



What's New in HPE LoadRunner and HPE Performance Center 12.53

July 7, 2016

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Hosted By



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Today's Speakers



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Hewlett Packard Enterprise



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Network Virtualization
Hewlett Packard Enterprise



Housekeeping

- This “LIVE” session is being recorded
Recordings are available to all Vivit members
- Session Q&A:
Please type questions in the Questions Pane

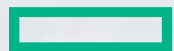


Webinar Control Panel

Toggle View Window
between
Full screen/window mode.

Questions





Hewlett Packard Enterprise What's New in HPE LoadRunner and HPE Performance Center 12.53

Gaspare Marino – LR & PC Product Marketing Manager

Yoav Karnibad – Functional Architect NV Group

July 7, 2016

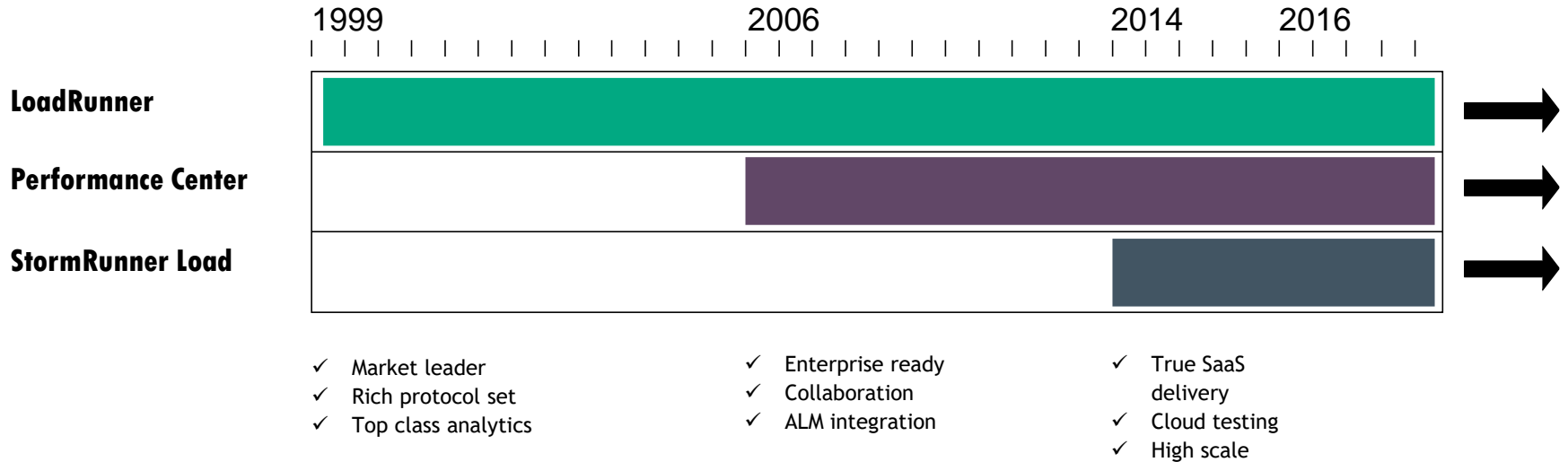


Agenda

- Introduction
- Thrive to the new now
- What's new in LoadRunner 12.53?
- What's new in Performance Center 12.53?
- What's new in Network Virtualization for LR/PC 12.53?
- System Configurations
- Q&A



A quick history of Performance Engineering



“HP is the market share leader in performance testing and test management, making investments in expanding its capabilities to capabilities to incorporate cloud and mobile, and connecting DevOps features, including integration into continuous integration integration tools and lifecycle virtualization solutions.”

2015 Gartner Magic Quadrant

Thrive to the new now

Intelligent performance & Insights for best user experience



Hewlett Packard
Enterprise



Version 12.53 provides new and innovative capabilities...

“We like LR very much, the tool is growing with us, as we change technologies, we can always go back to LR and continue work with the same primary tool” – SAS USA, beta customer program



Introducing version 12.53



DevOps

Continuous Testing
using IDE/CI/Git
Integration
REST GUI Editor in
VuGen
PAL 2.0 - Automatic
scripts generation
from production



Digital

Javascript
Web Enhancements
TruClient RORA
Other Protocols
Updates
New configurations



Analytics

NV Analytics & NV
Insight Report
New HTML Report
Style



Open

REST APIs
Jenkins Integration

Newly Supported Platforms and Environments

Updates for modern and innovative technologies

Innovation for the Future

Operating Systems & Platforms

- Windows 10
- SUSE Linux Enterprise Server 12
- Red Hat Linux 7.2 (Enterprise)
- hLinux (HPE's Debian-derivative)

Add-ins

- Visual Studio 2013 add-in
- Visual Studio 2015 add-in
- Upgraded Eclipse IDE add-in

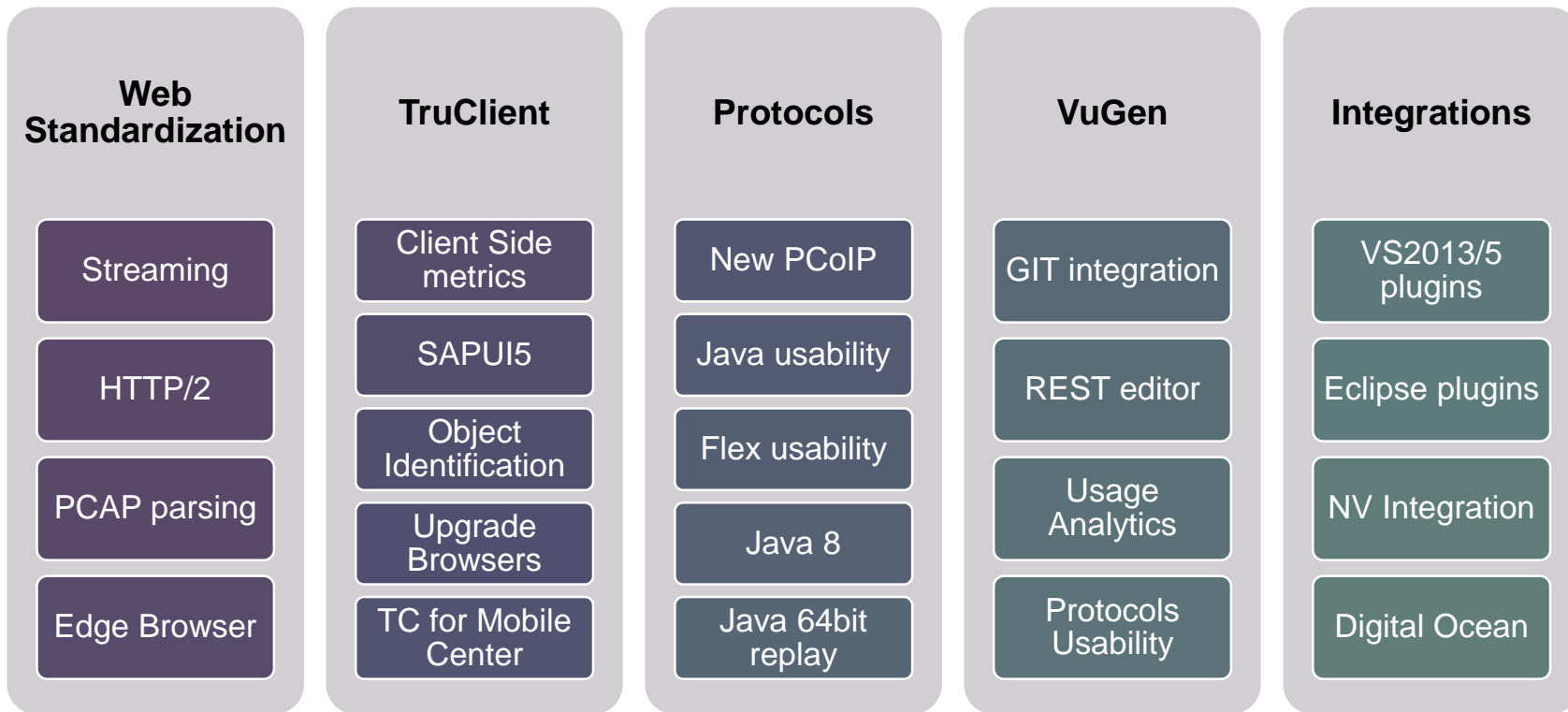
Browsers

- Microsoft Edge Browser
- Updates to TruClient browser versions:
 - Chromium 46
 - Firefox 40.03
 - Internet Explorer 10 and 11
 - Internet Explorer 9 is no longer supported.



What's new in LoadRunner 12.53?

New Content Overview





Web Standardization

Web Standardization

WHAT ?

- Media Streaming
- Easy REST API testing
- HTTP/2 support
- Improved PCAP parsing
- Edge browser recording and emulation

WHY ?

- **Streaming** - Video & Audio now mainstream technologies
- **REST** - Ability to run a single REST command outside context of script
- **HTTP/2** - Support new HTTP abilities, based on Google/SPDY
- **Edge** – now supplied with Win10

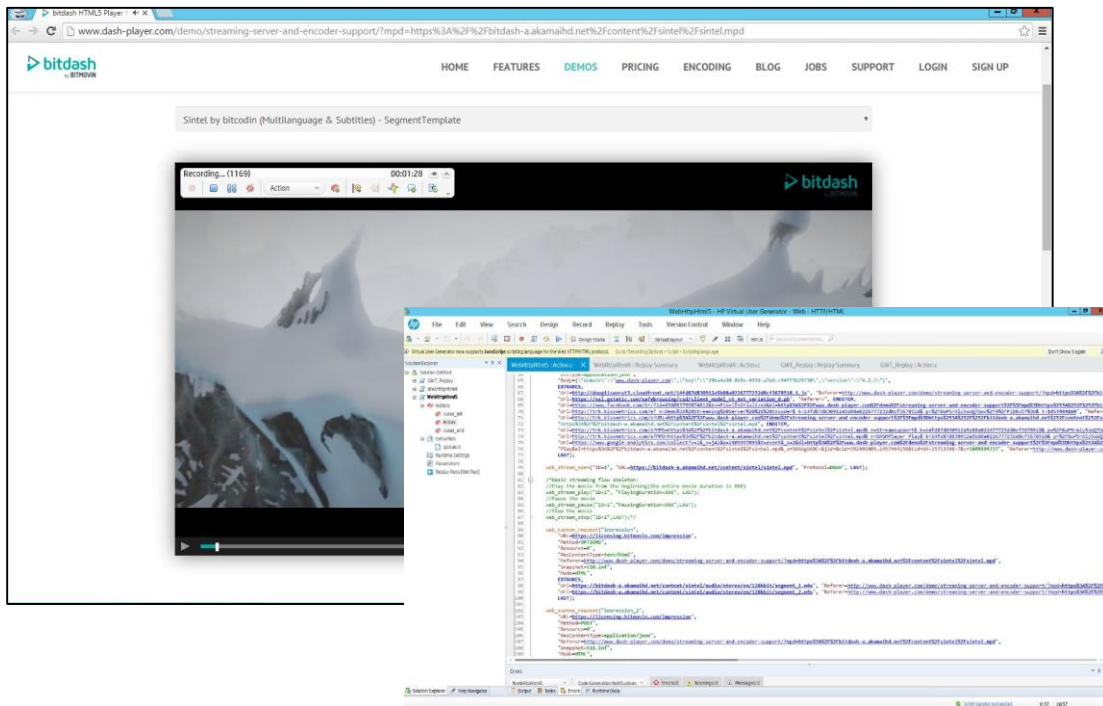
HOW ?

- Aligning all Web related features into single Protocol (Web HTTP)
- **Streaming** – Video/Audio as part of Web HTTP protocol ; provide unified APIs and specific metrics
- **REST** - Provide a REST step-builder Editor
- **HTTP/2** – ability to Record/Replay an HTTP/2 web site

Audio/Video Recording

Understand how audio/video streaming impacts performance

- Ability to record audio/video streaming with Web HTTP/HTML and Mobile protocols.
- Understand how video and audio streaming impact performance.
- Root cause analysis to find performance bottlenecks caused by media streaming issues pre-production.
- HTML5 and HLS



REST GUI Editor in VuGen

The image illustrates the process of adding a REST API step in the VuGen REST GUI Editor. The process is numbered 1 through 5:

- 1**: The **Action** menu is open, and the **REST API** option is selected. The **Design Studio** is also visible.
- 2**: The **Rest Step Properties** dialog is open. The **Status** is **200 OK**. The **URL** is `http://kalimanjaro.hpswlab.adapps.hp.com/cgi-bin/temp/echo_post.asp?Key1=1234`. The **URL Parameters (1)** section shows a key-value pair: **Key1** with value **1234**. The **Headers (1)** section shows a key-value pair: **Header1** with value **4321**. The **Method** dropdown is set to **POST**.
- 3**: The **Run Step** button is highlighted.
- 4**: The **Insert Step** button is highlighted.
- 5**: The **Insert Step** button is highlighted.



VuGen – Git Integration

Git Integration

What?

- Ability to connect and work with local/remote repository
- Provide a free integration for popular, open source SCM

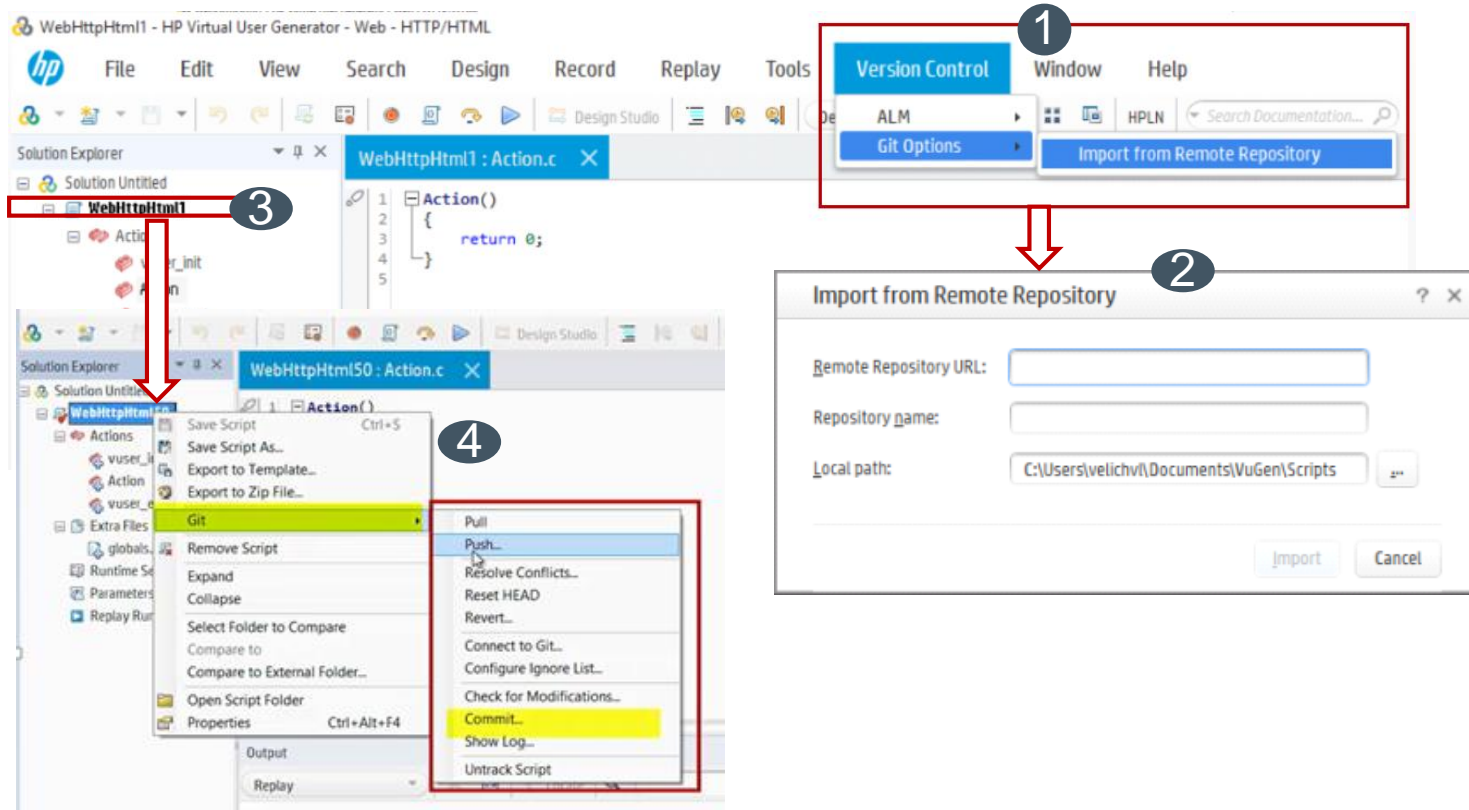
Why?

- Provide integrated alternative to ALM SCM
- Popular source control system
- Improved team collaboration especially agile teams

How?

- VuGen integrates with Git, via the Version Control menu
- Enables the user to upload scripts from a Git repository and perform common actions

VuGen interfaces with Git Repository





TruClient Enhancements

TruClient Protocol

What?

- Client side metrics
- SAPUI5
- Record Replay Heuristics improvements

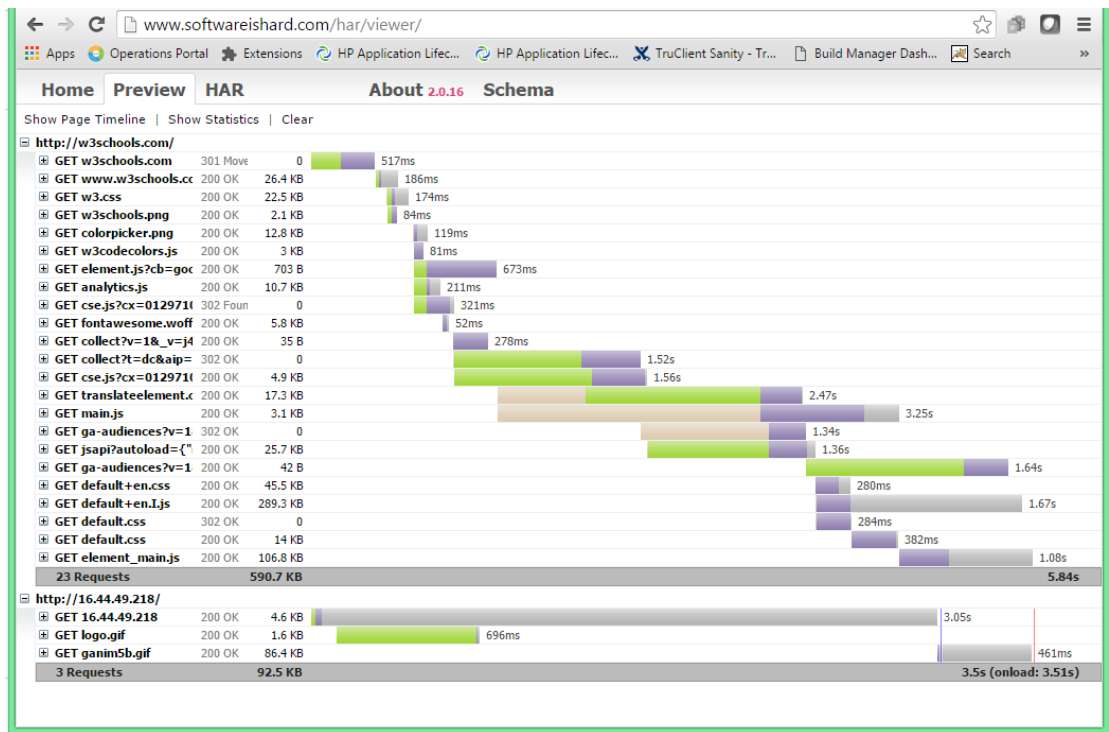
Why?

- Improve the User Experience analysis
- SAPUI5 – commonly used in Enterprises
- Minimize the need to edit the script after Recording

How?

- Provide all of the above OOB in simplified and usable way

Client side metrics available via HAR viewer of TC file



- Expose time stamps so Performance Engineers can better measure the client side performance
- For Mobile and Web
- Provided by TruClient

TruClient SAPUI5 Support

The screenshot displays the TruClient SAPUI5 Support interface. On the left is a 'Toolbox' with a list of actions such as 'Navigate to', 'Click on', and 'Press OK in alert dialog'. The main area shows the 'UI development toolkit for HTML5 - Demo Kit' with a navigation menu including 'DEVELOPER GUIDE', 'CONTROLS', 'EXPLORED', and 'API REFERENCE'. The 'CONTROLS' section is expanded to show 'Table' under the 'Complex' category. The 'Table' control page includes an introduction, settings overview, and an example. The example shows a table with columns for Last Name, First Name, Checked, and Ir.

What's New in SAPUI5

https://sapui5.hana.ondemand.com/#test-resources/sap/ui/table/demokit/Table.html

TruClient - TruClient63

Home Edit Window Action

UI development toolkit for HTML5 - Demo Kit

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DEVELOPER GUIDE CONTROLS EXPLORED API REFERENCE

Table

Introduction Settings (Overview) Example Fixed Columns Example Tree Mode API Documentation

Introduction

The Table control provides a set of sophisticated and comfort functions for table design. For each Column a template control must be defined which describes how the data is visualized. The Table control also provides the possibility for sorting and filtering based on the capabilities of the model, a drag and drop support for the columns and resizing of the table column widths. For the selection of rows, a Multi, a Single, and a None mode are available. Many further properties are provided to adapt the visual appearance for example rowHeight or visibleRowCount .

Settings (Overview)

Example

The following code snippet shows the basic capabilities of the Table control:

Table Example

Button in the Toolbar

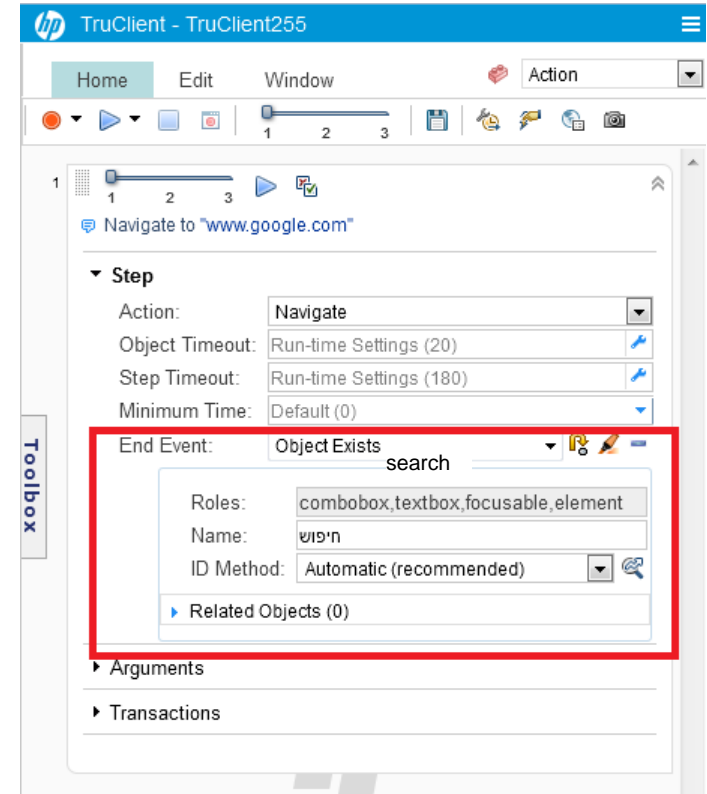
Button in the Extension Area

Last Name	First Name	Checked	Ir
Ander	Corey	<input checked="" type="checkbox"/>	\
Barr	Sandy	<input checked="" type="checkbox"/>	\
Burr	Tim	<input checked="" type="checkbox"/>	\

TruClient End Event

New 'End Event – Object Exists'

- The step will end when the chosen object exists on the page.



The screenshot displays the TruClient software interface for configuring a step. The window title is "hp TruClient - TruClient255". The interface includes a menu bar with "Home", "Edit", and "Window", and an "Action" dropdown. Below the menu bar is a toolbar with various icons. The main workspace shows a step configuration for "Navigate to 'www.google.com'". The "Step" section is expanded, showing the following settings:

- Action: Navigate
- Object Timeout: Run-time Settings (20)
- Step Timeout: Run-time Settings (180)
- Minimum Time: Default (0)

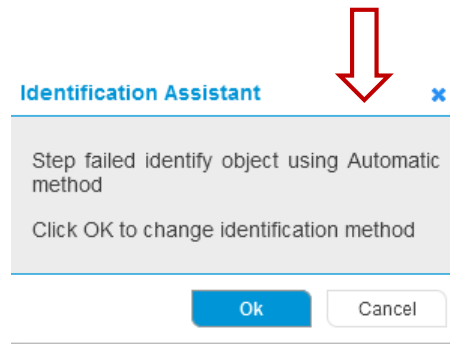
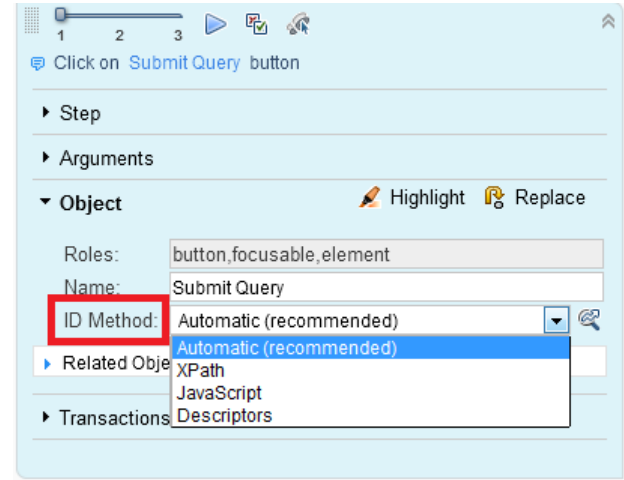
The "End Event" section is highlighted with a red box and contains the following configuration:

- End Event: Object Exists
- search
- Roles: combobox, textbox, focusable, element
- Name: חיפוש
- ID Method: Automatic (recommended)
- Related Objects (0)

Below the "End Event" section, there are expandable sections for "Arguments" and "Transactions". A "Toolbox" sidebar is visible on the left side of the interface.

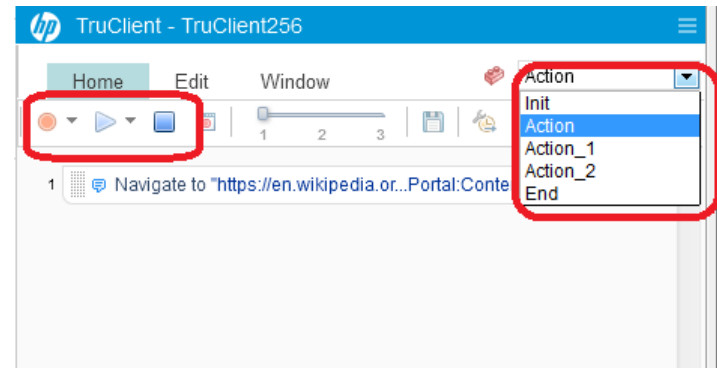
'Automatic' Object Identification

- Recommended (default) identification method.



Ability to control Actions during Recording

- User can add Actions during Recording, or switch actions during recording.





Desktop Protocols – PC Over IP

PC over IP Protocol

What?

- Add new remote access protocol (like Citrix, RDP)
- Used by multiple vendors

Why?

- Widely used for Virtual Desktop infrastructure (VDI)
- Used in VMWare products and in Amazon AWS

How?

- Similar concept to RDP and Citrix protocols

PCoIP Screens

The screenshot shows the PCoIP11 - HP Virtual User Generator - PCoIP application. The main window displays a code editor with the following code:

```
1 Action()
2 {
3     pcoip_client_connect("LTRND-Teradici", "172.23.74.44", "LTRND-Teradici", "4172", "230584300");
4
5     pcoip_set_display(741, 741);
6
7     pcoip_mouse_click(703, 72, LEFT_BUTTON, MODIF_SHIFT, "snapshot3");
8 }
```

The Output window shows the following log entries:

```
[API Trapper (1304: f4c)] Recording in 32-bit mode: C:\Program Files (x86)\Teradici\PCoIP Client\
[PCoIP Protocol (1304: f4c)] ClientInit: FeatureFlags=0 NumDisplays=1 USBWhiteBlackList=
Display[0] Topology={ 0; 0; 1791; 1016; rotation=0 }
[PCoIP Protocol (1304: f58)] ClientConnect: HostName=LTRND-Teradici IpAddr=172.23.74.44 SNI=LTRND-T
Connection GatewayTicket(unsupported): Valid=0 Data= CreateTime= ExpiryTime=
[PCoIP Protocol (1304:10f8)] ClientKeySend: VKCode=a4, DownFlag=0 (ScanCode=56, KeyboardLayout=00000
[PCoIP Protocol (1304:10f8)] ClientKeySend: VKCode=a2, DownFlag=0 (ScanCode=29, KeyboardLayout=00000
[PCoIP Protocol (1304:10f8)] ClientKeySend: VKCode=a0, DownFlag=0 (ScanCode=42, KeyboardLayout=00000
[PCoIP Protocol (1304:10f8)] ClientKeySend: VKCode=0, DownFlag=0 (ScanCode=347, KeyboardLayout=00000
[PCoIP Protocol (1304:10f8)] ClientKeySend: VKCode=0, DownFlag=0 (ScanCode=312, KeyboardLayout=00000
[PCoIP Protocol (1304:10f8)] ClientKeySend: VKCode=0, DownFlag=0 (ScanCode=285, KeyboardLayout=00000
[PCoIP Protocol (1304:10f8)] ClientKeySend: VKCode=a1, DownFlag=0 (ScanCode=54, KeyboardLayout=00000
[PCoIP Protocol (1304:10f8)] ClientKeySend: VKCode=0, DownFlag=0 (ScanCode=348, KeyboardLayout=00000
[API Trapper (1090: b48)] Recording in 64-bit mode: C:\Windows\sp1wow64.exe
(1304: d10) ClientDisplayBufferSet: display_id=0, width_pixels=741, height_pixels=5
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=a4, DownFlag=0 (ScanCode=56, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=a2, DownFlag=0 (ScanCode=29, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=a0, DownFlag=0 (ScanCode=42, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=0, DownFlag=0 (ScanCode=347, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=0, DownFlag=0 (ScanCode=312, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=0, DownFlag=0 (ScanCode=285, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=a1, DownFlag=0 (ScanCode=54, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=0, DownFlag=0 (ScanCode=348, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=a4, DownFlag=0 (ScanCode=56, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=a2, DownFlag=0 (ScanCode=29, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=a0, DownFlag=0 (ScanCode=42, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=0, DownFlag=0 (ScanCode=347, KeyboardLayout=00000
[PCoIP Protocol (1304: f4c)] ClientKeySend: VKCode=0, DownFlag=0 (ScanCode=312, KeyboardLayout=00000
```

The screenshot shows the Teradici PCoIP Client interface. The main window displays a recording session with the following information:

- Recording... (143)
- 00:03:02

The Output window shows the following log entries:

```
C:\Users\ahovan>dir
Volume in drive C:
Volume Serial Number

Directory of C:\Us

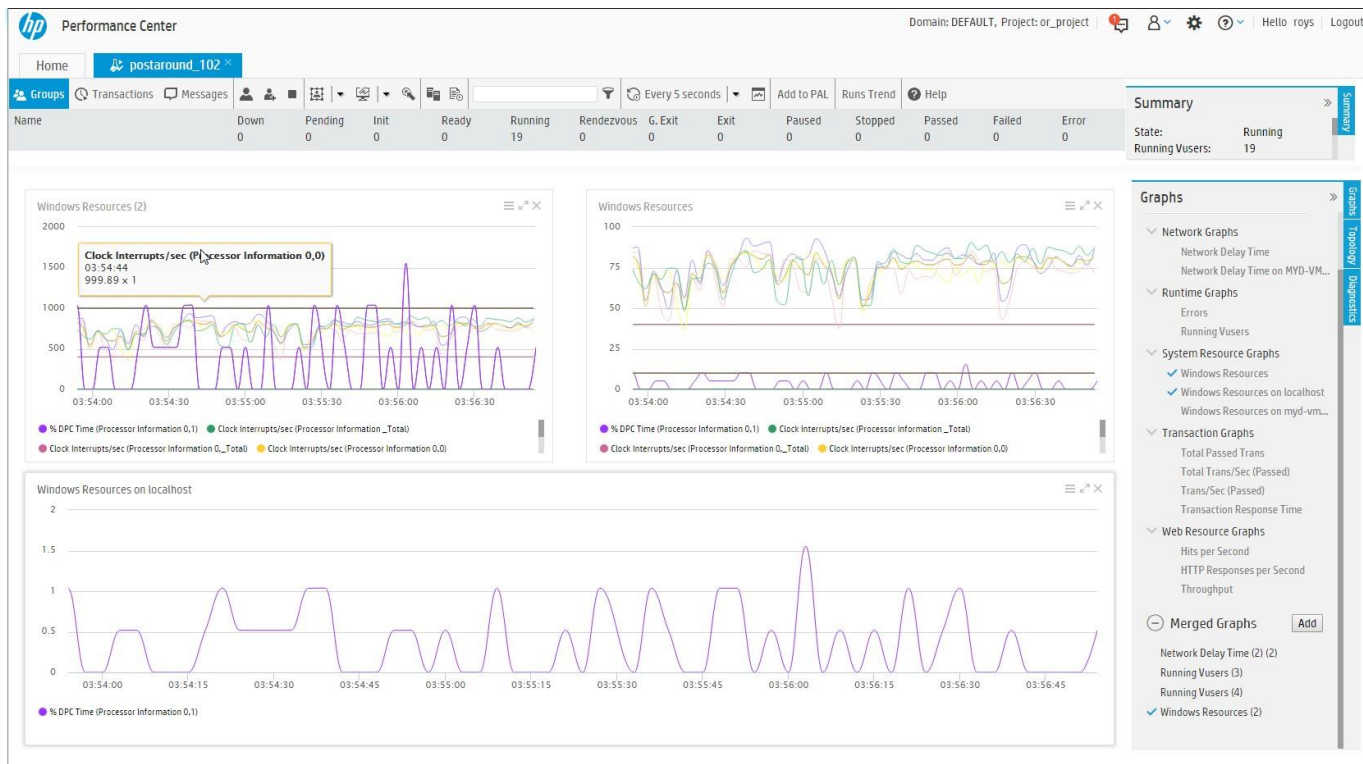
11/17/2015 11:21 A
11/17/2015 11:21 A
11/03/2015 10:18 A
11/03/2015 10:14 A
11/11/2015 05:55 P
11/03/2015 10:14 A
11/03/2015 10:14 A
11/03/2015 10:14 A
11/03/2015 10:14 A
11/03/2015 10:14 A
11/03/2015 10:14 A
11/03/2015 10:14 A
11/03/2015 10:14 A
0 Fi
14 Di
C:\Users\ahovan>
```

An "Untitled - Notepad" window is open with the text "just a test |".



What's new in Performance Center 12.53?

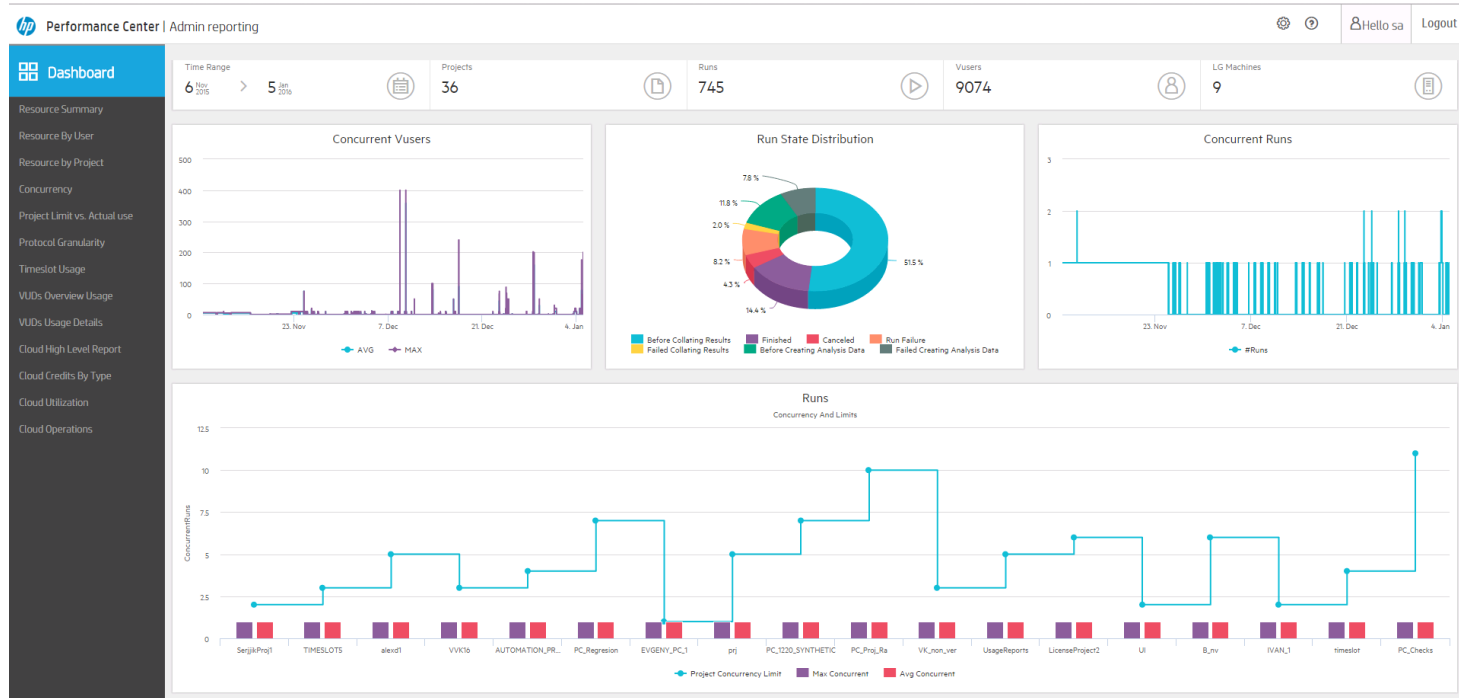
Enhanced Online Graphs



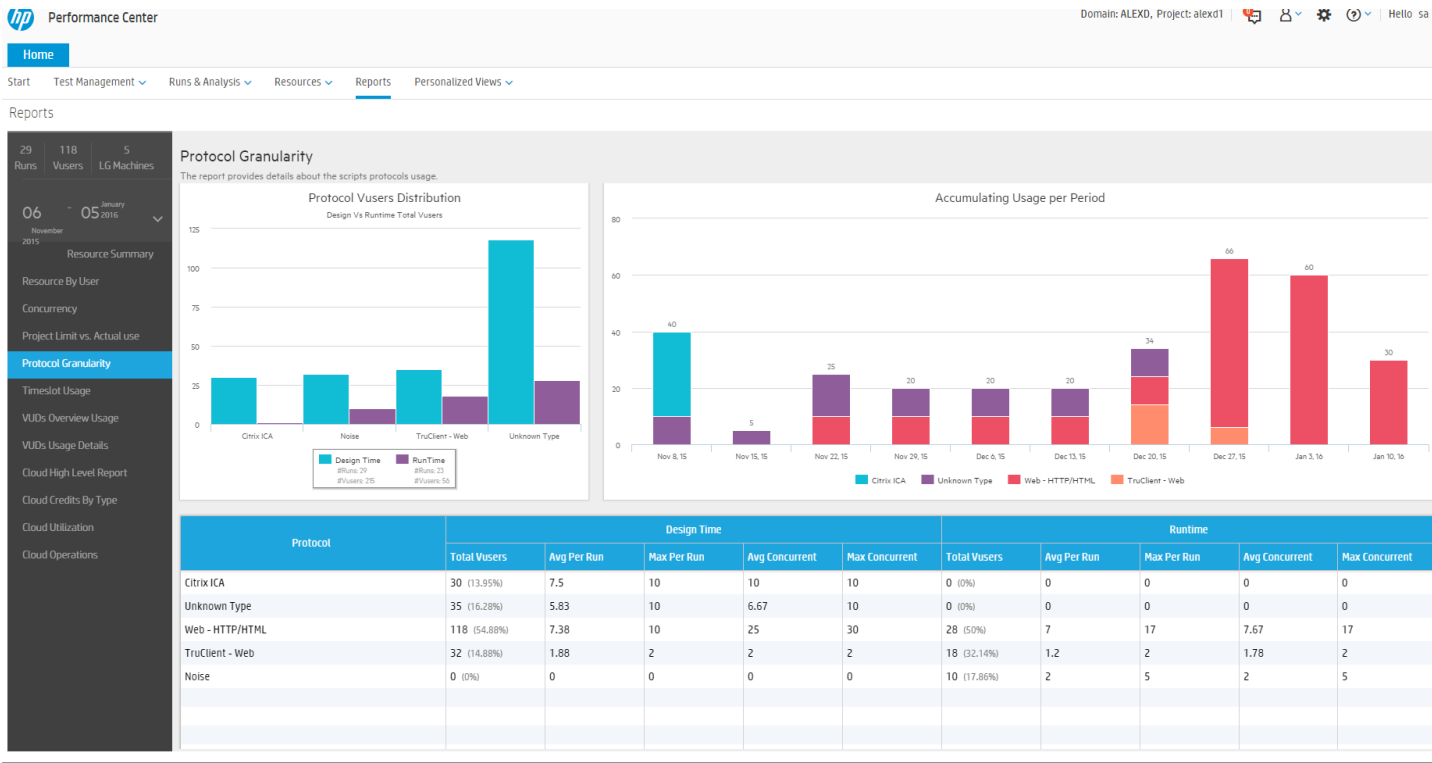
- Dynamic interactive graphs
- Ability to merge various graphs into one
- Enhanced usability

Administration Reports

- Web interface for admin dashboard
- Cross project reporting according to time range
- Multiple views for various usage reports



Usage Report



- Easy-to-read Usage Reports.
- Simplified for efficient department chargebacks.

Enhanced PAL Data Set Creator

- Enhanced usability and added the ability to define time ranges using the Scheduler Assistant graph. This graph samples your log to help you identify peak time ranges

The screenshot displays the Performance Center interface with the PAL Data Set Creator tool overlaid. The tool's progress bar shows three steps: 'Select data source' (completed), 'Upload log' (completed), and 'Set duration' (in progress). The 'Set duration' step features a graph titled 'Select data set Duration' with the instruction 'Move slider to choose time range'. The graph shows a red area chart representing log data over time, with a slider below it indicating the selected time range from 24.03.15 | 00:00:00 to 24.03.15 | 01:00:00. The background shows the Performance Center dashboard with various metrics and a scenario configuration view.

Performance Center - Google Chrome
myd-vm05854/loadtest/HTML/StartPage/index.html#/home

Performance Center
Domain: DEFAULT, Project: PROTOCOLS_PROJECT | Hello sa | Logout

Home | Start | Test Management | Runs & Analysis | Resources | Reports | Personalized Views | Manage PAL Applications

PAL Resources
Data sets | Reports | Scenario | Reports | Details

Import... | Filter by: All | To do List | Done | 100% | 240 Sessions | 157 Users | 8 Groups | 12 URLs | Scheduler | Options | Create Test

8 Sessionless URLs | 39118 Sessionless Hits | 109 Users

50% Coverage | check_bal | check_sum | Action1 | check_sum | Action3 | check_bal | ✓

Distribution Graph | Comparison Graph | Summary Graph

Action2

87 / 240 Sessions
26 / 157 Users

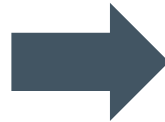
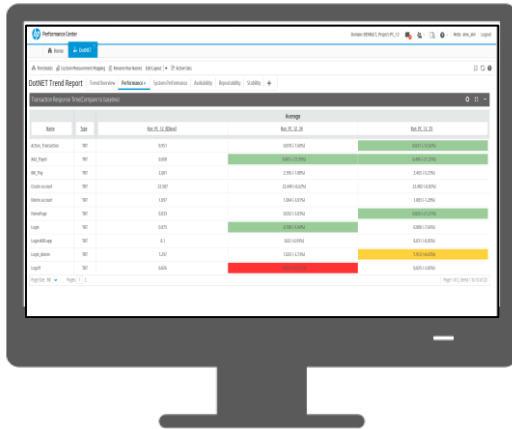
OK | Cancel

Back | Create

Early Visibility to Test Runs

Jenkins Plugin Supports Performance Center Trending

- Easily view Performance Center Trending reports directly within Jenkins.
- Team members have access to the metrics they need sooner.



Enhanced Service Virtualization Integration

The screenshot displays the HP Performance Center interface. The top navigation bar includes the HP logo, 'Performance Center', and user information: 'Domain: ANATOLIV, Project: PC_Checks', 'Hello sa', and 'Logout'. A sidebar on the left contains navigation options: Summary, Groups & Workload (selected), Monitors, Topology, Diagnostics, and Test Runs Trend.

The main workspace shows a configuration for a workload type 'Basic schedule by test, number mode' with a controller 'Dedicated'. A 'Groups' section is visible with 'LG Distribution: Assign all to each group' and 'LG: 1'. A table lists users, with one user '10' associated with the group 'sut_eventssimulationutil'.

A 'Global scheduler' section is present with options for 'New', 'Properties', 'Initialize', 'Start Users', and 'Duration'. The 'Start Users' option is set to 'simultaneously'.

The 'Service Virtualization' dialog box is open, showing a table of services on the server 'myd-vm02858' at 'http://myd-vm02858:6085/management'. The table has columns for Service Name, Simulate, Data Model, Performance Model, Deployed, and Service Log. The services listed are:

Service Name	Simulate	Data Model	Performance Model	Deployed	Service Log
WeatherService	<input type="checkbox"/>	Real Service	Maximal Performance	<input checked="" type="checkbox"/>	
WeatherService	<input checked="" type="checkbox"/>	Weather Data Mod	Maximal Performance	<input checked="" type="checkbox"/>	
WeatherService_11_04	<input checked="" type="checkbox"/>	WeatherService_1	WeatherService_11_04	<input checked="" type="checkbox"/>	
WeatherService1	<input type="checkbox"/>	Real Service	Maximal Performance	<input checked="" type="checkbox"/>	

The dialog box also includes buttons for 'Add Services', 'Delete', 'Unlock', 'Undeploy', 'Check Deployment', and 'Server Credentials'. At the bottom of the dialog are 'OK', 'Cancel', and 'Help' buttons.

At the bottom of the main interface, there are 'Run', 'Save', and 'Close' buttons.

Analysis: New HTML report style

- New design
 - Fonts, Logo and style
 - Matches NV Analytics Report design

The image shows two side-by-side screenshots of the LoadRunner Analysis Reports interface. The left screenshot shows the older design with a light grey sidebar and a white main content area. The right screenshot shows the new design with a dark grey sidebar and a white main content area. A red arrow points from the left report to the right report, indicating a design update. The new design features a more modern, clean layout with a dark sidebar and a white main content area, matching the NV Analytics style.

Old Design (Left):

- Scenario Name: Scenario1
- Results in Session: D:\WORK\Anal
- Duration: 6 minutes and

Statistics Summary

- Maximum Running Users:
- Total Throughput (bytes):
- Average Throughput (bytes/second):
- Total Hits:
- Average Hits per Second:

Transaction Summary

Transactions: Total Passed: 56 Total Failed: 0

Transaction Name	SLA Status
Action_Transaction	⊙
Dogs	⊙
Fish	⊙
JSP	⊙
vuser_end_Transaction	⊙
vuser_init_Transaction	⊙

Service Level Agreement Legend:

HTTP Responses Summary

HTTP Responses Total Per second		
HTTP_200	820	2.03
HTTP_404	14	0.035

New Design (Right):

- Scenario Name: Scenario1
- Results in Session: C:\test\test\Results5\Session1
- Duration: 6 minutes and 43 seconds.

Statistics Summary

- Maximum Running Users:
- Total Throughput (bytes): ⊙
- Average Throughput (bytes/second): ⊙
- Total Hits: ⊙
- Average Hits per Second: ⊙

Transaction Summary

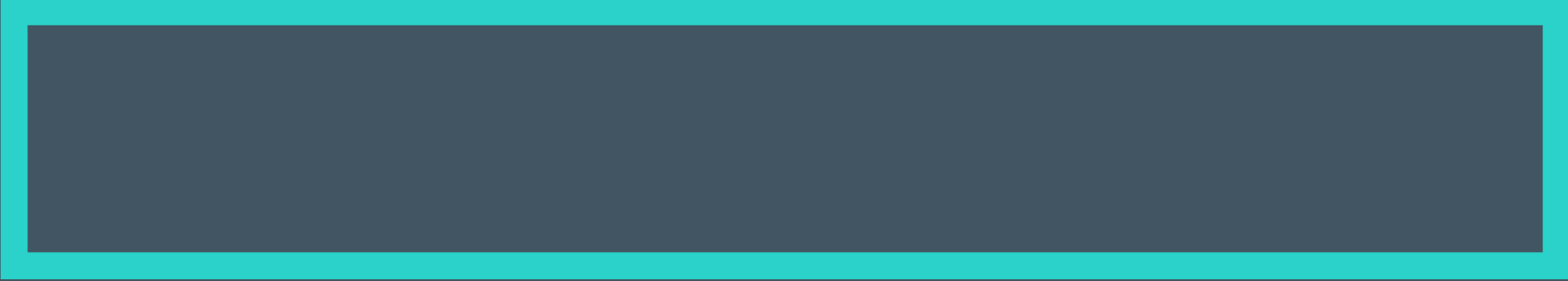
Transactions: Total Passed: 56 Total Failed: 0

Transaction Name	SLA Status	Minim
Action_Transaction	⊙	6.101
Dogs	⊙	3.931
Fish	⊙	8.242
JSP	⊙	1.798
vuser_end_Transaction	⊙	0
vuser_init_Transaction	⊙	0

Service Level Agreement Legend: ✔ Pass

HTTP Responses Summary

HTTP Responses		
HTTP_200		
HTTP_404		



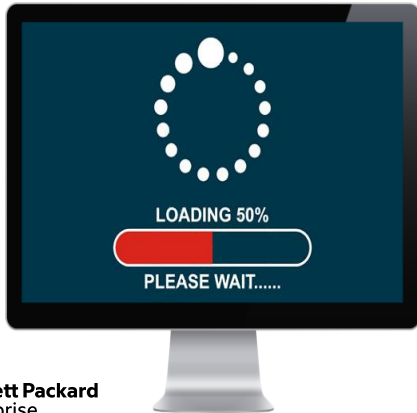
What's new in Network Virtualization for: LoadRunner 12.53 Performance Center 12.53?

Network Virtualization – Do We Really Need It?

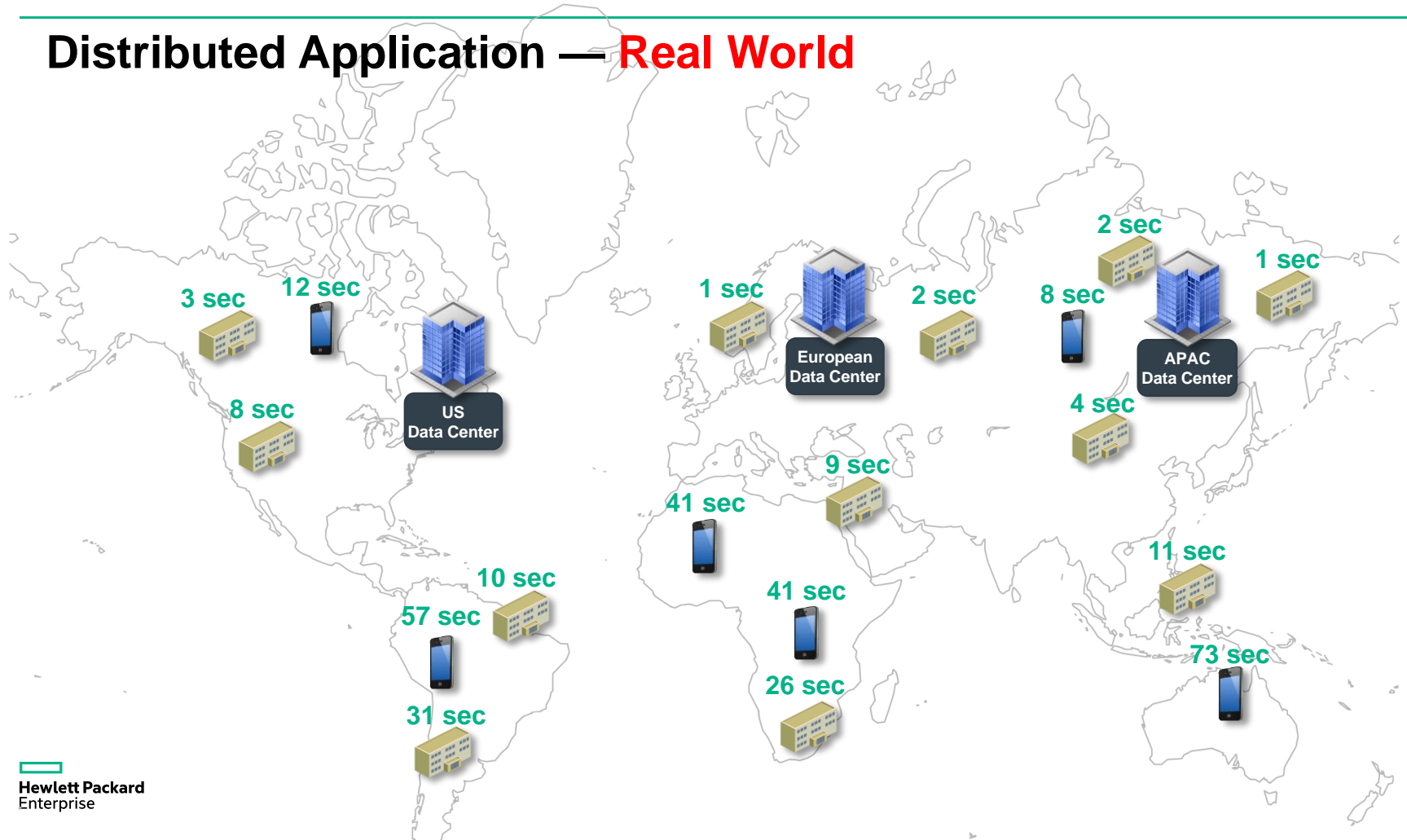
What is Network Virtualization?

How slower networks effect applications?

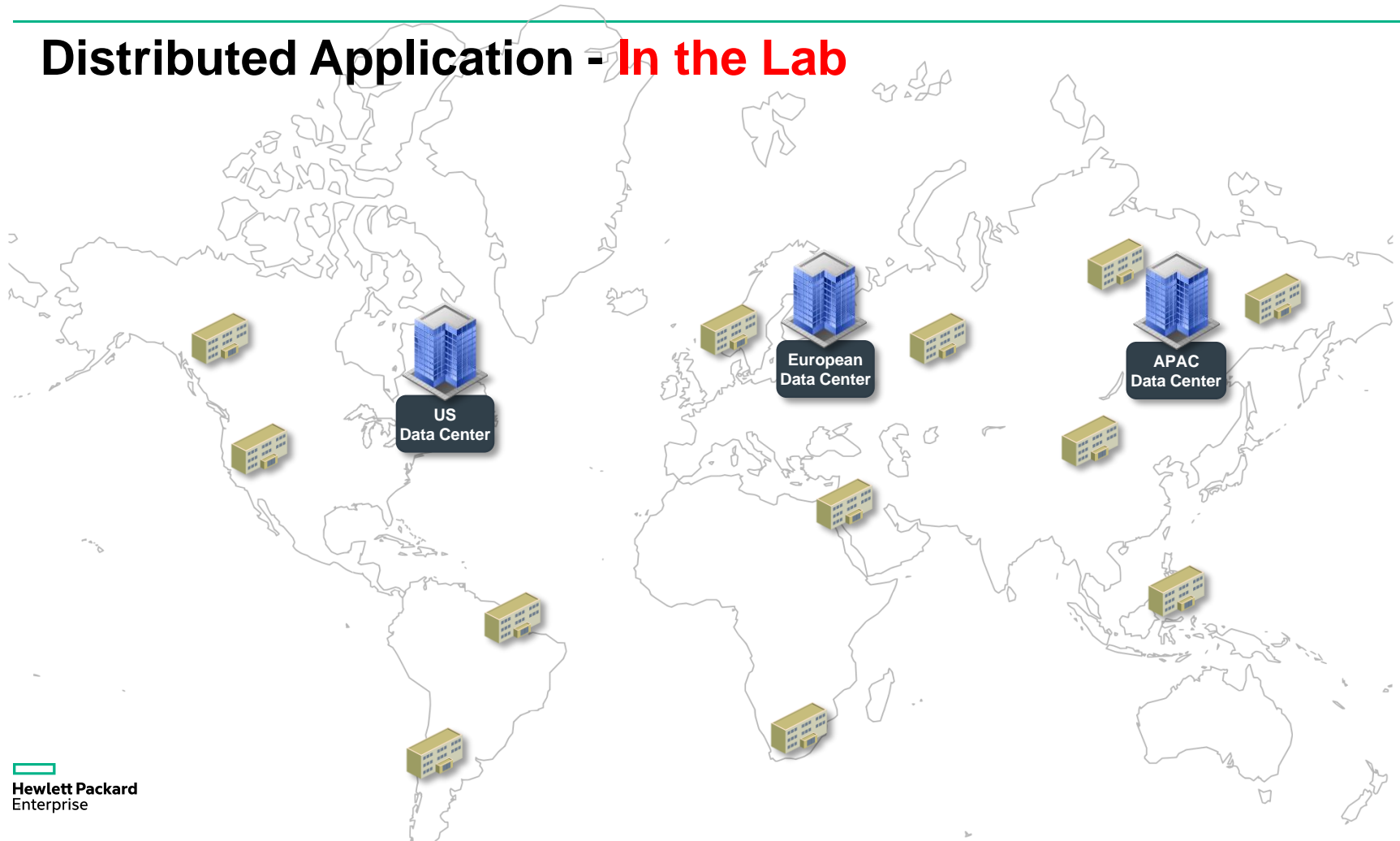
- Slow app performance
- Timeout exceptions
- Non-reproducible application issues
- System capacity degradation



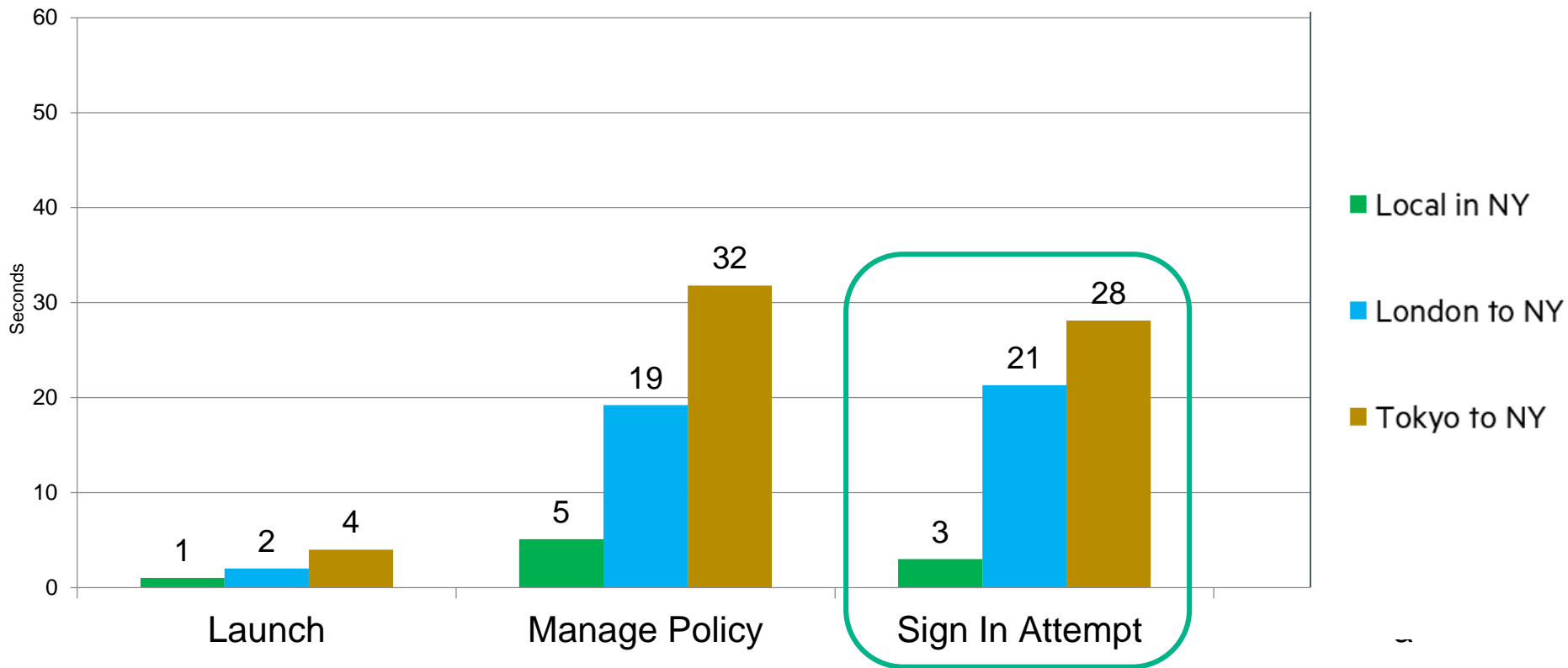
Distributed Application — Real World



Distributed Application - In the Lab

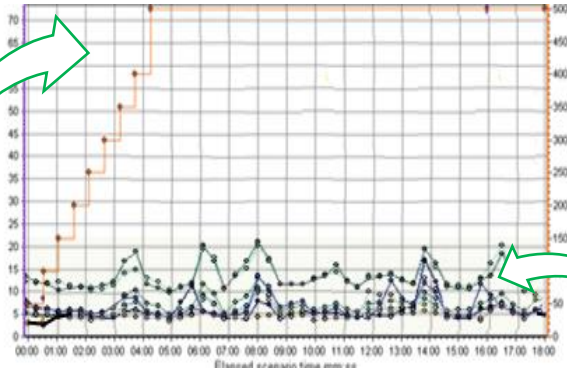


Network Impact on user experience - remote locations



Network Impact on System Capacity

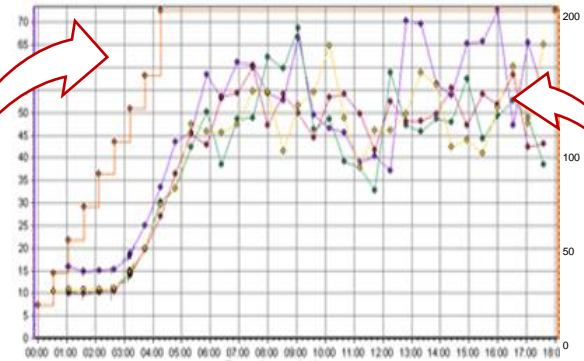
Load Test - **Without NV**



Response (TRT) < 10

Capacity > 500+

Load Test – **With NV**



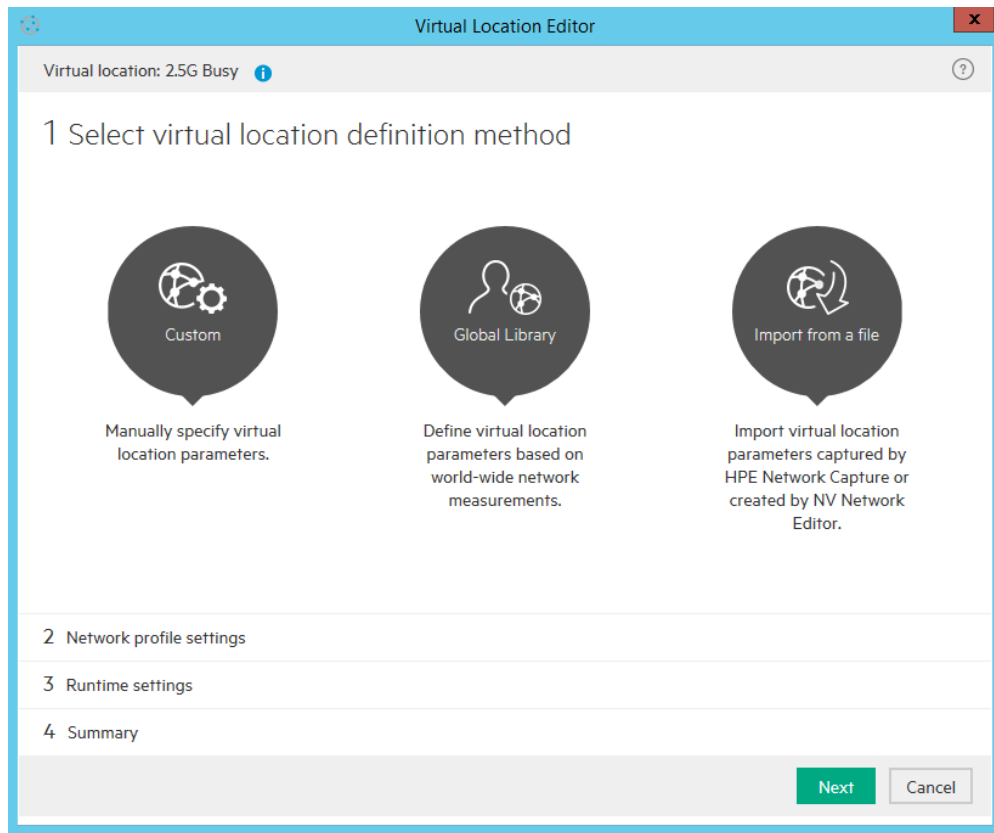
Response (TRT) > 40

Capacity < 200



Network Virtualization for LoadRunner 12.53 and for Performance Center 12.53

Define Virtual Locations

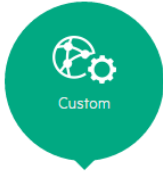


Define Virtual Locations - Custom

Location Editor - Google Chrome
16.60.186.58/SNV/LocationDefault.aspx

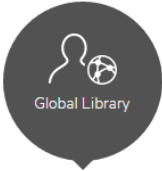
Virtual location: undefined

1 Select virtual location definition method



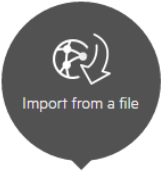
Custom

Manually specify virtual location parameters.



Global Library

Define virtual location parameters based on world-wide network measurements.



Import from a file

Import virtual location parameters captured by HPE Network Capture or created by NV Network Editor.

2 Network profile settings


3 Runtime settings

4 Summary

Location Editor - Google Chrome
16.60.186.58/SNV/LocationDefault.aspx

Virtual location: undefined

1 Select method

Custom 

2 Network profile settings

Latency 0 - 8000 ms	Download Bandwidth 2.4 - 10000000 kbps
<input type="text" value="200"/>	<input type="text" value="10240"/>
Packet loss 0-100 %	Upload Bandwidth 2.4 - 10000000 kbps
<input type="text" value="0.2"/>	<input type="text" value="28.8"/>

3 Runtime settings

4 Summary

Define Virtual Locations - Global Library

Virtual Location Editor

Virtual location: None

1 Select method Global library

2 Network profile settings

3 Runtime settings

4 Summary

Location Edit

From **New York, NY, US**
To **London, United Kingdom**

Conditions

Quality **Fair**
Technology **3.5G**
Carrier **T-Mobile**
Time **Business hours**

Network parameters

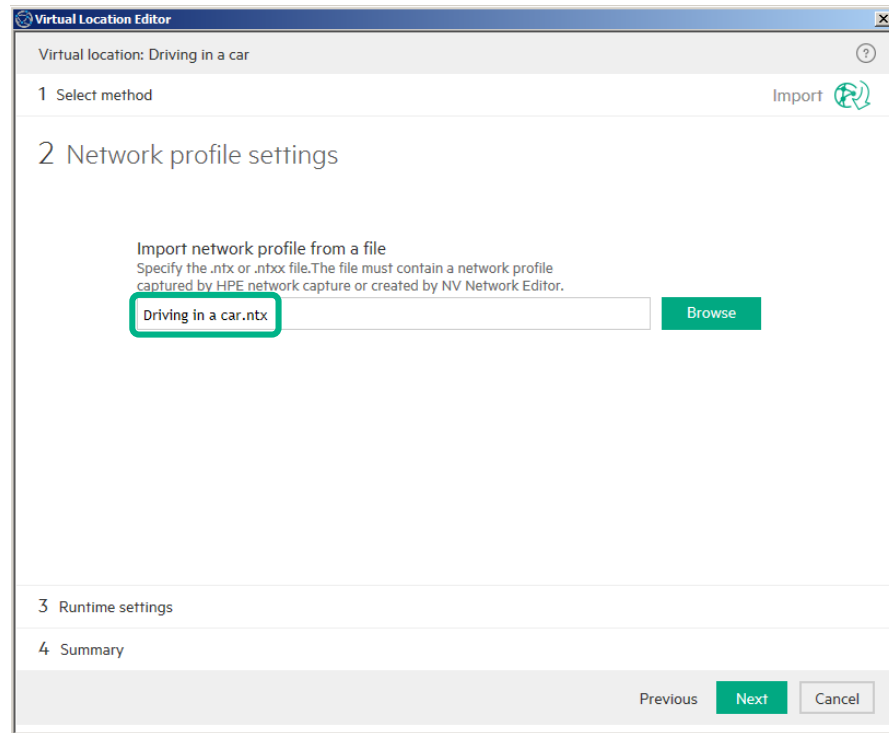
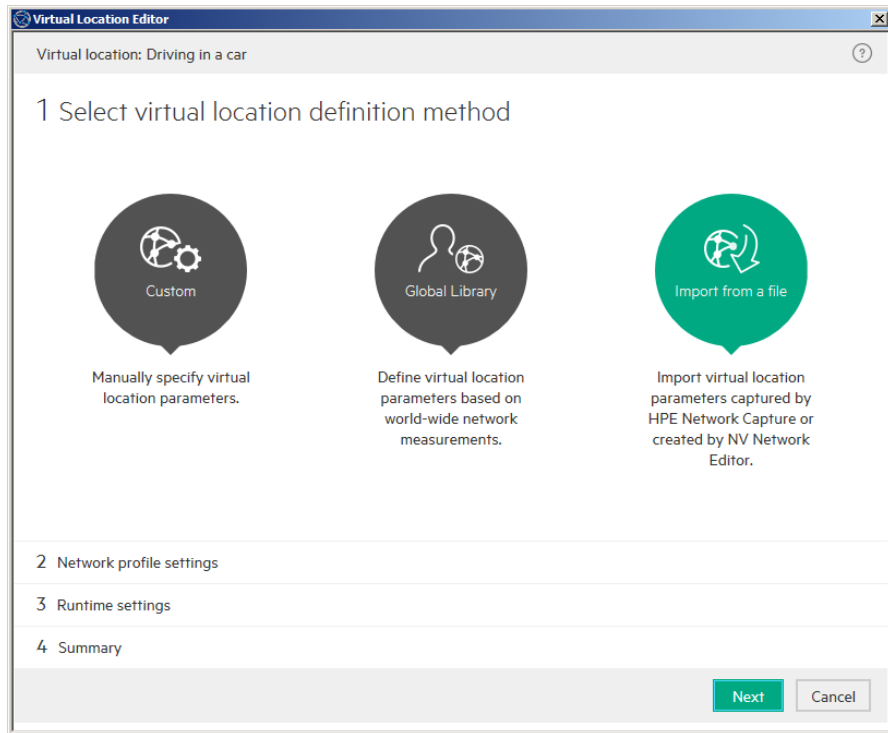
Latency **50 ms**
Packet loss **0.1 %**
Download Bandwidth **2,794 kbps**
Upload Bandwidth **949 kbps**

Runtime options Edit

Bandwidth **Individual**
Packet Capture **ON**

Redefine the virtual location

Define Virtual Locations - Network Capture



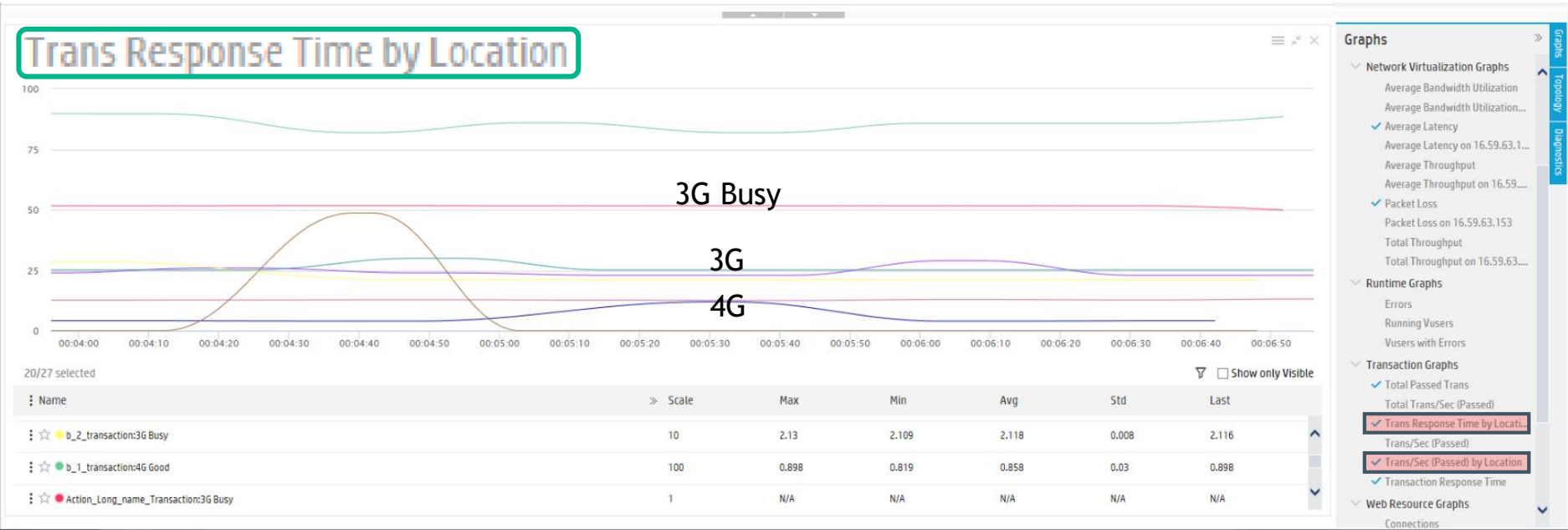
Add Virtual Location to groups

Groups

Select Scripts | [Icons] | LG Distribution: Assign manually | [Icons] | Virtual Location Editor... | Advanced

Vusers	Group Name	Script Name	Script Type	Load Generators	Virtual Location
30	internaldemo_specialoffer	InternalDemo_SpecialOffer	Web - HTTP/HTML	myd-vm22720	Driving in a car
20	internaldemo_specialoffer_1	InternalDemo_SpecialOffer	Web - HTTP/HTML		In a coffee shop
40	internaldemo_specialoffer_2	InternalDemo_SpecialOffer	Web - HTTP/HTML		3G Busy
60	internaldemo_specialoffer_3	InternalDemo_SpecialOffer	Web - HTTP/HTML	Select load generators	4G Good

Runtime TRT by Location graph



Analysis Summary in the Location Level



Summary Report | Running Users | Hits per Second | Throughput | Transaction Summary | Average Transaction Response Time | Transaction Re

Analysis Summary

Period: 10/03/2016 14:29:19 - 10/03/2016 14:30:28

Scenario Name: Scenario1

Results in Session: C:\Users\belferd\AppData\Local\Temp\2\res\res.lrr

Duration: 1 minute and 9 seconds.

Statistics Summary

Maximum Running Users: 27

Total Throughput (bytes): 21,165

loc100 7,395

loc200 6,885

loc300 6,885

Average Throughput (bytes/second): 302

loc100 105.643

loc200 98.357

loc300 98.357

Total Hits: 83

loc100 29

loc200 27

loc300 27

Average Hits per Second: 1.186

loc100 0.414

loc200 0.386

loc300 0.386

[View HTTP Respo](#)

Transaction Summary

Transactions: Total Passed: 218 Total Failed: 0 Total Stopped: 31

[Average Response Time](#)

	Pass	Fail	Stop
Total	218	0	31
loc100	74	0	9
loc200	72	0	12
loc300	72	0	10

Transaction Name	SLA Status	Minimum	Average	Maximum	Std. Deviation	90 Percent	Pass	Fail	Stop
Action Transaction	⊘	0.203	0.541	3.891	0.55	0.608	81	0	26
loc100		0.203	0.232	0.325	1.84	0.305	27	0	9
loc200		0.403	0.486	0.608	1.409	0.606	27	0	9
loc300		0.603	0.905	3.891	1.308	0.919	27	0	8
trans_shunra	⊘	0.203	0.535	3.891	0.545	0.607	83	0	5
loc100		0.203	0.237	0.324	0.047	0.306	29	0	0
loc200		0.403	0.486	0.607	0.116	0.606	27	0	3

You can define SLA data using the [SLA configuration wizard](#)

You can analyze transaction behavior using the [Analyze Transaction mechanism](#)



Network Virtualization Insights Report 12.53

NV Insights Report



7 Transactions

Network Impact

Optimization Grades



Optimization Recommendations

For Mobile

- F** Compress Components (14 violations)
- F** Add long term headers expiration dates (19 violations)
- F** Don't download the same data twice (10 violations)
- F** Avoid resources which are blocking parallel downloading (9 violations)
- F** Reduce the size of your images (iPhone) (8 violations)
- F** Use domain sharding (iPhone) (2 violations)
- C** Minify your textual components (3 violations)
- D** Leverage proxy caching (8 violations)
- A** Avoid 404 error code (Not Found) errors (1 violations)
- A** Specify your HTML documents' character sets (2 violations)

NV Insights Report



Workload type: Basic schedule by test, number mode

Controller: 16.60.162.68

Groups

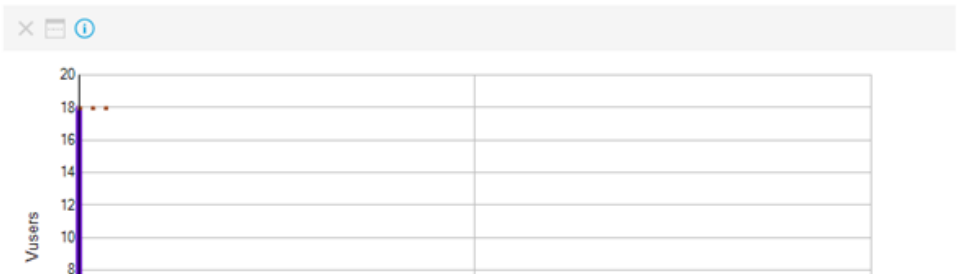
Select Scripts | LG Distribution: Assign manually | Virtual Location Editor... | Advanced | Total Users: 18

Vusers	Group Name	Script Name	Script Type	Load Generators	Virtual Location	NV Insights	Tag
10	script_1_test_1_test	Script_1_Test_1_Test	Web - HTTP/HTML	16.59.63.153		<input checked="" type="checkbox"/>	
2	script_1_test_1_test_1	Script_1_Test_1_Test	Web - HTTP/HTML	16.59.63.153	London to US EC	<input checked="" type="checkbox"/>	
1	script_1_test_1_test_2	Script_1_Test_1_Test	Web - HTTP/HTML	16.59.63.153	3G Busy	<input checked="" type="checkbox"/>	
1	script_1_test_1_test_3	Script_1_Test_1_Test	Web - HTTP/HTML	16.59.63.153	3G Busy	<input checked="" type="checkbox"/>	
1	script_1_test_1_test_4	Script_1_Test_1_Test	Web - HTTP/HTML	16.59.63.153	4G Good	<input checked="" type="checkbox"/>	
1	1	1	Web - HTTP/HTML	16.59.63.153		<input checked="" type="checkbox"/>	
1	2	2	Web - HTTP/HTML	16.59.63.153	3G Busy	<input checked="" type="checkbox"/>	
1	script_2	2	Web - HTTP/HTML	16.59.63.153	4G Good	<input checked="" type="checkbox"/>	

Global scheduler

* New | Scheduled Users: 18

Action	Properties
Initialize	Initialize each Vuser just before it runs
Start Vusers	Start All Vusers simultaneously
Duration	Run until completion



NV Insights Report



Test Runs

HTML Report **NV Insights Report** SLA Report Recalculate SLA Rename Run Delete View Hosts Export PAL Data

Add Filter **Last Modified : Last Two Months**

Run ID	Run Name	Test	State	SLA Status	Execution Date	Duration	Tester	Timeslot
3173	AdhocRun_2016-03-27 12...	test1	Finished		2016-03-27 12:22:20	9	sa	86945
3172	AdhocRun_2016-03-27 12...	test1	Before Creating Analysis...		2016-03-27 12:03:06	9	sa	86944
3171	AdhocRun_2016-03-27 10...	test1	Before Creating Analysis...		2016-03-27 10:59:44	10	sa	86943
3170	AdhocRun_2016-03-27 0...	test1	Finished		2016-03-27 00:05:41	9	sa	86938
3169	AdhocRun_2016-03-26 23...	test1	Before Collating Results		2016-03-26 23:53:22	11	sa	86937

Items 1 to 5 of 5

Results Event Log

Download...

ID	Type	Name	Modified By	Last Modified
14895	Output Log	output.mdb.zip	sa	2016-03-27 12:31:08
14896	Raw Results	RawResults.zip	sa	2016-03-27 12:31:13
14897	HTML Report	NVInsights.zip	sa	2016-03-27 14:12:09
14898	Analyzed Result	Results.zip	sa	2016-03-27 14:12:09
14899	HTML Report	Reports.zip	sa	2016-03-27 14:12:09
14900	Rich Report	Highl_evelReport_3173.xls	sa	2016-03-27 14:12:09

NV Insights Report



7 Transactions

Network Impact

Optimization Grades



Network Virtualization Licensing

- NV license is managed by LoadRunner Performance Center
- License by amount of NV Vusers
- Community license:
 - 2 NV Vusers
 - NV Insights report for 2 Locations for 30 days
 - NV Analytics report in VuGen for 30 days

All Licenses

[+ Add License Key](#) [+ Add Licenses From File](#) [- Hide Expired](#) [Licenses Details](#) [Help](#)

License Type	Expiration Mode	Expiration Date (GMT)	Host	
			License Bundle	Capacity
PC	Permanent	Unlimited		
PC	Permanent	Unlimited		
PC	Permanent	Unlimited		
Host	Permanent	Unlimited	Mobile UI	Unlimited
Host	Permanent	Unlimited	Global	100000
Host	Permanent	Unlimited	Network Virtualization Community	2
Host	Time Limited	01/07/2016	Network Virtualization	100



System Configurations

Supported setup in LR 12.53

Requirement	Value
Processor speed	Dual-Core 2.2 GHZ or faster
Operating system	<ul style="list-style-type: none">• Windows Server 2008 R2 SP1 64-bit• Windows Server 2012 R2 64-bit• Windows 7 SP1 64-bit• Windows 8.1 64-bit• Windows 10 (64-bit)
Memory (RAM)	Recommended: 8 GB or higher
Screen resolution	Minimum: 1366x768
Browser	Microsoft Internet Explorer 10 or 11, Edge, Chrome, Firefox
Available hard disk space	Minimum: 40 GB

Supported setup in PC 12.53

ALM & PC servers, PC Hosts

Requirement	Value
ALM / PC server	<ul style="list-style-type: none">• Microsoft Windows Server 2008 R2 (SP1) 64-bit• Microsoft Windows Server 2012 64-bit
Windows Operating system	<ul style="list-style-type: none">• Microsoft Windows Server 2012 R2 64-bit
PC Hosts / Load generators	<ul style="list-style-type: none">• Microsoft Windows Server 2008 R2 (SP1) 64-bit• Microsoft Windows Server 2012 R2 64-bit
Windows Operating system	<ul style="list-style-type: none">• Microsoft Windows 7 SP1 64-bit• Microsoft Windows 8.1 64-bit• Microsoft Windows 10 64-bit
Memory (RAM)	Recommended: 8 GB or higher
Screen resolution	Minimum: 1366x768
Browser	<ul style="list-style-type: none">• Microsoft Internet Explorer 10 and 11 (On Microsoft Windows only)• Google Chrome 49.x (On Microsoft Windows only)• Mozilla Firefox 45.x (On Microsoft Windows only)• Apple Safari 9.x (On Mac OS only)
Database server	<ul style="list-style-type: none">• Oracle 12c• Microsoft SQL Server 2012• Microsoft SQL Server 2014

Help Center Enhancements

- Help Center is now available on the Web, providing easier access and more up-to-date user assistance.
- By default, all the Performance Center help buttons open the online help.

The screenshot shows the 'Application Delivery Management HELP CENTER' interface. At the top, it says 'Choose an online help center. Discover friendly step-by-step documentation sets, PDFs, videos, and more. Helping you deliver amazing apps with confidence.' Below this are ten colored buttons, each with a unique icon and a label: StormRunner (lightning bolt), ALM Octane (geometric shape), LeanFT (hexagonal shape), Mobile Center (hexagonal shape), Service Virtualization (network diagram), LoadRunner (interlocking circles), ALM / PC (swirl), UFT (triangle), Agile Manager (cm logo), and Network Virtualization (network diagram).

Why HPE Performance Testing?

HPE Performance Testing

Large install base

10k+

More platforms supported

50+

protocols



Comprehensive & affordable

Competitive pricing, pay as you go, VUDs as low as \$0.56



Size & staying power

Fortune 50

Largest community

Millions of users worldwide



TruClient technology

Unique, easy and fast to simulate transactions and test



Top analyst rankings

Leader of Gartner Magic Quadrant 2016 for Software Test Automation



Network Virtualization

Exclusive offering





Q&A



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Thank you

Thank you

- Complete the short survey and opt-in for more information from Hewlett Packard Enterprise.

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