Sample Q&A to Clarify Comtrade Functionality:

A solution that doesn't capture key metrics and conditions from all aspects of the Citrix delivery infrastructure will create gaps in visibility. This will make it impossible to be proactive, because if you can't capture, analyze, and trend an element condition or metric, then you will be unable to alert or isolate it as the root cause of an end user experience issue.

The challenge, of course, is that many vendors say the same things. So this document is meant to get beyond marketing feature and functionality speak, and ask direct questions that drill into the specific capabilities of Comtrade.

As an overarching statement, Goliath is focused on permanent problem resolution. We simply collect deeper metrics, and track conditions that Comtrade doesn't. Therefore, we are able to not only identify when something is wrong, but isolate the root cause. For example, many technologies can tell you if the logon is slow, and some even track the high level stages like GPO. But if the technology doesn't collect the GPO process metrics and scripts, then problem resolution is difficult, if not impossible.

The questions below can be asked to Comtrade directly to clarify actual capability. Some questions may not be applicable based on customer selection criteria.
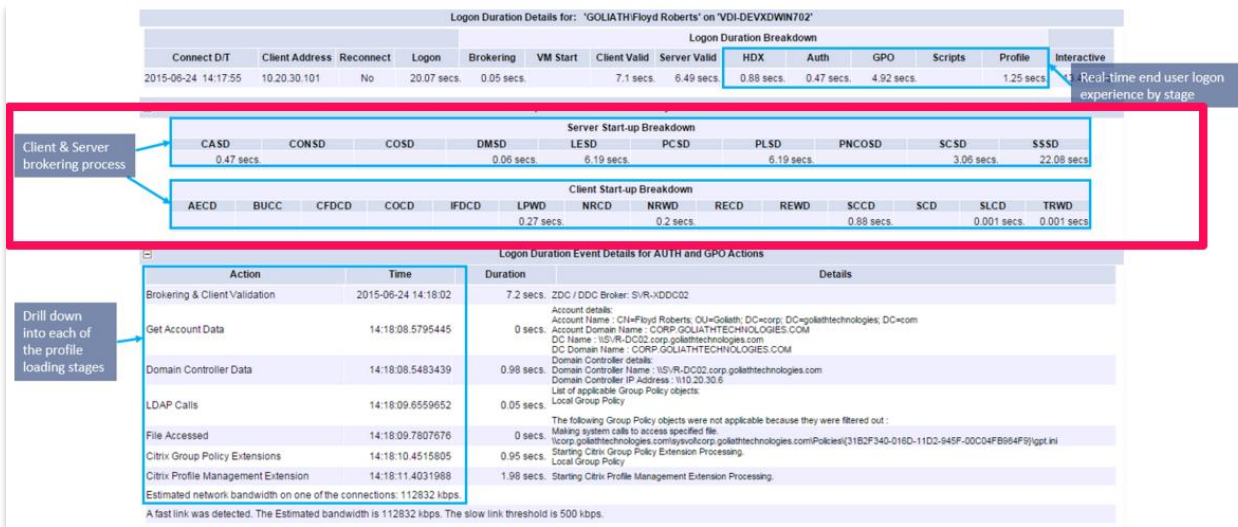
Logon Simulation:
1) Can Comtrade (CT) confirm that Citrix applications can be launched from endpoints, locally and remotely? Or if these same applications are slow?
2) If yes, can they isolate the root cause to be connection to the NetScaler, Authentication, Connection from NetScaler to StoreFront, Application/Desktop Enumeration, ICA/HDX Session Launch, or Application Launch?

Logon Duration:

1) Brokering Process: Can CT isolate the integrated client server brokering process steps below in real time, which is the process an end users connection takes from the client side to their eventual session host? Following is a list of the individual stages of the logon process which should be tracked:
   - *Credential Authentication*
   - *Credentials Obtention*
   - *Program Neighborhood Credentials Obtention*
   - *Profile Load*
   - *Login Script Executions*
   - *Printer Creation*
   - *Drive Mappings*
   - *Session Creation*
   - *Total Server Side*
   - *Configuration File Download*
   - *Backup URL Count*
   - *App enumeration*
   - *ICA File Download*
   - *Web Server – Name Resolution*
   - *Web Server Ticket Response*
   - *Web Server Page Launch*
   - *Session Creation*
   - *Client Name Resolution*
   - *Session Lookup*
   - *Total Client Side*

   Note: If not captured, there is no way to isolate root cause or proactively alert on threshold based metrics or conditions that may precede slow logon times.

Logon Duration Details for: 'GOLIATH\Floyd Roberts' on 'VDI-DEVXDWIN702'

				Logon Duration Breakdown									
Connect D/T	Client Address	Reconnect	Logon	Brokering	VM Start	Client Valid	Server Valid	HDX	Auth	GPO	Scripts	Profile	Interactive
2015-06-24 14:17:55	10.20.30.101	No	20.07 secs.	0.05 secs.		7.1 secs.	6.49 secs.	0.88 secs.	0.47 secs.	4.92 secs.		1.25 secs	Real-time end user logon experience by stage

Client & Server brokering process

		Server Start-up Breakdown							
CASD	CONSD	COSD	DMSD	LESD	PCSD	PLSD	PNCOSD	SCSD	SSSD
0.47 secs.			0.06 secs.	6.19 secs.		6.19 secs.		3.06 secs.	22.08 secs.

			Client Start-up Breakdown										
AECD	BUCC	CFDCD	COCD	IFDCD	LPWD	NRCD	NRWD	RECD	REWD	SCCD	SCD	SLCD	TRWD
					0.27 secs.		0.2 secs.			0.88 secs.		0.001 secs.	0.001 secs.

Drill down into each of the profile loading stages

Logon Duration Event Details for AUTH and GPO Actions

Action	Time	Duration	Details
Brokering & Client Validation	2015-06-24 14:18:02	7.2 secs.	ZDC / DDC Broker: SVR-XDDC02
Get Account Data	14:18:08.5795445	0 secs.	Account details: Account Name : CN=Floyd Roberts; OU=Goliath; DC=corp; DC=goliathtechnologies; DC=com Account Domain Name : CORP.GOLIATHTECHNOLOGIES.COM DC Name : \\SVR-DC02.corp.goliathtechnologies.com DC Domain Name : CORP.GOLIATHTECHNOLOGIES.COM
Domain Controller Data	14:18:08.5483439	0.98 secs.	Domain Controller details: Domain Controller Name : \\SVR-DC02.corp.goliathtechnologies.com Domain Controller IP Address : \\10.20.30.6
LDAP Calls	14:18:09.6559652	0.05 secs.	List of applicable Group Policy objects: Local Group Policy
File Accessed	14:18:09.7807676	0 secs.	The following Group Policy objects were not applicable because they were filtered out : Making system calls to access specified file. \\corp.goliathtechnologies.com\sysvol\corp.goliathtechnologies.com\Policies\{31B2F340-016D-11D2-945F-00C04FB984F9}\gpt.ini
Citrix Group Policy Extensions	14:18:10.4515805	0.95 secs.	Starting Citrix Group Policy Extension Processing. Local Group Policy
Citrix Profile Management Extension	14:18:11.4031988	1.98 secs.	Starting Citrix Profile Management Extension Processing.
Estimated network bandwidth on one of the connections: 112832 kbps.			

A fast link was detected. The Estimated bandwidth is 112832 kbps. The slow link threshold is 500 kbps.

2) GPO: Can CT break down the GPO Policies to identify if the delay is related to a specific GPO or logon script? If so, which GPO policy or script is the root cause of the delay?

3) Domain Controller Authentication: Can CT identify which Domain Controller authentication took place through in order to determine if that is causing delays?

Citrix General:

1) ICA/HDX Latency: Can CT break down the individual ICA/HDX channels to identify the root cause of latency?
   - Input/Output Session Bandwidth
   - Input/Output Session Compression
   - Input/Output Session Line Speed
   - Input/Output Printer Bandwidth
   - Input/Output Audio Bandwidth
   - Output Thinwire Bandwidth
   - Input/Output Clipboard Bandwidth

2) Network Latency: Can CT measure network latency through the ICA/HDX Channel to determine the true Network Latency between the XenApp Server/XenDesktop VDI and the end point? Please note: Network latency measured through the ICA/HDX channel the true indication of what the end user is experiencing in terms of latency, which can be vastly different than network latency measured by traditional network monitoring tools. (hence the finger pointing)

3) End User Experience Metrics, Conditions, and Reports:
   - Can CT correlate end user connection speed to the end user experience to identify if bandwidth availability is causing problems?
   - Can CT provide the following reports:
     - End to End Connection Report
     - End User Activity Report
     - ICA/HDX Latency Report

4) NVidia vGPU: Can CT get the following metrics?
   - Frames Per Second
   - vGPU Compute Utilization
   - vGPU Memory Utilization
   - Max FPS
   - Display Mode

2) Can Comtrade provide the following out of box reporting, without additional configuration or customization?

XenApp:
- Client Report
- End User Activity Report
- Environment Summary Report
- License Usage Report
- Peak Usage Report
- Server Health Report
- Session Activity Report

XenDesktop:
- Client Report
- End User Activity Report
- Environment Summary Report
- License Usage Report
- Health Report
- Peak Usage Report
- Session Activity Report
- Gold Image Health Report

NetScaler Reports:
- Web: URL Activity Summary Report
- Web: Server Activity Summary Report
- Web: Virtual Server (VIP) Activity Report
- Web: NetScaler Activity Report
- Web: Browser/Client Activity Summary Report
- Web: User Activity Report
- Web: Status Code Summary Report
- XenApp/XenDesktop Sessions Report
- XenApp Apps Report

NetScaler Report Details:
- Web URL Detail Reports
- Server Detail Reports
- VIP Detail Reports
- NetScaler Detail Reports
- Browser Detail Reports
- User Detail Reports
- Status Code Detail Reports
- XenApp Applications Detail Reports
- XenApp/XenDesktop Session Detail Reports

End User Experience:
- XenApp Logon Duration Report
- XenDesktop Logon Duration Report
- XenApp ICA Latency Report
- XenDesktop ICA Latency Report
- XenApp End User Experience Report
- XenApp End to End Connection Report
- Logon Simulator Report
- RDS & Terminal Services Report
- User Logon Problems Report

Infrastructure:
- Alert Analysis Report
- Group Policy & Registry Health Report
- Logical Drive Utilization Report
- Memory Utilization Stats Report
- Printing Health Report
- Profile Errors Report
- Registry Monitor Status Report
- Server Configuration Details Report
- Server Monitoring Rules Assignments Report
- SSL & Communication Errors Report
- Syslog Message Analysis Report
- Uptime & Availability Report
- Windows Event Log Analysis Report
- Windows Server & Configuration Errors Report
- Operation System Inventory Report
- Group Inventory Report
- User Security Report

Log On Simulator Reports:
- Logon Simulator Report

3) Can Comtrade provide the following out of the box dashboards without additional configuration or customization?

VMware:
VMWare Host Bottlenecks
VMWare Host Storage Bottlenecks
VMWare VM Bottlenecks
VMWare VM Storage Bottlenecks

Citrix XenServer:
XenServer Host Bottlenecks
XenServer VM Bottlenecks

Citrix XenDesktop:
XenDesktop VDI Bottlenecks

Citrix XenApp:
XenApp Server Bottlenecks

Windows:
Windows Bottlenecks

Hyper-V:
Hyper-V Bottlenecks

Linux/Unix:
Linux Bottlenecks

Network:
Bandwidth and Packet Performance
Virtual Host Network Bottlenecks
Virtual VM Network Bottlenecks