



YOUR INDEPENDENT HPE SOFTWARE COMMUNITY



Performance Engineering SIG Kick-Off & Vision for PE in 2016

12 January 2016

Brought to you by

Vivit Performance Engineering SIG

Leaders: Todd DeCapua, Petar Puskarich,
Paul Shovlin and Chris Trimper

www.vivit-worldwide.org



Hosted By:



Todd DeCapua
Chief Technology
Evangelist
HPE



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



Agenda

- PE SIG Overview
- Introductions
- Discussion
 - Definitions of Performance Engineering
 - Performance Engineering 'War Stories'
 - Tips for Performance Engineering
- Questions



Vivit Worldwide Performance Engineering SIG

1. Brief History
2. Current State
3. Future
4. Get Involved



Introductions



HPE
Todd DeCapua
@AppPerfEng



NTT Innovation Institute
Petar Puskarich
@ppuskari



Independent Health
Chris Trimper
@trimper



Checkpoint Technologies
Paul Shovlin
@CheckpointPaul



Polling Question #1

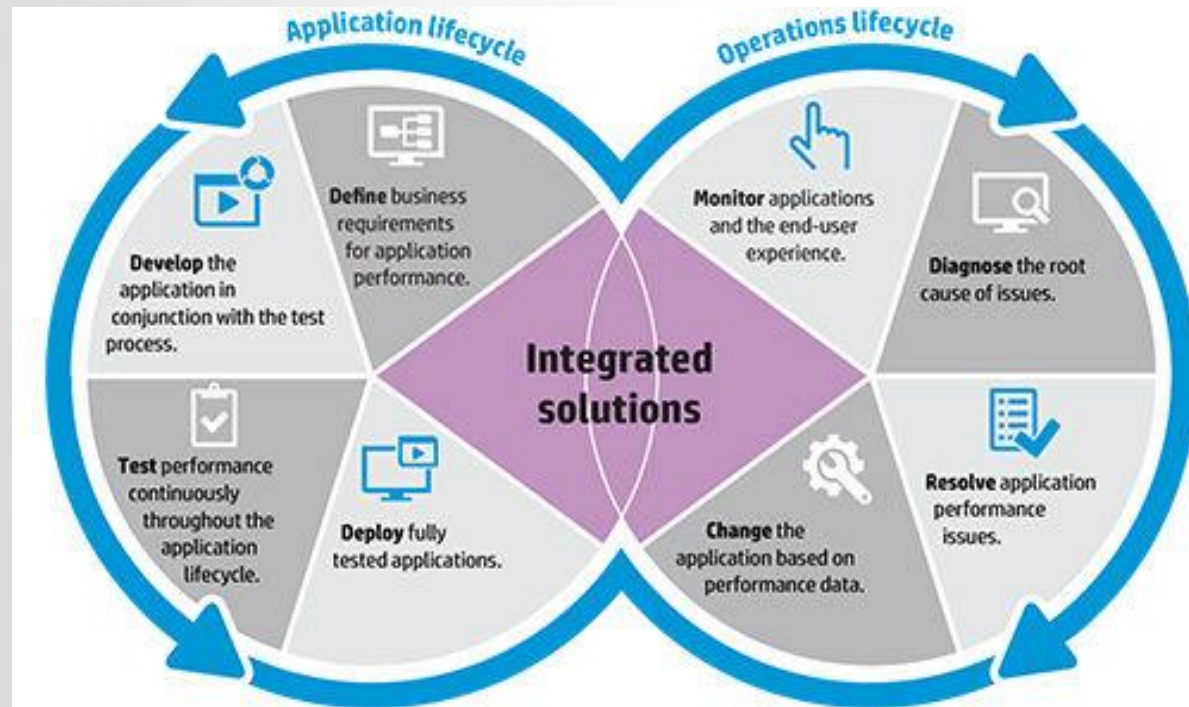
How do you want to be involved with the PE SIG? [check all that apply]

1. Listen
2. Contribute
3. Lead
4. All of the above



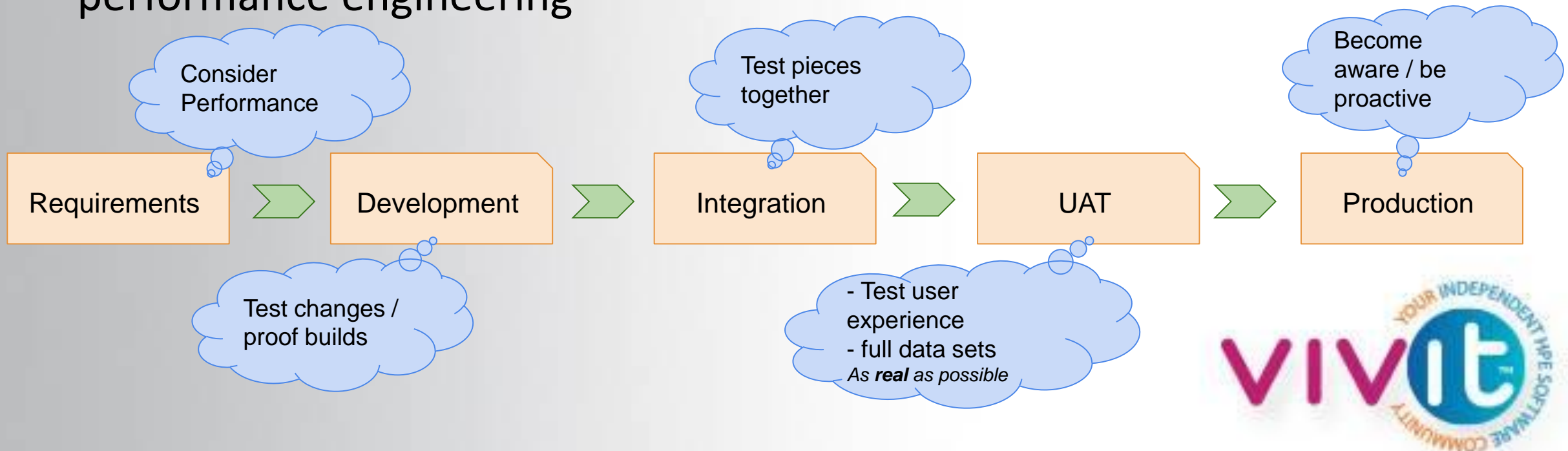
Definitions of Performance Engineering [Todd]

Continuous
Culture
Built-in
Throughout



Definitions of Performance Engineering [Chris]

Enhancing the common goal of a proper and quality-ensured user experience under all circumstances made available through performance engineering



Definitions of Performance Engineering [Paul]

Determining scalability and real world user experience for potential scenarios and how user experienced may be enhanced.

From Performance Testing perspective:

- Peak user load (stress) testing
- User ramp-up testing
- Soak (endurance) testing
- Spike testing
- Utilize tools such as SiteScope to drill down and determine root cause which may help determine system sizing and configuration.



Definitions of Performance Engineering [Petar]

Performance Engineering is a professional discipline that ensures a solution will meet or exceed the defined non-functional AND functional requirements under wide usage parameters.

It is implemented across each stage of the SDLC so “Performance” is “Baked In”.

Various tools and methodologies covering runtime statistics and proposed user interactions of the system are employed.



POLLING QUESTION #2

Has your organization adopted Performance Engineering practices?

1. Yes
2. No
3. What is Performance Engineering?



A Performance Engineering 'War Story' [Todd]

"The impact of Mobile on your backend infrastructure"

So What?

1. Latency: LAN / WiFi 30 msec Mobile 300 msec = **10X difference**

2. % of Users Forecasted to use Mobile: 5% **10X * 5% = 50%**

3. % of Data Center Utilization today: 65% **65% + 50% = 115%**



A Performance Engineering 'War Story' [Chris]

The long long road...

- Transition from large single server to clustered multi-server system
 - Extensive focused testing of services to tune first release
 - Post launch garbage collection analysis and garbage filling
 - Months of tweaking to meet production levels
 - Analysis of 'poison' data



A Performance Engineering 'War Story' [Paul]

Service Unavailable

HTTP Error 503. The service is unavailable.

A Performance Engineering 'War Story' [Petar]

This is a #WINNING War Story!



Multiple Open Source Core Technology
Cross Silo Partnerships
Performance included at each layer of System Design
Tuning and Optimization of OS, Application, Database, Message Queue
Python, C#/.Net Diagnostics



POLLING QUESTION #3

Would you be willing to contribute your 'war story'?

- Yes
- No



One tip for Performance Engineering [Todd]

How do you measure and share the value you and your team(s) deliver to: Organization, Business, and End Users? [and at what frequency, and how]

Benefits Solutions	Reduced Expense	Improved Productivity	Increased Revenue	Risk Mitigation	Total 3 Year Benefit
Service Virtualization	\$0	\$0	\$0		\$0
Network Virtualization	\$4,024,000	\$0	\$0	\$0	\$4,024,000
Total	\$4,024,000	\$0	\$0	\$0	\$4,024,000

Current	Improvements with HP (%)	Estimated with HP
A Average number of performance related production incidents per year	24	9.12
B IT hours required to resolve an outage	40.0 Hour(s)	15.2 Hour(s)
C IT staff FTE involved in resolving an outage	50.0 FTES	50.0 FTES
D Average hourly labor (including benefits)	\$50.00	\$50.00
E Total cost to resolve an outage	\$2,400,000	\$346,560
Year 1		
F Annual benefit realization	60%	70%
G Annual benefit	\$1,232,000	\$1,355,000
Year 2		
Year 3		
3 year benefit		\$4,024,000



One tip for Performance Engineering [Chris]

Never stop testing.

- Keep pushing boundaries
- Keep getting more real / live like
- Always push for performance testing on all projects



One tip for Performance Engineering [Paul]

Adopt and champion common quality practices for Performance Engineering.

Don't allow your organization to ignore basic quality processes such as requirement creation and test planning for performance engineering. Too many organizations accept “we don't see good performance requirements” or “test plans are for functional testing, integration testing, end-to-end, etc.”.

Develop good and bad examples of performance requirements for reference

• Develop a test plan template specific to performance testing.



One tip for Performance Engineering [Petar]

- Use your Performance Testers and Engineers to their full potential
 - Use cases can come from anywhere
 - The engineers directly working on the frameworks and applications often know more edge cases and oddities than even the dedicated business analysts.
 - Experience over the SDLC of an established application can drive extra tests that might not have been traditionally thought about including
 - Allow for the development of “Innovation” by the engineers
 - Tools used in multiple and creative ways to save testing times
 - Alternative test processes to ferret out deep level issues
 - Trust the Engineers
 - Errors reported are REAL
 - Tuning ideas are CREDIBLE



POLLING QUESTION #4

What future Performance Engineering topics would you like to see in our upcoming monthly webinars / presentations / whitepapers?

1. Case Studies
2. Tools
3. Value To Business
4. Solution Overviews
5. Enablement / Education



Questions



Thank you

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