



# StormRunner Load

DevOps Agile Journey

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PMO, Agile Release Manager



# About Micro Focus StormRunner Load

StormRunner Load is a cloud based solution that makes it easy to plan, run, and scale performance tests without the need to schedule, deploy, and manage load generators

simple | **smart** | scalable

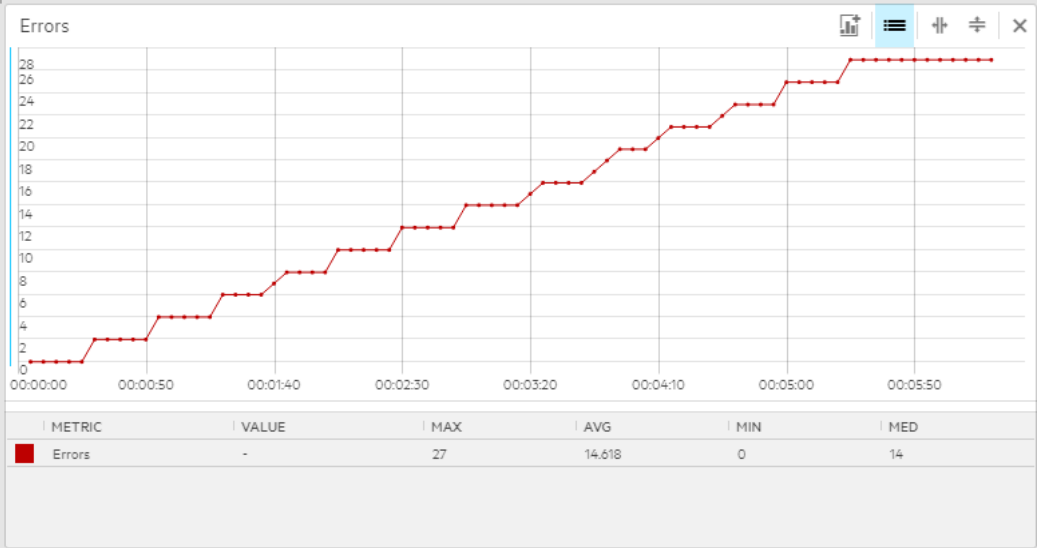
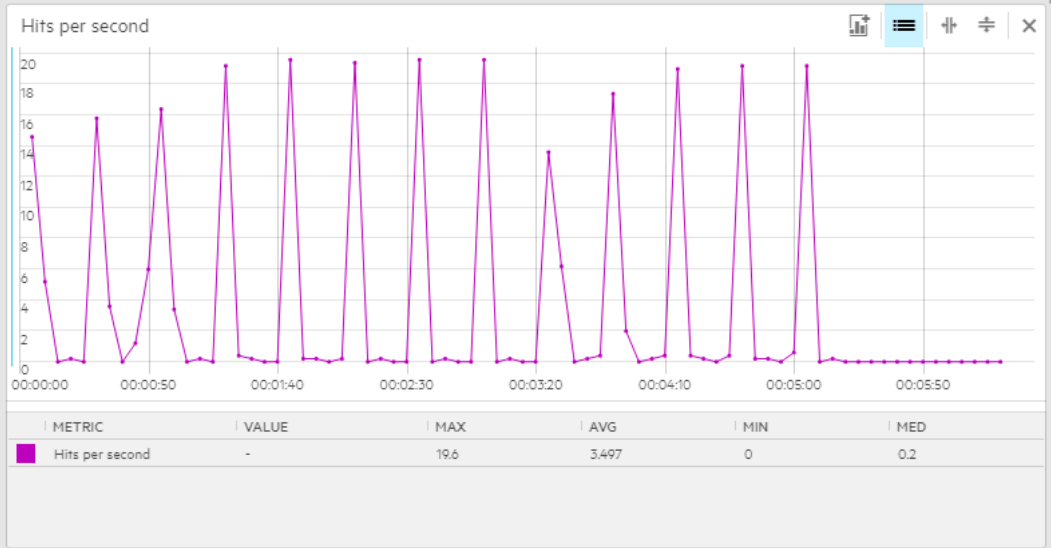
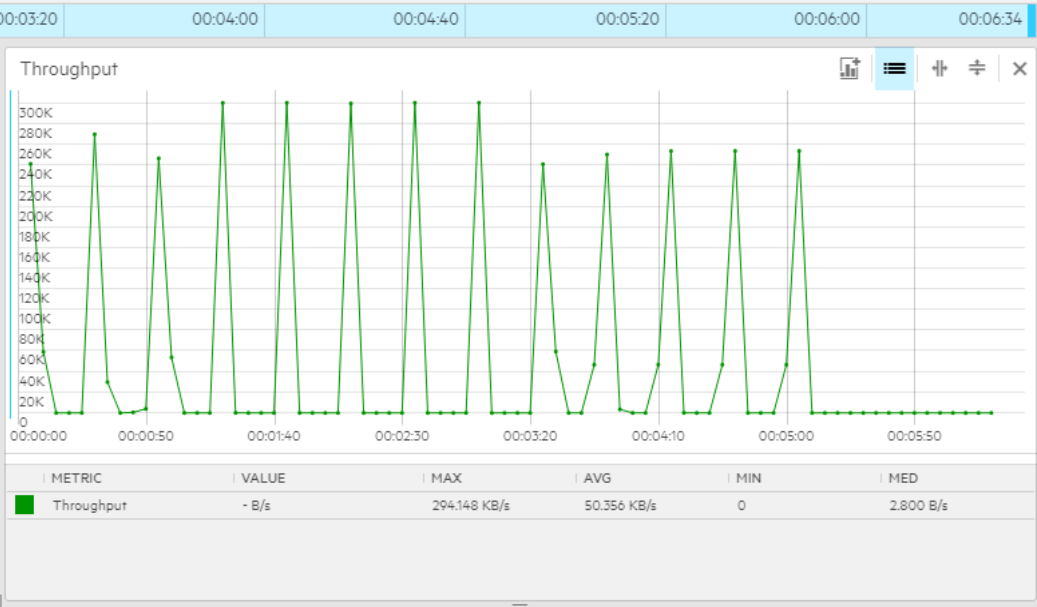
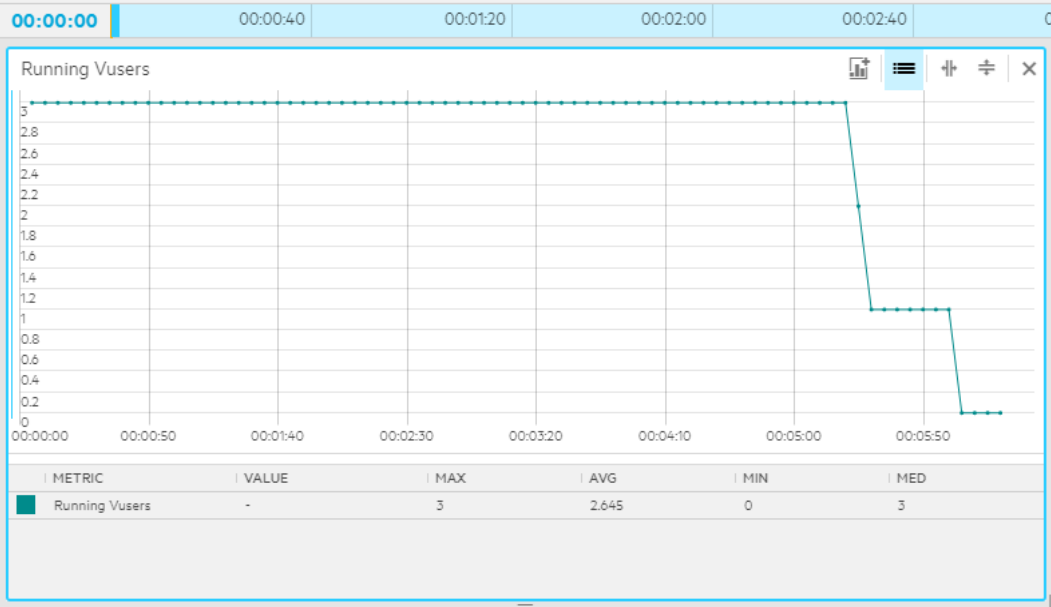
DATE	START TIME	DURATION	PLANNED GUI USERS
2/12/2018	07:16	00:06:34	3

Search

Hide all Expand visible Compare

Run #1892

METRICS (FROM RUN)	VALUE	BREAK
Running Users	-	
Failed Users	-	
Hits per second	-	
Throughput	- B/s	
Errors	-	
Errors per second	-	
Connections	-	
Transactions	-	
Monitors	-	



# Introducing StormRunner Load

## Cloud based performance testing

### Simple

Design a load test  
In under 10 minutes

10

minutes

### Smart

Real time predictive analytics  
For quick problem isolation

5

seconds

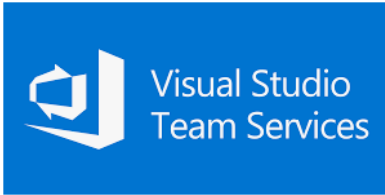
### Scalable

1 to 5M+ VUsers  
From Real world locations

5M+

VUsers

# Rich Integrations for DevOps Tool Chain





**From separated teams to a single group.**

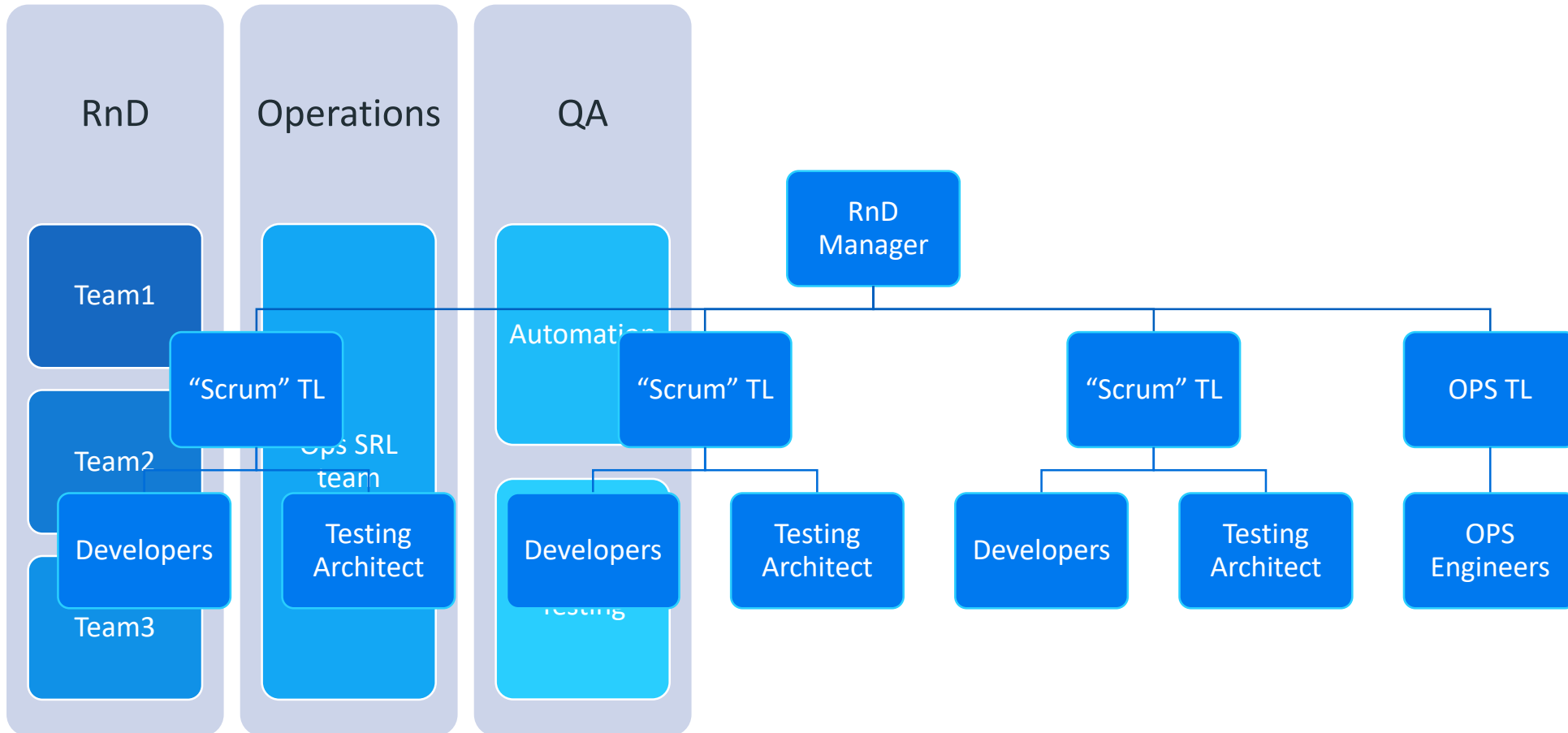
# קטע ממגזין עולם הבדיקות האחרון

הנה סיפור קצר להמחשה: התקשרתי למנהל QA שלא הכרתי כדי לקבל המלצה על מועמד שבחנו לקבל לעבודה. המנהל, שבינתיים גם הוא עבר למקום עבודה חדש, היה נחמד מאוד, שיתף פעולה ועזר לי מאוד לקבל החלטה לגבי המועמד. אבל ממש בסוף השיחה שאלתי אותו האם הציע לאותו מועמד להצטרף אליו לחברה החדשה אליה עבר ותשובתו הייתה "אצלנו אין QA, רק אוטומציה שאני אחראי עליה".

שנה חלפה, ובחברה שבה עבדתי התרחשו מספר תקלות חוזרות שנעשו ע"י שירות חיצוני בו השתמשנו (תקלות שהשפיעו באופן ישיר על לקוחותינו). לאחר מספר נסיונות ואזהרות ביטלנו את השירות מאותה חברה (הרי לא חסרים מתחרים). זה היה שירות אותו סיפקה... ניחשתם? אותה חברה בה עבד המנהל איתו דיברתי. "כנראה בכל זאת חסר להם משהו בתחום ה-QA" חשבתי לעצמי.



# StormRunner Load Group unification success story



# StormRunner Load Agile in General

- The Agile process is managed by [ALM Octane](#)
- Our Release cycle is ~2 months from CF to CF
- 3 development Sprints 1 stabilization sprint
- Each Sprint is 2 weeks
- TL is the “Scrum” Master
- Each sprint have Planning and retrospective is part of the planning. We conducting post release retrospective in management level.

# Work Flow During Development Sprint

- Each developer is assigned to feature/features
- All Agile management is done via Octane (Feature\User Stories\Defects etc)
- Feature can be extended between sprints and sometimes releases but it is not ideal. In general we are trying to create MMFs when feature is huge.
- Developer is the Feature Owner and in charge of the feature development, Test Automation and Manual tests if needed and on all other aspects that need to be considered (Documentation – working with Docs (Technical writer), DBA, Performance – Working with Performance Engineer, Security etc)
- Feature is moving to Done after Feature Check list is approved.

# Feature Check List

	Feature Name	<Feature Name>			
	Description	<short feature description>			
	Phase	Tasks	Status	Comments	Stakeholder
1	Execute	Coding			TL
2	Execute	Code Review			TL
3	Execute	Automation			TL
4	Execute	Infra/Devops changes review			TL/DevOPS
5	Execute	Strings and docs Review			Docs
6	Execute	Functional review		was reviewed by FA/SA?	FA/TL/SA
7	Execute	UX+Graphic review			UX\Graphics
8	Execute	complete graphics adjustments			UX\Graphics
9	Execute	DBA Review			DBA
10	Execute	Security review			SA/Elena
11	Execute	Document & send new/modified Public APIs to SA			SA
12	Execute	Document & send new/modified 3rd parties to SA			SA
13	Execute	Testing		The team tested the feature branch and approved the merge?	QA
14	Execute	Performance test			TL
15	Execute	Monitors			TL
16	Execute	Usage Statistics & Google Analytics			TL/FA
17	Execute	Provide description to the writing "What's new"			FA
18	Deliver	Record Feature Demo			TL



FOLLOW



DETAILS RELATIONS BACKLOG ITEMS COMMITS TESTS ATTACHMENTS HISTORY

📄 🔄 ✉️ 🔗 📅 Plan 📁 Split Feature ⏪ Show Prisma Coverage | More ▾



⊖ Description

Description:

ACTUAL BEHAVIOR:  
We currently can update the MAX test duration time to 99H manually only via the DB.  
(Needed mostly for intensive test)

EXPECTED BEHAVIOR:  
We should be able to configure MAX test duration time via the OC (Adding a feature).

Need to add to operations console the ability to define on a tenant level, the maximum time to run a test, and be able to configure it to 99H.

Defect related - [Defect 167128 - Features - We need to add the option to update Max test Duration time to 99H via OC](#)

TAGS  
Has Tests + X

- RELATED USERS
- Lior Urbani  
Author
  - Yonatan Nissan  
Owner
  - Benny Mizrachi  
DevTest Owner
  - Select user  
Doc Owner
  - rdapps  
Last Modifier

⊖ General

Global ID:	<u>OCTFT10A168130</u>	Feature type:	<u>Business</u>	▪ Epic:	<u>ⓔ Performance Testing - Test definition</u>
Application modules:	<u></u>	Branch Name:	<u>update-max-duration-oc</u>	▪ Team:	<u>Itzik</u>
Priority:	<u></u>	Items in releases:	<u>Alphaville SRL 3.5; Beatles SRL 3.6</u>	Source IDs:	<u></u>
Depends on IDs:	<u></u>	Legacy ID:	<u></u>		

⊖ Tracking

Progress:	<u><div style="width: 100%; height: 10px; background-color: green;"></div></u>	Actual story points:	<u>21</u>	QA Coverage:	<u></u>
QA Quality:	<u></u>	▪ DevOps Status:	<u>0-Not Required</u>	▪ Graphics Status:	<u>3-In Testing</u>
▪ Doc Phase:	<u>No Docs Required</u>	G11N Status:	<u>0-Not Required</u>	▪ PCoE Status:	<u>0-Not Required</u>
Security Risk:	<u>Medium</u>	Security Status:	<u>0-Not Required</u>		

⊖ Version





Backlog F 168130 | Update Max test Duration time to 99H via OC

**FOLLOW**

< 98 out of 173 >  
 Phase: Done | [Move to In Progress](#) ▾

[DETAILS](#)
[RELATIONS](#)
[BACKLOG ITEMS](#)
[COMMITTS](#)
[TESTS](#)
[ATTACHMENTS](#)
[HISTORY](#)








































+ User Story ▾  







+ Add Filter

ID	Severity	Team		Name	Rank	Owner	Story points	Phase	Sprint	Milestone	Release
178031	--	Itzik		Planning		 Yonatan ...	2	Done	Sprint 2		Alphaville SRL 3.5
182146	--	Itzik		Automation		 Yonatan ...	4	Done	Sprint 0		Beatles SRL 3.6
183127	--	Itzik		[Tech] Functional review		 Yonatan ...	0	Done	Sprint 0		Beatles SRL 3.6
183128	--	Itzik		Feature testing - Max Duration		 Benny M...	1	Done	Sprint 0		Beatles SRL 3.6
183130	--	Itzik		[Tech] Record feature demo		 Yonatan ...	0	Done	Sprint 0		Beatles SRL 3.6
186013	--	Itzik		As an operator, I wish to have a...		 Yonatan ...	1	Done	Sprint 3		Alphaville SRL 3.5
186014	--	Itzik		As an operator, I wish to be able...		 Yonatan ...	2	Done	Sprint 3		Alphaville SRL 3.5
187018	--	Itzik		As an operator, I wish to be noti...		 Yonatan ...	2	Done	Sprint 3		Alphaville SRL 3.5
193210	 Medium	Itzik		Update Max duration - when m...		 Yonatan ...	1	Closed	Sprint 0		Beatles SRL 3.6
193224	 Medium	Itzik		Need to adjust the OC tenants ...		 Yonatan ...	1	Closed	Sprint 0		Beatles SRL 3.6
194078	--	Itzik		Change edit box of max duratio...		 Yonatan ...	2	Done	Sprint 0		Beatles SRL 3.6
195001	 High	Itzik		Update max duration feature - v...		 Yonatan ...	1	Closed	Sprint 0		Beatles SRL 3.6
195040	 Medium	Itzik		OC (Max Duration) - We get an ...		 Yonatan ...	1	Closed			Beatles SRL 3.6
197001	 Low	Itzik		OC (Max Duration) - We need to...		 Yonatan ...	1	Fixed	Sprint 1		Beatles SRL 3.6
197003	 Medium	Itzik		OC (Max Duration) - The Title o...		 Yonatan ...	1	Closed			Beatles SRL 3.6
197006	 Low	Itzik		OC (Max Duration) - The word "...		 Yonatan ...	1	Closed			Beatles SRL 3.6

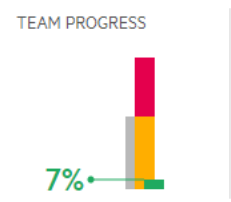
Release: Beatles SRL 3.6 (De...

Sprint: < > Sprint 1 (Current)

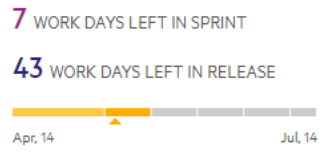
Milestone: < > [All Milestones]

Team: Itzik

Retrospective:



0 CRITICAL DEFECTS



COMMITTS  
No data to display

FEATURES BACKLOG ITEMS TESTS TASKS COMMITS

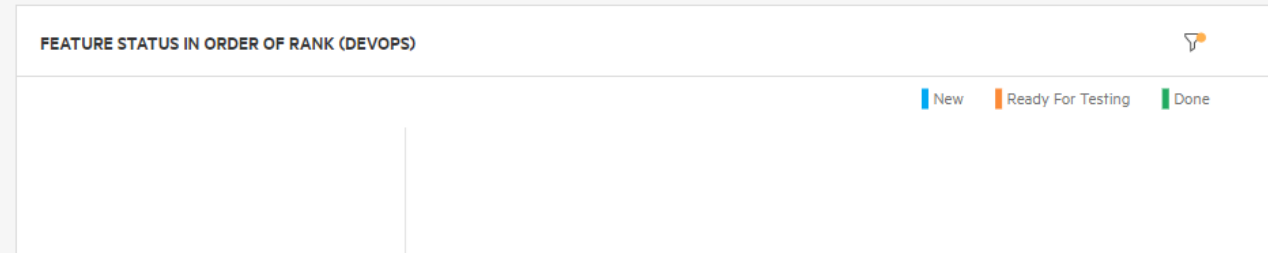
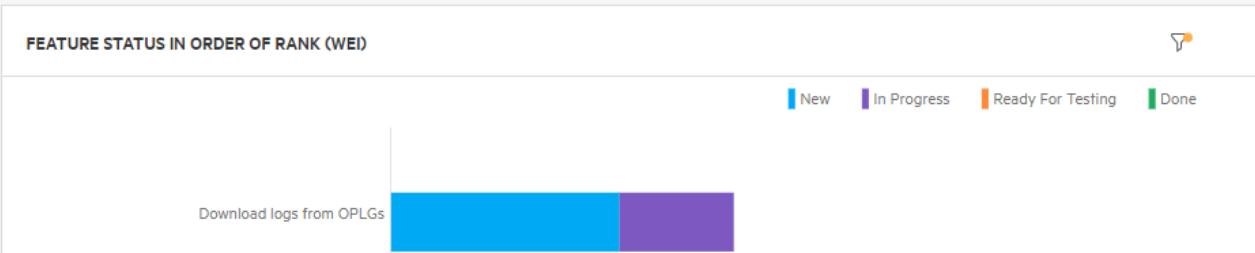
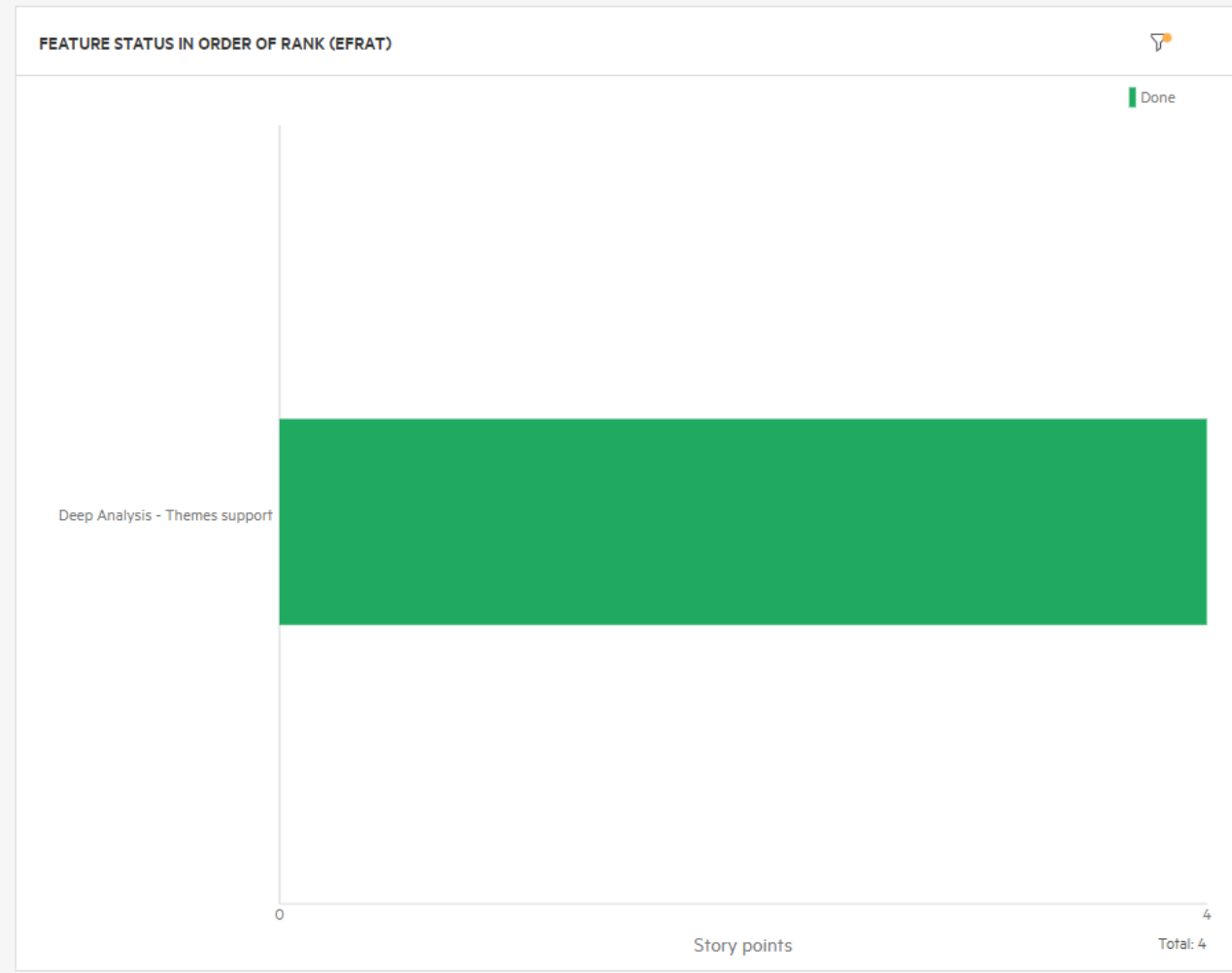
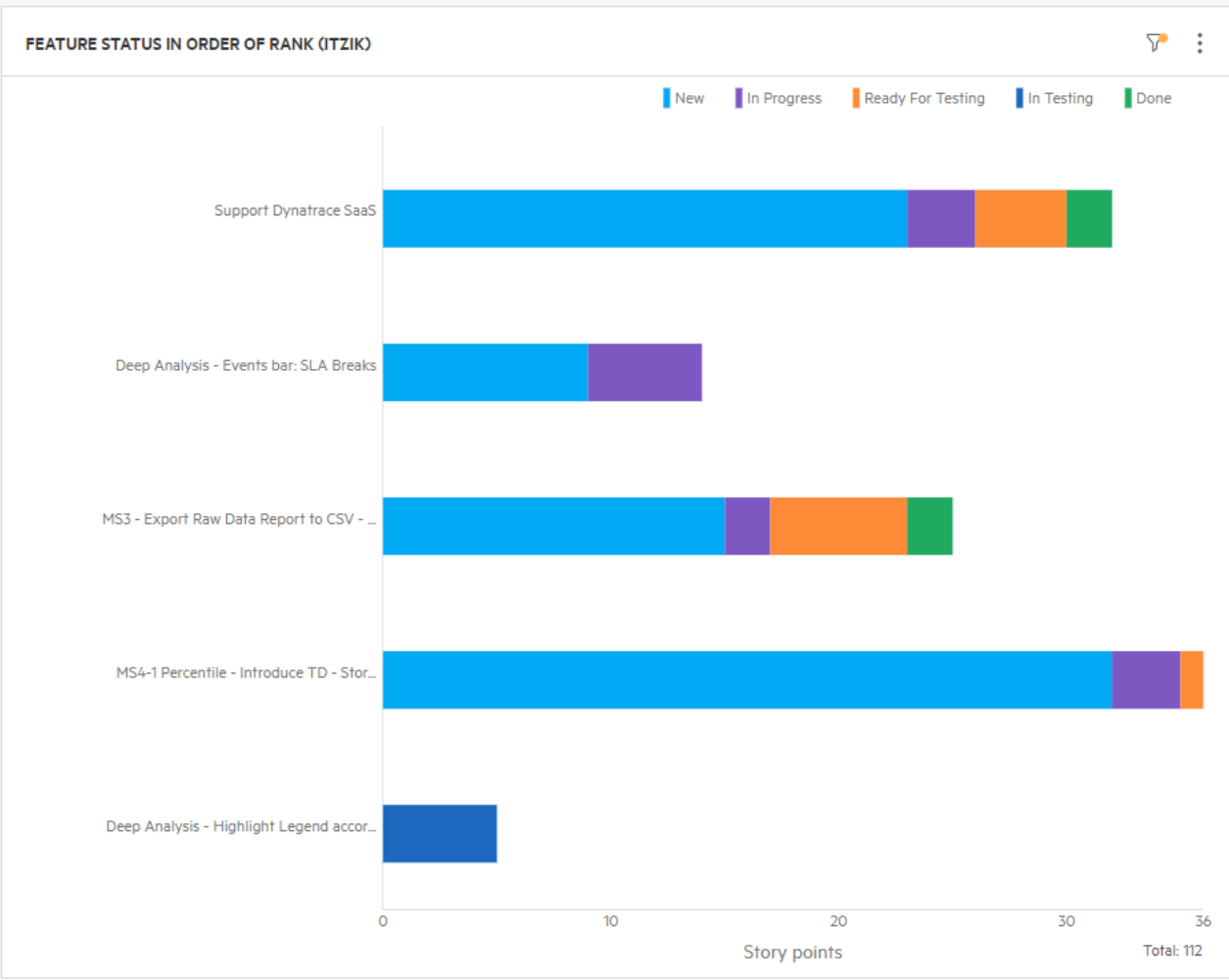
+ User Story

+ Add Filter

Filter and view icons

NEW	IN PROGRESS	IN TESTING	DONE
90/∞	9/∞	17/∞	31/∞
New	In Progress	Ready For Testing	Done
90	9	9	31
<p>US 195052 As a user configuring an Dynatrace SaaS monitor, after ... 8</p> <p>2 SP</p>	<p>US 204037 [Tech] Research - Choose the technologies to work with 3</p> <p>3 SP</p>	<p>US 195050 [Tech]As a developer, I wish to have a dynatrace wrapper which ... 4</p> <p>3 SP</p>	<p>D 204033 [Production]High failure rate when running a test that contains ... 1</p> <p>1 SP</p>
<p>US 195053 As a user I should be able to select the host which I would like to ... 9</p> <p>2 SP</p>	<p>US 197014 As a user , I should be able to choose Dynatrace SaaS when adding a... 5</p> <p>1 SP</p>	<p>US 195051 [Tech]As a developer, I wish to have an API to retrieve Dynatrace ... 6</p> <p>1 SP</p>	<p>D 174022 OC - When entering an email address with capital letters for a newly ... 38</p> <p>1 SP</p>
<p>US 195054 As a user, I should be able to run a test with Dynatrace SaaS ... 11</p> <p>3 SP</p>	<p>US 195049 As a user configuring Dynatrace SaaS monitor, I should be ... 7</p> <p>2 SP</p>	<p>US 195059 As an Operator I would like A new tenant feature flag in OC to ... 10</p> <p>1 SP</p>	<p>D 193161 [Inspector] - TypeError: Cannot read property 'replace' of ... 39</p> <p>1 SP</p>
<p>US 196015 As a user configuring Dynatrace SaaS monitor, I wish my ... 12</p> <p>2 SP</p>	<p>US 197016 [Tech]As a developer, I wish to have an API to retrieve Dynatrace ... 10</p> <p>2 SP</p>	<p>US 197022 As an operator, I wish to see the limit for Raw transactions CSV File ... 17</p> <p>0 SP</p>	<p>D 167133 [Security]: [AWS] SRL Uses an Unofficial NodeJS Docker Image 40</p> <p>2 SP</p>
<p>US 197018 As a user, I should be able to delete my Dynatrace SaaS monitor 13</p> <p>1 SP</p>	<p>US 204018 [Tech] Add S3 Service Api - Download all files in path 14</p> <p>1 SP</p>	<p>D 197001 OC (Max Duration) - We need to omit irrelevant border line and ... 41</p> <p>1 SP</p>	<p>US 199078 Test cases for SAP PQ 30</p> <p>2 SP</p>
<p>US 195061 As a user, I would like to download the Raw transactions data ... 15</p> <p>4 SP</p>	<p>US 197023 As a user, I would like to enable the generation of Raw ... 18</p> <p>1 SP</p>		<p>D 195043 Deep Analysis - Anomalies on the tree in on-line mode: anomalies in ... 32</p> <p>2 SP</p>

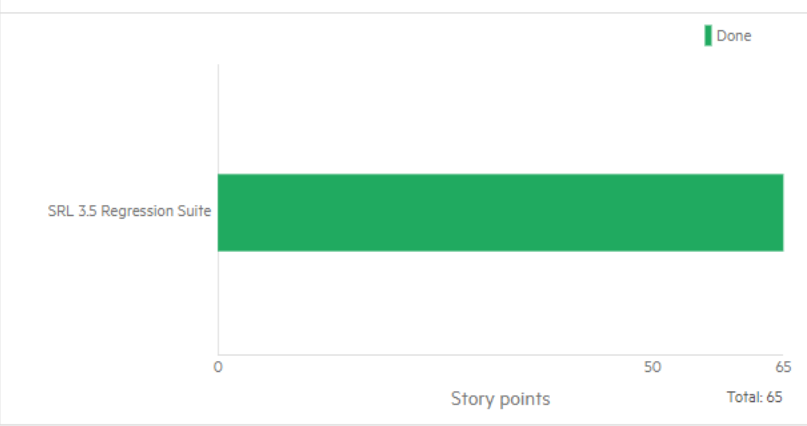
Total backlog items: 44



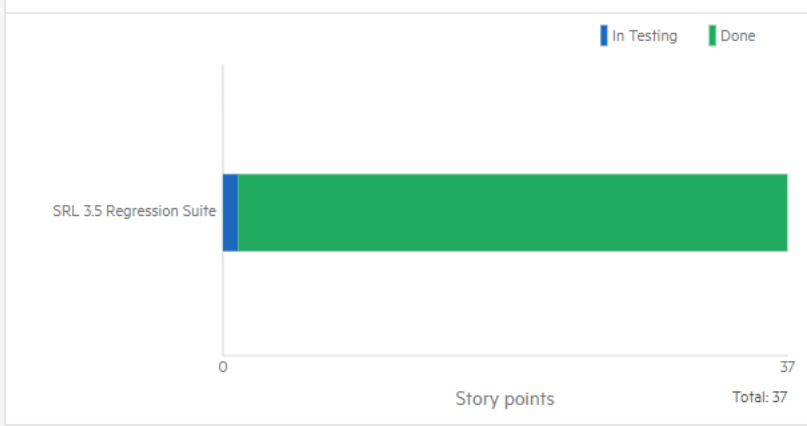




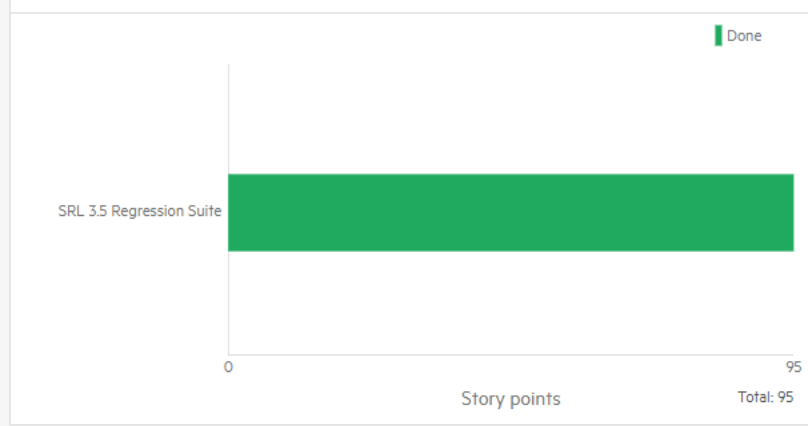
### 3.5 REGRESSION STATUS - EFRAT



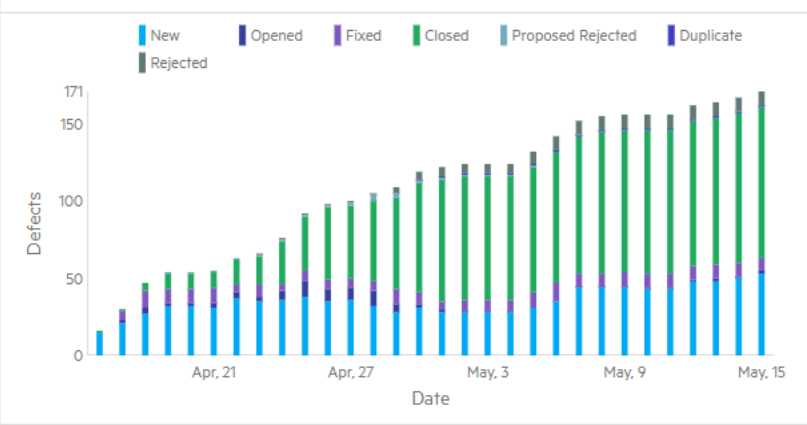
### 3.5 REGRESSION STATUS - ITZIK



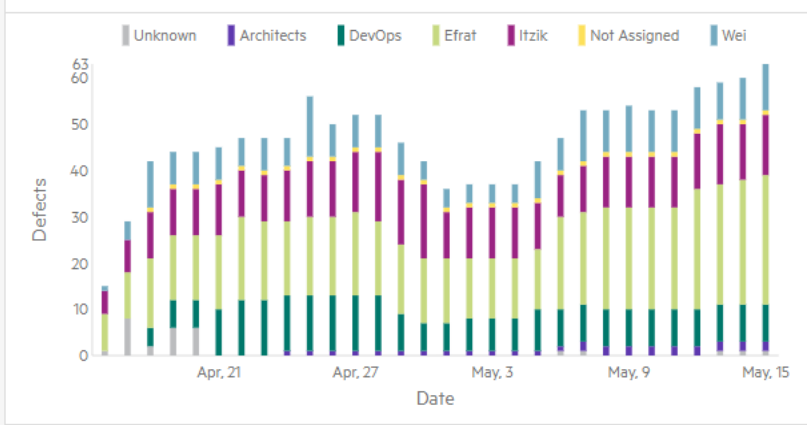
### 3.5 REGRESSION STATUS - WEI



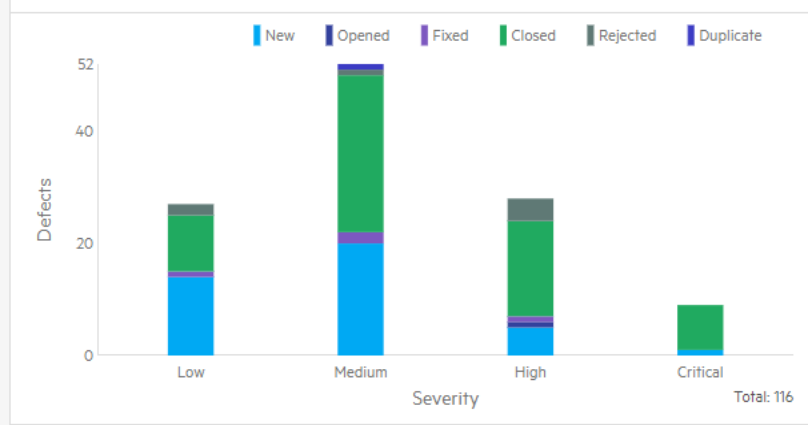
### STABILIZATION SPRINT DEFECT TREND



### STABILIZATION SPRINT DEFECT TREND BY TEAMS



### STABILIZATION SPRINT DEFECT BY SEVERITY



### 3.5 REGRESSION STATUS - ALL



# Regression Sprint with unified team

- Tests are managed by User Stories in order to give the team leader the ability to manage the sprint as regular development sprint
- The User Story define the needed tests to be done via description or attached test using [Octane](#)
- Each team member (Developers or Test Architect) having there own Users Stories
- Surprise!!!! Developers submitting defects and making Manual test if needed.
- Our goal is to reduce Regression sprint duration, to reach up to 95% automation and to shorten our delivery to production cycles



**From monolithic deployment to  
micro services and K8S use**

# From Local (Micro Focus) Data Center to AWS

## FROM

---

Private cloud provider (SaaS DC)

---

Monolithic service  
(Virtual Machines)

---

Process coding

---

## TO

AWS

Micro service

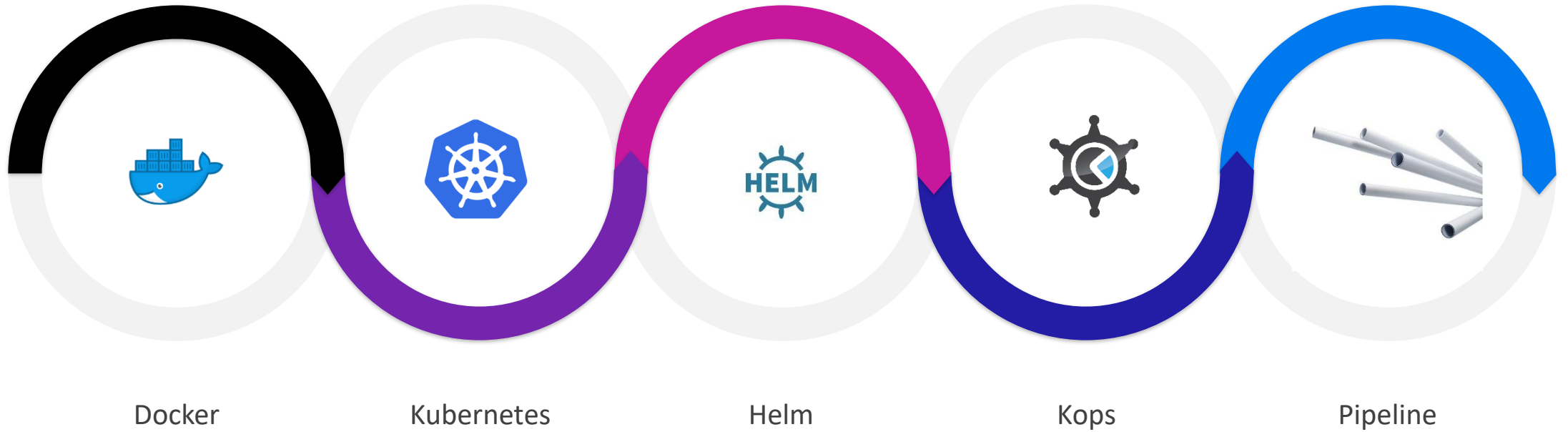
State

# Why?

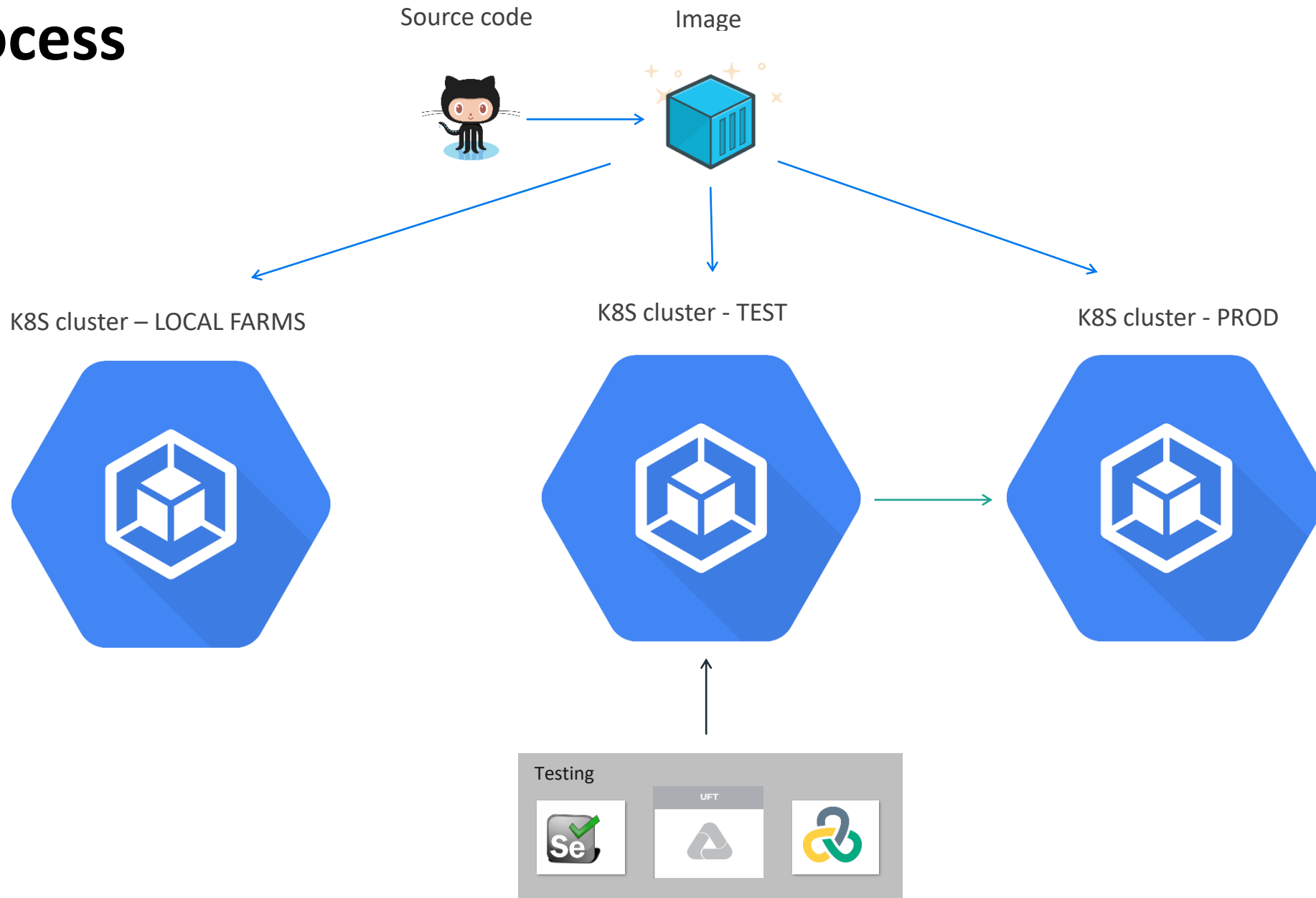


Benefits of moving to AWS

# How?



# process

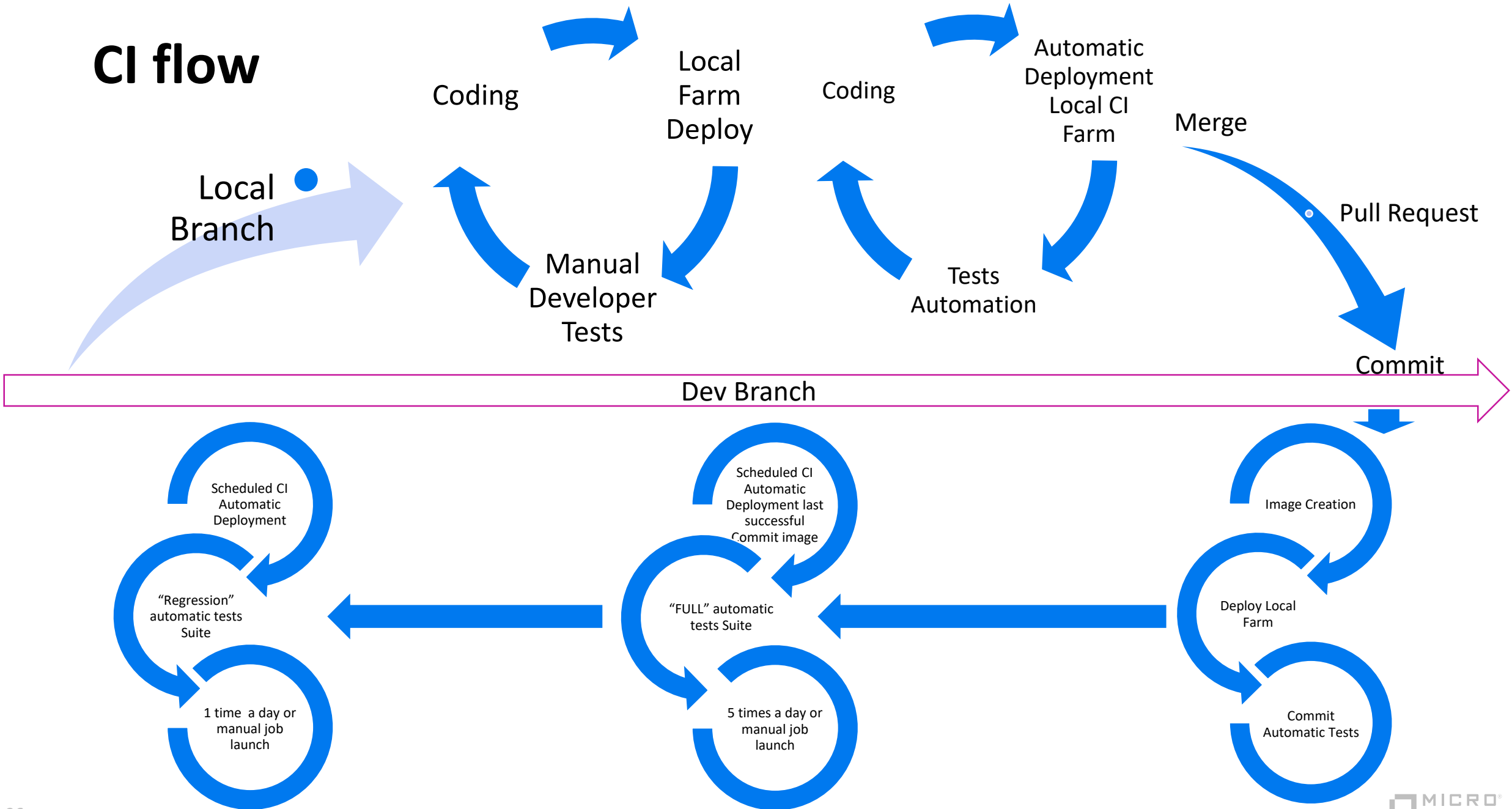




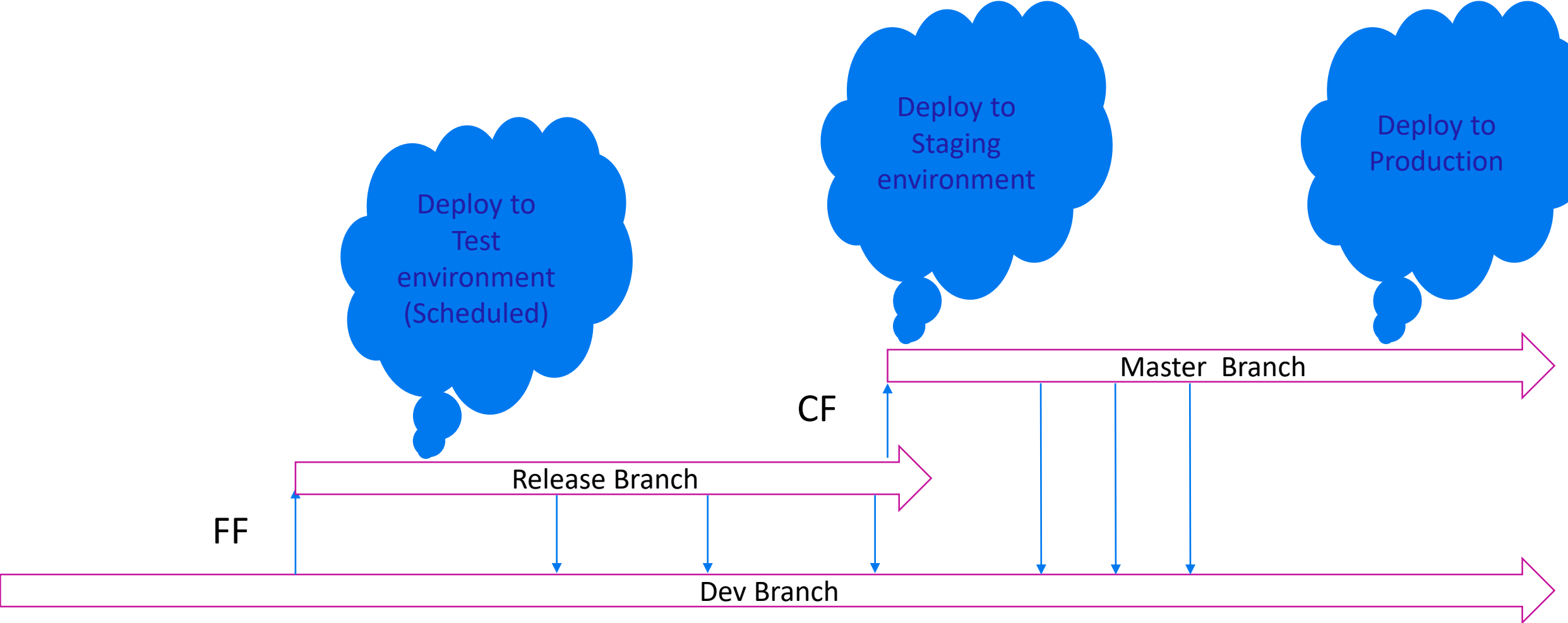
**From developer machine into  
Production in “no-time”**



# CI flow



# From development to Production Deployment





# AWS-CICD-DASHBOARD



## SRL-AWS-DELETE-LOCAL-FARM

#5568 33 minutes ago

## SRL-AWS-DEPLOY-LOCAL-FARM

#4871 40 minutes ago

## SRL-AWS-DEPLOY-NON-PROD-FARM

qa1

#354 13 hours ago

## SRL-AWS-NIGHTLY-DEPLOY-TO-QA1

AWS-NIGHTLY-dev-DEPLOY

dev Beatles\_3.6\_dev\_684

#189 13 hours ago

## SRL-AWS-PCOE-NIGHTLY-DEPLOY-AND-TESTING

50 builds have failed

#147 16 hours ago

## SRL-COMMIT-DEV

COMMIT-DEV-dev-688-meir-eliezer

dev Beatles\_3.6\_dev\_688

#688 35 minutes ago

## SRL-COMMIT-MASTER

COMMIT-MASTER-master-44-moshe-boim

master Alphaville\_3.5\_master\_44

#44 23 hours ago

## SRL-FULL-DEV

FULL-DEV-dev-341-Beatles\_3.6\_dev\_687

dev Beatles\_3.6\_dev\_687

#341 5 hours ago

## SRL-FULL-MASTER

FULL-MASTER-master-47-Alphaville\_3.5\_master\_44

master Alphaville\_3.5\_master\_44

#47 9 hours ago

## SRL-MULTI-BUILD

MULTI-vars\_5-1463

export-raw-transactions-itzik Beatles\_3.6\_export\_raw\_transactions\_itzik\_MULTI\_1462

#1463 9m 45s | 45m 20s

## SRL-REGRESSION-DEV

REGRESSION-DEV-dev-283-Beatles\_3.6\_dev\_687

#283 7 hours ago

## SRL-REGRESSION-MASTER

Back in the green!

REGRESSION-MASTER-master-20-Alphaville\_3.5\_master\_44

#20 21 hours ago



**From Legacy monitoring into  
Modernized view to production**

envName:"prod-aws"

Uses lucene query syntax

- Discover
- Visualize
- Dashboard
- Timelion
- Machine Learning
- Graph
- Dev Tools
- Monitoring
- Management

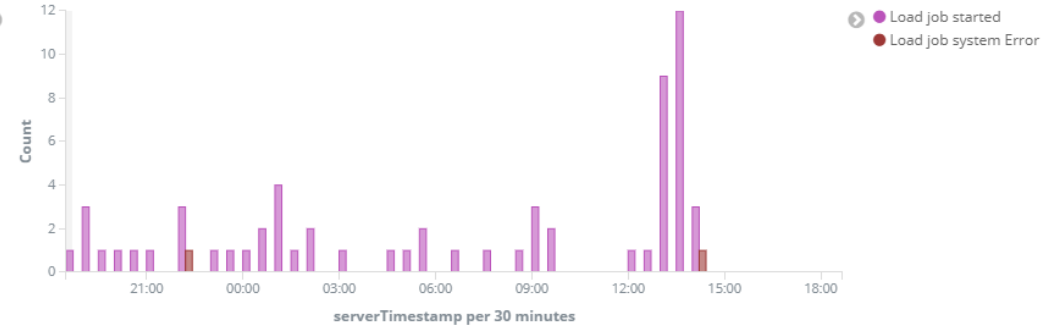
Add a filter +

\_SRL Fatal Errors Count    \_SRL Launch Test Count    \_SRL System Errors Count

Fatal Errors Count: **7,666**  
 Launch Test Count: **62**  
 System Errors Count: **2**

Fatal Errors Count    Launch Test Count    System Errors Count

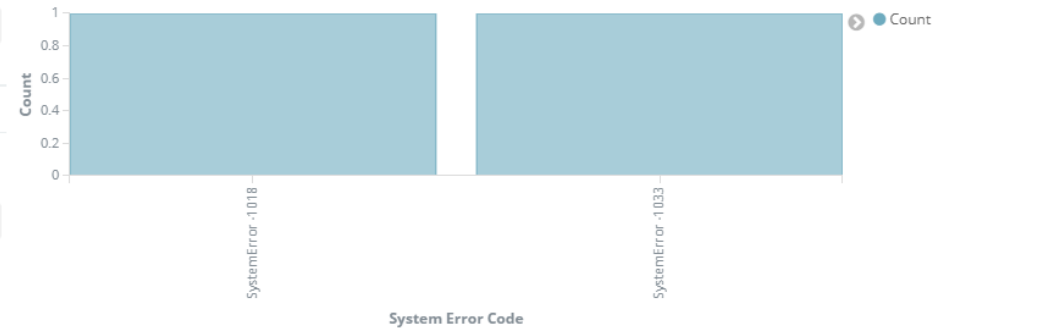
\_SRL Load Jobs Status



\_SRL System Errors List

Time	tenantId	jobId	logMessage
May 12th 2019, 14:14:53.146	t_282874198	1755	SystemError -1018
May 11th 2019, 22:14:08.346	t_503813821	173	SystemError -1033

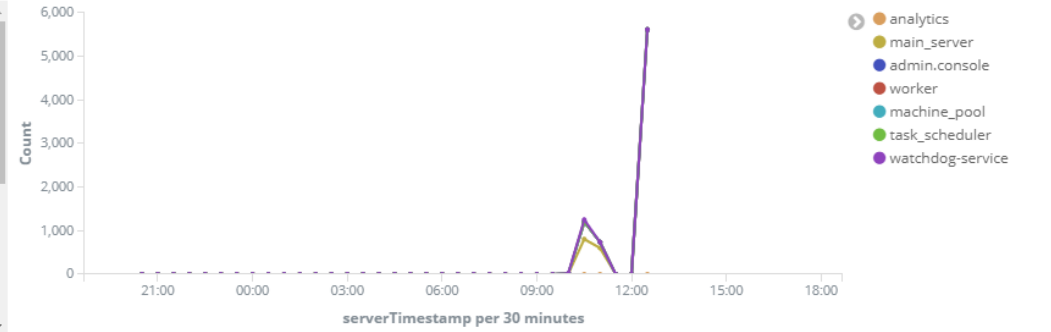
\_SRL System Error Distribution



\_SRL Tests and system errors per tenant

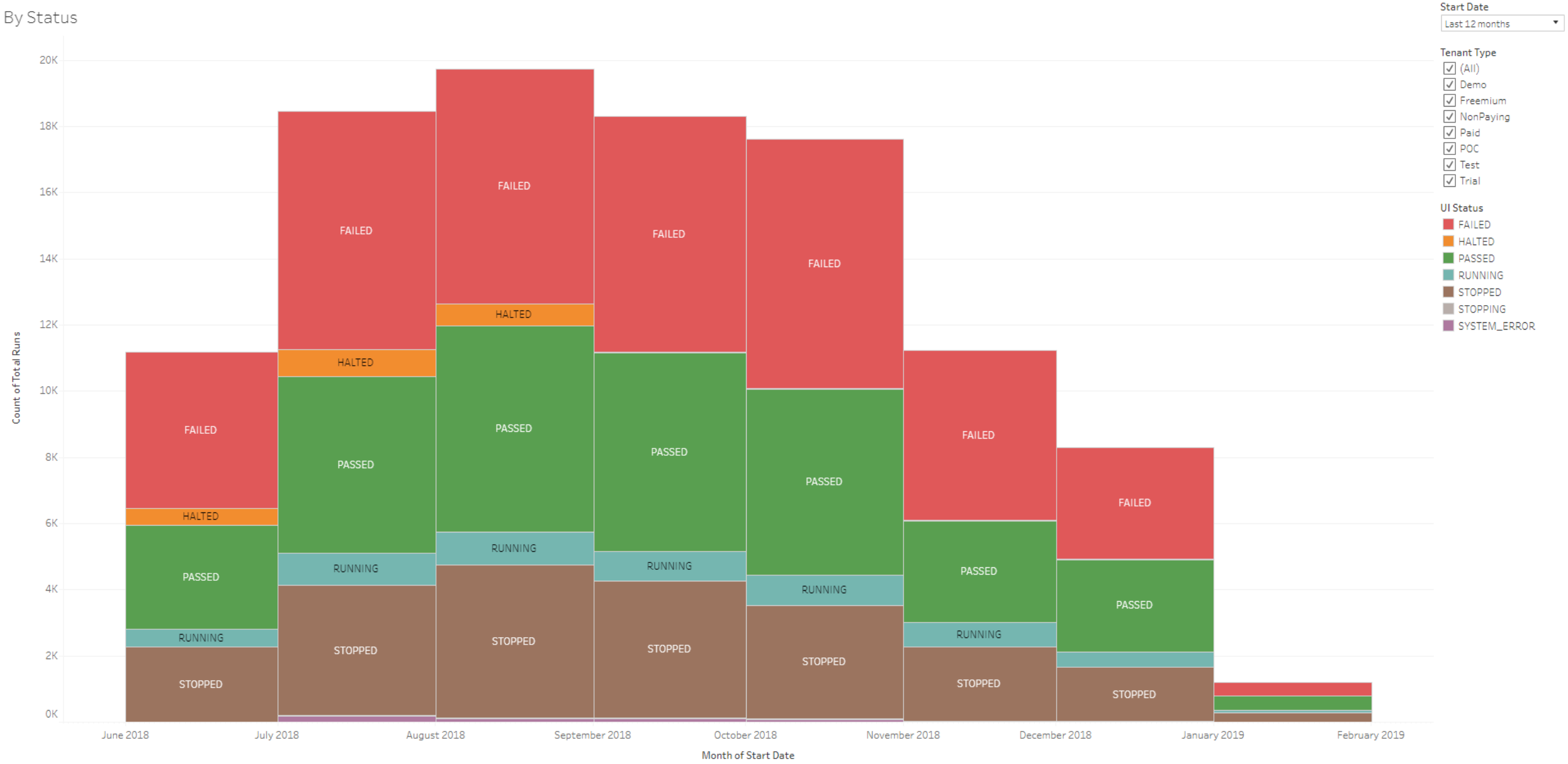
Tenant	filters	Count
t_309878701	All tests	22
t_309878701	System errors	0
t_761509040	All tests	11
t_761509040	System errors	0
t_381664230	All tests	5
t_381664230	System errors	0
t_503813821	All tests	3
t_503813821	System errors	1

\_SRL Fatal Errors Graph



\_SRL Fatal Errors List

\_SRL Uncaught Exceptions





OK Metrics

- ♥ Main Server Pods CPU Usage  
OK for 3 days
- ♥ Main Server Pods Memory  
OK for 3 days
- ♥ Ops Console Pods CPU Usage alert  
OK for 3 days
- ♥ Ops Console Pods Memory  
OK for 3 days
- ♥ PG Bouncer Pods CPU Usage  
OK for 3 days
- ♥ PG Bouncer Pods Memory  
OK for 3 days
- ♥ RabbitMQ Pods CPU Usage  
OK for 3 days
- ♥ RabbitMQ Pods Memory  
OK for 3 days
- ♥ Tomcat Pods CPU Usage  
OK for 3 days
- ♥ Tomcat Pods Memory alert  
OK for 3 days
- ♥ Watchdog Pods CPU Usage  
OK for 3 days
- ♥ Watchdog Pods Memory  
OK for 3 days
- ♥ Worker Pods CPU Usage  
OK for 3 days
- ♥ Worker Pods Memory  
OK for 3 days

Bad Metrics

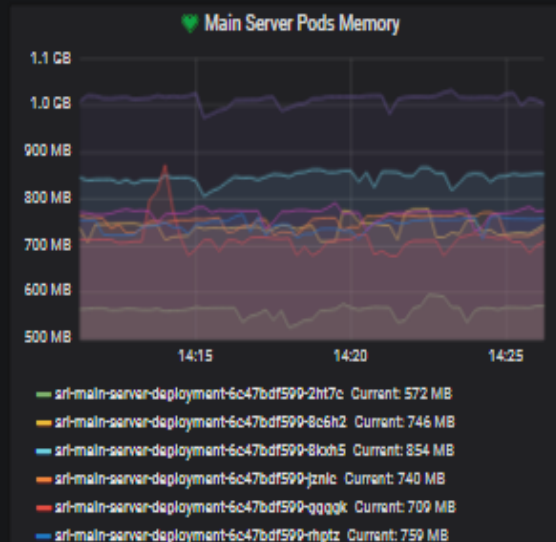
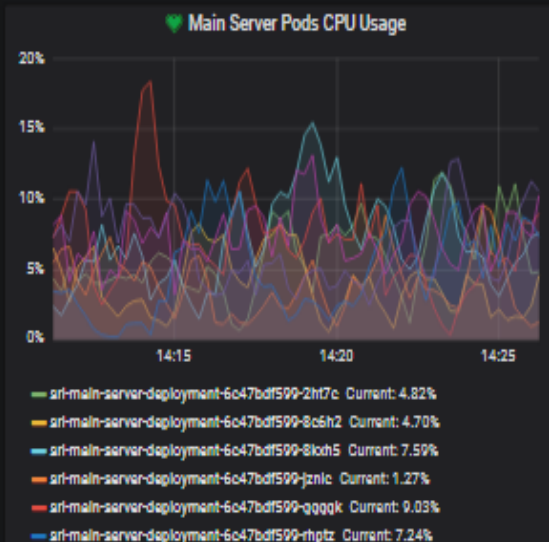
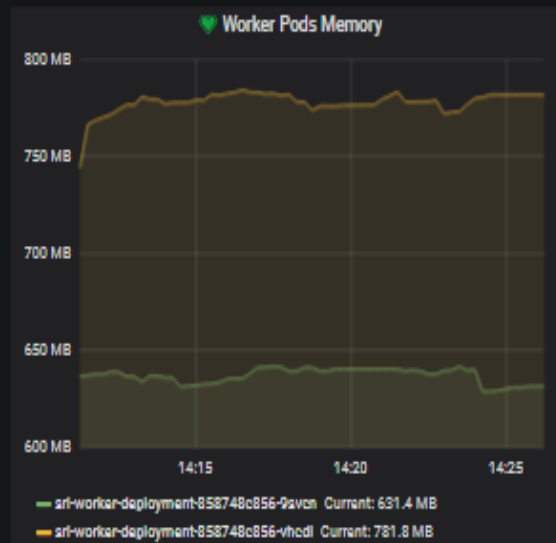
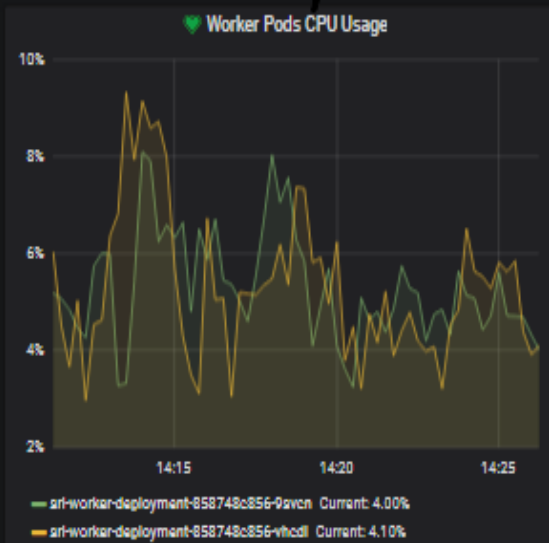
No alerts



namespace prod

Total usage (10 panels)

Pods CPU





Q&A?





**Thank you.**

[www.microfocus.com/srl](http://www.microfocus.com/srl)