

The ABCs of VSM



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DevOpsInstitute
Government SKILupday
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Software Value Stream

Steps used by an organization to continuously deliver value to stakeholders

Value Stream Mapping

Value Stream Management



Software Value Stream

Value Stream Mapping

Visualize and measure flow,
performance, constraints, quality

Value Stream Management



Software Value Stream

Value Stream Mapping

Value Stream Management

Track and improve
“software factory” performance
(The flow of value from
ideation to delivery)



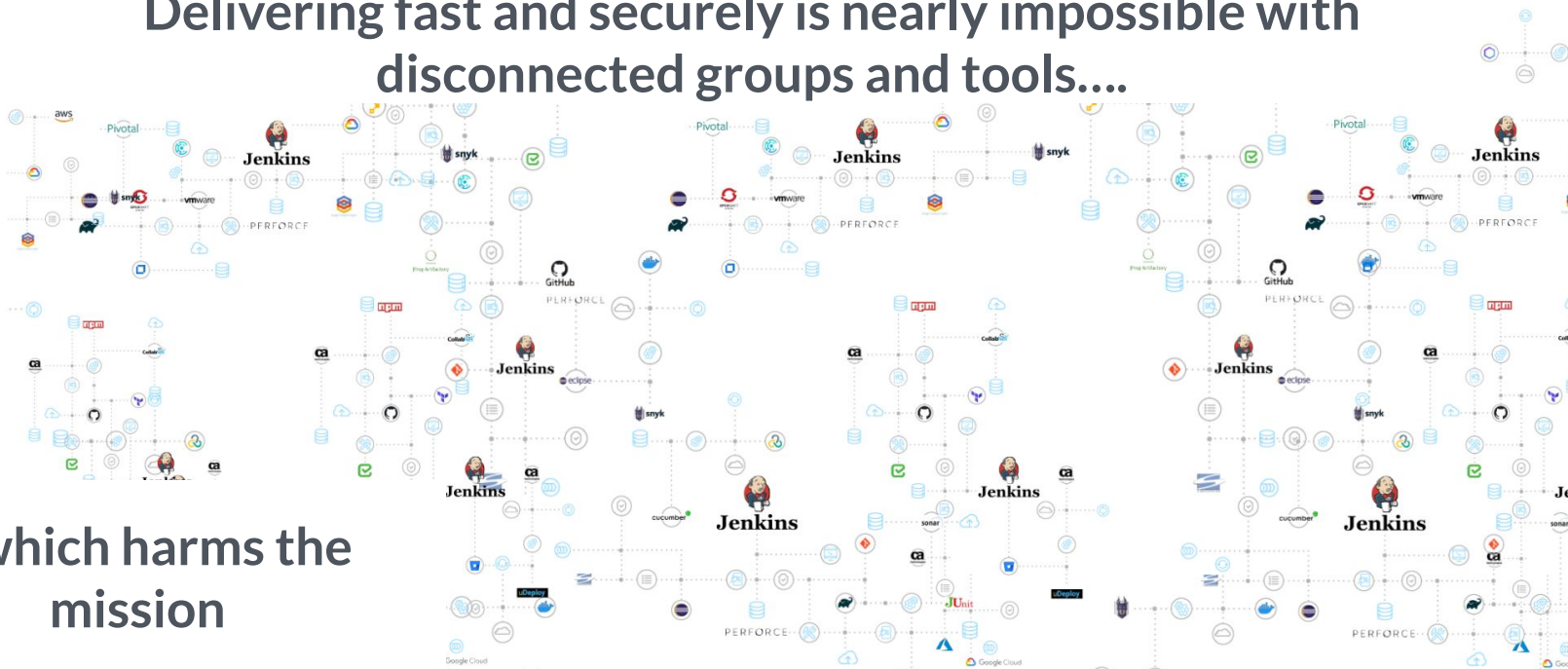
Today's Landscape



DISCONNECTIONS



Delivering fast and securely is nearly impossible with disconnected groups and tools....



...which harms the mission



Slow

Difficult to continually deliver business impact.



Expensive

Low confidence in on-time and on-budget delivery, due to low visibility and ever evolving technologies.



Fragile

Risk of security breaches, regulatory violations, production failures and failed audits due to siloed tools and processes.



Value Must Flow From Software Delivery

Solving the **disconnection** **problem**

Doing it well
requires:

Making sense of software releases
in a **consistent, reliable** and
repeatable way



The only company powering CI/CD and DevSecOps
at enterprise scale for over a decade



Organizers of DevOps World
28-30 September 2021



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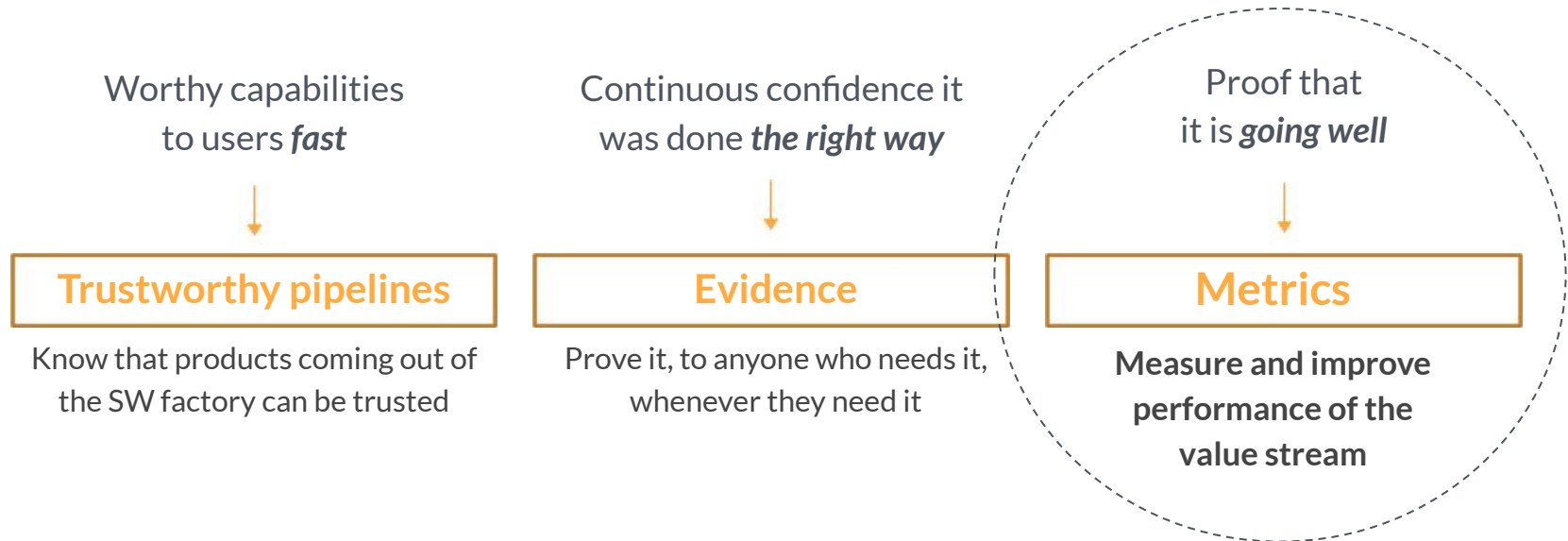
The Company Behind Jenkins



CloudBees Tech

DevSecOps orchestration to connect tools into
high-functioning delivery pipelines

Why It Matters

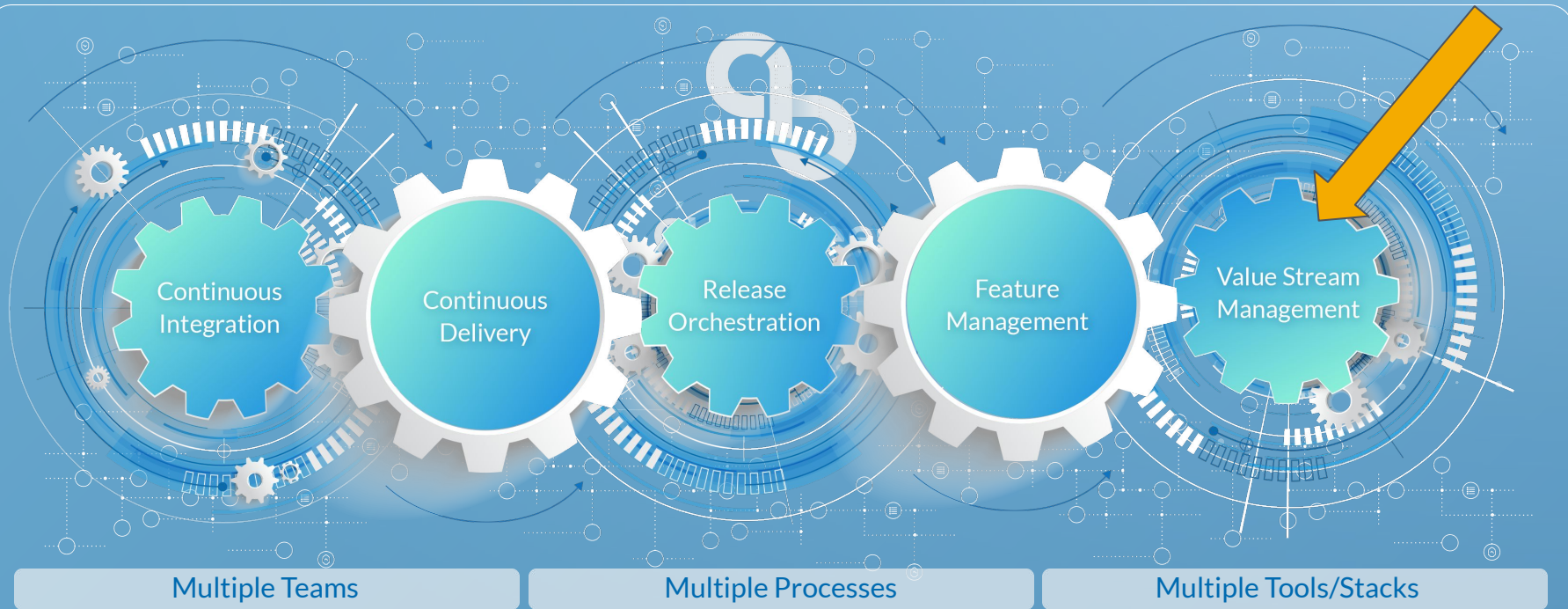


CloudBees Platform: Software Delivery Automation (SDA)

Ingredients for Modern Software Delivery



Ingredients for Modern Software Delivery



DevOps Control Plane



CloudBees
Software Delivery Automation



Value Stream Management

Measuring - and Improving - Software Factory Performance



“You can’t measure what you can’t see.”

“What gets measured gets done.”

“Does it spark joy?”



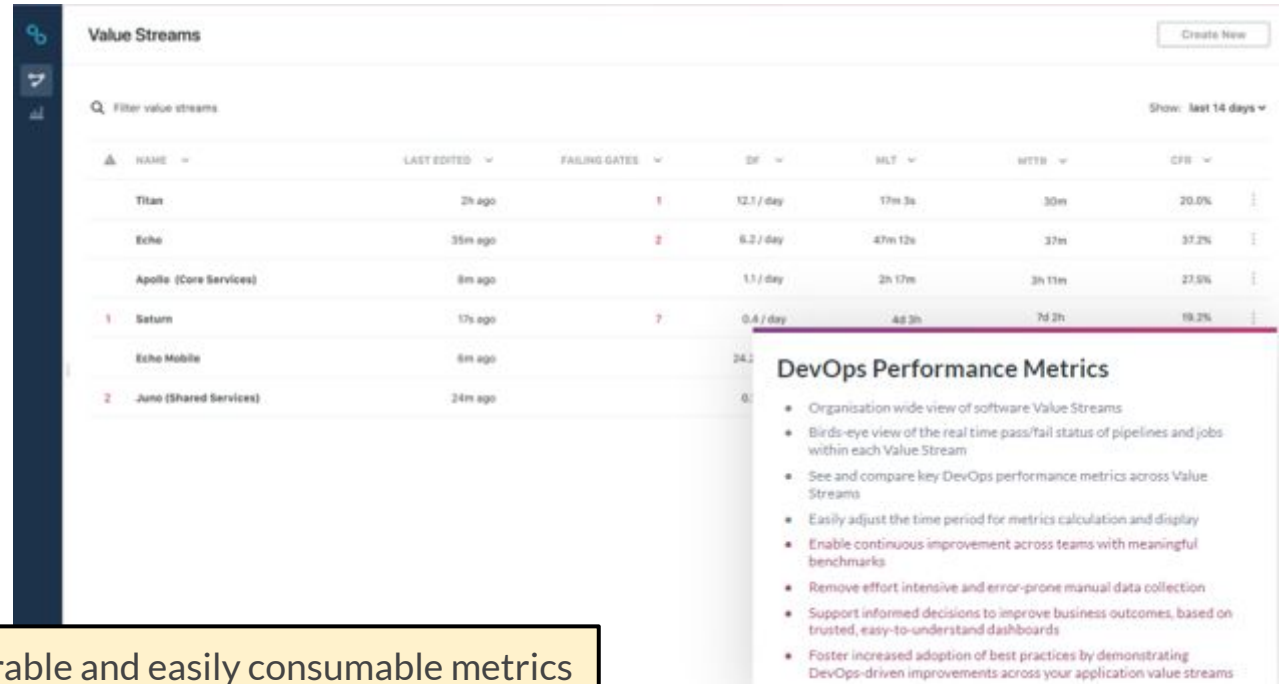
Industry Standard DevOps Metrics

Throughput

- Deployment Frequency
- Mean Lead Time

Stability

- Change Failure Rate
- Mean Time to Recover



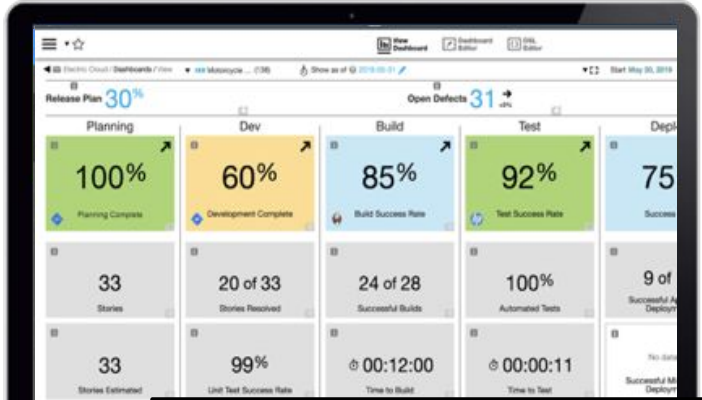
Demonstrable and easily consumable metrics enable efficient communication with executive stakeholders



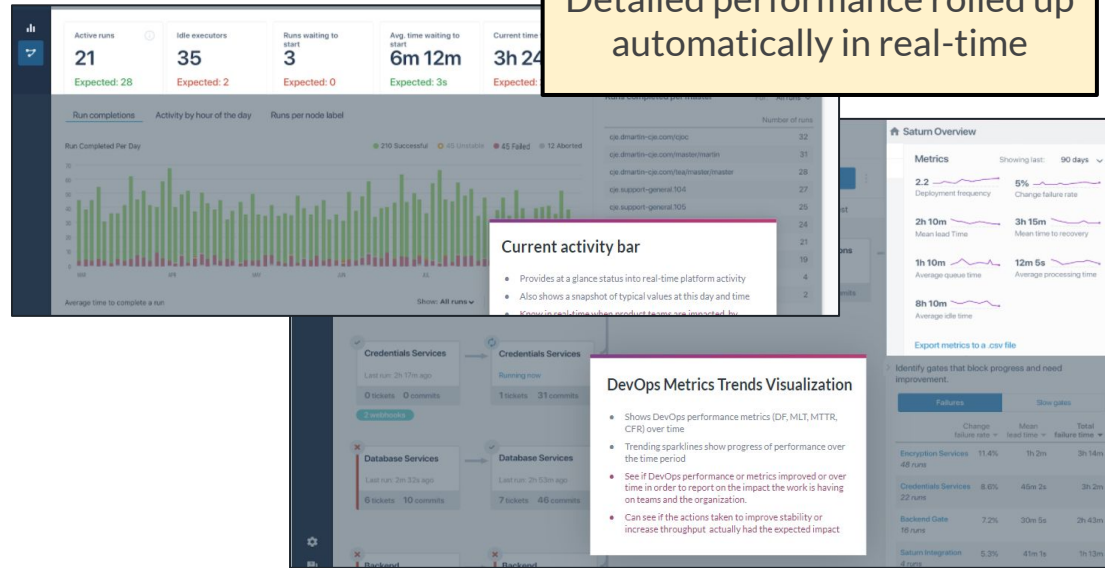
Real-Time Value Stream

Detailed performance rolled up automatically in real-time

Measure and Improve

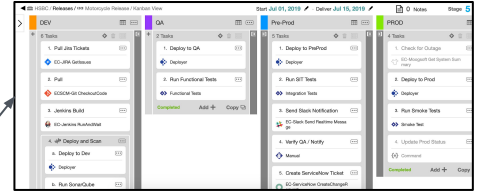


A strategic view of software value streams allows managers to objectively and reliably measure and monitor improvements to software delivery teams



Distributed development teams can build confidently knowing integration is assured

Operations teams define templates for going to operations

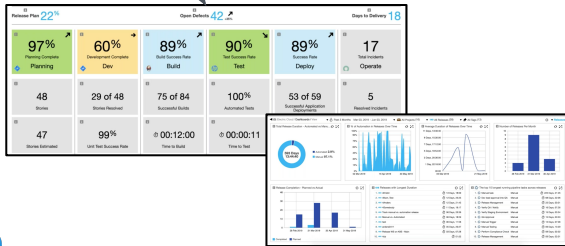
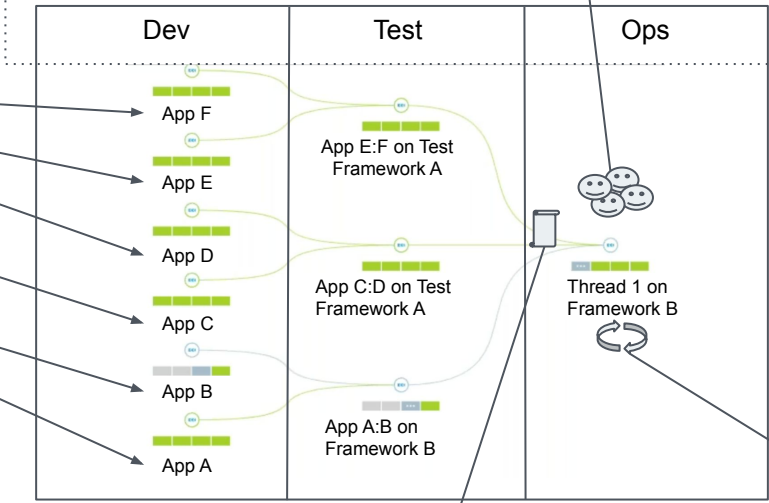


Management can track metrics on all teams and progress against program closure

Operational Context

IA can aggregate evidence from DevSecOps tools and enforce compliance goals

System Engineering teams can track configuration change over time



Approval Audit Report						
General Information						
Release Location	Release Location: Release, Microservices Release Pipeline					
Release Name	Release Name: Release Pipeline					
Discussion Start	Discussion Start: 2019-07-17T08:00:41.710Z					
Discussion Complete	Discussion Complete: 2019-08-07T09:20:17.251Z					
Status	Status: Incomplete					
Details						
Stage	Gate Type	User	Status	Date	Comments	
Approval	POST	[Auto-approved by conditional]	Approved	2019-07-17T08:01:55.912Z	Auto-approved by conditional: Server - No Critical Issues	
Approval	POST	[Auto-approved by conditional]	Approved	2019-07-17T08:01:55.912Z	Auto-approved by conditional: Code Coverage - 7%	
Approval	POST	[Auto-approved by conditional]	Approved	2019-07-17T08:01:56.712Z	Auto-approved by conditional: 75% Passing QA Tests	
Approval	POST	[Auto-approved by conditional]	Approved	2019-07-17T08:01:56.712Z	Auto-approved by conditional: 75% Passing QA Tests	
Approval	POST	[Auto-approved by conditional]	Approved	2019-08-07T09:20:17.251Z	Auto-approved by conditional: QA on Production Test Envs	

Change History for Microservices Release									
Who	When	What	Reason	By	Change	Impact	Rollback	Revert	Rollback
admin	7 Jul 18, 2019 - 08:40	task	task	admin	created	task			
admin	7 Jul 18, 2019 - 08:40	task	task	admin	created	task			
admin	7 Jul 18, 2019 - 08:40	task	task	admin	created	task			
admin	7 Jul 18, 2019 - 08:40	task	task	admin	created	task			
admin	7 Jul 18, 2019 - 08:40	task	task	admin	created	task			
admin	7 Jul 18, 2019 - 08:40	task	task	admin	created	task			
admin	7 Jul 18, 2019 - 08:40	task	task	admin	created	task			
admin	7 Jul 18, 2019 - 08:40	task	task	admin	created	task			
admin	7 Jul 18, 2019 - 08:40	task	task	admin	created	task			
admin	7 Jul 18, 2019 - 08:40	task	task	admin	created	task			





25,000

Hours
saved

CHALLENGES: Deployment and test times

BEFORE: 8 months to set up software on 17,000 servers used to store data and run applications

AFTER: 22 minutes

REAL-WORLD VALUE:

More quickly process stimulus checks during the coronavirus pandemic, track investments outside the U.S., and reduce fraudulent tax refunds



INSIDER

US MARKETS OPEN
In the news

▼ Dow Jones +0.07%

▼ Nasdaq +0.48%

▼ S&P 500 +0.13%

▼ TSLA +0.06%

▼ FB +0.76%

▼ BABA +718%

Premium HOME > ENTERPRISE

The IRS saved 25,000 hours of work by adopting new technology to automate code testing and releases

Rosalie Chan Apr 16, 2021, 10:50 AM





CHALLENGE: Poor visibility across the software delivery process

FOCUSED ON: Speed to onboard new teams. Pipeline efficiency.

REAL-WORLD VALUE:
More quickly update and keep their apps awesome for their stakeholders



Industry:
Information Technology & Services

Geography:
North America

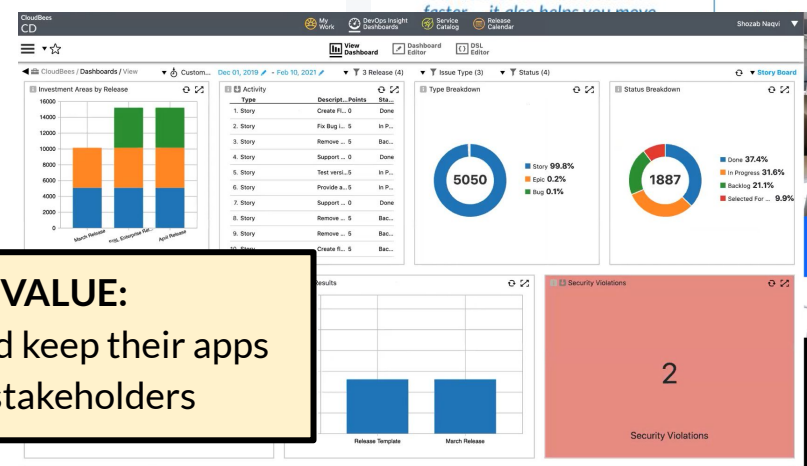
"Agile development doesn't just help you release new features faster, it also helps you save..."

Consistency, Faster Deployments, and Less Duplicated Effort: The Immediate Impact of Modern CI/CD and DevOps

Contributed by Rebecca Rickert DevOps Manager, Ventech

At Ventech Solutions, innovation is our passion. Our dedicated teams of experts and engineers help our clients deploy high-quality IT infrastructure that advance their missions. We leverage key partnerships and cutting-edge technologies to deliver powerful platforms and products in an ever-evolving IT landscape.

Our visionaries work with private sector and government clients to provide IT solutions that balance speed, efficiency, and security.



Supporting Our Customer's Developers
Our major customers is a large federal health care organization. As their future contractor, we provide the servers and the development tools that they need to create websites and applications. We also manage their help desk,





U.S. Citizenship and Immigration Services

CHALLENGE: Get answers: “Where is this particular feature? Is it done? Are we ready for launch?”

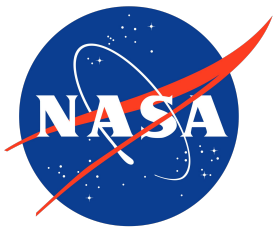
BEFORE: Time-consuming and uncertain release readiness reviews

AFTER: Real-time data to understand release status and readiness

The screenshot displays a release management dashboard with several panels. The 'Release Readiness' panel on the left lists tasks such as 'Gather Evidence', 'Get Jira Tickets', 'Get Frontend Change Logs', 'Get Backend Change Logs', 'Quality Checks', and 'Verify Feature Flag Experiment in Rollout'. The 'Quality Assurance (QA)' panel shows tasks like 'Deploy to QA', 'Enable Feature Flag for QA Env', 'Send Slack Message', and 'Run Functional Test'. The 'Pre-Prod' panel includes 'Wait for Release Manager Approval' and 'Approval'. The 'Prod' panel lists 'Deploy to Prod', 'Run smoke tests', 'Enable FF for Beta users', 'Send Slack message', 'Approve final deployment', and 'Enable FF for all users'. Each task is accompanied by a status indicator and a 'Completed' button.

REAL-WORLD VALUE:
Standard processes, and consistent ways of measuring, make for accurate, actionable insights and less squandered time





CHALLENGE: Audit trail and compliance report needed for every release

BEFORE: Hire 10 interns for 2-3 weeks to walk around with spreadsheets to each person's desk

AFTER: Value stream performance and audit data **collected automatically** and displayed in custom reports

Approval Audit Report

General Information

Label	Value
Pipeline Execution	Release Candidate RC-1 - 200605175157
Pipeline Name	F-35 JSF
Execution Start	2020-06-05T17:51:57.104Z
Execution Complete	
Status	running

Details

Stage	Type	Label	User	Status	Date	Comment
Release Readiness	POST	Code Coverage > 75	[Auto-approved by conditional]	success	2020-06-05T17:52:36.800Z	Auto-approved by conditional: Code Coverage > 75
	POST	No Critical Violations	[Auto-approved by conditional]	success	2020-06-05T17:52:36.910Z	Auto-approved by conditional: No Critical Violations
	POST	Wait for PM Approval	Tyler Johnson	Approved	2020-06-05T17:58:13.552Z	
Quality Assurance (QA)	POST	75% Passing QA Tests	[Auto-approved by conditional]	success	2020-06-05T17:58:38.401Z	Auto-approved by conditional: 75% Passing QA Tests
	POST	No P1s & P2s Issues	[Auto-approved by conditional]	success	2020-06-05T17:58:38.490Z	Auto-approved by conditional: No P1s & P2s Issues
Pre-Prod	PRE	Wait for Release Manager Approval	Tyler Johnson	Approved	2020-06-05T18:05:12.851Z	
	TASK	Verify QA - Notify	Tyler Johnson	success	2020-06-05T18:10:45.069Z	
	POST	100% Passing Pre-Prod Tests	[Auto-approved by conditional]	success	2020-06-05T18:10:45.097Z	Auto-approved by conditional: 100% Passing Pre-Prod Tests
Prod	POST	No P1s	[Auto-approved by conditional]	success	2020-06-05T18:10:45.100Z	P2s Issues
	POST	ATO Approved	[Auto-approved by conditional]	success	2020-06-05T18:10:45.100Z	
	PRE	Wait for Release Manager Approval	Tyler Johnson	Approved	2020-06-05T18:10:45.100Z	
TASK	Approve	[Auto-approved by conditional]	success	2020-06-05T18:10:45.100Z		

REAL-WORLD VALUE:
Expedited approvals and insight into the readiness of capabilities to proceed down the value stream into Ops





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THANK YOU