

# How to **Troubleshoot** and **Resolve** Citrix End-User Experience Issues

## **Step-by-step instructions from real life scenarios**

In this troubleshooting guide, we provide real world examples and steps to resolution for some of the most common Citrix end-user experience issues.

See how you can pinpoint the root cause of even complex issues in just a few clicks.

# Slow or Failed Logons

A large health system using Citrix & Epic Hyperspace reduced logon times by 80%

*"Without a doubt, there is no comparison between the level of detail found in Goliath Performance Monitor and other tools like Director, etc."*

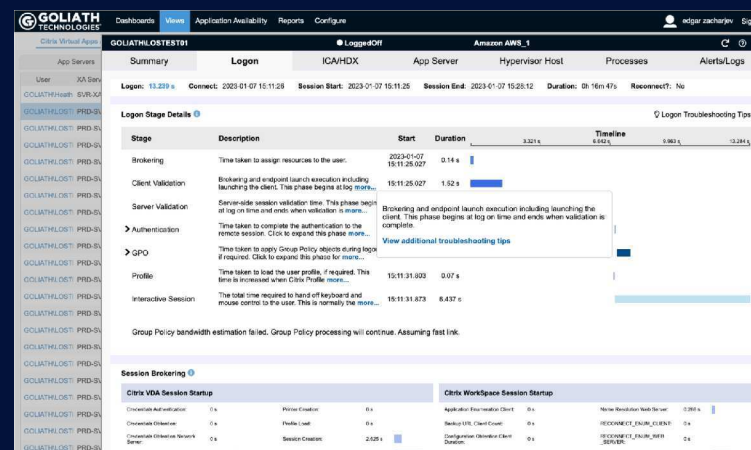
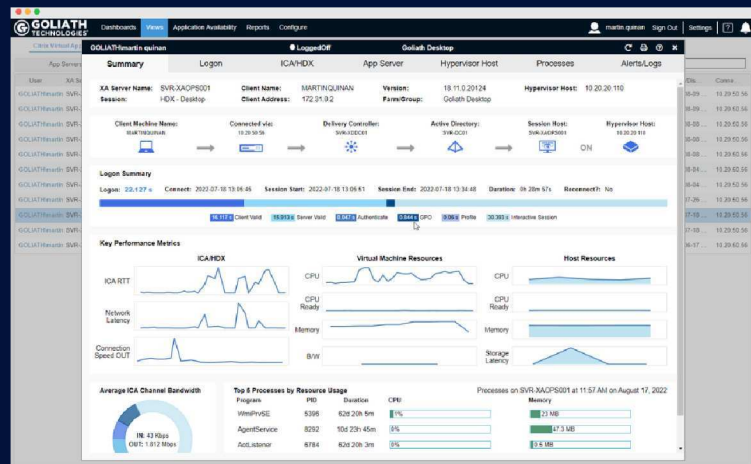
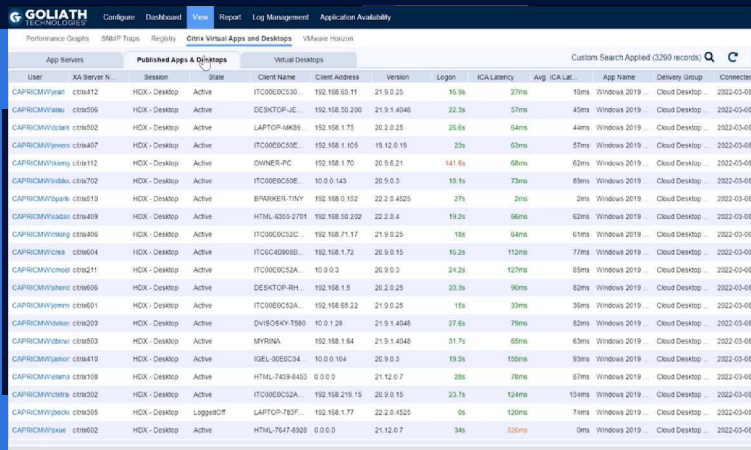
- George Spiers, Citrix CTP

1. Start off in the Virtual Apps and Desktops view, which lists out all user sessions. Search for the appropriate user (or sort by logon duration), and **see all sessions and logon times** for the past week, month, etc. Logon times are color coded to let you know when logon duration is longer than what is considered normal.

2. Click into the session with the offending logon time to bring up more session details. In the Logon Tab **you can see all stages of the logon process** broken out and see which stage is delaying the logon process.

3. In this case, **86% of the total logon time was spent on the Client Validation stage**. The Delivery Controllers causing the slowness are listed right next to the duration for this stage of the logon process.

4. The issue was quickly resolved by allocating more memory to the delivery controllers during busiest logon times. **Root cause was found in just 3 clicks.**



"In order to deliver exceptional end user experience, we can either hire expensive Citrix consultants invest in technologies like Goliath. Goliath's embedded intelligence and automation not only helps us troubleshoot but also proactively prevents end user performance issues from happening."

- John Bennett, Principal Consultant and Head of EPPM Practice at Citrix

## Session Slowness

Critigen, global professional service provider, remedies ongoing slowness complaints

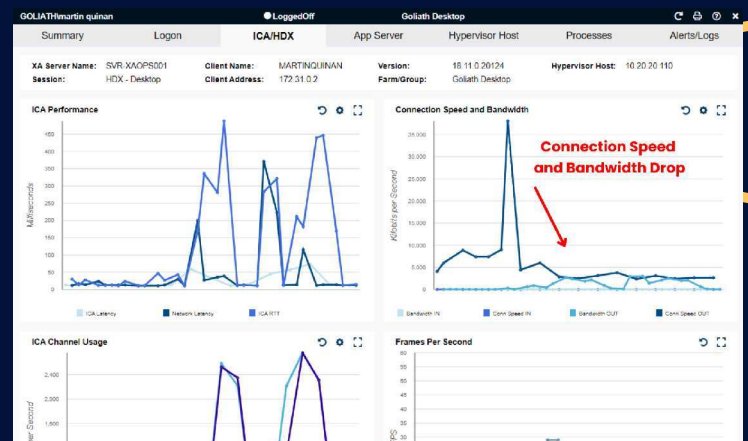
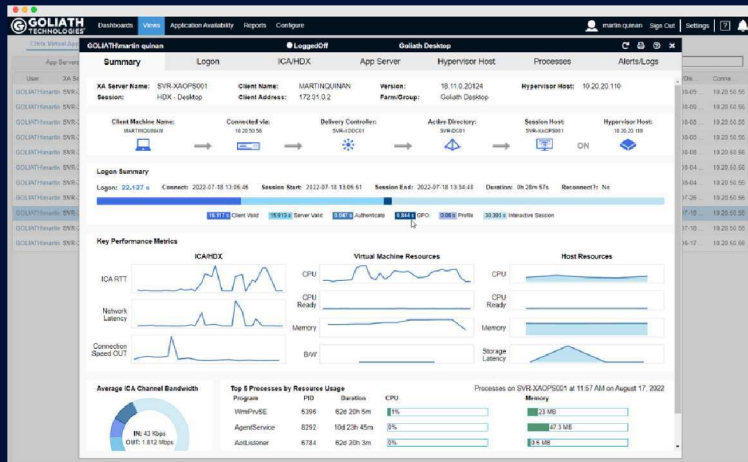
1. Start off in the Virtual Apps and Desktops view, and filter by ICA latency to confirm that end users are indeed experiencing slow session performance.

2. Click into a user session to investigate further, then click into the ICA/HDX tab.

3. In this case, it was observed that connection speed and bandwidth dropped simultaneously, indicating that there was not enough bandwidth allocated to Citrix to support the applications running on it.

4. The fix is simple - allocating more bandwidth to Citrix. **Root cause was found in just 3 clicks.**

User	App Server	Session	State	Client Name	Client Address	Version	Logon	ICA Latency	Avg. ICA Lat	App Name	Delivery Group	Connected
CAPRICM\jseal	cbra412	HDX - Desktop	Active	ITOC0EC330	192.168.65.11	21.9.0.25	16.3s	23ms	16ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra505	HDX - Desktop	Active	DC5KTOP-JE	192.168.50.200	21.9.1.4048	22.2s	57ms	45ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra502	HDX - Desktop	Active	LAPTOP-AK69	192.168.1.75	20.2.0.25	26.6s	64ms	44ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra407	HDX - Desktop	Active	ITOC0EC35E	192.168.1.105	19.12.0.19	23s	63ms	57ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra112	HDX - Desktop	Active	OWNER-PC	192.168.1.70	20.5.6.21	141.6s	66ms	82ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra702	HDX - Desktop	Active	ITOC0EC35E	10.0.0.143	20.9.0.3	15.1s	73ms	85ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra510	HDX - Desktop	Active	BPKRKR-TNY	192.168.0.192	22.2.0.4026	27s	76ms	2ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra409	HDX - Desktop	Active	HTM_-6265-2701	192.168.60.202	22.2.0.4	19.2s	86ms	82ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra465	HDX - Desktop	Active	ITOC0EC35C	192.168.11.11	21.9.0.25	18s	94ms	51ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra664	HDX - Desktop	Active	ITOC0E09603	192.168.1.72	20.9.0.15	16.2s	112ms	77ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra211	HDX - Desktop	Active	ITOC0EC32A	10.0.0.3	20.9.0.3	24.2s	127ms	85ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra505	HDX - Desktop	Active	DESKTOP-RH	192.168.1.5	20.2.0.25	20.3s	90ms	82ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra501	HDX - Desktop	Active	ITOC0EC32A	192.168.65.22	21.9.0.25	15s	33ms	36ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra203	HDX - Desktop	Active	DVBOSKY-T580	10.0.1.28	21.9.1.4048	27.6s	79ms	82ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra503	HDX - Desktop	Active	MYSRMA	192.168.1.84	21.9.1.4048	31.7s	65ms	63ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra410	HDX - Desktop	Active	IGEL-08E3C54	10.0.0.124	20.9.0.3	19.5s	105ms	93ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra408	HDX - Desktop	Active	HTM_-7429-8453	0.0.0.0	21.12.0.7	28s	78ms	87ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra502	HDX - Desktop	Active	ITOC0EC32A	192.168.219.15	20.9.0.15	23.7s	124ms	134ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra305	HDX - Desktop	LoggedOff	LAPTOP-783F	192.168.1.77	22.2.0.4025	0s	126ms	74ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\jseal	cbra502	HDX - Desktop	Active	HTM_-7447-8928	0.0.0.0	21.12.0.7	34s	155ms	0ms	Windows 2019	Cloud Desktop	2022-03-03



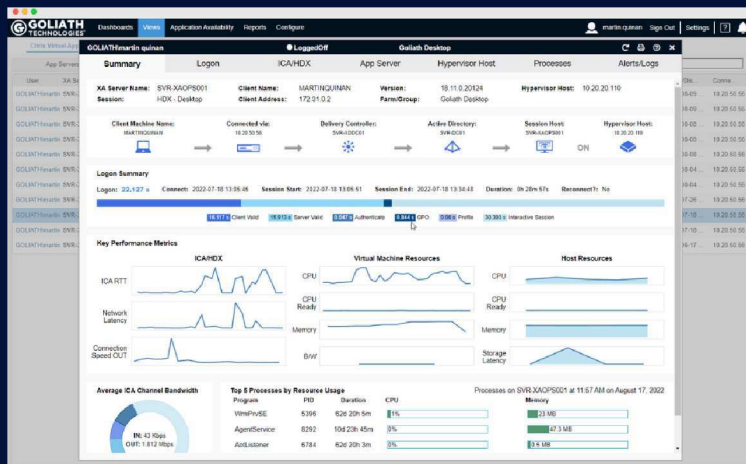
"Goliath provides so much value that we can never set it aside. The ability to see all our cross-platform products in one tool and to quickly have true visibility into the issue to guide expectations and meaningful conversations with our end users is priceless."  
 — Mark Keefer, Senior Infrastructure System Administrator, Penn National Insurance

# Remote Worker Issues

Penn National is able to determine when issues are due to user behavior or slow WiFi

1. Locate the user's session in the Virtual Apps and Desktops view.
2. Click in to view the session details and navigate to the ICA/HDX tab.
3. ICA latency was spiking while connection speed dropped, indicating that **there is an issue with the home network.**
4. Short term, IT suggested they reduce the number of users connected to the home WiFi to improve connection speed. Long term, they upgraded their internet package. **Root cause was identified in just 3 clicks.**

User	XA Server N.	Session	State	Client Name	Client Address	Version	Logon	ICA Latency	Avg. ICA Lat.	App Name	Delivery Group	Connected
CAPRICM\myeast	chr412	HDX - Desktop	Active	ITOCOE\CS33	192.168.63.11	21.9.0.25	16:36	27ms	16ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr505	HDX - Desktop	Active	DCS\TOP-JE	192.168.50.200	21.9.1.4048	22:28	57ms	45ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr502	HDX - Desktop	Active	LAPTOP\AK69	192.168.1.75	20.2.0.25	26:56	64ms	44ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr407	HDX - Desktop	Active	ITOCOE\CS5E	192.168.1.105	19.12.0.19	23:36	63ms	57ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr412	HDX - Desktop	Active	OWNER-PC	192.168.1.70	20.5.6.21	14:15	66ms	62ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr4702	HDX - Desktop	Active	ITOCOE\CS5E	10.0.0.143	20.5.0.3	15:15	73ms	85ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr4510	HDX - Desktop	Active	BP\RKER-TNY	192.168.0.150	22.2.0.4026	2:25	76ms	2ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr409	HDX - Desktop	Active	HTM_-7429-8453	0.0.0.0	21.12.0.7	19:26	86ms	62ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr405	HDX - Desktop	Active	ITOCOE\CS3C	192.168.71.11	21.9.0.25	18:36	94ms	61ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr464	HDX - Desktop	Active	ITOCOE\CS60	192.168.1.72	20.9.0.15	16:28	112ms	77ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr4211	HDX - Desktop	Active	ITOCOE\CS2A	10.0.0.3	20.9.0.3	24:28	127ms	85ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr505	HDX - Desktop	Active	DCS\TOP-RH	192.168.1.5	20.2.0.25	20:38	90ms	82ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr501	HDX - Desktop	Active	ITOCOE\CS2A	192.168.63.22	21.9.0.25	15:36	33ms	36ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr203	HDX - Desktop	Active	DVIBOSKY\T580	10.0.1.28	21.9.1.4048	27:56	79ms	82ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr503	HDX - Desktop	Active	MYRNA	192.168.1.84	21.9.1.4048	31:75	65ms	63ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr410	HDX - Desktop	Active	IGEL-OECS34	10.0.0.124	20.9.0.3	19:56	105ms	93ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr408	HDX - Desktop	Active	HTM_-7429-8453	0.0.0.0	21.12.0.7	2:28	78ms	87ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr502	HDX - Desktop	Active	ITOCOE\CS2A	192.168.219.15	20.9.0.15	23:79	124ms	134ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr305	HDX - Desktop	LoggedOff	LAPTOP\730F	192.168.1.77	22.2.0.4026	0:36	126ms	74ms	Windows 2019	Cloud Desktop	2022-03-03
CAPRICM\myeast	chr502	HDX - Desktop	Active	HTM_-7447-8928	0.0.0.0	21.12.0.7	3:46	135ms	0ms	Windows 2019	Cloud Desktop	2022-03-03





*"We selected Goliath Technologies because their end user experience monitoring identifies systems degrading before physicians and patients are impacted. This early warning system coupled with enhanced performance data and analysis puts us in a better position to quickly resolve issues."*

– Mike Nelson, Sr. VP of Strategic Services, Universal Health Services

# Application Availability

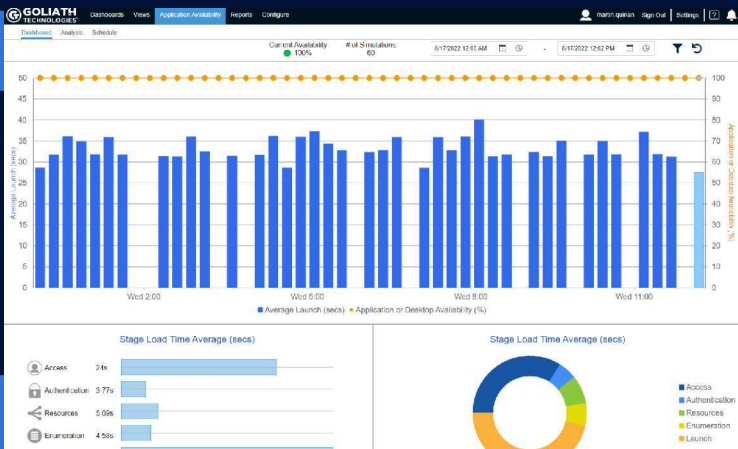
Universal Health Services ensure applications are always available

1. View availability dashboard to **see the current status of application availability**, or view availability trends over time using historical data. Goliath Application Availability Monitor continuously launches applications to ensure they are available.

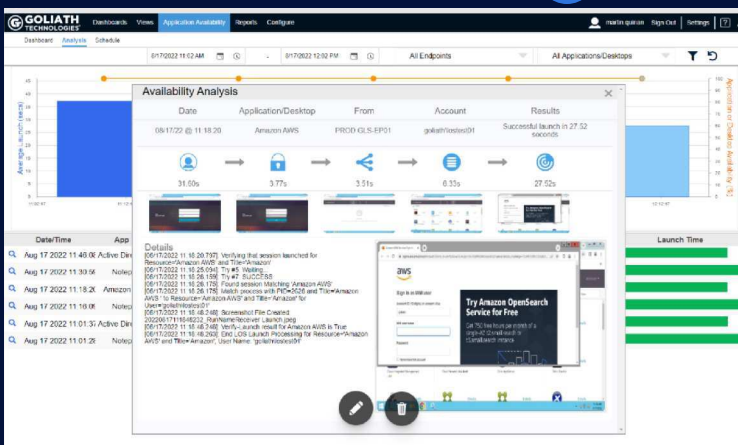
2. If an application launch fails, click into the Analysis tab to view each individual synthetic logon. **Any failed launches and the faulty stage of the logon process will be indicated** in this view.

3. Click into any failed logons, viewing a breakdown of the logon process and root cause of the failure. **Get all the information pertaining to the logon** such as location, duration, user, and application, including screenshots of each stage from the viewpoint of the end user.

4. Receive failure alerts in real time, letting IT take immediate action to **resolve issues before end users are impacted** and avoid any potential outages.



Date/Time	App	End Point	Session Host	Availability	Access	Auth	Resources	Enumeration	Launch
Aug 17 2022 11:40:06	Active Directory U	PROD.GLS-EP01	SVR.XAOPS005	Good	✓	✓	✓	✓	✓
Aug 17 2022 11:30:56	Notepad	DEV.GLS-EP03	DEV.SVR-CTXCL	Good	✓	✓	✓	✓	✓
Aug 17 2022 11:19:28	Amazon AWS	PROD.GLS-EP01	SVR.XAOPS005	Good	✓	✓	✓	✓	✓
Aug 17 2022 11:18:06	Notepad	DEV.GLS-EP03	DEV.SVR-CTXCL	Good	✓	✓	✓	✓	✓
Aug 17 2022 11:01:31	Active Directory U	PROD.GLS-EP01	SVR.XAOPS005	Good	✓	✓	✓	✓	✓
Aug 17 2022 11:01:21	Notepad	DEV.GLS-EP03	DEV.SVR-CTXCL	Good	✓	✓	✓	✓	✓



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