Trivadis – DevOps General Prezentation

@Trivadis

Trivadis.com

trivadis

What DevOps is ?

How are the frequency rates of Amazon, Google, and Netflix even possible?

It's because these companies have figured out how to make a nearly perfect DevOps pipeline.

Company	Deployment Frequency
Amazon	23,000 per day
Google	5,500 per day
Netflix	500 per day
Facebook	1 per day
Twitter	3 per week
Typical enterprise	1 every 9 months

trivadis

Trivadis – DevOps use cases

trivadis

GERAS

Java Web Application

Deployment automation

trivadis

GERAS – Initial situation

Java Web Application run in a Tomcat server

On-premise servers managed by a third provider

11 organizations are using the application

Problematics
- Connection through a gateway, secured by a two-factor authentication
- Artifact file (war) transferred by an FTP server
- Stop, deploy and start 11 tomcat servers manually
- All servers are using Microsoft as operating system

GERAS – Azure DevOps Pipeline

Automatic deployment using pipeline

- Source code checked out (git)
- Project compilation (maven)
- Artifact file transferred to the server
- Tomcat servers cleaned (file deleted; service stopped)
- Java application deployed (tomcat restarted)

Azure Agent

- Key component for this project
- Installed on client server
- Able to download artifact
- Able to stop/start services

Benefit
- ✓ Time : 5 minutes vs 2 hours
- ✓ No more human mistakes

trivadis

Inextend - Context

Solution to enable all economic operators to comply with the EU Tobacco Products Directive to track and trace

Captures all required events across the distribution chain and supports all your logistics operations

Problematics
- Old monolithic architecture, not scalable, to modernize
- Painfully deployment process
- Application upgrade require zero down-time due SLA agreement with customer

Inextend - Azure DevOps

Continuous integration

- Migration from TFVC to Git
- GitFlow strategy implementation
- No build anymore from workstation
- Automatic build number versioning

Continuous deployment

- Service Fabric orchestrator deployment
- Infrastructure as Code
- Release approval for specific user

INEXTO
THE VALUE OF AUTHENTICITY.

Benefits

✓ Save human resources cost
✓ Shorter release deliver cycle
✓ Time : Minutes vs Hours
✓ Better deployment quality with zero downtime
✓ Control over Cloud Infrastructure update

trivadis

Suite One - Context

919 Collaborators in Switzerland

97 stores overall Switzerland

Problematics

- Difficult deployment, requiring a lot of human resources
- Very long downtime, with many manual operations that can only be done overnight
- Handle deployment and component installation over 97 windows servers
- Very long cycle to release a new version

Suite One - Azure DevOps

Continuous integration

- Cloud based build server
- Trigger build at each commit
- Automatic build number management
- Automatic creation of package ready to deploy

Continuous deployment

- Deployment group over 97 servers with Azure DevOps agent
- Automation of deployment server process
- Integration of database upgrade scripts
- Release approval for specific user

VISILAB

Benefits

- ✓ Save human resources cost
- ✓ Dev & Ops Fluid relation
- ✓ Time : Minutes vs Hours
- ✓ No more human mistakes

trivadis

Why do I Need a DevOps

Pipeline Assessment ?

trivadis

Why do I Need a DevOps Pipeline Assessment ?

Trivadis approach for new technical client engagements is to initially perform a Pipeline Assessment.

This is a short phase in which we understand technological challenges, explore automation related constraints and establish the needs of the software delivery pipeline(s).
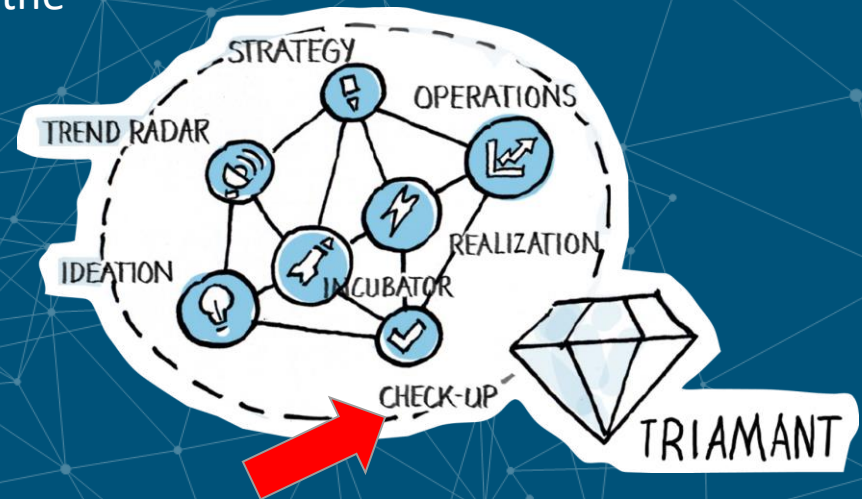
Why do I Need a DevOps Pipeline Assessment ?

1. **What are the IT goals for your automated Pipelines?**
We help to define your desired deliverables for the CI/CD pipelines and ensure that these objectives are aligned amongst all of the relevant IT stakeholders.

2. **What is the status of your current automated pipelines?**
We formally assess all seven stages of your software delivery pipeline: Plan, Code, Integrate, Test, Release, Deploy and Operate.

3. **What additional work is required to meet your goals and what additional tooling is required?**
We use the gathered information to make recommendations regarding the configuration of existing automation tools and suggest new tooling where appropriate. We will also highlight the required technical training in order for your teams to use this tooling effectively.

4. **How do you plan to build the required CI/CD pipelines?**
We produce a strategic plan that documents how to move from your current technical environment to one with fully-automated, best practice CI/CD pipelines in place.

5. **What are the timescales?**
Our plan incorporates a roadmap of automated tooling adoption that includes predicted timescales to help set realistic expectations.

6. **How much will it cost?**
We provide budgetary financial costs in order to deliver the recommended automation tooling solutions.

How is the DevOps Pipeline Assessment Delivered ?

trivadis

How is the DevOps Pipeline Assessment Delivered ?

During the Pipeline Assessment we run onsite workshops over 3 consecutive days with a focus on the 7 stages of your software delivery process.

Pipeline Assessment Diagram

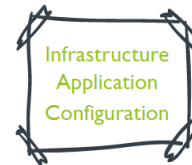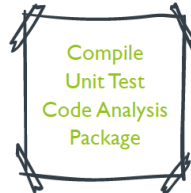| PLAN | CODE | INTEGRATE | TEST | RELEASE | DEPLOY | OPERATE |

REQUIREMENTS	SOURCE CODE REPOSITORY	CI SERVER	TEST SUITE	ARTIFACT REPOSITORY	DEPLOYMENT ORCHESTRATION	ENVIRONMENTS
Functional Operational	Branching Dependency Management DVCS	Compile Unit Test Code Analysis Package	Automation Integration UI Testing Performance Security	Plan Schedule Control	Infrastructure Application Configuration	Monitoring Alerting Notification

trivadis

The DevOps Pipeline Assessment Schedule

INCEPTION

Kick-Off Meeting – Introductions & Agreement of Schedules Goals Canvas Pipeline Overview

WORKSHOP 1

Plan and Code

WORKSHOP 2

Integrate and Test

WORKSHOP 3

Release, Deploy Operate

REPORT

Report and Presentation

trivadis
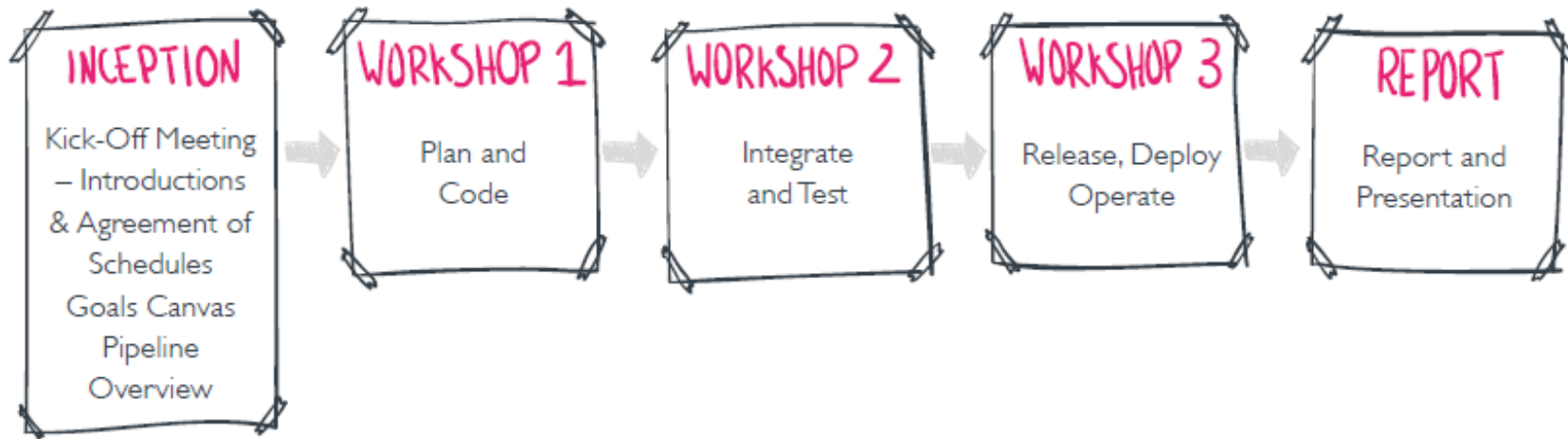
What is Included ?

Deliverables

- Documented IT Goals
- Identification of Potential Automation Improvement
- Prioritised Next Steps
- Roadmap
- Budgetary Estimates

Report / Feedback

- PowerPoint Report

Business Value

- Alignment of IT Objectives
- Assessment of Existing Automated Pipelines
- Improvement Recommendations
- Budgeted Roadmap

trivadis

What Technologies are Covered?

Trivadis has extensive knowledge, experience and vendor endorsement with a wide range of automation tools and we have detailed some of these below.

However, where out clients have already invested in alternative software then we will optimise these existing platforms to make them as productive as possible.

What Technologies are Covered?

1. **Collaboration Tooling**

   We have extensive experience of implementing software development management tools such as Atlassian JIRA and collaboration tools such as Atlassian Confluence. For source code management we have skills with GitHub (Partner) and Atlassian Bitbucket

2. **Automation Tooling**

   Trivadis has significant capability and experience with automation technologies in both Microsoft and Linux environments.

3. **Cloud Vendors**

   Trivadis also works with multiple Cloud vendors including Amazon Web Services (APN Consulting Partner), Microsoft Azure (Gold Cloud Platform Partner).

4. **Monitoring Tooling**

   Trivadis works with monitoring tooling including Nagios, Sensu, Outlyer, ELK (Elasticsearch Logstash Kibana) and AppDynamics (Certified Partner).

FOUNDED IN 1994

15 TRIVADIS WORKSPACES

SWITZERLAND, GERMANY, AUSTRIA, ROMANIA

118 MILLION CHF TURNOVER

300 SLA's (SERVICE LEVEL AGREEMENTS)

4000 TRAINING PARTICIPANTS PER YEAR

800 CUSTOMERS

700 EMPLOYEES

5 MILLION CHF BUDGET FOR SCIENCE AND DEVELOPMENT PER YEAR

EXPERIENCE FROM 1900 PROJECTS PER YEAR

trivadis

NOTRE MISSION

TOGETHER for a smarter LIFE

trivadis