Model-Driven Deployments

Model-Driven Deployments help organizations automate complex deployments, in order to speed up releases and increase software quality.

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Below we have compiled publicly available sources from around the world that present views on Model-Driven Deployments.

Model-Driven Deployments Overview

Model-Driven Deployments help organizations automate complex deployments, in order to speed up releases and increase software quality.

Many organizations have some level of deployment automation with scripts to handle aspects of the overall application deployment, with multi-page deployment instructions listing all the manual tasks that take place alongside the scripted processes. Manual steps, coupled with pockets of script-based automation, are error prone.

Model-driven deployment is an approach that helps guarantee that deployments run consistently and correctly across different environments.

Model-Driven Deployment Tools

Model-driven deployment products, like Electric Cloud's ElectricFlow, Serena Release Automation, IBM UrbanCode Deploy, etc., allow you to model the logic necessary to automate complex deployment processes using a graphic user interface. Deployments are broken down into their basic components: What (code) needs to be deployed, Where (on which environments), and How (what steps, in what order, and following what conditions) will it be accomplished.

The tools typically offer process definition capabilities for defining the “how” (processes) which should run for the software system to be deployed.

Perspectives on Model-Driven Deployment

Gartner Magic Quadrant: Application Release Automation

Gartner. Download the full report

- Challenges of manual deployment and the need for model-driven deployment
  Anders Wallgren
  2015
devops.com

Deployment Tool Vendors Offering Model-Driven Deployment

- Forrester Wave report on Application Release Automation Tools, all tools in the report have model-driven deployment functionality
  Forrester
electric-cloud.com
- Electric Cloud ElectricFlow
A single DevOps platform that supports the entire end-to-end software development and delivery process.

- **Automic Release Automation**
  - automic.com
  - Automates your deployments once and runs them without human intervention at any speed, as an integral part of your continuous integration builds.

- **SaltStack**
  - saltstack.com
  - Systems administrators, site reliability engineers and developers configure and manage modern data center infrastructure, applications and code.

- **Attunity Maestro**
  - attunity.com
  - Rapidly and easily manage large-scale data transmission processes. Coordinate multiple Big Data deployments tasks and data processes.

- **Go ThoughtWorks**
  - go.cd
  - Go's manual triggers allow you to deploy any known good version of your application to wherever you like. This empowers QA teams with self-service environments, and increases reliability of pushing to production.

- **IBM UrbanCode Deploy**
  - ibm.com
  - Orchestrates and automates the deployment of applications, middleware configurations and database changes into development, test and production environments.

- **Serena Deployment Automation**
  - serena.com
  - Bridge the DevOps divide by simplifying and automating deployments. Support continuous delivery and production deployments via deployment pipeline automation

- **Octopus Deploy**
  - octopusdeploy.com
  - Works with your build server to enable reliable, secure, automated releases of ASP.NET applications.

- **BMC Application Release Automation**
  - toolkitfiles.co.uk
  - Packages, promotes, installs, configures, validates and selectively rolls back application deployments.

- **CA Release Automation (Lisa)**
  - wiki.ca.com
  - CA Release Automation enables you to automate and manage deployments for your applications.

- **Microsoft Visual Studio Release Management**
  - visualstudio.com
  - Create managed continuous deployment pipelines to release quickly, easily, and often

- **XebiaLabs XL Deploy**
  - xebialabs.com
  - Automates your application deployments so releases can occur in a repeatable, standard and efficient way.

- **Midvision RapidDeploy**
  - midvision.com
  - A powerful application release and deployment automation tool. Built for DevOps teams and enterprise continuous delivery

- **Calm.io DevOps Automation**
  - calm.io
  - Deploy and manage microservices apps, Orchestrate containers, virtual machines and binary workloads

### How Model-Driven Deployment Works with Specific Deployment Tools

- An example of a complex manual deployment and how to automate it by modeling the environment, application and deployment process
  - electric-cloud.com

- **How Electric Cloud's ElectricFlow models and automates deployments**
  - electric-cloud.com

- **How to package applications for use in XebiaLabs model-based deployment**
  - xebialabs.com
See more resources about **Model-Driven Deployment in Specific Deployment Tools**

**Further Reading**

- **Software Deployment Process** — Resources offering general descriptions of the deployment process, deployment in specific environments, how deployment works in specific tools, and examples of deployment processes at Amazon, GitHub and more.
  - **Software Deployment Best Practices** — Resources offering software deployment best practices and guidelines, deployment recommendations for specific environments, and examples of deployment best practices used by real organizations.
  - **Software Deployment and Release Requirements** — Resources on the relation and dependency between the requirements defined for a release, and the resulting deployments of that release.
  - **Compliance and Auditing in Software Deployment** — Resources on how to manage deployments subject to regulation or contractual compliance, with the requirement to enable auditing by a third party.
  - **Deployment Verification** — Resources on how to verify that a deployment or software package is of sufficient quality for its users.
  - **Examples of Software Deployment Process** — Resources offering general descriptions of software deployment process, and examples of deployment processes at Amazon, GitHub and more.
  - **Software Deployment Process with Specific Technologies** — Resources about how software deployment works in specific tools, including Octopus, Puppet, and other commercial and open-source technologies.

- **Deployment Automation** — Deployment automation allows applications to be deployed across the various environments used in the development process, as well as the final production environments.
  - **Deployment Automation Tools** — Deployment Automation Tools help organizations improve the speed and quality of software releases, and address the challenges of manual software deployment.
  - **Continuous Deployment** — Continuous Deployment is the practice of continuously pushing to production new versions of software under development.
  - **Model-Driven Deployments** — Model Driven Deployments help organizations automate complex deployments, in order to speed up releases and increase software quality.
  - **Software Deployment Scripts** — Resources on automating deployments using scripts, typically written in-house or repurposed by operations staff or release engineers.
  - **Deployment Automation Best Practices and Approaches** — A comprehensive list of deployment automation best practices from leading experts of the field.
  - **Deployment Automation Using Specific Tools** — A comprehensive list of Deployment Automation how to guidelines and tutorials using specific tools such as Docker, Ant, Jenkins and Capistrano.
  - **Deployment via Continuous Integration Tools** — Resources on how to deploy software applications using Continuous Integration tools like Jenkins and TeamCity.
  - **Deployment Using Containers** — Resources on how to deploy software applications using container frameworks such as Docker and CoreOS.

- **Types of Software Deployments** — Resources on how to deploy complex software on different contexts, environments and stacks.
  - **Deployments in the SDLC** — Deploying software at different stages of the Software Development Lifecycle - development, testing and production.
  - **Deploying Locally, Virtualized or on the Cloud** — Resources on how to deploy
software to different computing models: local machines, virtualized machines or cloud instances.

- **Deployment by Type of Application** — Resources on how to deploy different types of applications, including web apps, mobile apps, and enterprise applications.
- **Deployment by Stack** — Resources on how to deploy applications on common technology stacks such as J2EE, LAMP and OpenStack.
- **Deployment Planning** — General resources on deployment planning, deployment in specific environments such as Geronimo, Oracle, WebSphere, and examples of deployment planning at real organizations.
  - **Examples of Deployment Planning** — General resources on deployment planning, including detailed examples of software deployment planning at real organizations.
  - **Software Deployment Checklist** — General resources on what a deployment checklist should contain, and specific checklists for general deployments, and for deploying in specific environments such as Google Cloud, Django and Drupal.
  - **Deployment Plan Template** — Resources offering document templates that can be used to plan complex deployments, and examples of deployment templates used by real organizations.

**Gartner Magic Quadrant: Application Release Automation**

**Suggest a Resource!**

Know an online resource which could be relevant for this wiki page? We’re constantly updating our wiki and will be happy to review it!

Submit a URL for Inclusion in the Wiki

L;calm.io;Calm.io DevOps Automation - Deploy and manage microservices apps, Orchestrate containers, virtual machines and binary workloads;https://calm.io/;NA;2016;;