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SIG Talk: Quality & Testing - LeanFT: How to Combine with Existing Selenium & How It Enables Intelligent Automation

September 11, 2018

Welcome to

#VivitSIGTalk

YOUR INDEPENDENT MICRO FOCUS SOFTWARE USER COMMUNITY

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Future topics

If you are interested in **participating as a SIG Talk speaker** for one of our 2018 Quality and Testing topics or want to **suggest a speaker** or **topic**, please take a moment to **answer our survey**.

vivit SIGTALK

Date	SIG Talk	Moderator
December 12, 2017	Discover the New Tour	Richard Bishop
January 9, 2018	Proven Practices	Todd DeCapua
February 13, 2018	Testing Tools	Chris Trimper
March 13, 2018	Tips & Tricks	Tammy Young
April 10, 2018	Proven Practices	Robert Linton
May 8, 2018	Testing Tools	Mark Ford
June 12, 2018	Tips & Tricks	Chris Scharer
July 10, 2018	Proven Practices	Richard Bishop
August 14, 2018	Testing Tools	Todd DeCapua
September 11, 2018	Tips & Tricks	Chris Trimper
October 9, 2018	Proven Practices	Tammy Young
November 13, 2018	Testing Tools	Mihai Grigorescu
December 11, 2018	Tips & Tricks	Mark Ford

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Hosted By

Chris Trimper
Enterprise QA Automation
Architect
Independent Health

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Today's Speakers

Daniel Horn
Senior IT Consultant
profi.com AG

Jonathon Wright
Digital Therapist
Digital-Assured

House Keeping

- This "LIVE" session is being recorded
  Recordings are available to all Vivit members

- Session Q&A:
  Please type questions in the Questions Pane

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Webinar Control Panel

Toggle View Window between Full screen/window mode.

Questions

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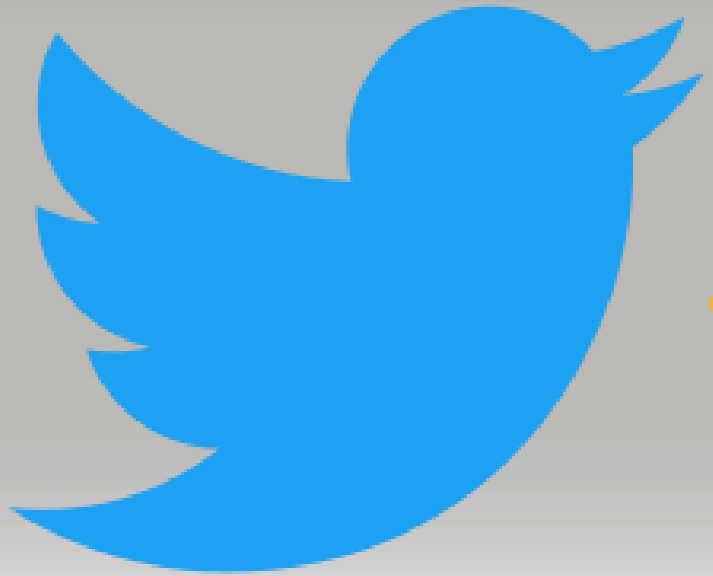
Tweet Your Questions



#VivitSIGTalk

Combining Micro Focus LeanFT with your existing Selenium Test Automation

Vivit SIG Talk - Daniel Horn – September 11th 2018

Speaker

Daniel Horn
profi.com AG
Senior IT-Consultant

dhorn@proficom.de

Current market challenges

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- Huge competition in Innovation & Releasement
- time to market becomes faster and faster
- Customer exper … back
- Scaleability (Clo … ces …)
- Cross-Platform Capability (Chrome, Firefox, Edge, …)

Results in
- Earlier Testing
- More Testing
- Faster Results in Testing

How can LeanFT help?

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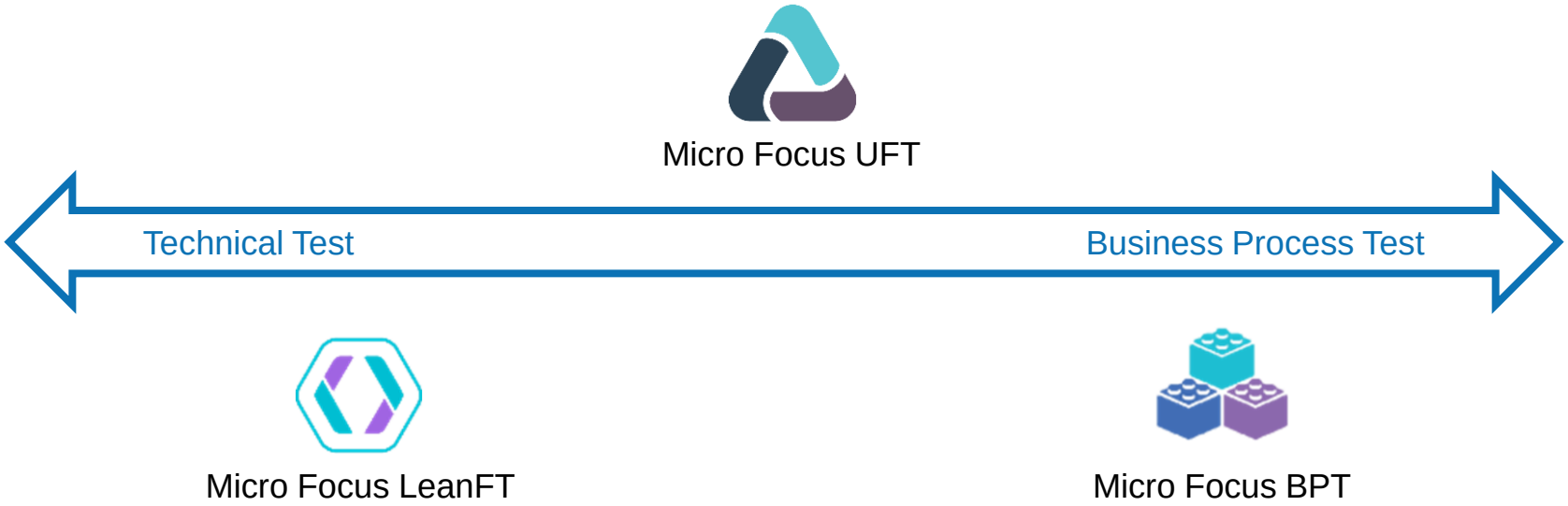

Key Features of LeanFT

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- integrated in several IDE‘s and development-environments (IntelliJ, Eclipse, VisualStudio)
- Creation of tests based on established Unit-Frameworks and in known environments
- Creation of tests in modern languages (C#, Java, …)
- Support of all major technologies as AUT[1]

[1] Application under Test

LeanFT compared to Selenium

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	LeanFT	Selenium
Programming Language	Java, JavaScript, C#	Java, JavaScript, C#, Pearl, PHP, Python…
Operating Systems	MS Windows, Apple OS X, Linux	MS Windows, Apple OS X, Linux
Unit-Test-Frameworks	NUnit, MSTest, TestNG, JUnit, Jasmine, Mocha	NUnit, JUnit, TestNG, PyUnit, RSpec
Utilities	Object Identification Center Test Recorder **LeanFT for Selenium** Image Based Recognition	Selenium IDE (Record & Replay) Selenium Grid
Supported AUT	Web, Mobile, .NET, SAP, Java, Mainframe	Web (IE, Firefox, Safari, Opera, Chrome) Mobile (Appium)

What is LeanFT for Selenium

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- Extends the usage of Selenium
  - Enhancement of the functionalities
    - Visible text, object-type, attributes, regular expressions
    - Combine different locators
  - Object Identification Center for Selenium-Tests
    - Identification of objects in the application from IDE
    - Validation of selected locator combination
    - Code Generator
- Available since LeanFT 14.00

Object Identification from the IDE

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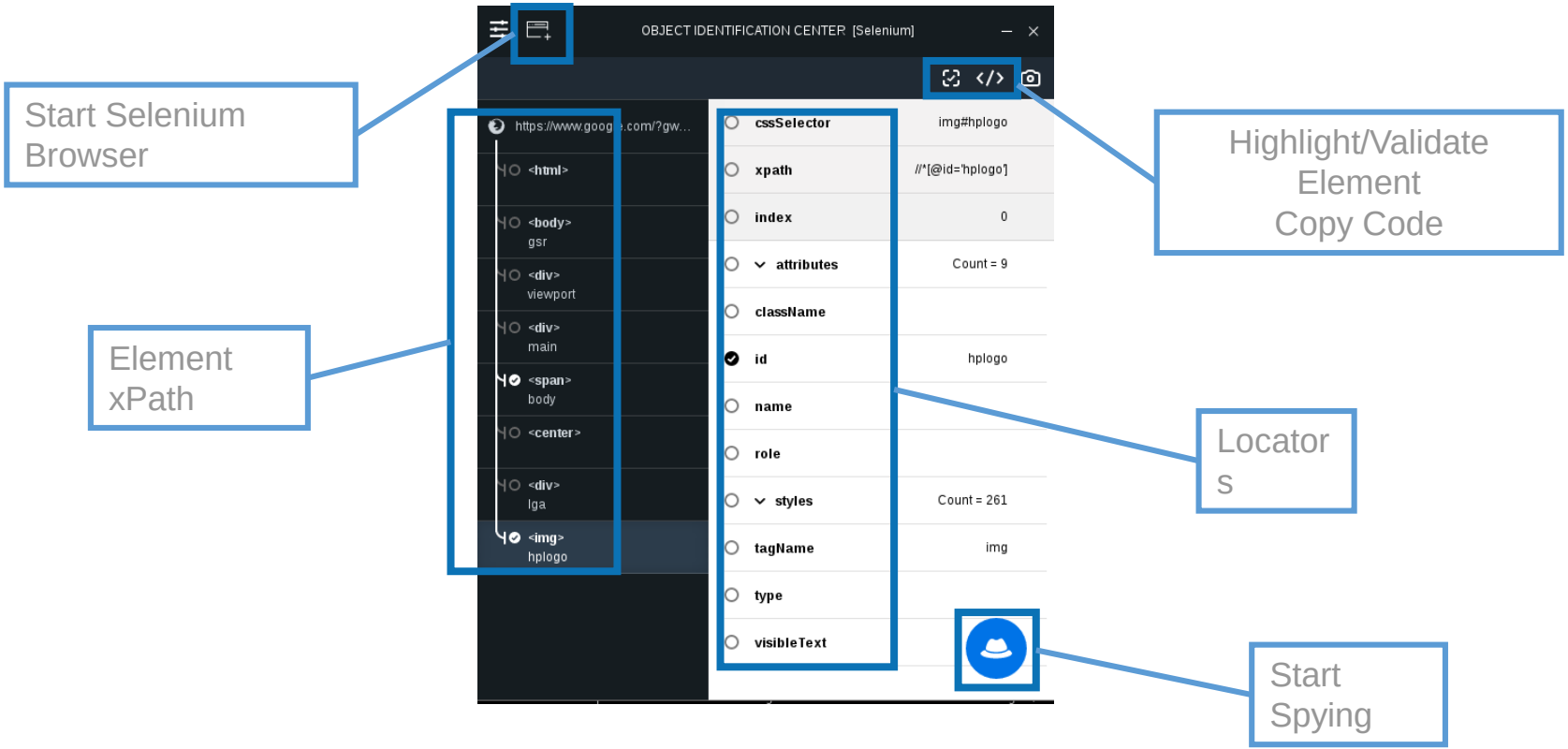

Enhanced Locator Functionality

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- Chain elements to recreate the Website-Structure
- Combine multiple locators to identify one object

```
31
32          driver.findElement(new ByChained(
33                  new ByEach(
34                      By.attribute("id", "body"),
35                      By.id("body")
36                  ),
37                  By.tagName("center"),
38                  new ByEach(
39                      By.id("hplogo"),
40                      By.name("")
41                  )
42              ));
43
```

Patterns for using LeanFT and Selenium

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- Integration by simply installing LeanFT
  - Install and enable LeanFT on Dev-Devices
  - Import two libraries and you are ready to go

```
6 import com.hpe.leanft.selenium.By;
7 import com.hpe.leanft.selenium.ByEach;
```

- Make life easier using utility-tools (object identification center)

- „old“ Selenium-Code is still working
  - TIP: Keep old code – integrate when maintaining or developing new

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Enterprise AIOps – Augmented Intelligence

DIGITAL - VIVIT WORLDWIDE

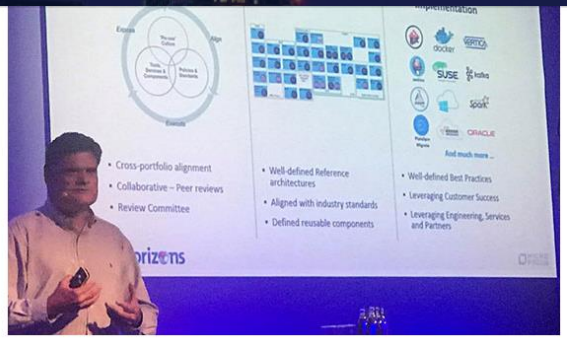
ASSURED **Board Member - Jonathon Wright – Director of Advocacy**

VIVIT BOARD

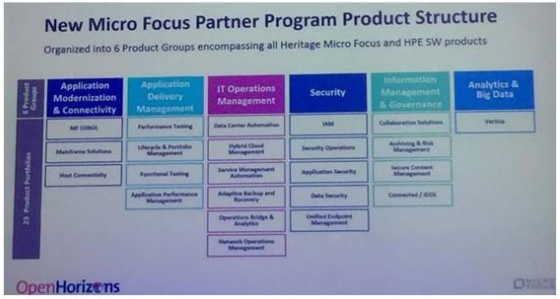
Discover the New ADM

*Posted By **Jonathon Wright**, Wednesday, June 13, 2018*
Updated: Wednesday, June 13, 2018

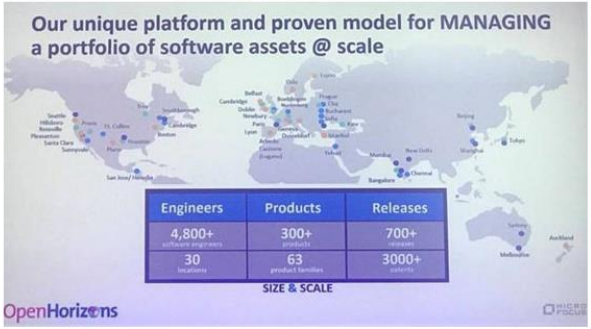
Last week, I attended the Micro Focus Open Horizon Summit in Berlin as the recently elected Vivit Board Director for Advocacy along with our Engagement Director Stephanie Konkoy.



After speaking with Jerome Labat – Chief Technology Officer (CTO) at Micro Focus at some lengths around the next generations products they have planned to go to market, I can confidently say that there is plenty to get excited about with the new Micro Focus.



"Discover the new Micro Focus" is something that we have heard continuously over the last 250+ days since September 1st when they became one of the worlds largest pure-play software companies but what does that actually mean for you?



Let us start with the 300+ products (including heritage Hewlett Packard Enterprise / Mercury / Open View product families) Micro Focus are now managing with over 4,800 software engineers across 30 locations to deal with this size and scale they have had to align the end to end process:

- Market Opportunity
- Product Offerings
- Enablement (Go To Market)
- Implementation Capabilities
- Tracking Performance

https://www.vivit-worldwide.org/blogpost/1289493/Board-of-Directors-Blog

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DIGITAL - COGNITIVE LEARNING

ASSURED TED talk on AI https://www.youtube.com/watch?v=_hnxJEqq_6k

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DIGITAL - AUGMENTED INTELLIGENCE?

- Cognitive Learning Services (CLS)
- Augmented Intelligence (AIx)
- Virtual Personal Assistants (VPA)
- Smart Advisors
- Natural language processing
- People-Literate Technology
- Digital Experiences (DX)
- Internet of Everything (IoE)
- Human Augmentation
- Ambient Experiences
- Gesture Control
- Brain Computer Interface (BCI)
- Emotion Detection
- Head-Mounted Displays
- Virtual Worlds
- Context Brokering Platforms
- Digital Offers
- City Data Exchange
- Complex Event Processing
- Atomic Level Mass Personalization
- Connected Vehicle
- Autonomous Vehicles (C2X)
- Vehicles to Infrastructure (I2X)
- Mood Recognition

- Cognitive Adoption - The AI Imperative
- Ultra-Intelligence (Singularity)
- Deep Reinforcement Learning
- Learning / Selfaware Software
- Neural Networks / Conversational
- Quantum / Fog / Edge Computing
- Cognitive Reckoning / Abstract Thinking
- Humanoid robots
- Vision / Sensors / Knowledge Replication
- Neuromorphic Hardware
- Digital Twins / Hyperconverged
- Cyber-physical systems
- Cryptocurrency Lawful hacking
- Cyber Threat Prediction / Zerotrust security
- Adaptive risk, trust & learning
- Location-based authentication
- Growth / Performance hacking
- Flexible displays / Screenless interface
- Smart Dust / Workspace / Robots
- Nanotube Electronics
- Accumulated Reality
- Self-healing & aware systems
- Digital Out-of-Home (DOOH)
- Additive manufacturing

- Cognitive Adoption Platforms (GAP)
- Artificial Intelligence Foundations (1st Wave)
- Virtual / Augmented / Mixed Reality
- Immersive / Human Augmentation
- Intelligent / Enterprise of Things (EoT)
- Blockchain / Event Driven
- Mobilegeddon / Intelligent Apps
- Device Mesh / Sensorization
- Data visualization / stewardship
- Business / Digital transformation
- Tri-Modal / Shadow IT
- Interactive digital signage / Ambient UX
- Omni channel engagements
- Microcontainerization [Unikernels]
- BI / Big Data [NoSQL]
- Wearables / Haptics / Gesture tech
- 4D / 3D printing
- Uberfication of services
- Object based storage
- Smart building technologies
- Cloud aggregator / broker
- Chaos Monkey
- Gamification
- Commercial drones (UAVs)

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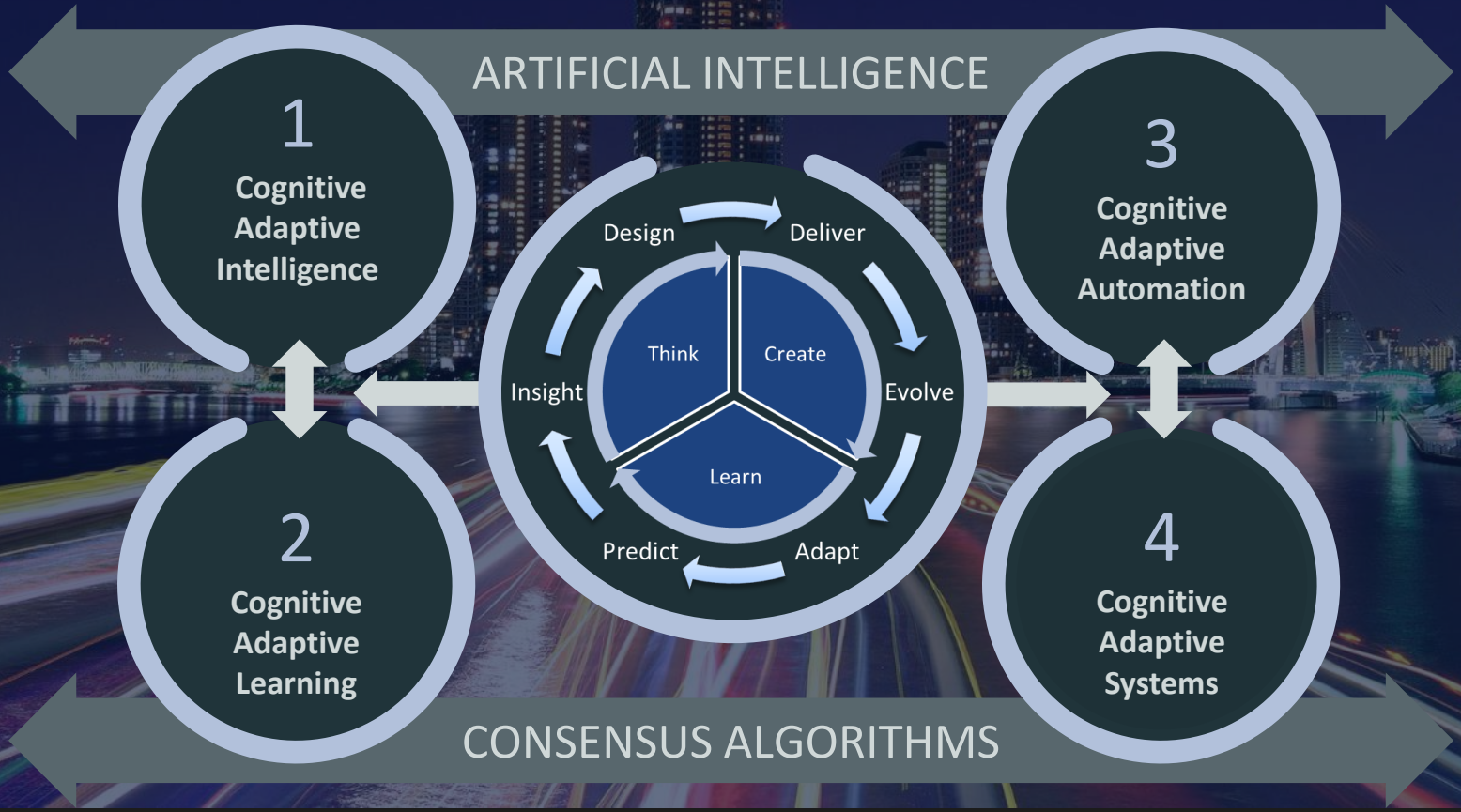
DIGITAL - AUGMENTED INTELLIGENCE

ASSURED Cognitive Learning – Evolution, over Revolution



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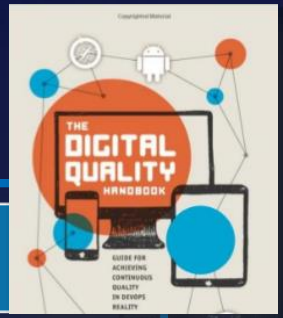
DIGITAL - AUGMENTED INTELLIGENCE

ASSURED Importance of Digital Quality within Enterprise Artificial Intelligence (A.I.)



COGNITIVE ADAPTIVE TECHNOLOGY

Virtual Personal Assistants	Connected Home	Multi-Reality	Context Brokering Platforms	Connected Vehicle
Smart Advisors	Internet of Everything (IoE)	Brain-Computer Interface	Digital Offers	Autonomous Vehicles (C2X)
Natural-Language (Q&A)	Human Augmentation	Emotion Detection	City Data Exchange	Vehicle-to-Infrastructure
Situation Awareness	Ambient Experiences	Head-Mounted Displays	Complex Event Processing	Mood Recognition
People-Literate Technology	Gesture Control	Virtual Worlds	Mass Personalization (Scale)	Digital Offers (Concierge)

Deep / Machine Learning	Artificial Intelligence	Neural Networks	Quantum / Fog Computing	Cognitive Reckoning

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DIGITAL - DEVOPS VS. AIOPS

ASSURED IF “Shift Left” < “Dev(Sec)Ops” THEN “Shift Right” > “AIOps”

SHIFT RIGHT

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DIGITAL - IAOPS = SHIFT RIGHT

DIGITAL ASSURED Learning from Production – How to successfully predict the future

SHIFT RIGHT

SHIFT LEFT

SHIFT RIGHT

CODE

BUILD

DEPLOY

OPERATE

AUGEMENTED INTELLIGENCE (AI)

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DIGITAL - ENTERPRISE AIOPS

ASSURED Reversing the Paradigm - Value to Idealization

SHIFT RIGHT

Enterprise AIOps

Value-Driven to Idealization

Business	Delivery	Operations
"as a Experiment" modelling to proving hypothesis based on trusted DX evidence.	Value-Driven Innovation Labs (Build > Test > Evolve) (LeanDX)	Insight-Driven powered by Digital Experience (DX) Analytics
Cognitive Thinking	Cognitive Creation	Cognitive Learning

Cognitive Adaptive Security

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DIGITAL - VALUE-DRIVEN DELIVERY

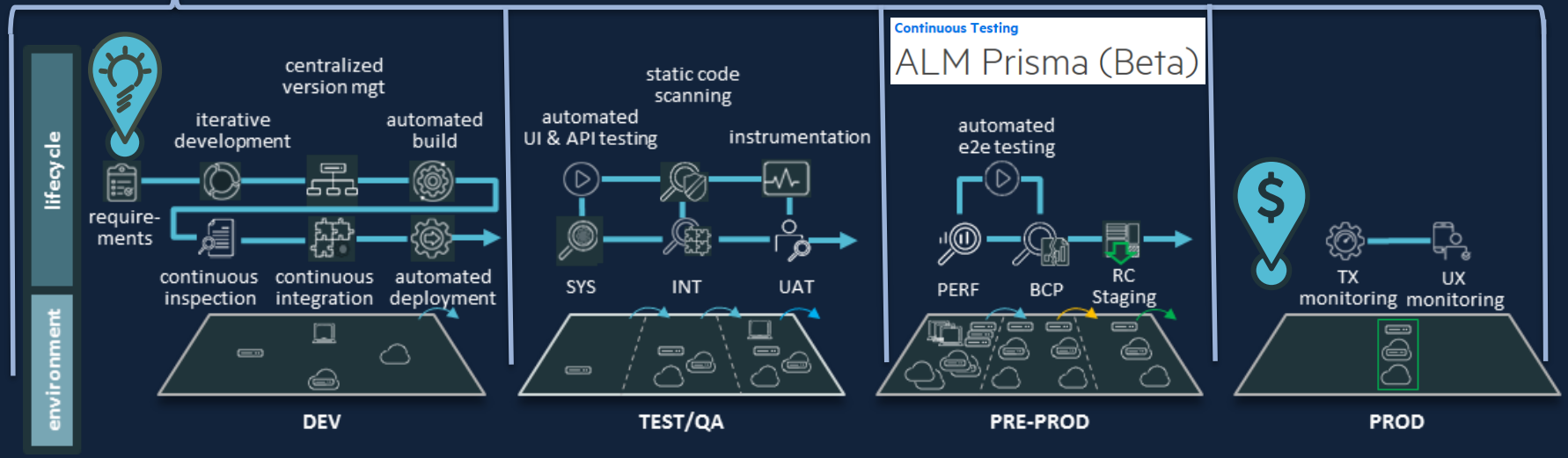
ASSURED **Application Delivery Management (ADM) – Enabling Continuous Testing**

ADM

DevOps Suite (SaaS)

- ✓ Lifecycle Management Suite (ALM, QC Ent (w/BPT), Agile Manager or ALM Octane)
- ✓ Performance and Lifecycle Management Suite (SV, NV, PC and LR)
- ✓ Functional Testing and Mobile Suite (UFT, BPT, Sprinter, LeanFT and Mobile Test)
- ✓ Application Performance Management Suite (APM, SiteScope, BPM and AppPulse)
- ✓ DevOps Suite for SaaS (ALM Octane, AppPulse Active, StormRunner Functional and Load)
- ✓ Microfocus SaaS AppDelivery Marketplace (ALM Prisma, ALI, TruClient or Applitools Eyes)
- ✓ DockerHub SaaS (ALM Octane (Technology Preview), LeanFT (IntelliJ) and PerfDriver.io)

Shift | X (Everywhere)



DIGITAL - INTELLIGENT AUTOMATION

ASSURED

StormRunner Functional (Docker) vs. Microcontainerization UCP (Kubernetes)

LEANFT

Windows Azure SDK Environment

```
$ docker run -it -p 5900:5900 --rm --add-host=license-server:16.60.133.93 -v //
c/Users/saaroni/Desktop/js_test-14.01:/tests -w /tests  leanft-chrome

Performing npm test....
npm info it worked if it ends with ok
npm info using npm@3.10.10
npm info using node@v6.10.2
npm info lifecycle js_tests@1.0.0~pretest: js_tests@1.0.0
npm info lifecycle js_tests@1.0.0~test: js_tests@1.0.0

> js_tests@1.0.0 test /tests
> mocha --reporter leanft.report



npm info lifecycle js_tests@1.0.
npm info ok
```

Run Results 0 0

Execution Time	Duration	Tool Name	Operation System	< Show Less
2017-08-07 14:43:30	00:00:39.414	LeanFT 14.1	Linux 4.4.52-boot2docker	
Core Number	**Total Memory**	**Host**	**User**	
1	995MB	d5a9663ce991	leanft-user	
Timezone	**Locale**			
GMT+0000 (UTC)	POSIX			

https://hub.docker.com/r/functionaltesting/leanft/

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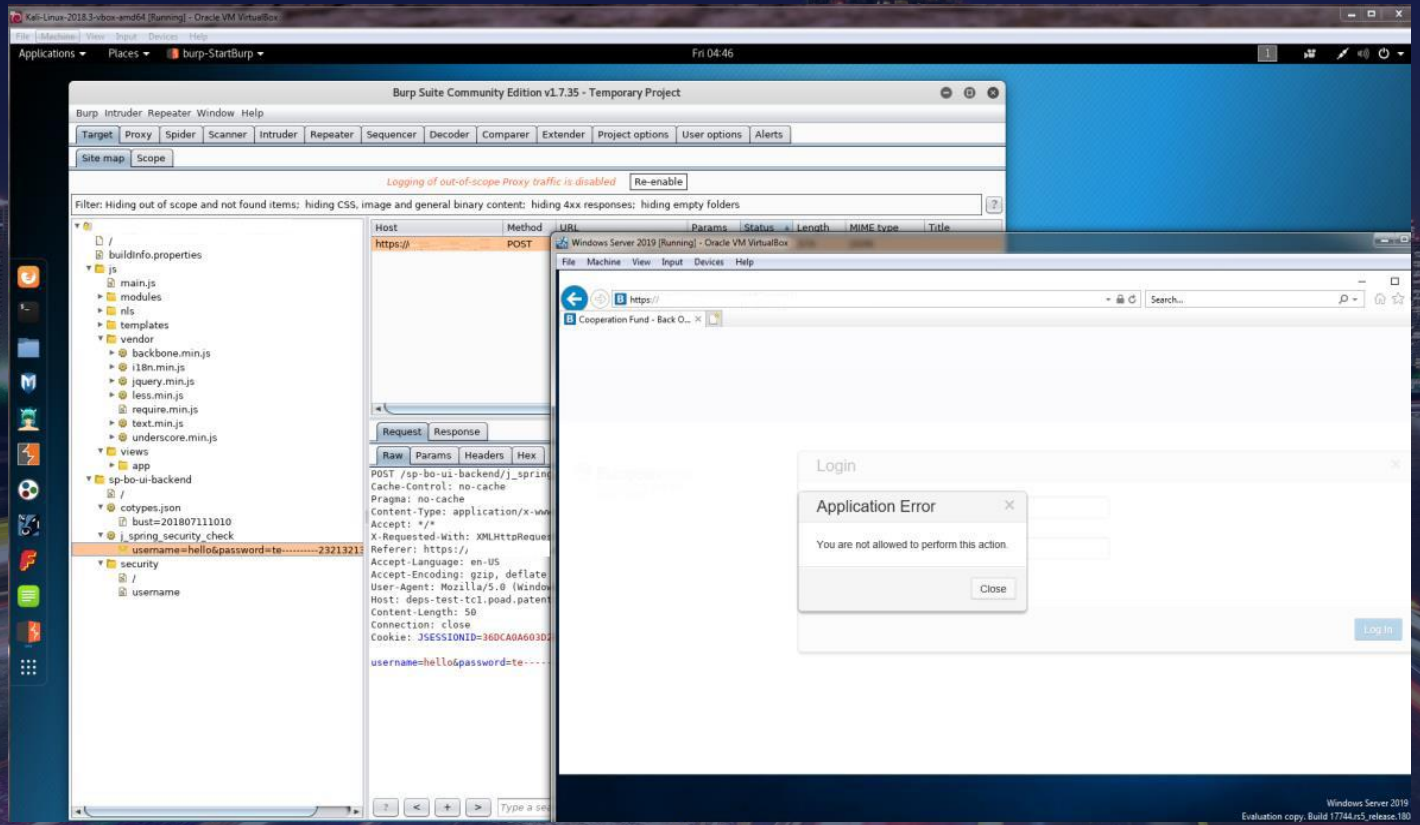
DIGITAL - INTELLIGENT SECURITY

ASSURED

Reverse Proxy (Fiddler) vs. Proxy (PortScanner)

KALI



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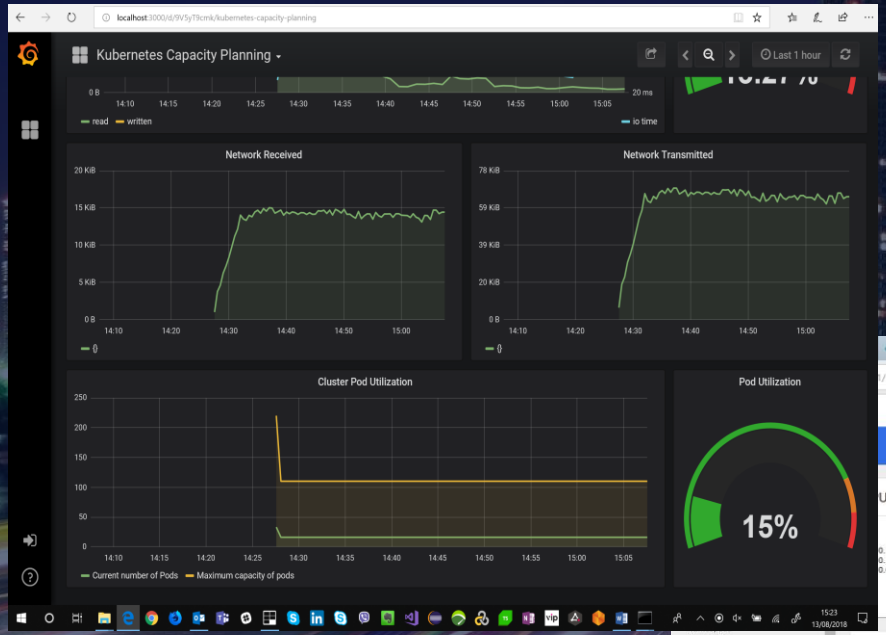
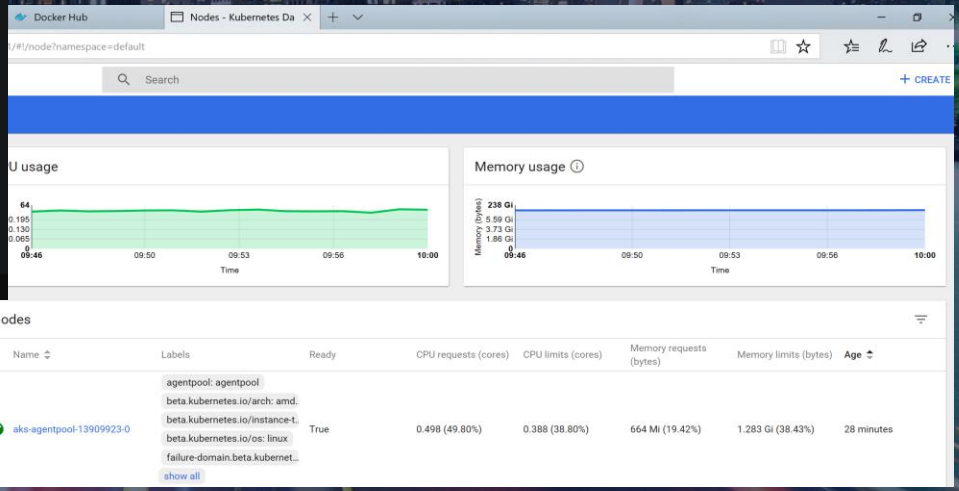
DIGITAL - INTELLIGENT OPERATIONS

ASSURED Enterprise OpsDev - Microcontainerization Enterprise Management

KUBE




```
C:\Users\Jonat>kubectl.exe get pods -n monitoring
NAME                                                     READY   STATUS    RESTARTS   AGE
alertmanager-kube-prometheus-0                           2/2     Running   0          2m
kube-prometheus-exporter-kube-state-76f498d465-bfrnr     1/2     Running   0          29s
kube-prometheus-exporter-kube-state-844bb6f589-5t4r5     2/2     Running   0          2m
kube-prometheus-exporter-node-qqjbz                      1/1     Running   0          2m
kube-prometheus-grafana-57d5b4d79f-5wjqm                 2/2     Running   0          2m
prometheus-kube-prometheus-0                             3/3     Running   1          2m
prometheus-operator-d75587d6-tkcw9                       1/1     Running   0          4m
```



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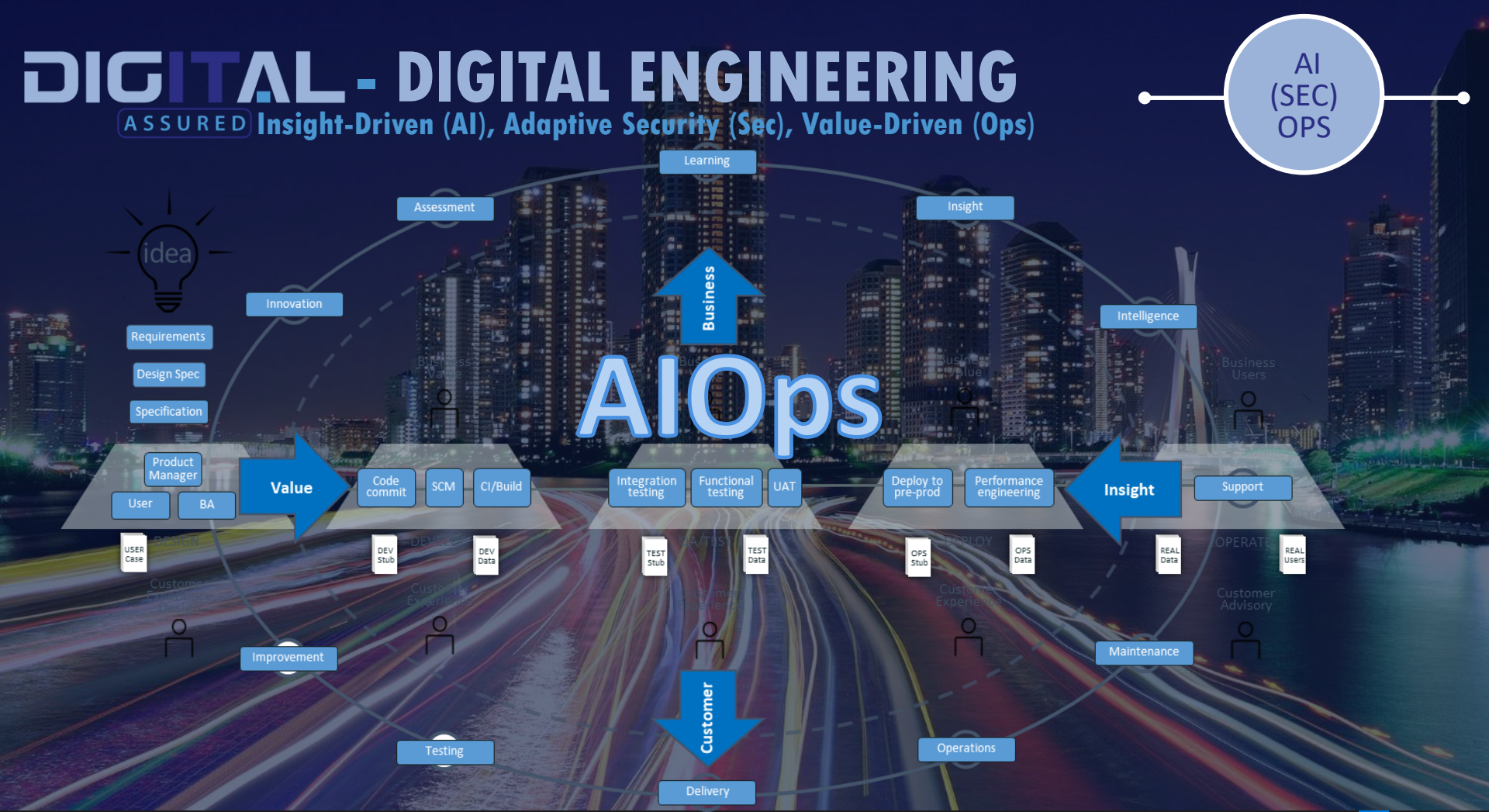
DIGITAL - DIGITAL ENGINEERING

ASSURED Insight-Driven (AI), Adaptive Security (Sec), Value-Driven (Ops)

AI (SEC) OPS



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Cybersecurity Summit 2018 Registration

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Upcoming Vivit Webinars

September 13, 2018
4 Steps to Achieve a Data Driven Culture using TotalView Analytics for ALM
8:00 - 9:00 AM PDT (Los Angeles), 11:00 AM- 12:00 PM EDT (New York), 17:00 - 18:00 CEST (Frankfurt) https://www.vivit-worldwide.org/events/EventDetails.aspx?id=1123536&group=

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Vivit SIG Talk

- Complete the short survey
- For more information, go to:

http://www.vivit-worldwide.org/?page=Quality_Testing

#VivitSIGTalk

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Thank You

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