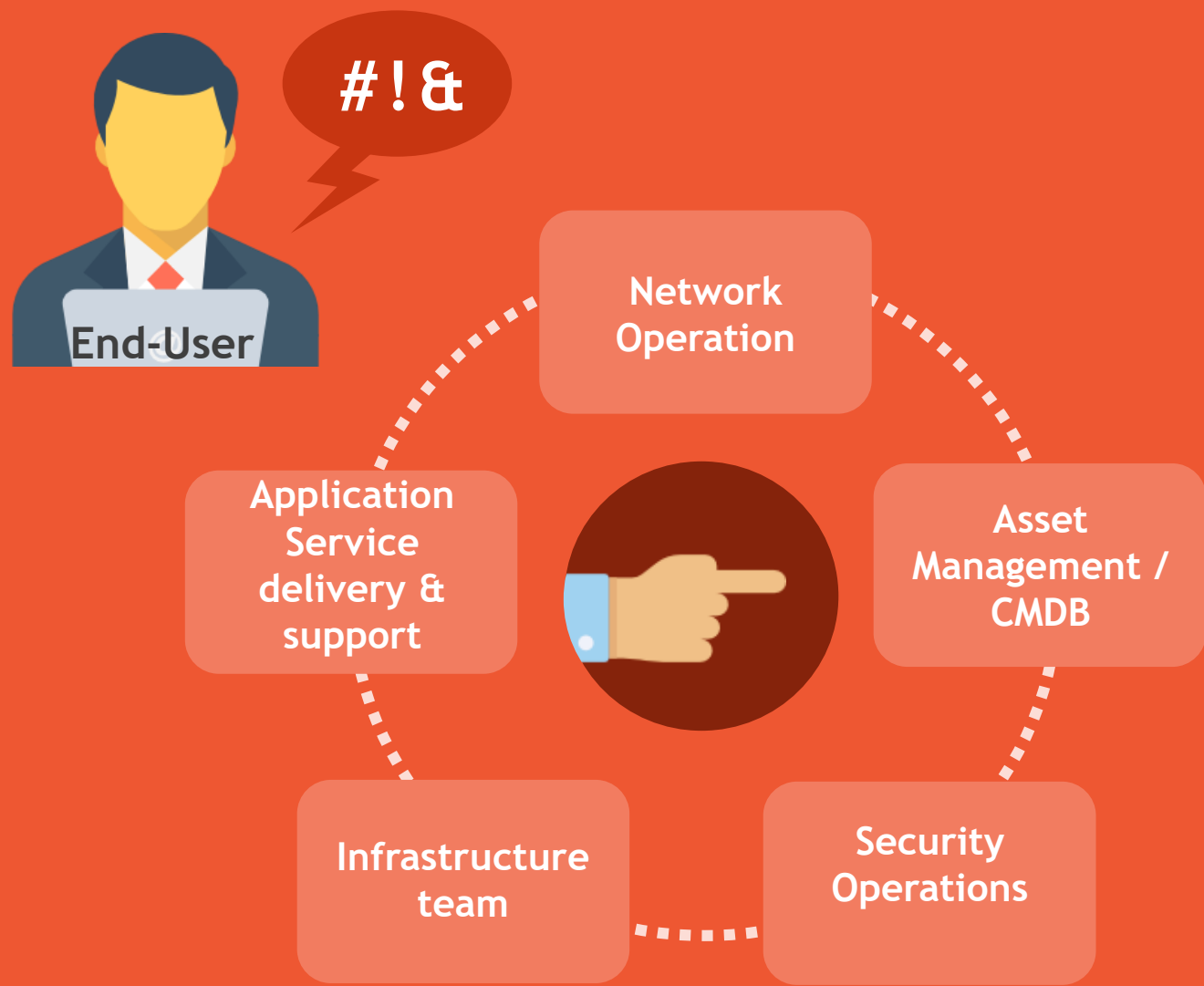
Because Trust Matters

Microsoft Partner

Gold Cloud Productivity
Gold Messaging



Stuck in the infrastructure blame game?



No proper visibility



Finger pointing between IT departments



Increases time to repair...



Impacting directly & indirectly the enterprise bottom line.



Without accurate data, distrust begins

GSX
www.gsx.com



Enterprise IT

No data to trust & understand complaints
Finger pointing within IT departments
& Cloud provider



Cloud Provider

SLA to their limit only
No visibility on client's issues
Client management costs



Business Lines & End-User

Business critical applications
Company image
Distrust and Frustration

Distrust increases between Users, Cloud Providers and Enterprise IT

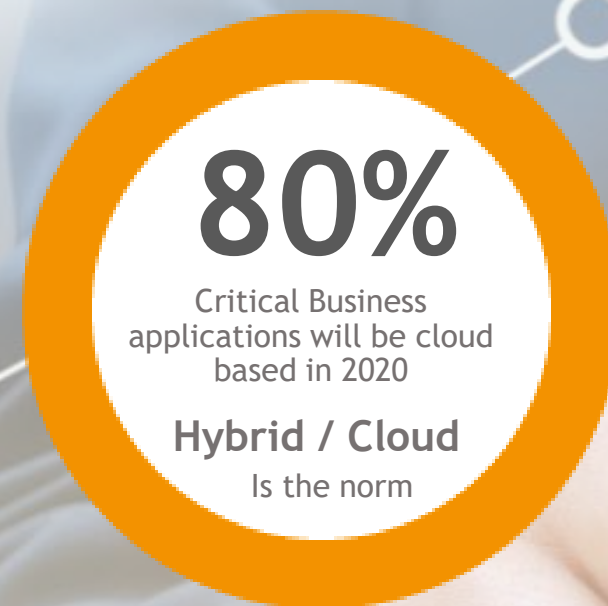




And it is getting worse...



As the level of distrust rises,
the challenges get bigger





It is time to choose!

PAST

FUTURE



Conflict

- Frustration between IT, Users & Cloud Providers
- Waste of time & money
- High costs, low efficiency
- Diverts from strategic goals



Cooperation

- ✓ Build trust between Business lines, Enterprise IT & Cloud Providers
- ✓ Lower risk and management costs
- ✓ Maximize time & spending towards business goals



The GSX Solution: A unique way to measure End User experience

GSX
www.gsx.com

Accurate

- Performing real end-user actions for every Office 365 workloads
- Use the exact same protocols as a user would do



Manageable

- Centrally deployed
- Centrally managed



The GSX Robot User



Unaffected

- By device malfunction
- By user emotion



Ubiquitous

- Installed at any of your location
- Alert you in real time





A unique way to understand Cloud hybrid Service delivery

9 times out of 10 the issue is between the end-user and the cloud services...

Hybrid Infrastructure
& On-Premises Equipment

Network Diagnostic

End-User Scenarios

... pinpoint the pain, solve the problem



Hybrid Office 365 & Identities



Side applications
(IIS, SQL, Web)



MDM Services



Security appliance



Digital Experience Monitoring: The GSXperience!

Common language
is a basis for
understanding
each other



Transforming
perceptions into
data is the key



User satisfaction
Decrease management costs

GSXperience



Unbiased



Trustful



Shared across
Stakeholders



Enterprise IT

Prevent & understand end-user issues
Avoid finger pointing



Business Lines and End-Users

Reduce performance issues
Enforce trust in services & productivity



The GSXperience - Interpreting and Sharing Data

01

Prevent issue before they impact users
Acknowledge reality of user complaints
Reduce tickets numbers

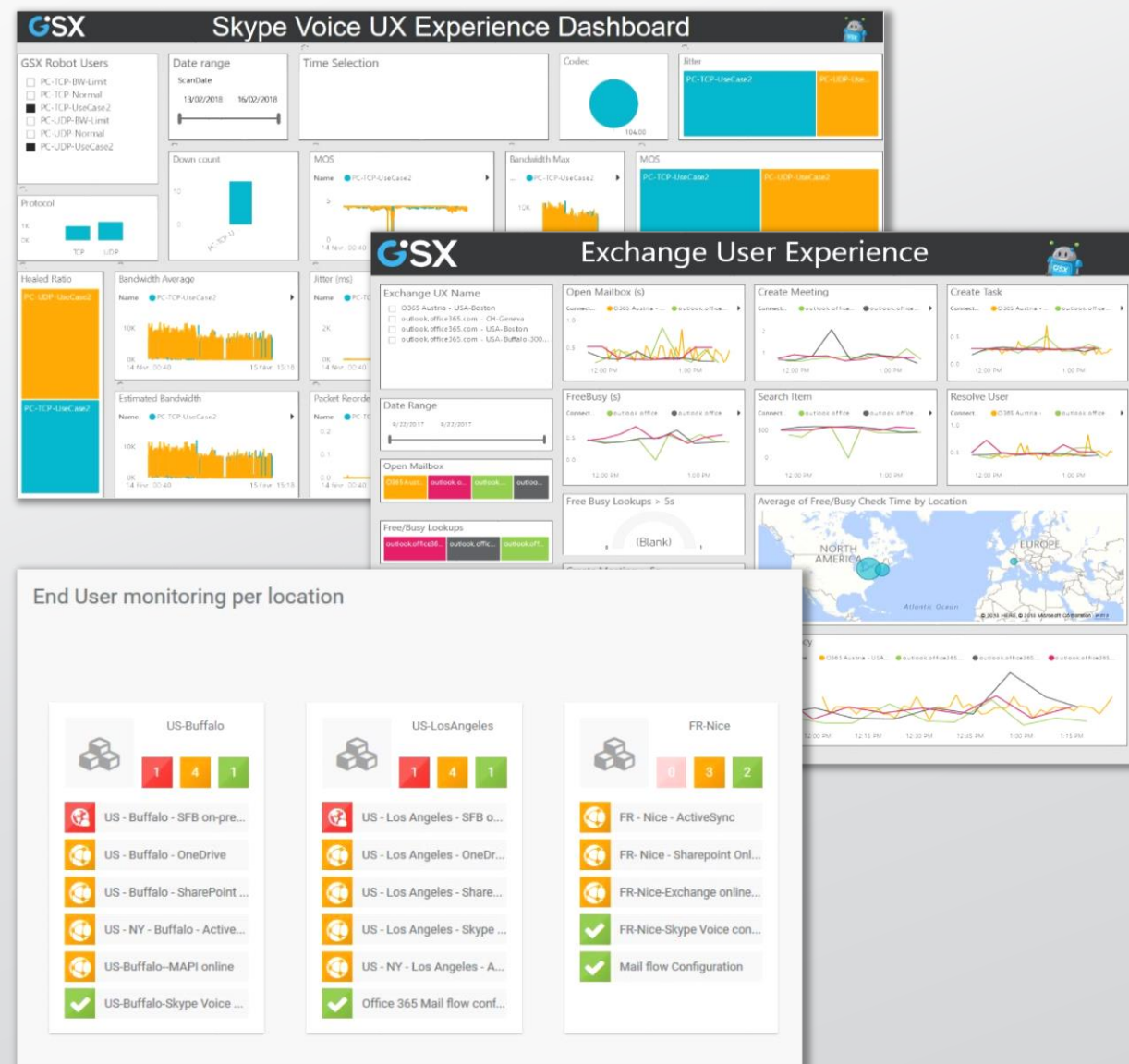
02

Recognize local or tenant wide issue
Avoid costly escalation with Microsoft
Discover root cause & avoid costly finger pointing between IT departments

03

Share Data:

- With IT departments to solve issues
- With Business line to build trust
- With Microsoft to manage SLA





Your first step to Digital Experience Monitoring

GSXperience SPOT Assessment



30 Days



1 to 5 locations



All inclusive: installation, configuration and reports, End-User experience assessment for Office 365 services



Check the location's ability to deliver decent Office 365 service to your end-user



Detect bottlenecks within a hybrid infrastructure



Access to all collected data with PowerBI dashboards



Read more on
GSX Robotech Library

*Learn how to improve
your End-User experience*

Read more ▶





We've got your back!

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GSXperience Services

With you step by step during your journey to Digital Experience Monitoring



Microsoft Expert teams

Office 365 migration expertise
Cloud & On-premises certifications
Customer Success Organization



Framing the project, Deployment, Customization

Discovery
Configuration health check
User Experience
Reporting



Office 365 Performance Assessment End-User Experience Optimization

Full migration lifecycle
Location-specific Diagnostic
Optimization recommendations



Building trust, case study

*Full Cloud, Hybrid and/or multiple vendors,
Office 365 performance management made
easy*

30% reduction

End-User complaints
Performance tickets



50% reduction

Mean time to repair on
Office 365 performance
issues



25% reduction

Escalation tickets
Partner Management
costs



100%+ ROI

Office 365 hybrid
management
End-User satisfaction
Productivity



Reviewer Profile

**Lead R&D System
Management Services**

Industry:
Finance
Role:
Enterprise Architecture
and Technology Innovation
Firm Size:
10B - 30B USD

Licensed Users:
100,000 or more licensed
users

Deployment Architecture:
On-premises

Go-Live Date:
2017

Implementation Strategy:
Worked with just the
vendor

**Technology Adoption
Bias:**
Adopt maturing

"Best Monitoring Solution For O365 From An End-User Perspective"

Last Updated: January 17, 2018

[Email this page](#)

★★★★★ **Overall User Rating**

Was this user review helpful?

Product(s): Monitor

[Report Inappropriate Content](#)

Overall Comment: "Vendor is committed to provide monitoring solutions from an End-User perspective. This gives real insight how the service can be consumed by end-users which is invaluable for all SaaS offerings like O365. I am also impressed how GSX evolved their tool suite from being very IBM Lotus Domino focused to the scope they have now. They also actively listened to our feedback and enhanced their product accordingly. This enabled GSX to really built the best O365 monitoring solution on the market."



Evaluation & Contracting



Integration & Deployment



Service & Support



Product Capabilities

Lessons Learned

If you could start over, what would your organization do differently?

Nothing.



With you anywhere, anytime

GSX
www.gsx.com



Clients: 400



Users: 5 Million



Countries: 90

Microsoft Partner

Gold Cloud Productivity
Gold Messaging



**Follow the Sun Support,
Sales & Services**



Before Migration

- ✓ Site's ability to handle Office 365 workload
- ✓ Sites optimization
- ✓ Prevent future bottleneck

During Migration

- ✓ Availability & performance of the hybrid infrastructure
- ✓ Prevent availability & performance issue
- ✓ Infrastructure changes impact on your end-user experience

Project success validation

- ✓ Extensive reporting on end-user experience
- ✓ Lower end-user complain tickets
- ✓ Validate the global success of your project



Restore control on Office 365 Service delivery

- ✓ Detect potential end-user performance issue before end-user complains
- ✓ Detect if infrastructure change has any impact on end-user performance
- ✓ Lower drastically the number of end-user performance issue tickets



- ✓ Provide the data you need to validate the reality of an end-user performance issue
- ✓ Show instantly if it is a local or a tenant issue
- ✓ Reduce finger-pointing by detecting instantly which part of the infrastructure is causing the issue

- ✓ Provide the data you need to validate the success of the ticket resolution
- ✓ Prove the quality of your Cloud Service delivery to business lines and management



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Office 365 End-User actions



- ▶ Open Mailbox
- ▶ Create Email
- ▶ Create tasks
- ▶ Create Folder
- ▶ Create meeting
- ▶ Resolve User
- ▶ Download attachment
- ▶ Free Busy service
- ▶ Search Item
- ▶ Mail Routing internal & External



- ▶ Log in to SharePoint Online
- ▶ Upload an attachment from a SharePoint online library
- ▶ Download attachment from SharePoint library



- ▶ Log in, Presence & Instant Messaging
- ▶ Voice call
- ▶ Call quality statistics: Packet loss & reorder, Latency & RTT, Average Jitter, Network MOS & Degradation, Concealed sample & Bandwidth



- ▶ Log in to Microsoft OneDrive
- ▶ Upload an attachment from Microsoft OneDrive
- ▶ Download attachment from Microsoft OneDrive



Alerting Capabilities

- ▶ Alert based on customizable profiles
- ▶ Email, Sound, Pager, Command line, Mobile
- ▶ SNMP trap for direct integration with ticketing systems (SCOM, BMC, Service Now, etc.)
- ▶ Built-in Severity & Escalation processes
- ▶ Smart alerts - Consider the status of other Robot Users before alerting



Requirements

- ▶ Can be installed on any Windows VM (2012) or Workstation (Windows 7 and up)
- ▶ Windows service (around 10MB)
- ▶ Same impact on a Network as a user
- ▶ Centrally deployed & managed through GSX Monitor console





Robot Users
locations



Internal
Network



Proxy



End-User Experience



End-to-end Network health tests

- ✓ Traceroute with hop number & latency
- ✓ Port connectivity to Office 365
- ✓ Round trip time to any network end point
- ✓ DNS resolution availability & time
- ✓ Packet Loss analysis

- ✓ The Robot User correlate the end-user experience and the availability and performance of the network's equipment
- ✓ The Robot User tests the access time to any end-point on the network and performs a traceroute to determine the numbers of hops and their latency to the Office 365 service entry point
- ✓ The Robot User checks the connectivity to the datacenter proxy & compares the end-user experience with and without proxy
- ✓ The Robot User analyzes the DNS resolution availability & performance impact on end-user performance
- ✓ The Robot User measures the percentage of packet loss between the critical location and Office 365
- ✓ The Robot User detect any bottleneck in the hybrid infrastructure that impacts the service delivered by Office 365 to the end-users.



360° vision of everything impacting the End-User experience: Hybrid Identities monitoring features



Synchronization Health

- ▶ Checks Synchronization success and failure and time to completion (Current synchronization cycle, last & next synchronization time)
- ▶ Database size and number of AAD Connect objects

ADFS Usage monitoring

- ▶ Number of Token requests & requests per second, Federation metadata requests & requests per second, Artifact resolution requests & request per second

SQL Backend Specific monitoring

- ▶ SQL Infrastructure availability
- ▶ System Performance
- ▶ SQL Cache & queries optimizations

Federation Services & Certificates

- ▶ Synthetic transaction testing the token authentication & Metadata service availability
- ▶ Monitor & report on certificates expiration date

System Monitoring

- ▶ CPU, RAM, Disk Usage and Average disk queue length
- ▶ Get real time graph on Key Performance indicators
- ▶ Windows Services

System Monitoring

- ▶ CPU, RAM, Disk Usage and Average disk queue length with Real Time graphs
- ▶ Windows Services



360° vision of everything impacting the End-User experience: Hybrid Microsoft Office 365 environments

Microsoft on-premises hybrid component monitoring & reporting

Exchange on-premises servers monitoring & reporting



- ✓ End-user experience through end-user scenarios (create email, free busy, create meeting, etc.) for both online and on premise environments
- ✓ Interconnection between On-premise and online environment with Mail Routing and Hybrid scenarios
- ✓ Specialist of the Exchange servers, roles, services, DAG, critical performance counter, Mailbox database availability

Skype for Business server monitoring & reporting



- ✓ End-user experience for Presence, IM, Mobile IM, Voice over IP, peer to peer communication, and much more both for online and on premises environments
- ✓ Any Skype for Business server, role, services health & performance metrics

SharePoint on-premises server & farm monitoring & reporting



- ✓ End User experience on Farm service delivery through end user scenarios (create site, resolve user, search, create blog, etc.)
- ✓ Every servers, roles, applications and log monitoring
- ✓ SharePoint Website availability & performance
- ✓ SQL Database indexer, crawler, health & performance
- ✓ End User experience and performance for SharePoint online (login, upload, download)



GSX provides the only solution on the market that can actually analyze the impact of Microsoft on-premises servers on Office 365 service delivery



360° vision of everything impacting the End-User experience: Applications & Appliances

Datacenter critical components

IronPort monitoring & reporting



- ✓ End-to-end service monitoring through mail routing scenario (internal to external)
- ✓ IronPort Usage statistics for capacity planning and security checks
- ✓ Critical performance counters of the appliance

Microsoft SQL monitoring & reporting



- ✓ End to End SQL queries simulating application interactions with SQL database
- ✓ Health & Performance metric collections

Windows Servers monitoring & reporting



- ✓ Any critical Windows services
- ✓ Critical performance counters
- ✓ Microsoft IIS health and usage critical for any Web application

AirWatch monitoring & reporting



- ✓ End-user experience monitoring through Active Sync scenarios: create email, send email, create meeting...
- ✓ Every AirWatch service, server, role availability & performance
- ✓ AirWatch backend database (SQL) health & performance



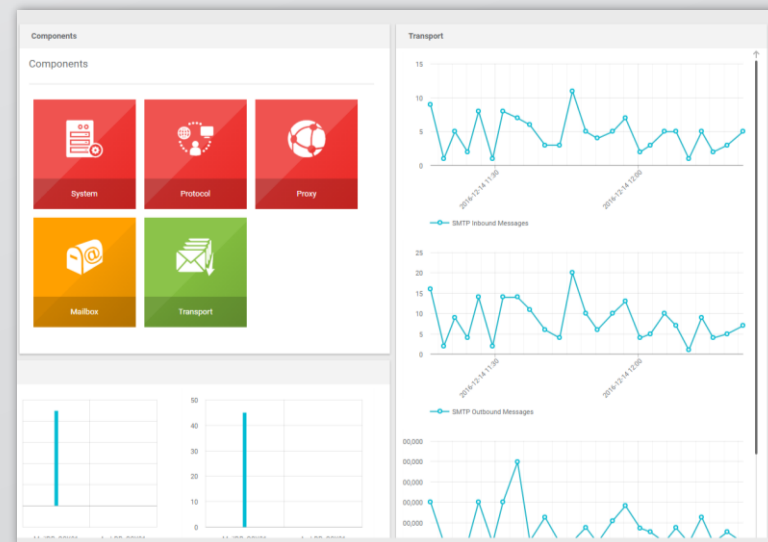
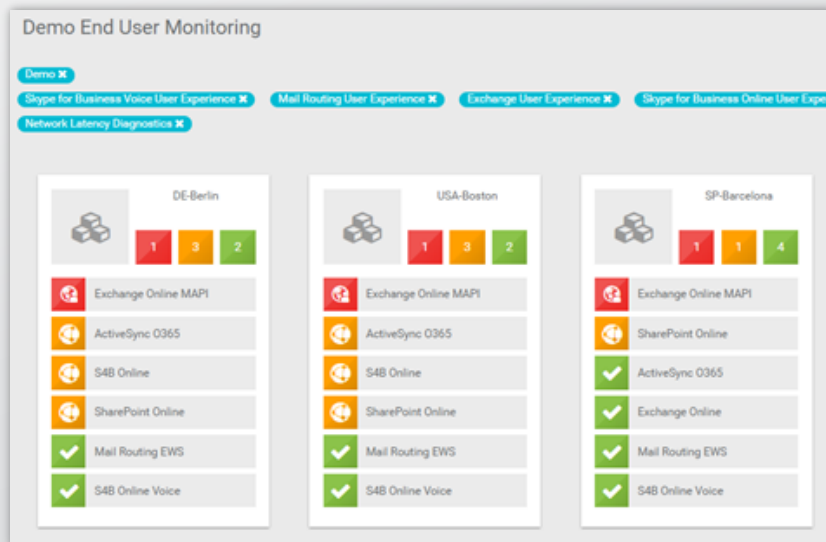
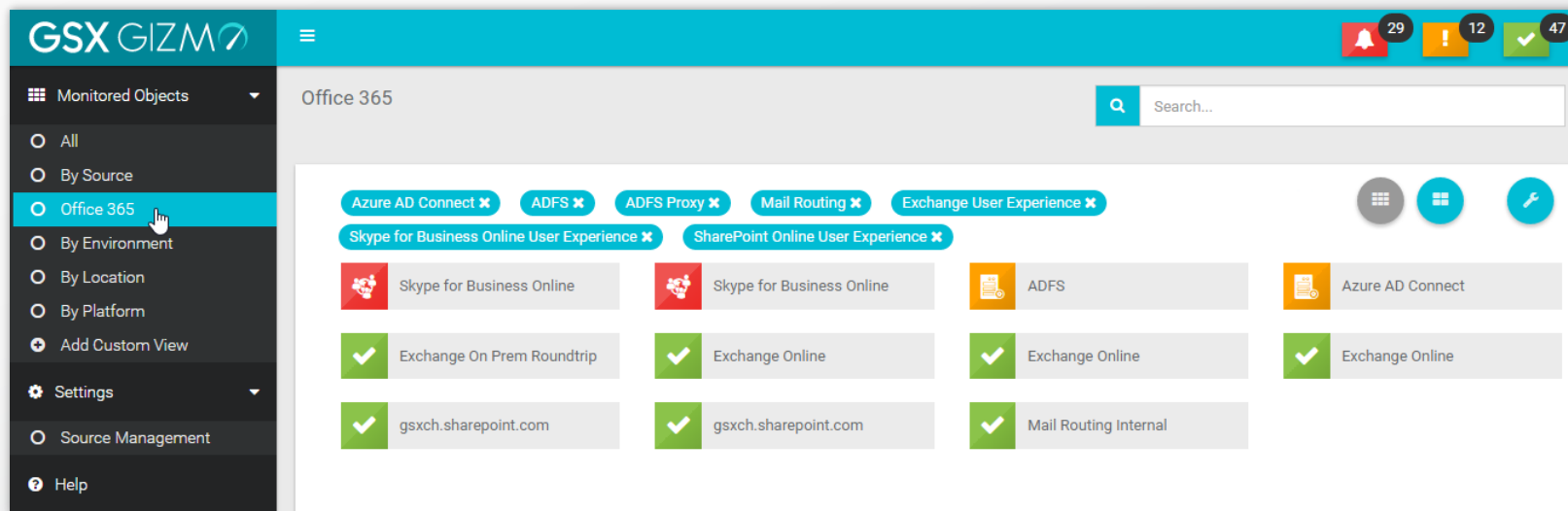
GSX provides the only solution on the market that can actually analyze the impact of the datacenter components on Office 365 service delivery



GSX Gizmo for Office 365 detailed features: Reduce your mean time to repair

Real Time Troubleshooting Dashboards

- ✓ A central web dashboard to see your entire collaboration environment in one place
- ✓ Organize information the way you want
- ✓ Easy navigation: pinpoint what's wrong in seconds
- ✓ Advanced graph capabilities for a better understanding of every situation.

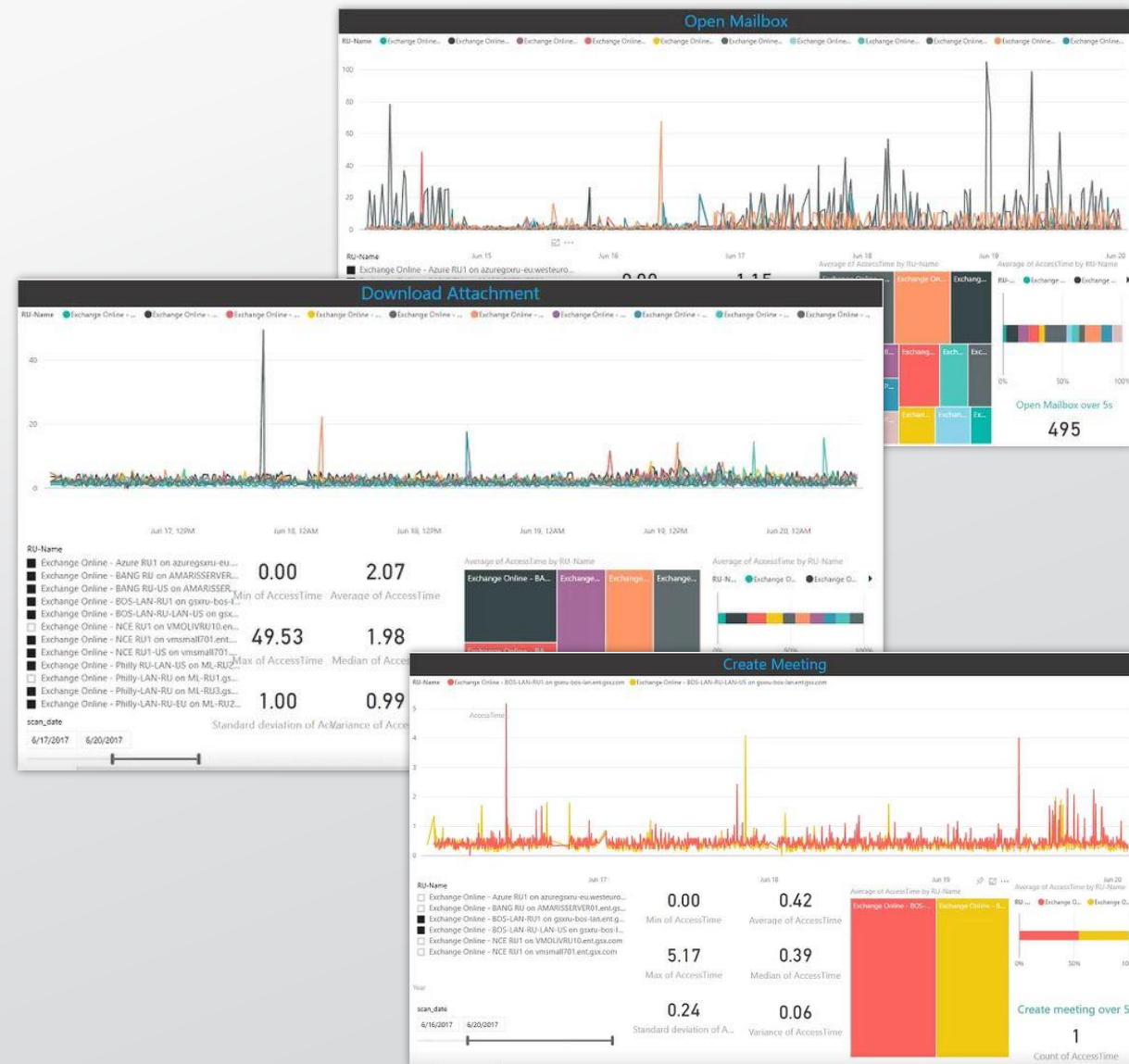




GSX Gizmo for Office 365 detailed features: Analyzing and sharing data made easy

Get the data you need!

- ✓ Every statistics are sent to Microsoft SQL Database (Enterprise or SQL Express) that can be used by any reporting tool
- ✓ GSX provides out of the box PowerBI templates or can design them to target your specific needs
- ✓ Establish your baseline, your norm of performance, to determine the reality and the impact of any issue
- ✓ Instantly report on service quality for all your environments and end-user experience to the management.
- ✓ Troubleshoot your issues with historical data
- ✓ Provide facts to Microsoft when opening an escalation ticket





Detect & Understand Skype for Business Online Performance & audio quality issues



Robot User actions for Skype for Business Online

- ✓ Log in
- ✓ Presence
- ✓ Instant Messaging
- ✓ Real Voice call
- ✓ The Robot User performs a real 15 seconds call between a location and Office 365
- ✓ The Robot User collects every critical Voice quality data during these call

Voice quality Statistics For each call

- ✓ One way and Round trip latency
- ✓ Packet Loss
- ✓ Packet reorder ratio
- ✓ Jitter
- ✓ Network MOS
- ✓ Network MOS degradation
- ✓ Ratio concealed Sample Average
- ✓ Estimated Bandwidth



- ✓ Continuously test Skype for Business Online end-user experience from your critical locations
- ✓ Be alerted before your end-user complains!

- ✓ Get full visibility on everything that can increase the number of tickets



Analyze the impact of your infrastructure on the Skype for Business end-user experience

Client Network
Segment

Robot Users
locations



ISP

Datacenter Internal
Network

Connection to Skype
for Business Online



Client
Edge

 Office 365

- ▶ The Robot Users meet every Microsoft FastTrack recommendations:
 - ▶ Tests and data collection take place from every site enabling Skype for Business Online
 - ▶ Tests run continuously (every X minutes, as configured)
 - ▶ Tests run during a long period of time (days, weeks, months, as you wish)
-
- ▶ The Robot Users can be placed:
 - ▶ On the Client Network Segment (the one that contains Skype for Business clients)
 - ▶ On the Edge network Segment (that breaks out to Office 365)
-
- ▶ That will determine the impact of your infrastructure and network on the voice quality
 - ▶ The Robot User can run with different network configurations (egress point, proxy, VPN, etc.) to test their impact on end-user experience
 - ▶ The Robot User can detect the impact of your infrastructure on the end-user experience
 - ▶ The Robot User provides all the necessary data to understand the voice quality



Analyze your voice quality data

Packet Loss Rate

Packet Loss Rate: 0

- ▶ A high packet loss will lead to moment of silence during a call (if you have period of sustained packet loss during a call) or to a degradation of the voice quality giving people 'robot-voice.'

Round Trip Latency

Round Trip Latency: 64 ms

- ▶ The latency impacts the smoothness of the conversation between two people. Too much latency provides unnatural pauses during the conversation. People also report that it feels like using a satellite phone.

Average Jitter

Average Jitter: 6.05 ms

- ▶ A large Jitter buffer provides additional delay in calls. It is the sign of a congestion of the network. The shrink or the expansion of the buffer will provide audio distortion during the call like speeding or slowing down of the speech

Degradation Average

Degradation Average: 0.04

- ▶ A high value of Network MOS degradation causes distortion in the audio or a blank during the conversation. Generally due to LAN & wireless congestion and/ or insufficient bandwidth.

Healed Ratio

Healed Ratio: 0.92%

- ▶ A high percentage means that many audio samples had to be concealed because of the packet loss. It indicates poor audio quality, which the user experiences as distorted or lost audio.

MOS

MOS: 4.25

- ▶ Designed by Microsoft to predict what will be the value of the Mean Opinion Score (User call ratings)

Packet Reorder Ratio

Packet Reorder Ratio: 0

- ▶ Impact the Network MOS the same way as packet loss. Can also directly impact the packet sending rate which increase the round trip time. The call will be distorted and will cut out at times.

More information at:

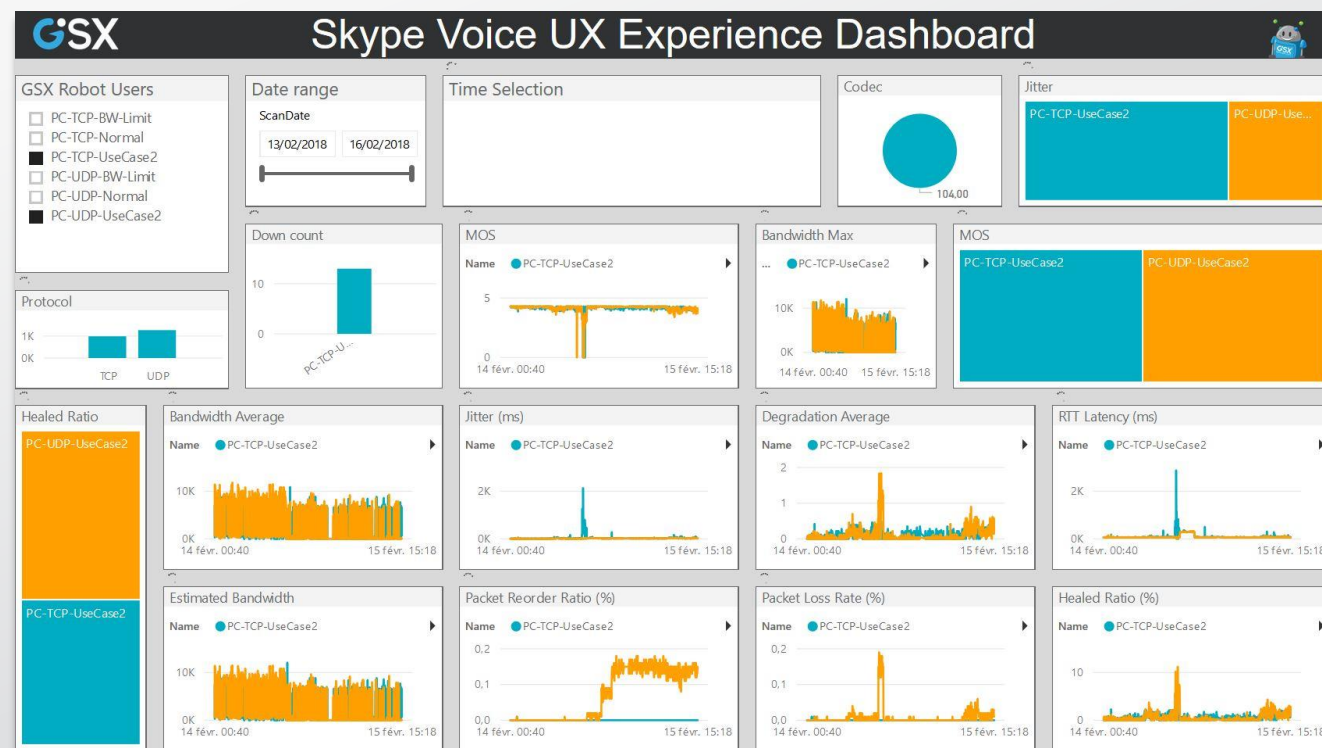
<http://www.gsx.com/robotech-library/skype-for-business-online-key-metrics-to-watch-to-assess-your-end-user-experience-before-during-and-after-any-deployment>



Analyzing Skype for Business voice quality data

Compare and share your voice quality data

- ▶ Select every statistics you need from our SQL database to build your own voice quality dashboard.
- ▶ Analyze the impact of the bandwidth, latency, jitter, packet loss & reorder, Concealed sample on your expected Mean Opinion Score (MOS).
- ▶ Get a instant report on the type of protocol used during your calls (UDP or TCP).
- ▶ You keep the control over your data.





GSX Gizmo for Office 365

End-to-end
End-User Performance
Monitoring & Reporting



GSX 365 Usage Reports Security & Audit

Advanced Usage Reporting
Threat detection &
Troubleshooting



GSX 365 Enterprise Management

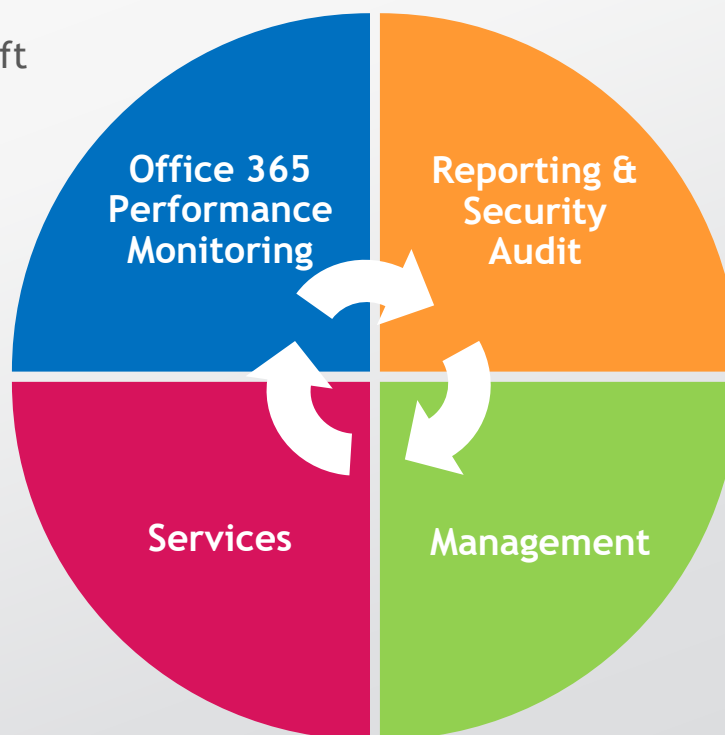
Automatic management
Custom delegation
Help desk empowerment



Enterprise IT benefits for every part of our suite

- ▶ Be warned before your users
- ▶ Reduce considerably the number of tickets
- ▶ Reduce drastically the mean time to repair
- ▶ Reduce considerably your costs with Microsoft (decrease your escalation tickets number)
- ▶ Ensure the best possible experience and productivity for your end users

- ▶ Assess the ability of your locations to provide descent Office 365 end-user experience before your migration
- ▶ Reduce considerably migration-related end-user complaints
- ▶ Troubleshoot easily locations with poor Office 365 performance



- ▶ Provide the right data to the right person, automatically
- ▶ Use self service reports to cut down your reporting time & costs
- ▶ Enable precise analysis of license & services usage per department, locations, etc.
- ▶ Reduce drastically the Security risks of your organization attached to Office 365
 - ▶ Detect abnormal behavior before they impact you
 - ▶ Fix the event before the impact grows
- ▶ Reduce IT operation costs by automating recurring tasks and enabling safe delegation to non IT, non PowerShell expert (Helpdesk)
- ▶ Track any actions to fix eventual human errors in minutes
- ▶ Manage large and multitenant environments from one portal efficiently