

Goliath Performance Monitor

A Technical Overview

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Goliath Technologies: Transforming IT from Reactive to Proactive

This product overview document highlights the unique way Goliath Technologies has built a monitoring & troubleshooting solution that differentiates Goliath within the marketplace today. These capabilities enable organizations to proactively monitor and troubleshoot not only their Citrix environments but the associated end user experience.

Goliath provides software with AI, embedded intelligence, and automation that enables IT professionals to anticipate issues before they happen, provide the data to troubleshoot quickly when they do & documentation that proves root cause so permanent fix actions can be implemented and IT can objectively report on the quality of the user experience they are delivering - regardless of where IT workloads or users are located. By doing so, Goliath helps IT break out of reactive mode, into proactive mode.

Objective Measure of End User Experience

Three primary challenges that the End User Experience Scorecard Solves:

- No way to objectively represent how well IT is doing at delivering a good end user experience
- IT lacks the necessary data to improve end user experience
- When problems occur, they are often amplified and without objective data, it is impossible to know how widespread the issue is and whether it is just loud or actually broad

The Citrix XenApp End User Experience report utilizes embedded intelligence to provide a distilled objective view of user experience. Goliath automatically analyzes complex connectivity and performance metrics from the user's perspective and calculates a top-line user experience score. The report then enables easy filtering to analyze subsets of the environment for focused analysis, even down to individual users. Not only is IT able to easily see what the objective user experience is, but also explains why by breaking out the primary elements responsible for the user experience score (ICA Latency, Network, Local Connection). This capability expedites cross-departmental analysis and streamlines both IT operations and IT management's ability to act confidently on objective data.

Use this report to establish an EUE benchmark for new pilots or deployments and track EUE changes over time. Also, provide management with automated health checks that objectively demonstrate the quality of the end user experience IT is delivering.

Citrix XenApp - End User Experience

Citrix XenApp - End-User Experience Scorecard Report for specified time period

Reporting Period: Sun Dec 25 2022 15:32:45 - Fri Jun 23 2023 16:32:45

Sort By: User Name

Report Run: Fri Jun 23 2023 16:32:45

Total Users: 13

87

Overall EUE Score

50

Connection Speed Score

99

Network Latency Score

98

ICA RTT Score

99

ICA Latency Score

17.12

Avg Connection Speed (Mbps)

4.34

Avg Network Latency (ms)

21.02

Avg ICA RTT (ms)

4.46

Avg ICA Latency (ms)

User Name	Org Unit	Dept	EUE Score	Avg Conn Speed (Mbps)	Avg Network Latency (ms)	Avg ICA RTT (ms)	Avg ICA Latency (ms)
Erica Jones	Miami Office	Finance	81	9.24	17.86	33.68	25.58
Bobby Hansen	Miami Office	Finance	87	17.33	1.74	23.78	1.22
April Kirby	New York Office	Engineering	85	40.16	61.13	101.72	58.22
Malik Kant	Contract (India)	Finance	99	89.00	50.26	29.85	20.29
Hector Suarez	New York Office	Sales	89	30.81	18.79	24.21	20.19
Traci Small	New York Office	Engineering	72	25.63	117.89	147.16	154.53
Pranod Patil	Contract (India)	Engineering	74	6.74	17.05	37.00	32.58
Nareesh Mahesh	Contract (India)	Sales	74	0.96	8.30	13.50	6.41
Claude Daniel	Miami Office	Sales	74	2.95	60.55	32.15	41.77
Blake Mathis	New York Office	Finance	80	42.58	69.73	140.09	137.45
Shayne McDaniel	New York Office	Sales	84	10.90	5.11	36.18	4.74
Von Raymond	Miami Office	Sales	94	45.96	2.75	2.68	3.24
Melvin Shannon	New York Office	Finance	90	43.39	28.59	47.90	25.38

Connection Speed score thresholds:

Excellent: > 49 Mbps

Good: <= 49 and > 24 Mbps

Fair: <= 24 and > 10 Mbps

Poor: <= 10 Mbps

Network Latency score thresholds:

Excellent: < 101 ms

Good: >= 101 and < 151 ms

Fair: >= 151 and < 250 ms

Poor: >= 250 ms

ICA RTT score thresholds:

Excellent: < 201 ms

Good: >= 201 and < 351 ms

Fair: >= 351 and < 450 ms

Poor: >= 450 ms

ICA Latency score thresholds:

Excellent: < 101 ms

Good: >= 101 and < 201 ms

Fair: >= 201 and < 400 ms

Poor: >= 400 ms

Early Warning System

Goliath is the industry's leading proactive, production-ready end-user experience software that validates availability of the entire Citrix delivery infrastructure (including the NetScaler). It intelligently ensures availability by executing real Citrix sessions that exercise the exact same steps a user takes during the Citrix logon process. Regardless of whether a user is remote or local, Goliath gives administrators an "early warning system" that allows them to know exactly what the Citrix end-user experience will be like for their users - in advance.

Illustrated Below: (1) The Application Availability Monitor Dashboard displaying a real-time assessment of Citrix Availability and then (2) breaking down launch times by stage.



End User Screenshot Analytics

When there is a logon failure, an administrator receives an alert immediately. Using the simulation details, an administrator can quickly pinpoint where the failure occurred and the root cause.

Illustrated Below: Quickly drill down to investigate failures right from the application availability dashboard by clicking on the magnifying glass. In just three steps, you can then see where the logon issues occurred during the logon process and what the issue was:

Availability Analysis

Date	Application/Desktop	From	Account	Results
09/11/17 @ 09:30:54	SAP Logon	DEV.GLS-EP04	goliath\lostest05	Failed during Launch stage

Timeline of steps:

- 6.9s: Verify session launched
- 2.7s: Verify session launched
- 2.3s: Verify session launched
- 1.4s: Verify session launched
- 31.8s: Launch

Details

[09/11/2017 09:30:54.446]: Verifying that session launched for Resource=Internet Explorer - 65 and Title=Internet
[09/11/2017 09:30:58.712]: No match on window title=Citrix Client Logon Message - \Remote
[09/11/2017 09:30:58.727]: Try #5: Waiting...
[09/11/2017 09:31:03.790]: No match on window title=Citrix Client Logon Message - \Remote
[09/11/2017 09:31:03.806]: Try #10: Waiting...
[09/11/2017 09:31:08.837]: No match on window title=Citrix Client Logon Message - \Remote
[09/11/2017 09:31:08.853]: Try #15: Waiting...
[09/11/2017 09:31:13.916]: Try #20: Waiting...
[09/11/2017 09:31:18.947]: No match on window title=Citrix Client Logon Message - \Remote
[09/11/2017 09:31:18.963]: Try #25: Waiting...
[09/11/2017 09:31:23.995]: Try #30: Waiting...
[09/11/2017 09:31:26.135]: Screenshot File Created: 09/11/2017 09:31:26.135: RunNameReceiver Launch.png
[09/11/2017 09:31:26.135]: WARNING: Unable to confirm that session launched for Resource=Internet Explorer - 65 and Title=Internet
[09/11/2017 09:31:26.151]: Verify-Launch result for Internet Explorer - 65 is

Where the issue occurred

Visual proof of the issue

Isolation of the failure point

1. In this case, failure occurred at the launch stage (marked by the '1')
2. The screenshot (2) proves that the application failed to launch and shows the root cause of the Citrix workflow and application launch failure as being the result of a licensing problem
3. By navigating to the "Details" or "Analytics" section (3), we can see that the launch failed at the point of verifying that Internet Explorer launched

Proactive Monitoring and Troubleshooting

Automatic Citrix Discovery and Dependency Map

Goliath's Automatic Citrix Discovery and Dependency Map intelligently creates a dependency map of your entire Citrix infrastructure with true end-to-end visibility of the health of your Citrix infrastructure. This single, macro view used as a real-time NOC display of your Citrix environment gives administrators the ability to monitor, manage and troubleshoot issues with Citrix, whether the root cause is the Citrix infrastructure or the supporting IT elements. It shows the overall health of your environment at-a-glance and provides context-sensitive supporting metrics and details as you select each element. You can drill down and dynamically examine your environment and troubleshoot issues more easily since everything is broken down logistically.

Highlights:

- Automatically deploys to your environment, with no manual set-up.
- Eliminates the time it takes to correlate root-cause to elements in your environment by graphically representing all the connections between components in your Citrix infrastructure. Easily switch between data centers and farms to eliminate siloed architectures.
- Drill down to the host level and view specific metrics for each element in your environment. View end user experience metrics for different layers in your environment at-a-glance.

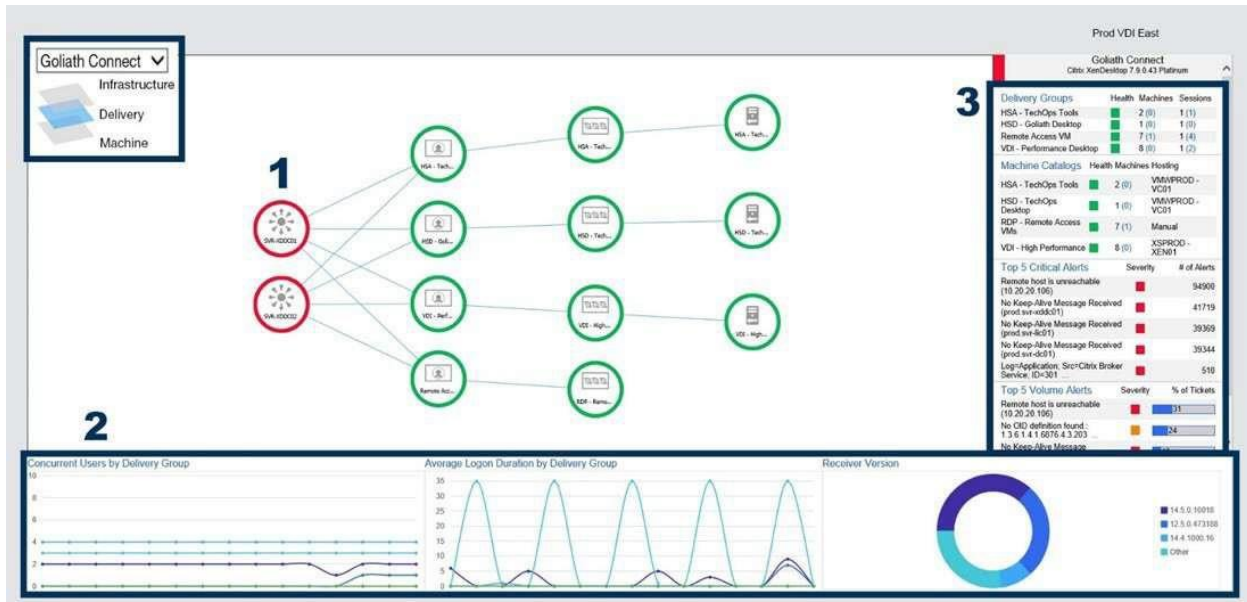
Physical Layer:

1. Automatically map your entire Citrix infrastructure to visualize connections, relationships, and health of components.
2. Easily switch views to different data centers or locations.
3. Correlate end user experience issues to delivery infrastructure components and health.
4. See context-sensitive metrics and alerts for selected components.



Delivery Layer:

1. Shows the logical connections and dependencies of your Citrix environment by delivery group, machine catalog, and down to the specific image.
2. Correlates end user experience metrics for the selected delivery groups.
3. Delivers context sensitive metrics for any selected component.



Machine Layer:

1. In addition to the delivery group elements, the machine layer displays Citrix PVS and/or MCS as well as the hypervisor resources and hosts.
2. The details on the right pane will update according to the selected node.



Real-Time Citrix Performance Graphs

Goliath provides five layers of visibility in one console: hardware, host, VM, OS, and application. The performance graphs allow administrators to trend Citrix ICA/HDX Latency and Logon Duration as well as resource utilization of each server.

Real-Time Citrix Virtual Apps & Desktops (CVAD) Session Display

Goliath provides granular real-time and historic data for all Citrix Sessions. When there are end user experience issues, administrators can drill into an individual user session to gain deeper visibility and identify the root cause. This includes the ability to sort via AD/OU to understand if issues are isolated or if they are correlated to a larger group of users.

Virtual Machine	Summary State	User	Org Unit	CPU Use	Avg. Memory Use	Log	ICA Latency	Avg. ICA Latency	Group Name	Client Address	Version	Broker Name	Start Time	State Change	Connected
WS-HMCL000	LoggedOff	McLeod, Heather A.	Goliath	4%	5%	50%	128.6s	84ms	37ms	Remote Access VM	172.31.0.10	23.11.0.87	PRD-SV2DDC02	2024-01-23 13:4...	2024-01-23 13:4...
WS-HMCL00002	Disconnected	McLeod, Heather A.	Goliath	17%	16%	17%	36.8s	15ms	26ms	Remote Access VM	172.31.0.19	23.11.0.87	PRD-SV2DDC02	2024-01-17 14:4...	2024-01-17 15:0...
WS-FLOYD	LoggedOff	Floyd Roberts	Service Accounts	40%	14%	22%	28.9s	1ms	3ms	Remote Access VM	172.31.0.20	14.10.1.22	PRD-SV2DDC02	2024-01-17 11:3...	2024-01-17 12:0...
WS-FLOYD	LoggedOff	Floyd Roberts	Service Accounts	40%	4%	42%	17s	16ms	31ms	Remote Access VM	172.31.0.3	23.11.0.87	PRD-SV2DDC01	2024-01-18 12:0...	2024-01-18 12:1...
WS-HMCL000	LoggedOff	McLeod, Heather A.	Goliath	5%	2%	9%	19.8s	15ms	45ms	Remote Access VM	172.31.0.19	23.11.0.87	PRD-SV2DDC01	2024-01-17 09:2...	2024-01-17 12:5...
WS-FLOYD	LoggedOff	Floyd Roberts	Service Accounts	10%	14%	22%	18.5s	1ms	3ms	Remote Access VM	10.20.66.55	23.11.0.132	PRD-SV2DDC02	2024-01-17 12:3...	2024-01-17 12:4...
WS-HMCL000	Disconnected	McLeod, Heather A.	Goliath	4%	6%	51%	16.8s	31ms	51ms	Remote Access VM	172.31.0.26	23.11.0.87	PRD-SV2DDC01	2024-01-31 07:4...	2024-01-31 08:1...
DEV-CTICL001	LoggedOff	McLeod, Heather A.	Goliath	16%	15%	44%	15.6s	78ms	56ms	Citrix Cloud Virtu...	192.168.1.220	23.11.0.87	M82321-34-1	2024-02-02 08:3...	2024-02-02 08:4...
WS-HMCL000	Disconnected	McLeod, Heather A.	Goliath	9%	5%	44%	15.6s	78ms	56ms	Remote Access VM	172.31.0.30	23.11.0.87	PRD-SV2DDC01	2024-02-05 10:2...	2024-02-05 11:4...
WS-FLOYD	Disconnected	Floyd Roberts	Service Accounts	5%	10%	48%	15.5s	1ms	3ms	Remote Access VM	10.20.66.55	23.11.0.132	PRD-SV2DDC02	2024-01-18 08:1...	2024-01-19 14:3...
WS-FLOYD	LoggedOff	Floyd Roberts	Service Accounts	10%	14%	22%	15.2s	1ms	3ms	Remote Access VM	172.31.0.20	14.10.1.22	PRD-SV2DDC02	2024-01-17 12:1...	2024-01-17 12:2...
WS-FLOYD	LoggedOff	Floyd Roberts	Service Accounts	10%	14%	22%	15.1s	1ms	3ms	Remote Access VM	10.20.66.55	23.11.0.132	PRD-SV2DDC02	2024-01-17 12:2...	2024-01-17 12:3...
WS-HMCL000	LoggedOff	McLeod, Heather A.	Goliath	28%	4%	34%	14.8s	16ms	31ms	Remote Access VM	172.31.0.19	23.11.0.87	PRD-SV2DDC01	2024-01-17 16:4...	2024-01-17 17:1...

Hybrid Environment Monitoring

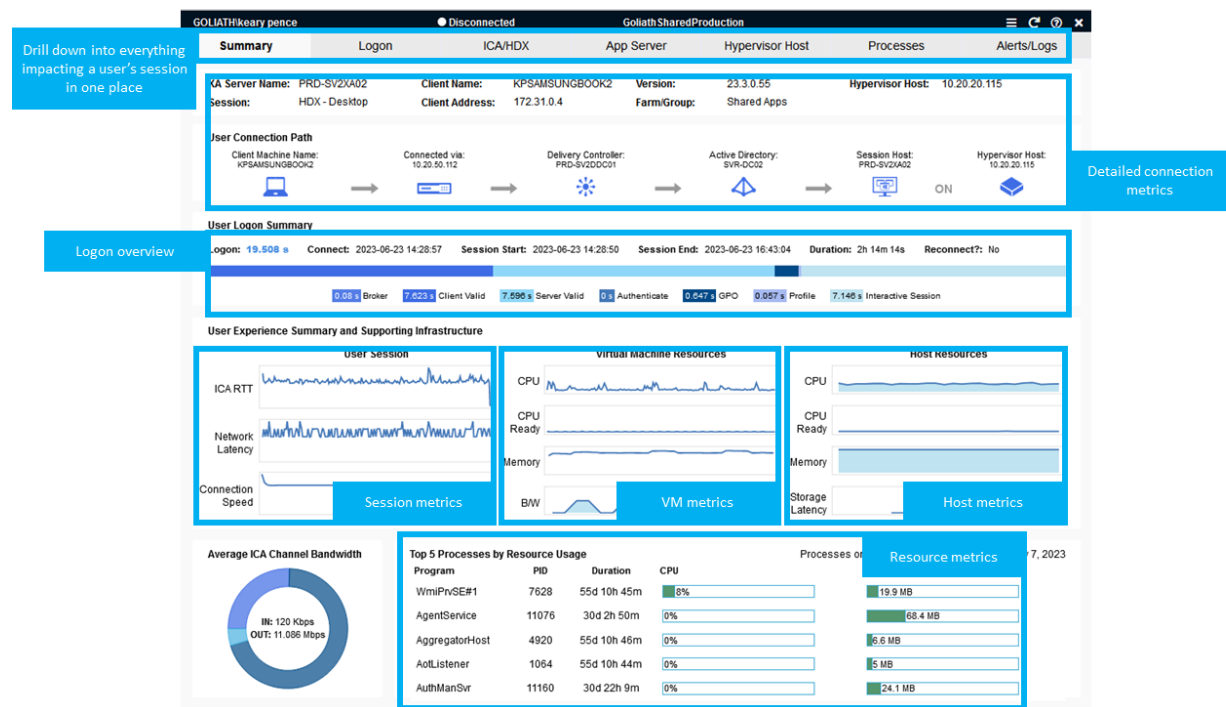
Goliath enables IT to monitor hybrid environments from a single platform. In addition to on-prem VDI and/or Citrix/Horizon environments, you have the ability to monitor your AWS EC2 & Workspaces and Azure VMs & AVD (coming soon) in one place.

OS	Type	Device Name	Group
Windows	VM	10.20.20.110	VMware Hosts & Storage
Windows	VM	10.20.20.111	VMware Hosts & Storage
Windows	VM	10.20.20.112	VMware Hosts & Storage
Windows	VM	10.20.20.113	VMware Hosts & Storage

In Session Real-Time Analytics Overview

Goliath provides the ability to drill down into a single end user's session and, at a glance, review key analytics around that session performance: logon duration summary, key performance metrics from ICA/HDX, VM resources, host resources along with application resource usage data.

This quick summary enables an administrator to quickly view correlated performance metrics and rule out what isn't causing the performance bottleneck and focus on the metrics that appear to indicate root cause.

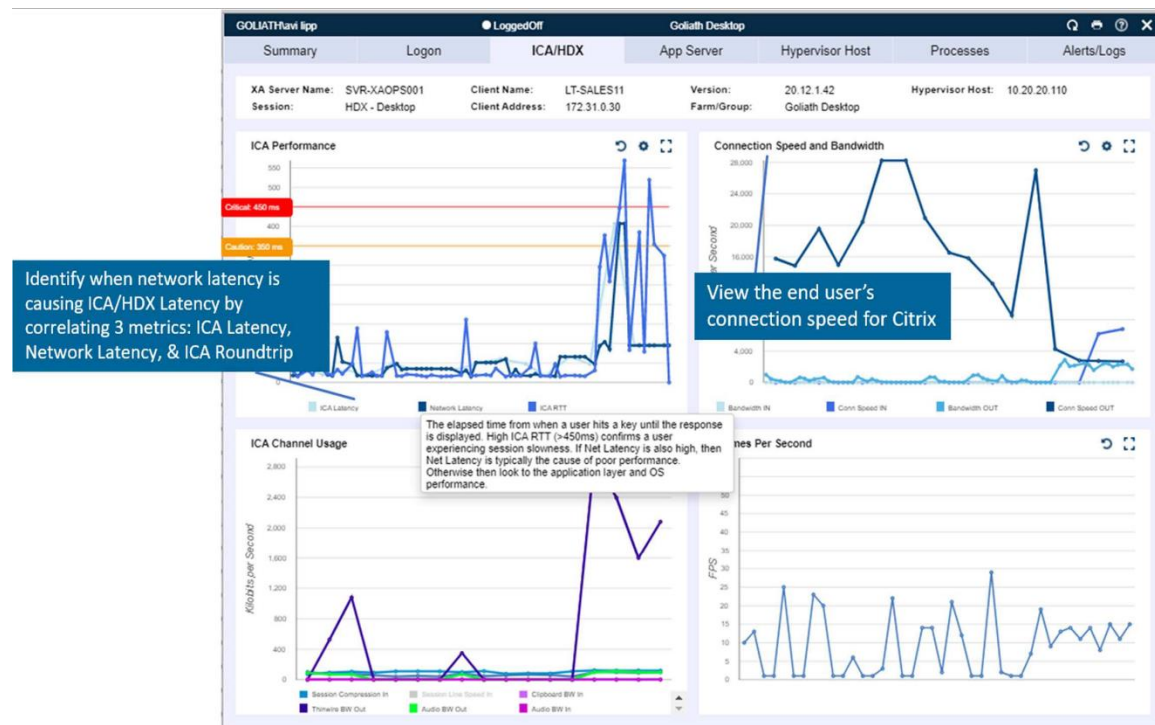


Real-Time ICA Channel Drill Down from Session Display

Goliath provides industry-leading visibility into Citrix session performance by breaking down the ICA/HDX protocol and returning precise metrics around individual ICA/HDX channel performance.

Detailed ICA/HDX Channel Metrics Include:

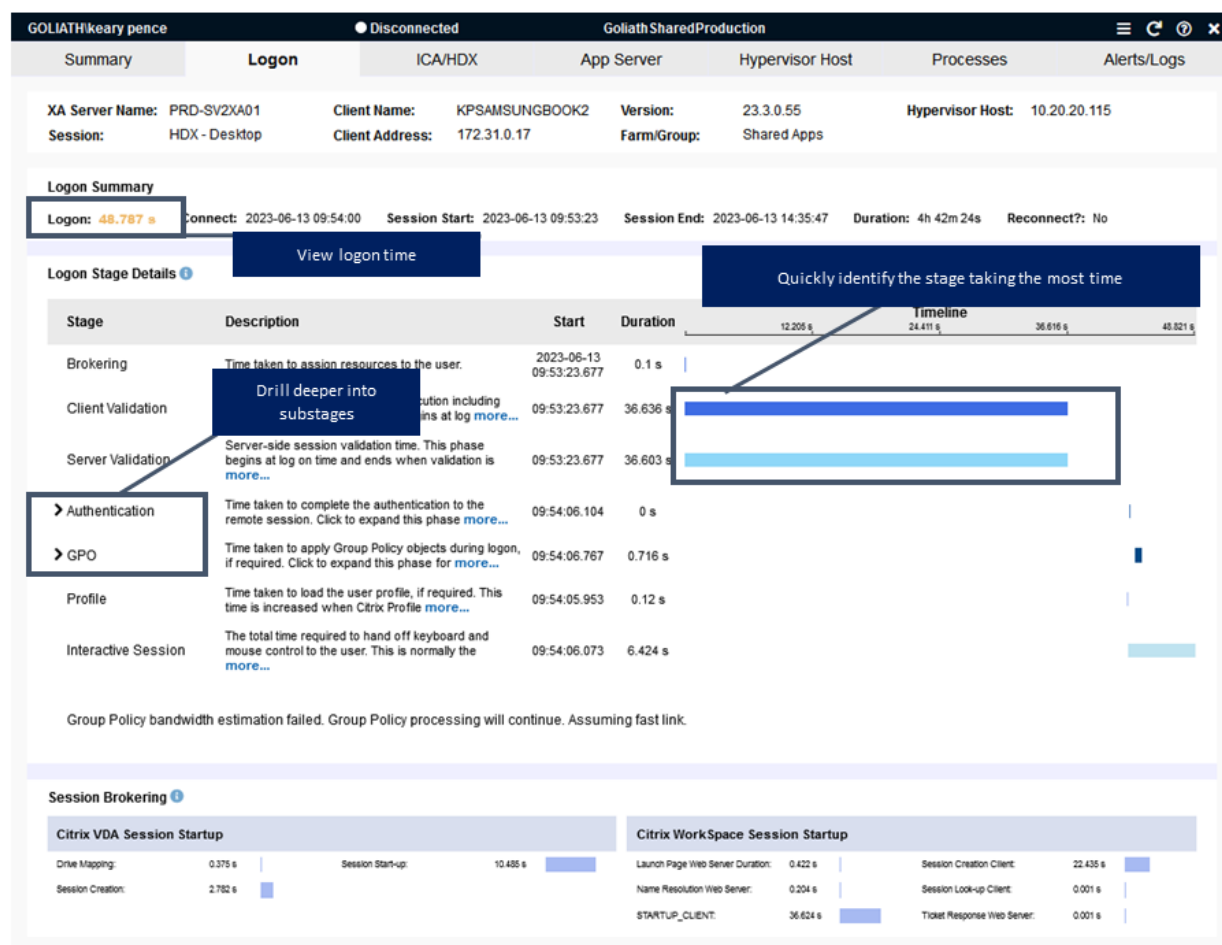
- User Connection Performance
- Printing Bandwidth
- Audio Bandwidth
- Clipboard Bandwidth
- Keyboard and Mouse Bandwidth
- Thinwire Bandwidth
- DCR Bandwidth
- Multimedia Bandwidth
- And more!



Real-Time Citrix Logon Duration Drilldown

If you can't drill down into all 33+ stages of the Citrix logon process, then you can't isolate and fix root cause of logon slowness. With the Citrix Logon Duration monitoring and troubleshooting functionality you can capture real-time Logon Duration times and get alerted to end user logon slowness on any of the 33+ Logon Duration Stages.

The real-time Citrix Logon Duration Drilldown breaks down a user's logon process into each of the stages to help understand what needs to be optimized to improve logon times. This report can also be used to identify and troubleshoot session load problems by identifying what may be getting stuck or taking too long to process. Threshold-based alerting on user logon times is also possible.



The logon duration drilldown allows an administrator to parse logon times into each of the stages and sub- stages. This includes the details of the brokering process that the Citrix Delivery Controller and Receiver is responsible for and the breakdown of the session launch from mouse click to being delivered onto the XenApp/XenDesktop Server or VDI, including but not limited to:

- End User Mouse Click to Launch Application or Desktop to Session Host
- XML Service Name Resolution of an App or Desktop to a Session Host
- ICA/HDX File Download
- User Authentication

- Time to Request Session Creation
- Determine the Session Host STA Ticket Retrieval
- Logon Script Execution
- Desktop Load

When the session is established on the XenApp/XenDesktop Server or VDI, GPM further breaks down the policy and profile load stages to determine the root cause of which script or stage caused the logon delay. This is accomplished by providing the details of how long each process took and iterating each execution stage and how that occurs including:

- Identifying and establishing connection to the Domain Controller for authentication
- LDAP calls to copy over policies
- Copying over each script file

Execution of each group policy and script to determine the execution time of:

- Registry Extensions
- Citrix Group Policy
- Folder Redirection
- Citrix Profile Management
- Drive Mapping
- Printer Mapping
- OU Policy Execution

Real-time Remediation Actions

On-demand remediation actions are built into the troubleshooting flow. Actions are on the screens where you are troubleshooting. Real-time commands, empower help desk and IT professionals to take actions, and resolve issues in real-time during a live session for things like:

- Disconnecting a session
- Logging off a user
- Killing a process
- Ending an application

Having real-time actions built into the workflow reduces context switching for more efficient troubleshooting. Since access to Citrix Director is not required, this allows for remediation actions to be performed earlier in the troubleshooting process, reducing the number of escalations.

The screenshot displays the Citrix Director interface with two main panels. The top panel, titled 'GOLIATHHeather McLeod', shows session details for 'PRD-SV2XA01' and 'HDX - Application'. It includes tabs for Summary, Logon, ICA/HDX, App Server, Hypervisor Host, and Processes. A 'Real-time remediation' overlay is visible, with buttons for 'Disconnect' and 'Log Off User'. The bottom panel, titled 'GOLIATHHeary pence', shows session details for 'PRD-SV2XA01' and 'HDX - Desktop'. It includes tabs for Summary, Logon, ICA/HDX, App Server, Hypervisor Host, and Processes. A 'Real-time remediation' overlay is also visible, with buttons for 'End Process' and 'Show All Processes'. The 'Processes' tab in the bottom panel displays a table of running processes, including 'AgentService.exe', 'AggregatorHost.exe', 'AotListener.exe', 'ApplicationFrameH...', 'AuthManSvc.exe', 'AuthManSvc#1', 'BrokerAgent.exe', 'BrokerAgent', 'CdfSvc.exe', 'CdfSvc', 'concentr.exe', 'concentr#1', 'conhost.exe', 'conhost#1', 'CpSvc.exe', 'CpSvc', 'CseEngine.exe', 'CseEngine', 'csrss.exe', 'csrss#1', 'csrss#2', 'csrss#3', and 'csrss#4'. The table columns include Name, Program, User, PID, Start, Duration, CPU, Memory, I/O, and Pg Fl. The right side of the interface shows 'Virtual Machine Resources' and 'Host Resources' graphs, including CPU, Memory, and Storage Latency. Below these graphs is a 'Process Usage' table with columns for ID, Duration, CPU, and Memory. The table lists processes with their IDs, durations, CPU usage, and memory usage.

Name	Program	User	PID	Start	Duration	CPU	Memory	I/O	Pg Fl
AgentService.exe	AgentService	SYSTEM	13712	2023-05-07 08:59:05	30.1 dy	0%	65MB	0	78MB
AggregatorHost.exe	AggregatorHost	SYSTEM	5148	2023-05-13 01:03:16	55.5 dy	0%	3MB	0	2MB
AotListener.exe	AotListener	NETWORK SERVICE	1000	2023-05-13 01:03:41	55.5 dy	0%	4MB	0	23MB
ApplicationFrameH...	ApplicationFrameH...	CitrixAdmin	26628	2023-06-16 12:57:55	21 dy	0%	48MB	0	68MB
AuthManSvc.exe	AuthManSvc	Kyle Grare	20740	2023-05-25 11:30:02	43 dy	0%	12MB	0	8MB
AuthManSvc#1	AuthManSvc#1	CitrixAdmin	31208	2023-06-16 12:56:06	21 dy	0%	13MB	0	8MB
BrokerAgent.exe	BrokerAgent	NETWORK SERVICE	2632	2023-05-13 01:01:34	55.5 dy	0%	90MB	0	108MB
BrokerAgent	BrokerAgent	NETWORK SERVICE	2932	2023-05-13 01:01:34	55.5 dy	0%	3MB	0	2MB
CdfSvc.exe	CdfSvc	LOCAL SERVICE	3240	2023-05-13 01:01:35	55.5 dy	0%	8MB	0	4MB
CdfSvc	CdfSvc	LOCAL SERVICE	3240	2023-05-13 01:01:35	55.5 dy	0%	8MB	0	4MB
concentr.exe	concentr	Kyle Grare	22288	2023-05-25 11:05:45	43 dy	0%	6MB	0	11MB
concentr#1	concentr#1	CitrixAdmin	33052	2023-06-16 12:55:52	21 dy	0%	11MB	0	11MB
conhost.exe	conhost	SYSTEM	2988	2023-05-13 01:01:34	55.5 dy	0%	3MB	0	7MB
conhost#1	conhost#1	NETWORK SERVICE	6456	2023-05-13 01:03:41	55.5 dy	0%	2MB	0	7MB
CpSvc.exe	CpSvc	LOCAL SERVICE	3240	2023-05-13 01:01:35	55.5 dy	0%	8MB	0	4MB
CpSvc	CpSvc	LOCAL SERVICE	3240	2023-05-13 01:01:35	55.5 dy	0%	8MB	0	4MB
CseEngine.exe	CseEngine	SYSTEM	3144	2023-05-13 01:01:35	55.5 dy	0%	27MB	0	22MB
CseEngine	CseEngine	SYSTEM	3144	2023-05-13 01:01:35	55.5 dy	0%	27MB	0	22MB
csrss.exe	csrss	SYSTEM	840	2023-05-13 01:01:28	55.5 dy	0%	3MB	0	2MB
csrss#1	csrss#1	SYSTEM	10204	2023-05-25 11:04:53	43 dy	0%	3MB	0	2MB
csrss#2	csrss#2	SYSTEM	11040	2023-06-01 15:01:37	35.9 dy	0%	2MB	0	2MB
csrss#3	csrss#3	SYSTEM	35388	2023-06-16 12:55:19	21 dy	0%	15MB	0	2MB
csrss#4	csrss#4	SYSTEM	28620	2023-06-16 13:13:38	20.9 dy	0%	2MB	0	2MB

Out-of-the-Box Monitoring Intelligence

Goliath comes with embedded intelligence and automation consisting of hundreds of pre-configured monitoring rules and alerts based upon best practices from Citrix, VMware, Microsoft, and our own Goliath consulting experience. So immediately upon deployment, the product begins using this embedded intelligence to automatically search out these known failure points and conditions. This out-of-the-box functionality simplifies deployment and allows administrators to immediately begin focusing on improving environmental bottlenecks or failure points.

These rules cover the following conditions and more:

- Virtual Host & VM: CPU, CPU ready, memory provisioning, storage performance, and B/W usage
- XenApp & XenDesktop End User Experience: ICA/HDX latency, logon duration, server load

Unregistered machines, active users/sessions per server, and available desktops

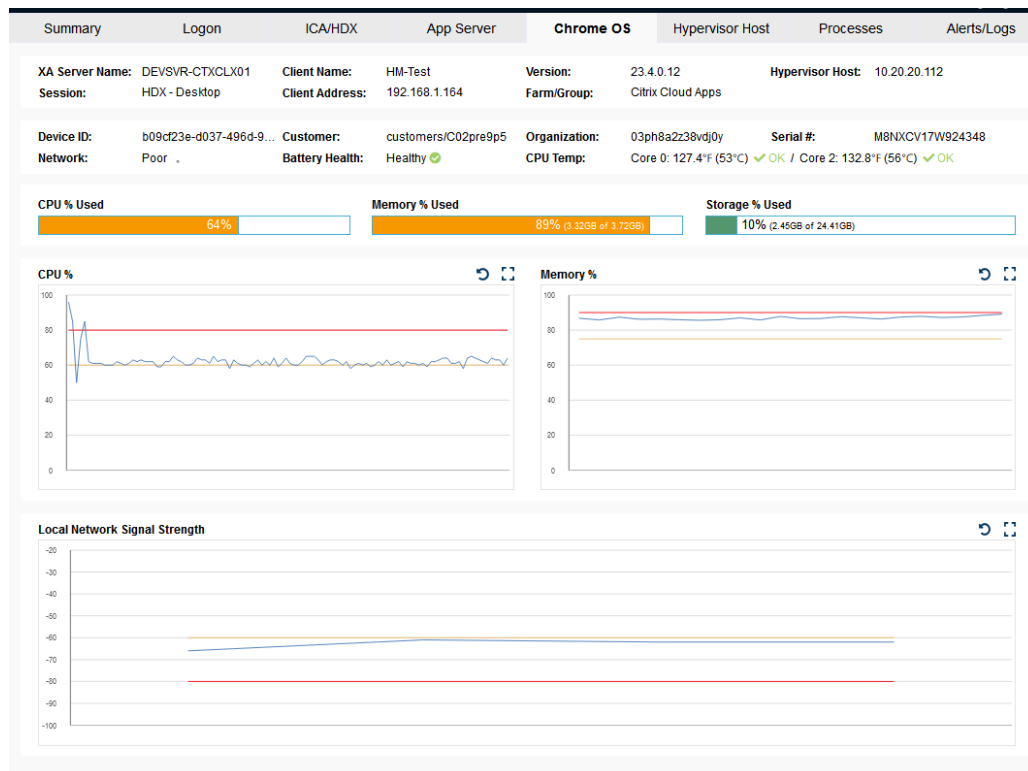
- Application crashes, hangs, and high CPU/memory utilization
- Citrix delivery controller, StoreFront, PVS, Licensing Server, and Windows dependencies group policy and registry faults
- Printing and profile faults
- Windows errors and faults

ChromeOS Devices

Goliath is leading the way as the only vendor with access to Google's APIs providing visibility into the health and performance of ChromeOS devices. We take that even further by correlating ChromeOS device telemetry with Citrix session data, user behavior, and the underlying IT elements that are part of the delivery infrastructure.

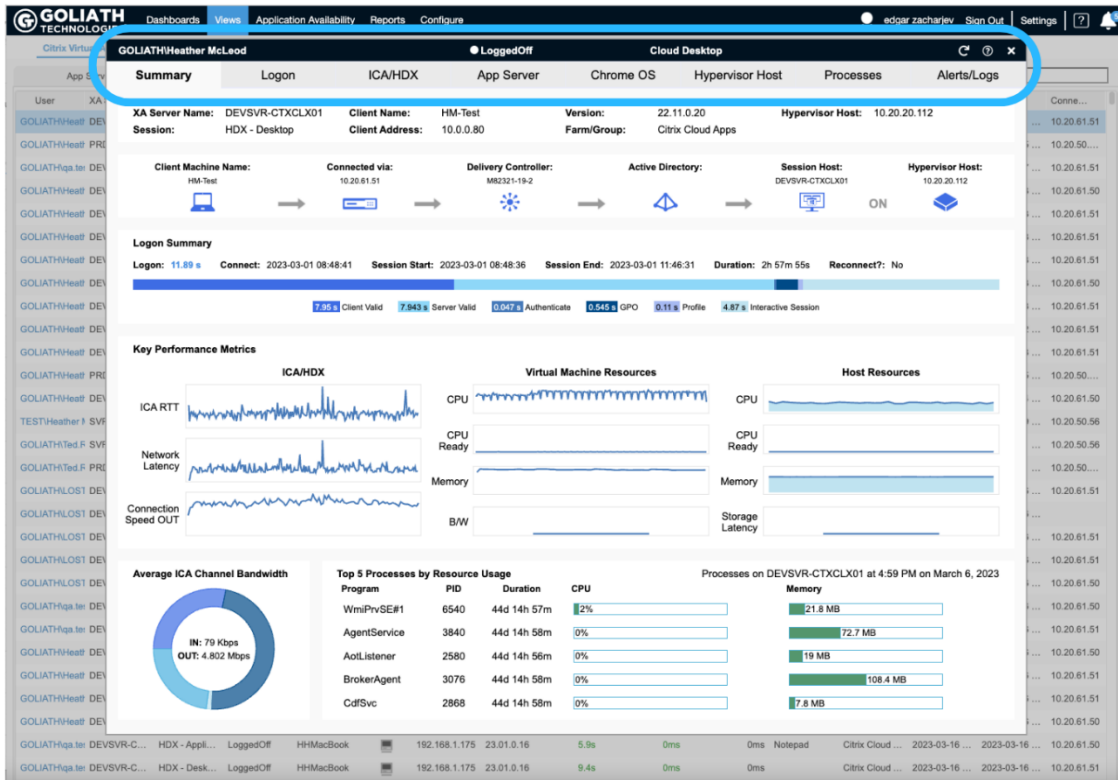
Embedded Intelligence and Threshold Lines

View ChromeOS device details on performance and usage metrics like CPU, memory, disk, network usage, battery health, local network signal strength, and CPU temp to quickly diagnose issues impacting overall device performance.



Correlated User Experience Data in a Single view

Troubleshoot the root cause of end user experience issues by correlating ChromeOS device health and Citrix session performance metrics. In a central console see ChromeOS device health, Citrix, and IT delivery infrastructure performance that can impact end user experience.



Centralized Inventory

See all devices, including ChromeOS devices, in a centralized inventory view. As new ChromeOS devices are added to your environment, Goliath automatically populates the new devices into your inventory without manual configuration.

GOLIATH Technologies														
Citrix Virtual Apps and Desktops														
VMware Horizon SRMP Traps Log Management Performance Graphs														
App Servers														
User	XA Server Name	Session	Org Unit	Session State	Client Name	Client Address	Version	Logon	ICA Latency	Avg ICA Latency	App Name	Delivery Group	Connected	Session Duration
GOLIATHHeather	DEVSVR-CTXCLX01	HDX - Desktop	Goliath	Disconnected	HM-Test	192.168.1.178	23.5.0.38	45.2s	0ms	0ms	Cloud Desktop	Citrix Cloud Apps	2023-07-24 15:...	1h 0m
GOLIATHHeather	DEVSVR-CTXCLX01	HDX - Desktop	Goliath	LoggedOff	HM-Test	192.168.1.178	23.5.0.38	20.5s	30ms	30ms	Cloud Desktop	Citrix Cloud Apps	2023-07-24 13:...	1h 21m
GOLIATHHeather	DEVSVR-CTXCLX01	HDX - Application	Goliath	LoggedOff	HTML-7026-0835	0.0.0.0	23.6.0.27	4.6s	30ms	30ms	Google Chrome	Citrix Cloud Apps	2023-07-19 10:...	2m
GOLIATHHeather	DEVSVR-CTXCLX01	HDX - Desktop	Goliath	LoggedOff	HTML-8423-5947	0.0.0.0	23.6.0.27	11s	0ms	0ms	Cloud Desktop	Citrix Cloud Apps	2023-07-10 11:...	10m
GOLIATHHeather	DEVSVR-CTXCLX01	HDX - Desktop	Goliath	LoggedOff	HTML-8423-5947	0.0.0.0	23.6.0.27	6.5s	0ms	0ms	Cloud Desktop	Citrix Cloud Apps	2023-07-10 11:...	50m
GOLIATHHeather	DEVSVR-CTXCLX01	HDX - Desktop	Goliath	Disconnected	HM-Test	192.168.1.164	23.5.0.38	15.6s	0ms	0ms	Cloud Desktop	Citrix Cloud Apps	2023-06-13 10:...	1h 0m
GOLIATHHeather	DEVSVR-CTXCLX01	HDX - Desktop	Goliath	LoggedOff	HM-Test	192.168.1.164	23.5.0.38	15.6s	0ms	0ms	Cloud Desktop	Citrix Cloud Apps	2023-06-13 09:...	1h 0m
GOLIATHHeather	DEVSVR-CTXCLX01	HDX - Desktop	Goliath	LoggedOff	HM-Test	192.168.1.164	23.5.0.38	177.8s	59ms	50ms	Cloud Desktop	Citrix Cloud Apps	2023-06-13 08:...	19m
GOLIATHHeather	DEVSVR-CTXCLX01	HDX - Desktop	Goliath	LoggedOff	HM-Test	192.168.1.164	23.5.0.38	25.7s	0ms	0ms	Cloud Desktop	Citrix Cloud Apps	2023-06-13 08:...	35m
GOLIATHHeather	PRD-SV2IA01	HDX - Application	Goliath	LoggedOff	Heather_McLeo...	172.31.0.14	23.01.0.16	12.4s	15ms	17ms	VMware vCenter	Shared Apps	2023-07-26 08:...	14m
GOLIATHHeather	PRD-SV2IA02	HDX - Application	Goliath	LoggedOff	WRL_nNPKO_a...	172.31.0.13	23.01.0.16	14.2s	12ms	25ms	VMware vCenter	Shared Apps	2023-07-20 08:...	1d 54m
GOLIATHHeather	PRD-SV2IA02	HDX - Application	Goliath	LoggedOff	HM-MacBook	172.31.0.18	23.01.0.16	12.2s	15ms	5ms	VMware vCenter	Shared Apps	2023-07-17 14:...	1h 27m
GOLIATHHeather	PRD-SV2IA01	HDX - Application	Goliath	LoggedOff	HM-MacBook	172.31.0.18	23.01.0.16	12.6s	15ms	4ms	Calculator	Shared Apps	2023-07-17 13:...	23m
GOLIATHHeather	PRD-SV2IA01	HDX - Application	Goliath	LoggedOff	HM-MacBook	172.31.0.14	23.01.0.16	12.6s	15ms	18ms	VMware vCenter	Shared Apps	2023-07-10 10:...	28m
GOLIATHHeather	PRD-SV2IA02	HDX - Desktop	Goliath	LoggedOff	HM-MacBook	172.31.0.18	23.01.0.16	11.6s	0ms	0ms	Goliath Desktop	Goliath Desktop	2023-06-16 12:...	2m
GOLIATHHeather	PRD-SV2IA02	HDX - Application	Goliath	LoggedOff	HM-MacBook	172.31.0.17	23.01.0.16	13.8s	15ms	128ms	VMware vCenter	Shared Apps	2023-06-14 08:...	1h 33m
GOLIATHHeather	PRD-SV2IA02	HDX - Application	Consultants	Disconnected	VF-US-0023	192.168.0.14	22.01.0.9	9.2s	0ms	0ms	SQL Server Ma...	Citrix Cloud Apps	2023-06-13 14:...	1h 0m
GOLIATHHeather	PRD-SV2IA02	HDX - Application	Goliath	LoggedOff	HM-MacBook	172.31.0.20	23.01.0.16	28.1s	15ms	24ms	Microsoft SQL S...	Shared Apps	2023-06-13 08:...	4m
GOLIATHHeather	PRD-SV2IA02	HDX - Application	Goliath	LoggedOff	HM-MacBook	172.31.0.2	23.01.0.16	17.3s	0ms	0ms	VMware vCenter	Shared Apps	2023-06-01 15:...	35m
GOLIATHHeather	PRD-SV2IA02	HDX - Application	Goliath	Disconnected	Ted_s_MacBook...	172.31.0.2	23.01.0.16	17.4s	0ms	0ms	Calculator	Shared Apps	2023-05-15 09:...	7m
GOLIATHHeather	PRD-SV2IA02	HDX - Application	Goliath	LoggedOff	HM-MacBook	172.31.0.18	23.01.0.16	11s	0ms	0ms	Shared Apps	Shared Apps	2023-07-24 10:...	0m
GOLIATHHeather	PRD-SV2IA02	RDP - Desktop	Service Accounts	Disconnected	Teds-MacBook-Pr	172.31.0.13	23.01.0.16	1.1s	0ms	0ms	Shared Apps	Shared Apps	2023-07-19 08:...	8m
GOLIATHHeather	PRD-SV2IA01	RDP - Desktop	Service Accounts	Disconnected	Teds-MacBook-Pr	172.31.0.13	23.01.0.16	1.5s	0ms	0ms	Shared Apps	Shared Apps	2023-07-19 08:...	12m
GOLIATHHeather	PRD-SV2IA01	HDX - Desktop	Goliath	LoggedOff	LAPTOP-PTTS...	172.31.0.13	18.11.0.20124	12.4s	0ms	0ms	Goliath Desktop	Goliath Desktop	2023-07-10 14:...	19m

Advanced Remediation & Alert Self-Healing

Improved Troubleshooting & Help Desk Operational Workflows

Goliath goes beyond providing differentiating Citrix visibility and granular metrics by also delivering unique operational features that allow organizations to take the next step in improving operational IT troubleshooting and Help Desk workflows.

Threshold-Based Alerting

Define custom thresholds and receive proactive notifications based on faults, errors, and conditions so administrators can resolve issues before end users complain. Configuring alerts and tuning them to the specifications of each department requires no scripting or customizations because there are prebuilt templates for each type of alert.

Specify Monitoring Rule Parameters and Properties

* Rule Name: Citrix Server Alert

* Description: Server reaching thresholds for CPU, Memory, and Network resource levels

* Severity: Critical

Citrix CPU, Disk and Memory Parameters

CPU Performance Thresholds:
CPU Ready (Percent): 2

Disk Performance Thresholds:
Throughput (KBytes/sec), Read: 2000 Write: 2000
IOPS (Operations/sec), Read: Write:
Latency (Milliseconds), Read: 200 Write: 100 Total:

Memory Performance Thresholds: ☒ Percent ☐ GB
Active: 60 Consumed: 90
Shared: Granted:
Swap-in: Swap-out:
Ballooned: Overhead:

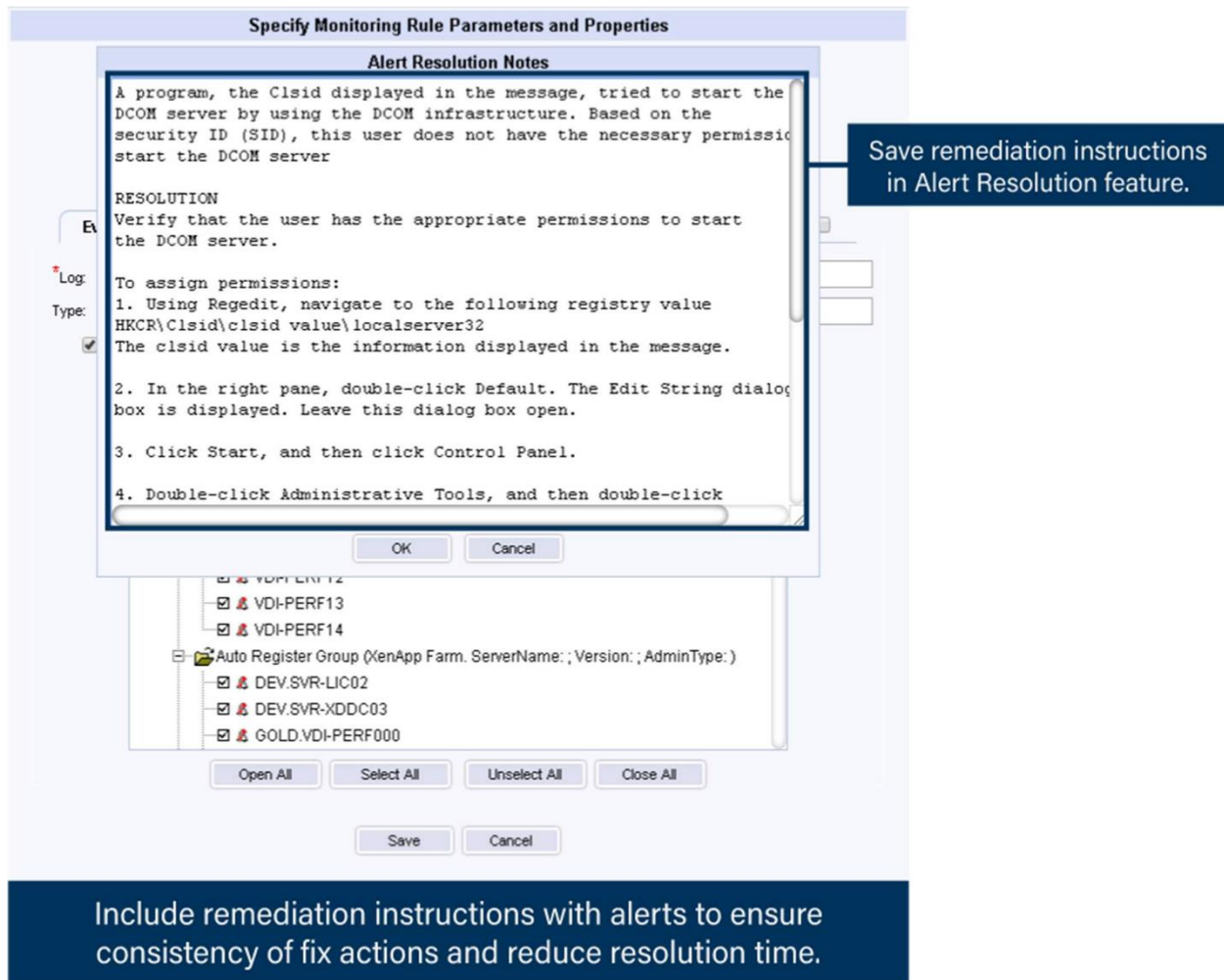
Apply Cancel

Proactive notifications on CPU, storage and memory performance

Define custom thresholds

Alert Resolution Feature

For workflows that cannot be automated, Goliath allows administrators to automatically pass on troubleshooting instructions to the appropriate administrators when certain alerts are triggered. This enables consistent response quality regardless of the help desk responder and frees up senior resources for other projects rather than responding to recurring issues.



Specify Monitoring Rule Parameters and Properties

Alert Resolution Notes

A program, the Clsid displayed in the message, tried to start the DCOM server by using the DCOM infrastructure. Based on the security ID (SID), this user does not have the necessary permissions to start the DCOM server.

RESOLUTION

Verify that the user has the appropriate permissions to start the DCOM server.

To assign permissions:

1. Using Regedit, navigate to the following registry value HKCR\Clsid\clsid value\localserver32. The clsid value is the information displayed in the message.
2. In the right pane, double-click Default. The Edit String dialog box is displayed. Leave this dialog box open.
3. Click Start, and then click Control Panel.
4. Double-click Administrative Tools, and then double-click

OK Cancel

Log: []
Type: []

☒ [] VDI-PERF12
☒ [] VDI-PERF13
☒ [] VDI-PERF14
[] Auto Register Group (XenApp Farm. ServerName: ; Version: ; AdminType:)
[] [] DEV.SVR-LIC02
[] [] DEV.SVR-XDDC03
[] [] GOLD.VDI-PERF000

Open All Select All Unselect All Close All

Save Cancel

Save remediation instructions in Alert Resolution feature.

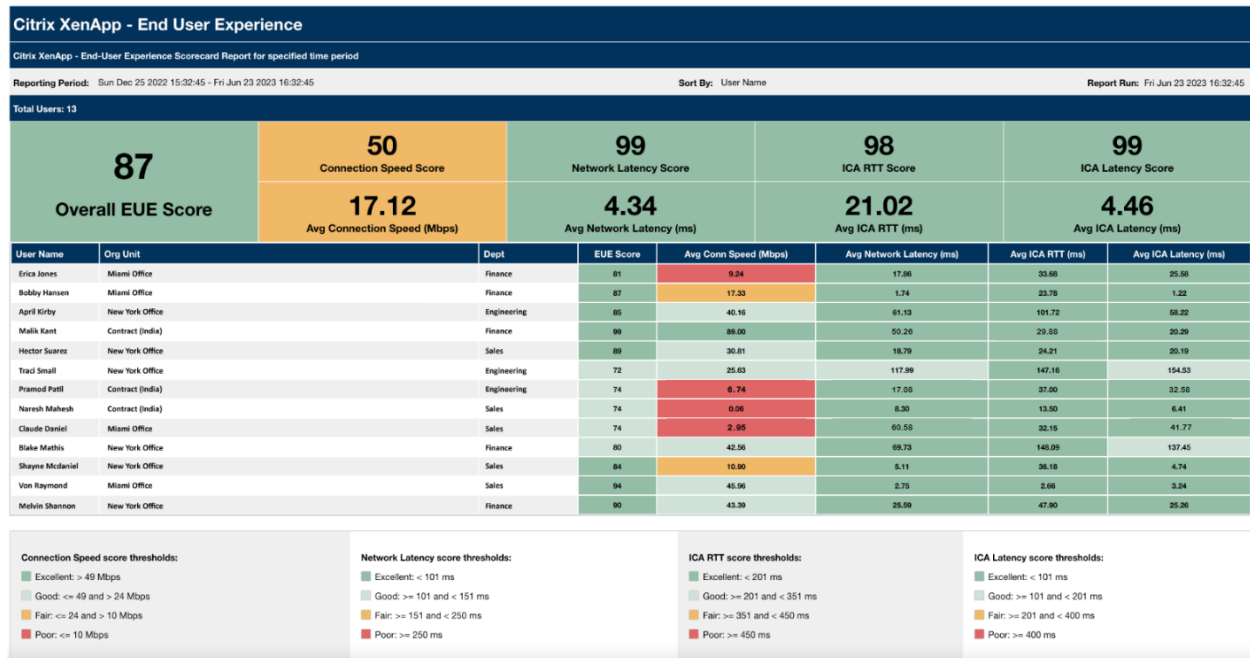
Include remediation instructions with alerts to ensure consistency of fix actions and reduce resolution time.

Advanced Reporting

Industry-only End User Experience Reports

Citrix End User Experience Scorecard

Provide management with automated health checks that objectively demonstrate the quality of the end user experience IT is delivering. View EUE across the organization, by AD/OU, or individually. The only report that scores EUE based on comparison against industry standards.



Citrix Logon Duration Scorecard

This report provides a holistic view of Citrix logon times and experience across the organization, and automatically compares performance against internal SLAs and industry best practices. Data can be filtered by location, AD/OU, time period, users, or specific machines.

Citrix XenApp - XenApp Logon Duration Scorecard (Location)					
Citrix XenApp - LogOn-Duration Scorecard Report for specified time period					
Reporting Period: Mon May 15 2023 09:02:53 - Mon May 22 2023 09:02:53			Sort By: User Name		Report Run: Mon May 22 2023 09:02:53
Total Users: 6					
13.37s Avg Initial Logon Duration	10.78s Avg Reconnect Duration	443 Total Initial Connections	441 Logons <= 30s	0 Logons > 60s	
		5 Total Reconnects	3 Logons <= 10s	0 Logons > 45s	
User Name	Org Unit	Avg Initial Logon (sec)		Avg Reconnect (sec)	Total Logons
GOLIATH\Floyd Roberts	corp.goliathtechnologies.com/Accounts/Service Accounts	27.32		0.00	2
GOLIATH\Heather McLeod	corp.goliathtechnologies.com/Accounts/Goliath	17.48		0.00	1
GOLIATH\earry penae	corp.goliathtechnologies.com/Accounts/Goliath	21.23		13.47	13
GOLIATH\LOSTEST01	corp.goliathtechnologies.com/Accounts/Test Accounts/TestLevel1/TestLevel2	11.82		0.00	224
GOLIATH\LOSTEST03	corp.goliathtechnologies.com/Accounts/Test Accounts	14.54		0.00	207
GOLIATH\Ted Rainey	corp.goliathtechnologies.com/Accounts/Goliath	17.35		0.00	1

Initial Logon score thresholds:

Excellent: < 31 s

Good: >= 31 and < 45 s

Fair: >= 45 and < 60 s

Poor: >= 60 s

Reconnect score thresholds:

Excellent: < 11 s

Good: >= 11 and < 25 s

Fair: >= 25 and < 45 s

Poor: >= 45 s

End User Productivity Report

This report addresses a growing need by management to understand who is using Citrix, with what frequency, and what applications they are accessing. These insights into the effectiveness and accessibility of the current tools help organizations maintain a high level of productivity, avoid any roadblocks, and identify unneeded applications.

Citrix XenApp - End User Productivity Report

Citrix XenApp - End user interaction (e.g. keyboard and mouse input), inactivity, and session details, for specified time period

See who's using Citrix

06 2021 14:12:02

Sort By:

Understand the frequency with which users are engaged

Report Run:

Applications Used

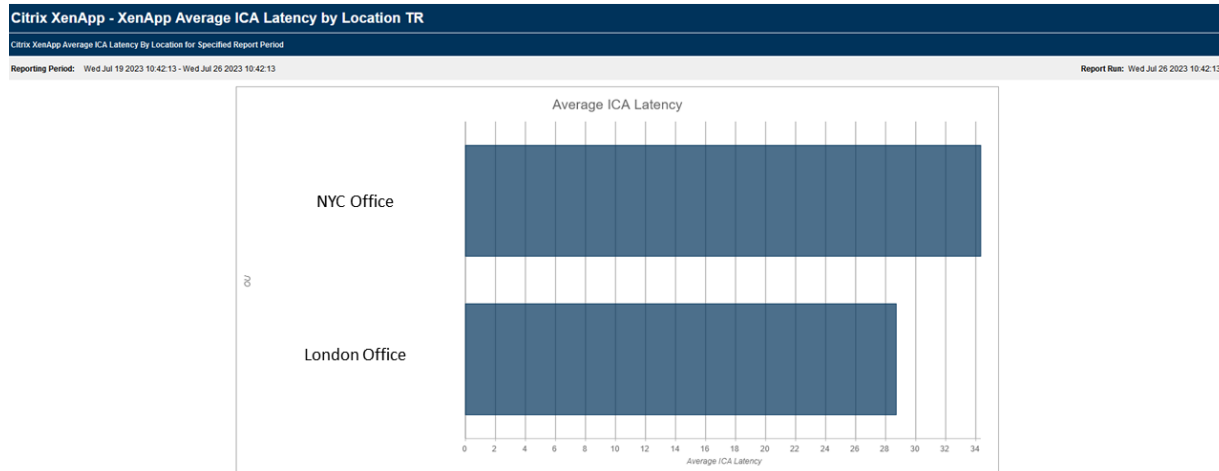
User Display Name	Client IP	Connected Via	App Server	Session Start	Session Change	Session State	Duration	Interaction	Inactivity	Inactivity Max	% Interaction	Apps / Desktop Name
Randy Hilaire	127.31.0.29	52.2.45.5	XAOPS001	2021-01-04 09:07:18	2021-01-04 17:05	LoggedOff	9h 0m	7h 0m	2h 0m	42m	77.8	Chrome, Outlook, Excel
Zack Trieber	127.33.0.29	52.2.45.5	XAOPS004	2021-01-04 09:07:03	2021-01-04 18:02	LoggedOff	9h 54m	9h 31	23m	8m	96.5	Outlook, Excel
Vinita Zacarias	127.41.55.87	52.2.45.5	XAOPS001	2020-12-28 15:50:40	2021-01-04 04:23:07	LoggedOff	9h 8m	8h 23m	45m	25m	95.3	Chrome, Outlook
Genevieve Langworthy	127.13.0.92	52.2.45.5	XAOPS004	2020-12-24 10:21:53	2021-01-04 04:05:41	LoggedOff	8h 0m	7h 21m	39m	8m	92.1	Chrome, Outlook, Excel
Devora Paille	127.34.82.1	52.2.45.5	XAOPS005	2021-01-06 12:32:40	2021-01-06 12:38:05	LoggedOff	5m	5m	0m	0m	100	Outlook, Excel
Ilene Moulton	127.20.43.90	52.2.45.5	XAOPS004	2021-01-05 15:53:10	2021-01-05 15:56:29	LoggedOff	5h 21m	4h 15m	1h 6m	11m	82.2	Calculator
Marci Simonton	127.9.65.43	55.2.45.57	XAOPS004	2021-01-05 15:32:30	2021-01-05 15:37:58	LoggedOff	9h 0m	7h 0m	2h 0m	42m	77.8	Chrome, Outlook, Excel
Isabela Pastrana	127.2.44.51	55.2.45.5	XAOPS004	2021-01-05 15:23:05	2021-01-05 15:26:23	LoggedOff	9h 54m	9h 31m	23m	8m	96.5	Chrome, Outlook, Excel
Maribel Trent	127.24.5.87	55.2.45.57	XAOPS004	2021-01-05 15:02:47	2021-01-05 15:08:13	LoggedOff	8h 0m	7h 21m	39m	8m	92.1	Chrome, Outlook, Excel
Florence Lamantia	127.25.56.11	55.2.45.5	XAOPS004	2021-01-05 14:52:52	2021-01-05 14:56:10	LoggedOff	9h 8m	8h 23m	45m	25m	95.3	PowerPoint
Terence Suda	127.32.51.43	55.2.45.5	XAOPS004	2021-01-05 14:32:50	2021-01-05 14:38:22	LoggedOff	9h 0m	7h 0m	2h 0m	42m	77.8	Chrome
Cori Deveny	127.21.31.44	55.2.45.57	XAOPS004	2021-01-05 14:22:46	2021-01-05 14:26:05	LoggedOff	9h 54m	9h 31m	23m	8m	96.5	Outlook, Excel
Robbie Addison	127.20.65.5	55.2.45.5	XAOPS004	2021-01-05 14:10:12	2021-01-05 14:15:26	LoggedOff	9h 8m	8h 23m	45m	25m	95.3	PowerPoint
Mariano Waldrup	127.21.33.44	55.2.45.5	XAOPS004	2021-01-05 14:02:16	2021-01-05 14:07:36	LoggedOff	8h 0m	7h 21m	39m	5m	92.1	Chrome
Leslie Bartos	127.22.44.67	55.2.45.5	XAOPS005	2021-01-06 12:23:00	2021-01-06 12:26:19	LoggedOff	5h 21m	4h 15m	1h 6m	11m	82.2	Calculator
Patrick Kidell	127.53.22.12	55.2.45.57	XAOPS004	2021-01-05 13:32:47	2021-01-05 13:38:11	LoggedOff	9h 0m	7h 0m	2h 0m	42m	77.8	Chrome
Lois Buriss	127.44.32.23	55.2.45.5	XAOPS004	2021-01-05 13:22:52	2021-01-05 13:26:11	LoggedOff	9h 54m	9h 31m	23m	8m	96.5	Outlook, Excel
Claudia Chain	127.44.23.6	55.2.45.5	XAOPS004	2021-01-05 13:02:39	2021-01-05 13:08:06	LoggedOff	9h 8m	8h 23m	45m	25m	95.3	PowerPoint
Mike Pagliarulo	127.84.32.111	55.2.45.5	XAOPS004	2021-01-05 12:53:12	2021-01-05 12:56:32	LoggedOff	8h 0m	7h 21m	39m	5m	92.1	Chrome

How to Use: Run this report on-demand or schedule to run daily, weekly, or monthly to track how many hours an end user is active in their Citrix Session and how much time they were inactive.

Example Purpose: With the increase in remote workers, understand if workers are adapting to the new work style and have the right level of access tools to be productive.

Average ICA Latency by Location

This report provides comprehensive provides a quick view of the average ICA latency segmented by location enabling IT to quickly see the performance at each location and focus resources to locations with high ICA latency.



Citrix XenApp & XenDesktop Reports (CVAD)

The XenApp & XenDesktop reports from Goliath provide complete end-to-end visibility into the underlying delivery infrastructure so you can see how your environment is performing.

Citrix Usage & Productivity:

- Client Report
- End User Activity Report
- End User Productivity Report
- Environment Summary Report

- License Usage Report
- Peak Usage Server Health
- Session Activity

Citrix End User Experience:

- Logon Duration
- XenDesktop Logon Duration
- XenApp ICA Latency
- XenDesktop ICA Latency
- User Logon Problem
- XenApp End-User Experience
- XenApp End-to-End Connection
- RDS & Terminal Services Errors

Application Availability Monitor Reports:

- Simulation Success/Failure Analysis

[Citrix XenServer and VMware Performance Reports](#)

To proactively manage the Citrix XenApp/XenDesktop end user experience, using this set of reports will allow you to proactively detect and troubleshoot issues such as printing, profile and logon failures, and high ICA latency in order to remediate issues before end users complain.

Virtual Infrastructure Performance:

- Citrix XenServer - Host Performance
- Citrix XenServer - Virtual Machine Performance
- Citrix XenServer - Storage Usage
- VMware ESX/ESXi - Host Performance
- VMware ESX/ESXi - Virtual Machine Performance
- VMware ESX/ESXi - Storage Usage

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