

# External Webservice Monitoring

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COCUS AG

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# Agenda

## Introduction

COCUS & Me

## Our Approach

Technologies &  
Implementation

## The Challenge

What's the problem and  
why is it important?

## Next Generation

New Stuff  
Q&A

# Introduction

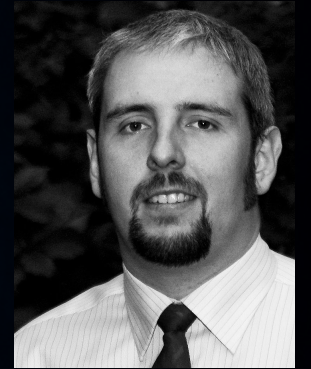
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COCUS AG



# Martin Senebald

Unit Manager Data Analytics & Cloud,  
COCUS AG



- ▶ Senior IT Consultant
  - Strong technical background
  - Architect for data and cloud solutions
- ▶ Strategic Management for Data Analytics & Cloud @ COCUS



- Strong experiences in the telecommunications, IT, Media & Entertainment (TIME) and Automotive sector
- Extensive telecommunications and connectivity know-how as basis for the new connected world, especially the Internet of Things
- Strategic Partnerships with Technology Leaders

100  
Employees

3  
Locations

1  
Company

## Performance scope:



IoT / M2M  
Value Added  
Services



Big Data  
Analytics



Information  
Security



Smart  
Contracting /  
Blockchain



Consulting &  
Development &  
Integration



# The Challenge

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What's the problem and why is it important?

# The Challenge

Wild guesses..

- ▶ Most companies provide online services to their customers
- ▶ A lot of us are heavily reliant on it
- ▶ A few of us provide the service “alone”
- ▶ The service is likely to change
- ▶ Sometimes customer behaviour is hard to predict

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category\_id=GIFTS&JSESSIONID=5D1SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product\_id=F1-SW-03"  
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product\_id=FL-DSH-01&JSESSIONID=5D3SL7FF6ADFF0 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product\_id=F1-SW-03"  
317 27.160.0.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item\_id=EST-26&JSESSIONID=5D5SL9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product\_id=AV-CB-01&JSESSIONID=5D18SL8FF3ADFF9 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product\_id=F1-SW-03"  
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# “Focus on Customer Experience Delivers Profit”

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Anna Farmery, The Engaging Brand  
(<http://bit.ly/gYMaEU>)



# The Challenge

To provide best  
Customer Experience

1. for Business Critical Services
2. in highly Distributed Environment
3. with fast Evolving Products

# Our Approach

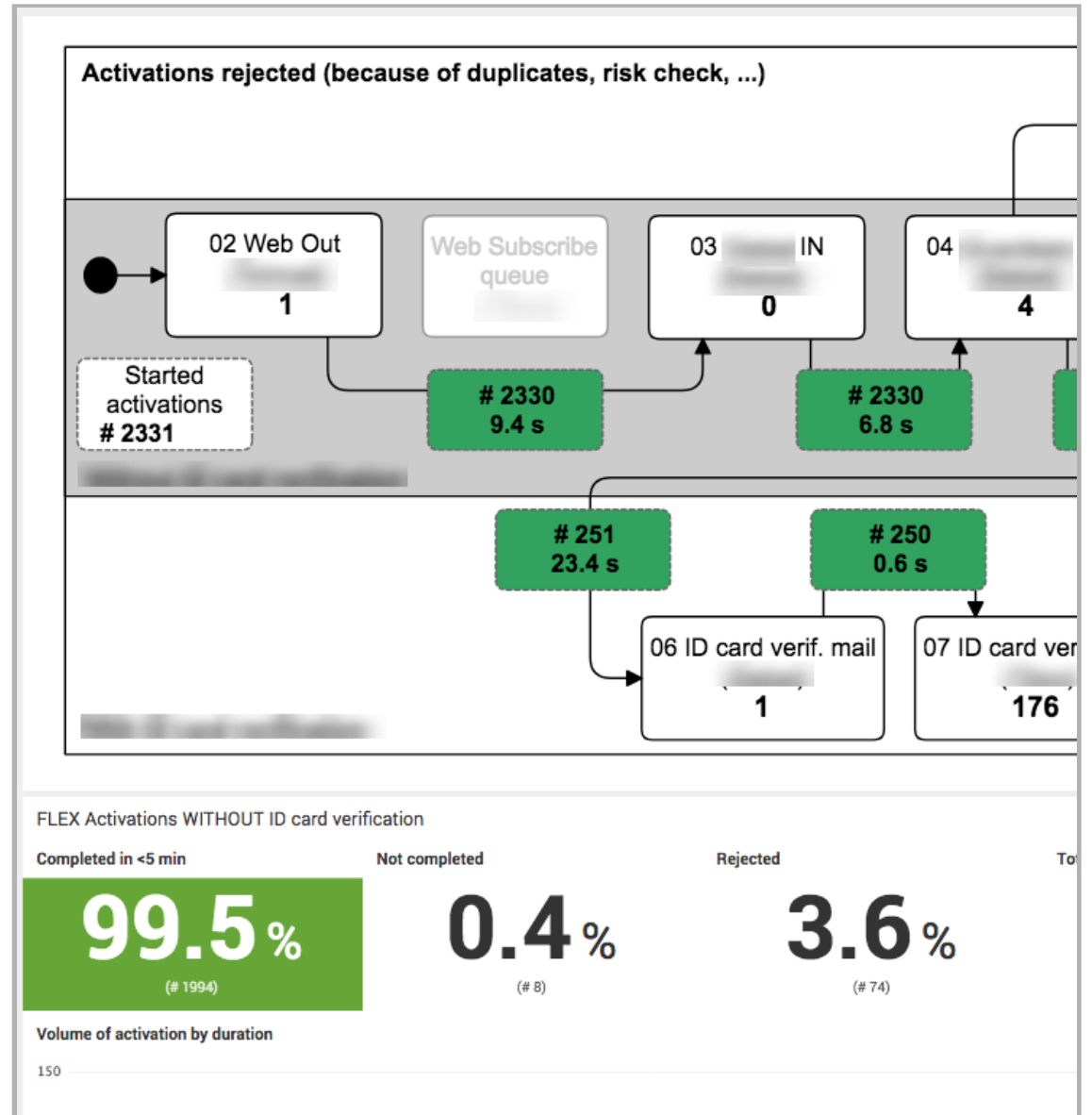
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Technologies &  
Implementation

# Solution Focus

## Getting Insights

- ▶ our own System & Services
  - In-depth Monitoring of Services and Processes using Splunk
- ▶ External Services & Partners
  - Monitoring Integration of 3<sup>rd</sup> party Providers
- ▶ Customers Experience Measurements
  - Like GA, Omniture



# Monitoring Limits

Why that might not be enough

## ► Internal Monitoring

- Restricted in resolution and granularity to own systems
- Not covering complete process flows (as the Customer experience it)

## ► Partner & external Services

- Usually limited influence what KPIs are to be delivered
- Realtime? Usually not
- Integrating this information can be tricky

## ► Customer Experience Measurements

- Issues hard to track
- Realtime? Various a lot
- Feedback might not be related to your service
- Depending on Customer usage

# What would we like to have

- ## > Simulate regularly Customer Journeys <



# External Service Monitoring

How do we do it?

## ► Leverage Cloud Providers

- To simulate customers where they are
- To scale and simulate as many as we want
- For reliability (failover, backup, exclude local problems)



## ► Use JMeter as Testframework

- To generate Testcases with Journeys
- To run the Testcases
- To capture metrics



## ► Use Splunk

- To distribute the Testcases
- To schedule the the Tests
- To gather all information and get the insights



Service Requests   Splunk Deployment   Splunk Data



# Service Tests

How to test?



## ► JMeter Framework

- Open Source Platform
- For Load and Performance Testing
- For various Protocols/Applications

## ► Testcases

- Uses Testplans, Steps, Modules

## ► Information

- Save all responses

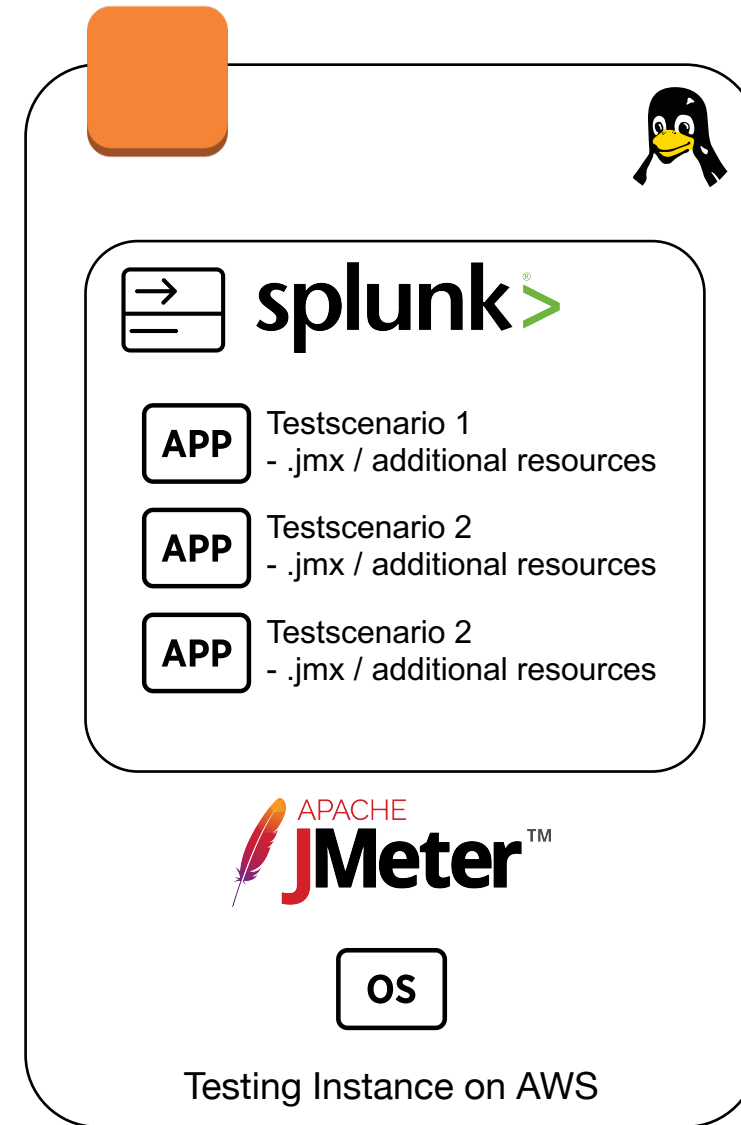
i	Time	Event
>	8/18/17 3:01:25.848 PM	2017-08-18T13:01:25.848000 name=" - Homepage" testid="ca926-de34" run=40435 =OK elapsed=731 tpt=1 tps=1 tpf=0 tot=1 tos=1 tof=0 bytes=1872 test_host=aws-service-m 124-160-168 TEST-CATEGORY="servicemon-store" host = aws-service-mon-hfw-10-124-160-168   source =   sourcetype = jmeter_test
>	8/18/17 2:56:25.904 PM	2017-08-18T12:56:25.904000 name=" - Homepage" testid="ca926-de34" run=12344 =OK elapsed=1992 tpt=1 tps=1 tpf=0 tot=1 tos=1 tof=0 bytes=1872 test_host=aws-service-m 124-160-168 TEST-CATEGORY="servicemon-store" host = aws-service-mon-hfw-10-124-160-168   source =   sourcetype = jmeter_test
>	8/18/17 2:51:25.936 PM	2017-08-18T12:51:25.936000 name=" - Homepage" testid="ca926-de34" run=38142 =OK elapsed=414 tpt=1 tps=1 tpf=0 tot=1 tos=1 tof=0 bytes=1872 test_host=aws-service-m 124-160-168 TEST-CATEGORY="servicemon-store" host = aws-service-mon-hfw-10-124-160-168   source =   sourcetype = jmeter_test
>	8/18/17 2:46:27.657 PM	2017-08-18T12:46:27.657000 name=" - Homepage" testid="ca926-de34" run=93948 =OK elapsed=1243 tpt=1 tps=1 tpf=0 tot=1 tos=1 tof=0 bytes=1872 test_host=aws-service-m 124-160-168 TEST-CATEGORY="servicemon-store" host = aws-service-mon-hfw-10-124-160-168   source =   sourcetype = jmeter_test
>	8/18/17 2:41:26.045 PM	2017-08-18T12:41:26.045000 name=" - Homepage" testid="ca926-de34" run=15375 =OK elapsed=719 tpt=1 tps=1 tpf=0 tot=1 tos=1 tof=0 bytes=1872 test_host=aws-service-m

# Scenario in a App

## Splunk Apps as Container

### ► Test Instance

- Jmeter is locally installed
- Splunk Heavy Forwarder is installed
- Configured via Deploymentserver



\* is provided by a custom module

# Scenario in a App

## Splunk Apps as Container

### ► A JMeter Testcase is bundled in a Splunk App

- Including the Scheduling information
- Including Testscenario from Jmeter
- Using a JMeter Stanza
- Facilitates Modular Input for Jmeter
- Converts Jmeter

The screenshot displays the Splunk web interface. On the left, the 'OPEN FILES' sidebar shows a tree structure with folders like 'CA-jmeter-', 'default', 'metadata', 'README', and 'scenarios'. The 'inputs.conf' file is selected. The main panel shows the configuration for 'inputs.conf' with the following content:

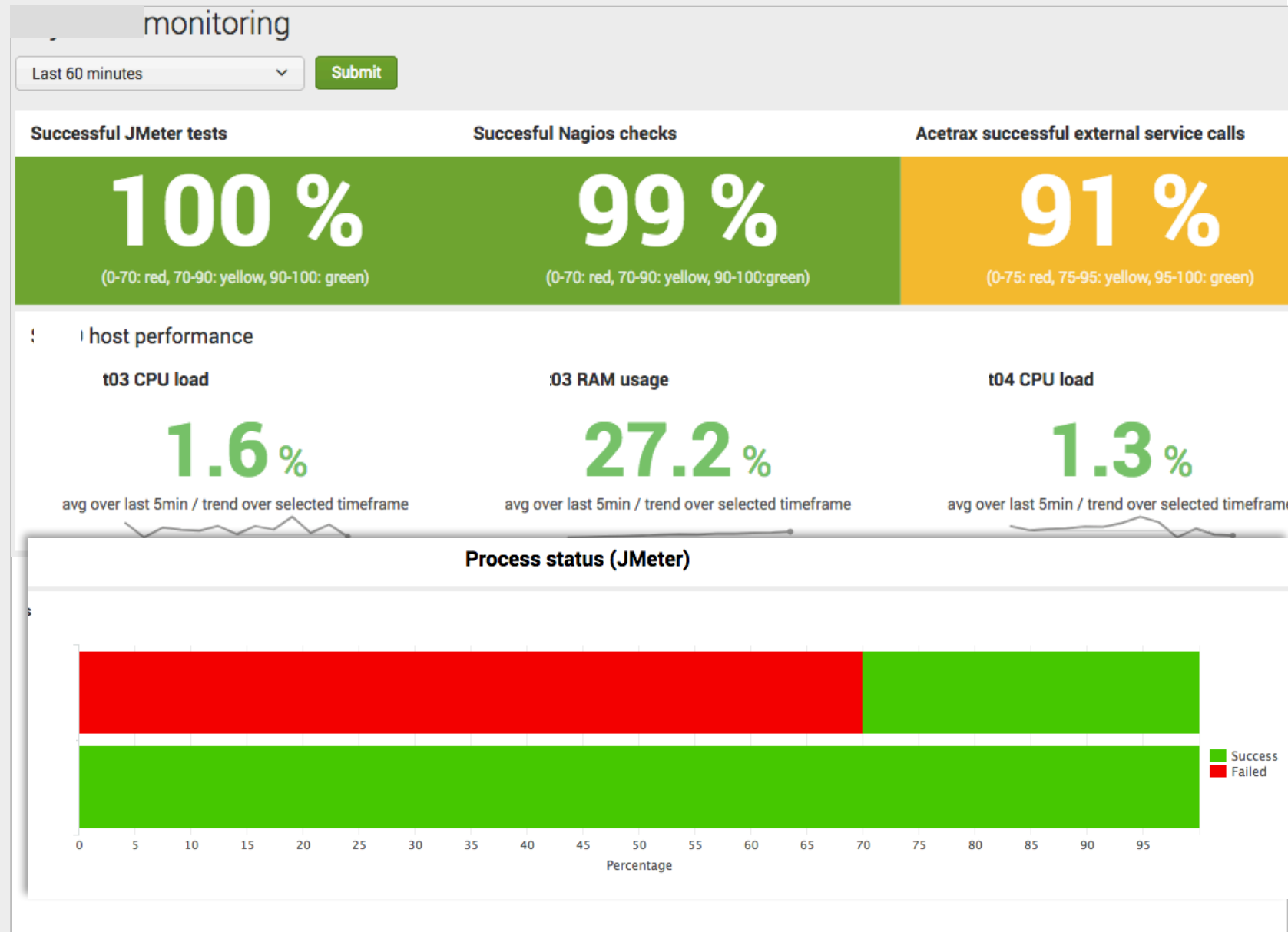
```
1 [jmeter://etc/apps/CA-jmeter- /scenarios/store_sk
2 interval = 300
3 index = gomez
4 category =
5 jmeter_exec=/opt/apache-jmeter-3.2/bin/jmeter
6
```

Below the configuration, a table of 'Event' logs is visible. The events show the execution of JMeter test scenarios, including details like 'fbstart', 'testid', 'pseq', 'lb', 'rc', 'method', 'cookies', and 'source'.

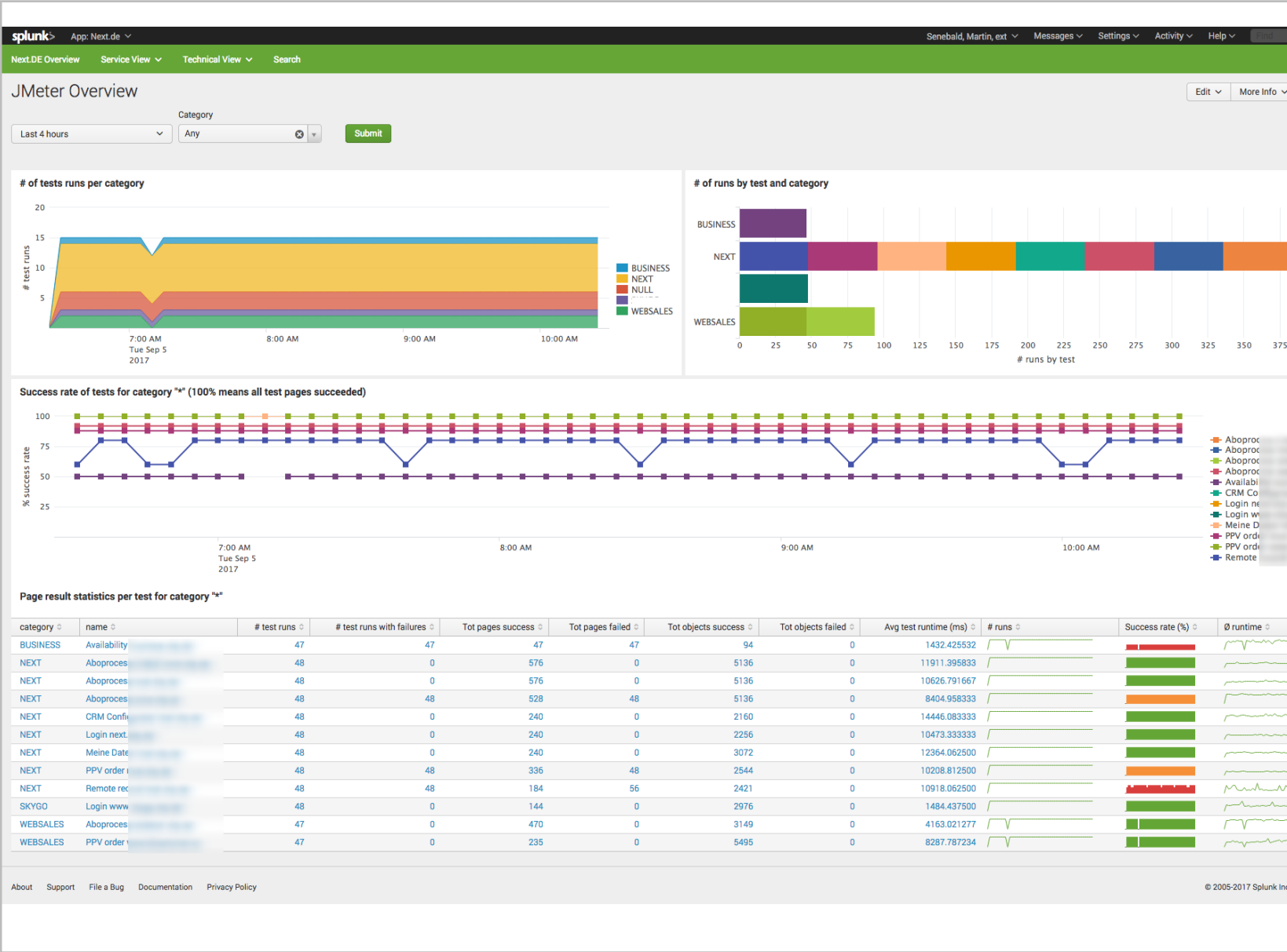
Event
fbstart=2017-09-05T09:36:19.561000,testid=8526534,pseq=5,lb="#5 Logout",rttime=77,rc="302",rc200=0,-168,method="GET",cookies="affiliate=WHPB01undefinedundefined; JSESSIONID=8077B2F2271B3E7630B87E99321opNOKYQn%2BcA0Mvwm9BoSMGnd431HD%2FzljwBqy01f9h3y0IN2DGmpCZLXf0fp7dk8NQSQ%2B1mWpHTPyupUQ32We99jTKARTE,profile.available=; nextde.emailinterception=true",s Monitoring 1.0 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/q=0.8 host = aws-service-mon-hfw-10-1 source = tr_crm_configurator_test sourcetype = jmeter_page
fbstart=2017-09-05T09:36:19.479000,testid=8526534,pseq=4,lb="#4 CRM Konfigurator",rttime=81,rc="20010-124-160-168,method="POST",cookies="affiliate=WHPB01undefinedundefined; JSESSIONID=8077B2F2271B3JnKqzEHQBSI321opNOKYQn%2BcA0Mvwm9BoSMGnd431HD%2FzljwBqy01f9h3y0IN2DGmpCZLXf0fp7dk8NQSQ%2B1mWpHTPyUSTRIA:ZWEITKARTE,profile.available=; nextde.emailintercep ttRequest } -Monitoring: Monitoring IT OSM Accept-Encoding: gzip, deflate User-Agent: Proc ost: ",sample_success=1 host = aws-service-mon-hfw-10-1 source = tr_crm_configurator_test sourcetype = jmeter_page
fbstart=2017-09-05T09:36:16.210000,testid=8526534,pseq=3,lb="#3 Abo erweiter",rttime=3266,rc="200"fw-10-124-160-168,method="GET",cookies="affiliate=WHPB01undefinedundefined; JSESSIONID=8077B2F2271



# Outcome



# Outcome

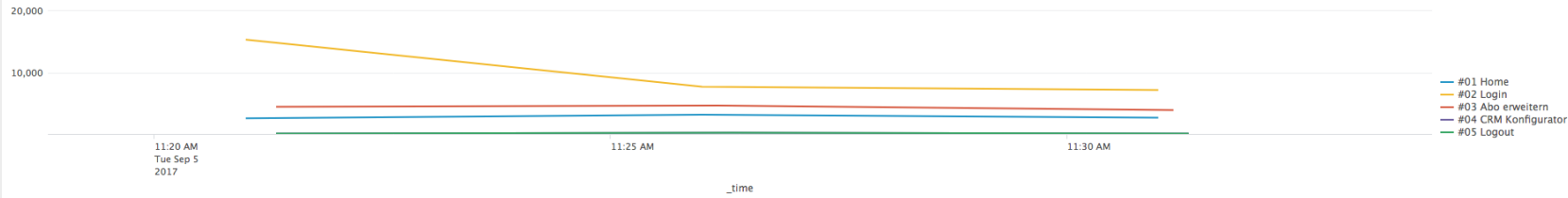


# Outcome

## Page success/failure analysis

pseq	lb	samples_count	failures_count	successes	failures	failure_rate_pct
1	#1 Home	3	0			0.0
2	#2 Login	3	0			0.0
3	#3 Abo erweitern	3	0			0.0
4	#4 CRM Konfigurator	3	0			0.0
5	#5 Logout	3	0			0.0

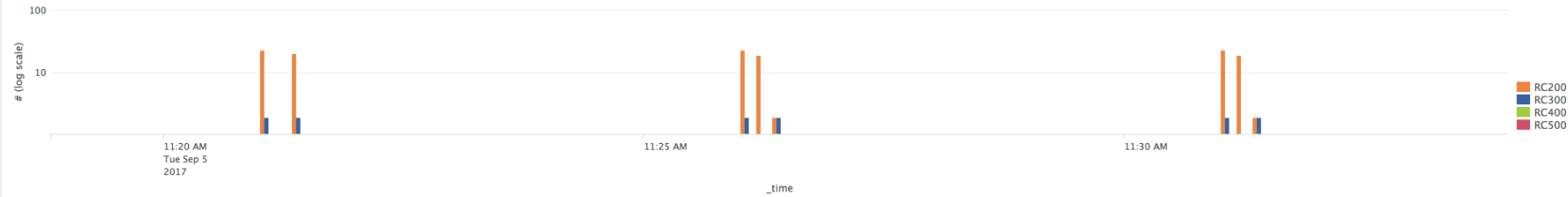
## Average Responsetime for each page



## Infos for each page

page_label	RC2XX	RC3XX	RC4XX	RC5XX	ContentMatch	ContentFailure	Responsetime
#01 Home	33	0	0	0	3	0	
#02 Login	36	3	0	0	3	0	
#03 Abo erweitern	57	0	0	0	3	0	
#04 CRM Konfigurator	3	0	0	0	3	0	
#05 Logout	0	3	0	0	3	0	

## Responsecodes



## Jmeter Detailed

testid	starting time	html	images	css	js
8085428	05.09.2017 11:26:21	18 0 0 0	5 0 0 0	3 0 0 0	
4933965	05.09.2017 11:21:29	18 0 0 0	5 0 0 0	3 0 0 0	
4663517	05.09.2017 11:31:20	18 0 0 0	5 0 0 0	3 0 0 0	

Shows the count of Returncodes (2XX | 3XX | 4XX | 5XX) for the object groups "HTML" "Images/Pictures" "Cascading Style Sheets" and "JavaScript"

## Error Analysis

No results found.

# Benefits

- ▶ Near Real-time feedback if Services & Processes running as expected
- ▶ Independent and Adaptable Solution
- ▶ End to End View for Business Critical Services
- ▶ Internal & External View together
- ▶ Enables for faster time to resolve problems (immediate insights)

# A Powerful Solution

1. Independent Tests
2. Adaptable Solution
3. End to End View



# Next Generation

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What is on the Horizon

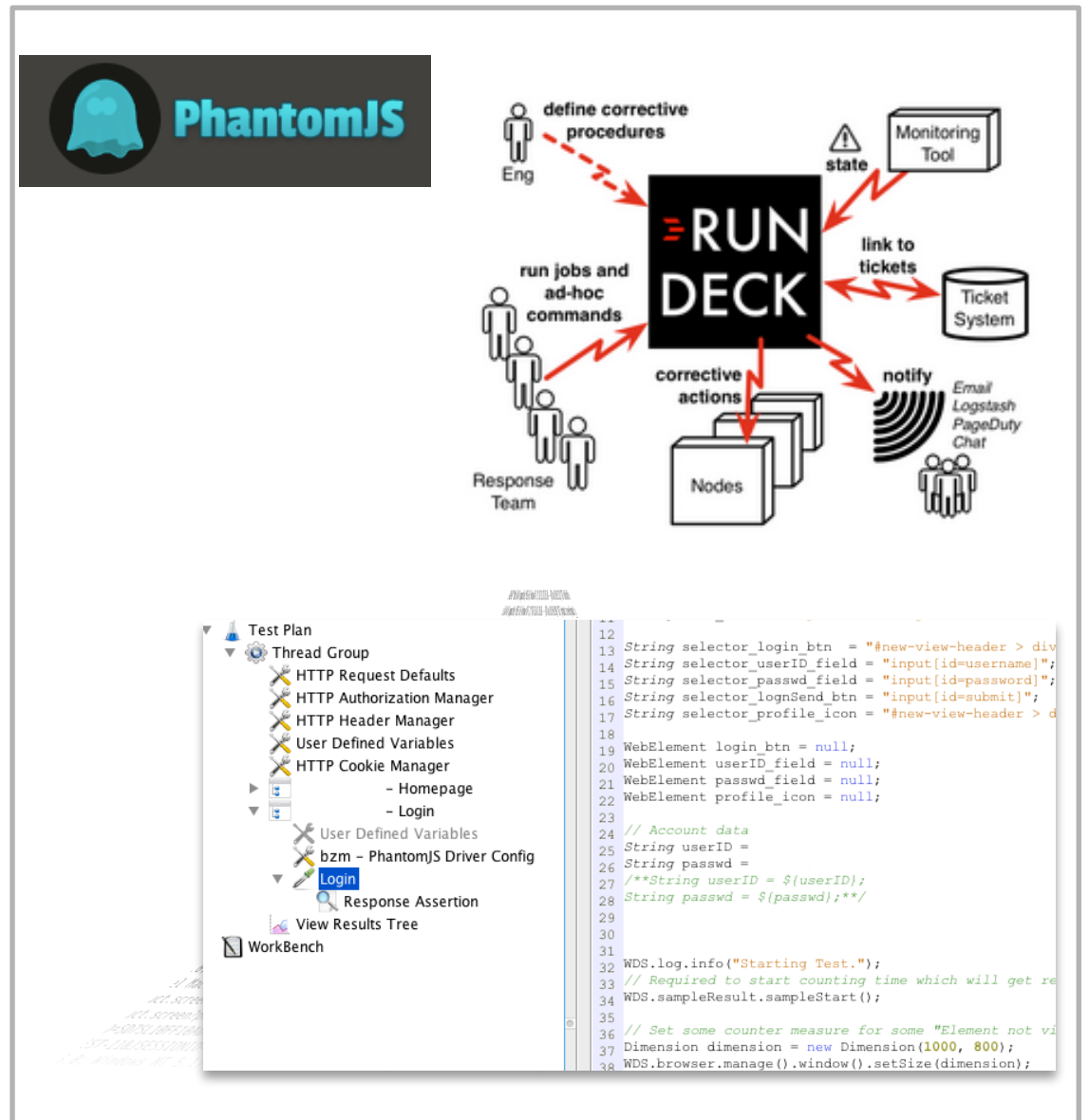
# Next Generation

## ► New features

- Using PhantomJS for Javascript Applications (like Angular)
- Replace Scheduling with Rundeck

## ► New Use Cases

- Investigation Tests
- Individual Tests (Chains of Testflows)
- Ad-hoch Loadtest



# Q&A

Martin Senebald | Unit Manager Data Analytics & Cloud,  
COCUS AG

# Thank You

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