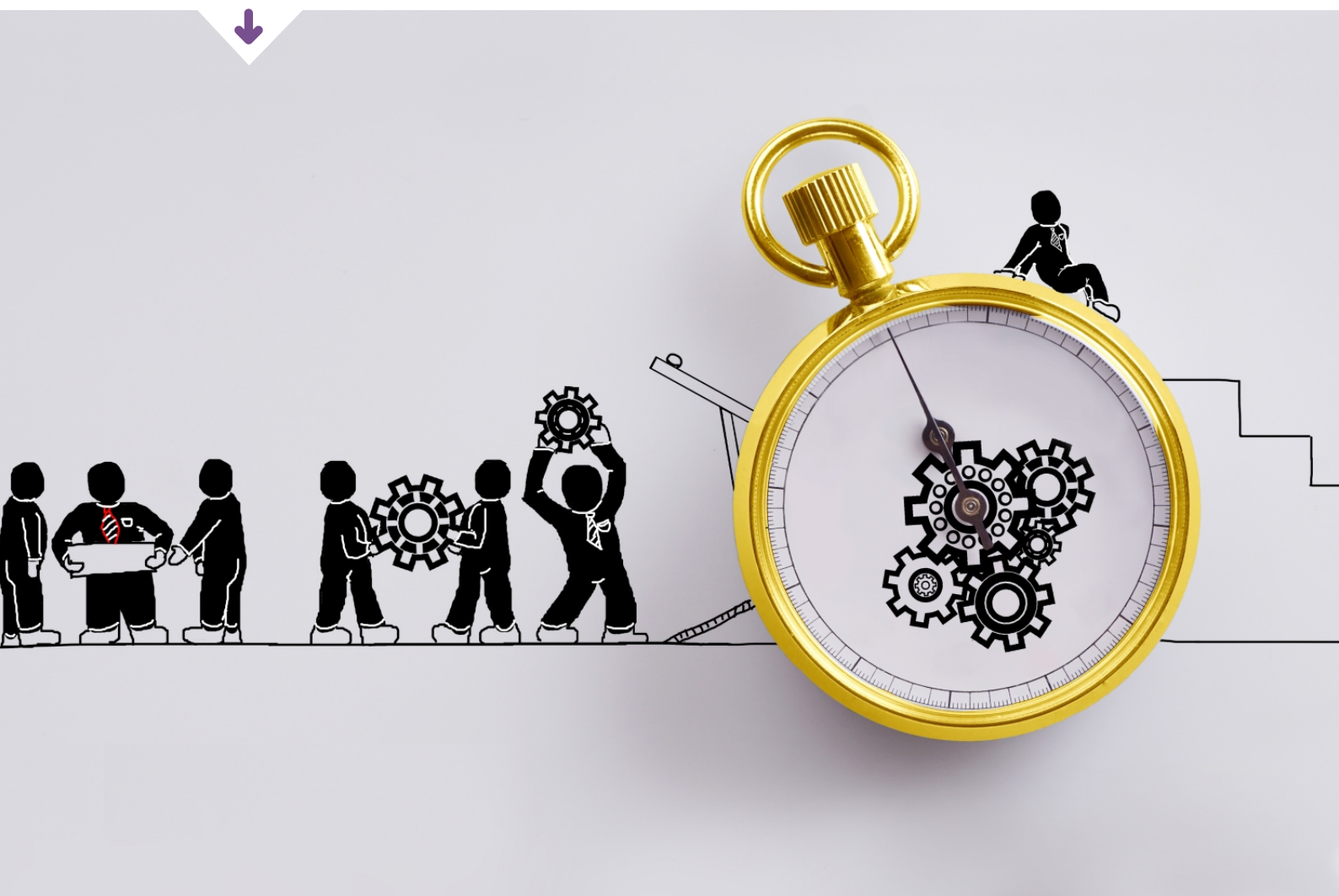


7 Flavours of DevOps Implementation



Author: **Bhargavi Seshadri**, DevOps Evangelist

Practice Head: **Althaf Ali**, DevOps Solution Architect

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From being laborious and silo-ed to being consolidated and collaborative, the Software Development Life Cycle (SDLC) has seen a steady evolution mirroring the temperament of the markets around the world. Today, the exponential spread of DevOps can be attributed to the fact that the IT world is at the epicentre of frequent technological disruptions.

The software development models of today are predominantly agile; the precursor to the DevOps movement. Thus the transition to adopting DevOps methodology is now much easier than ever before. With this, the industry has not only gotten rid of the rigidity that existed between the teams that took part in the development lifecycle but also the ways in which the DevOps way of Software Development can be inculcated into the project streams.

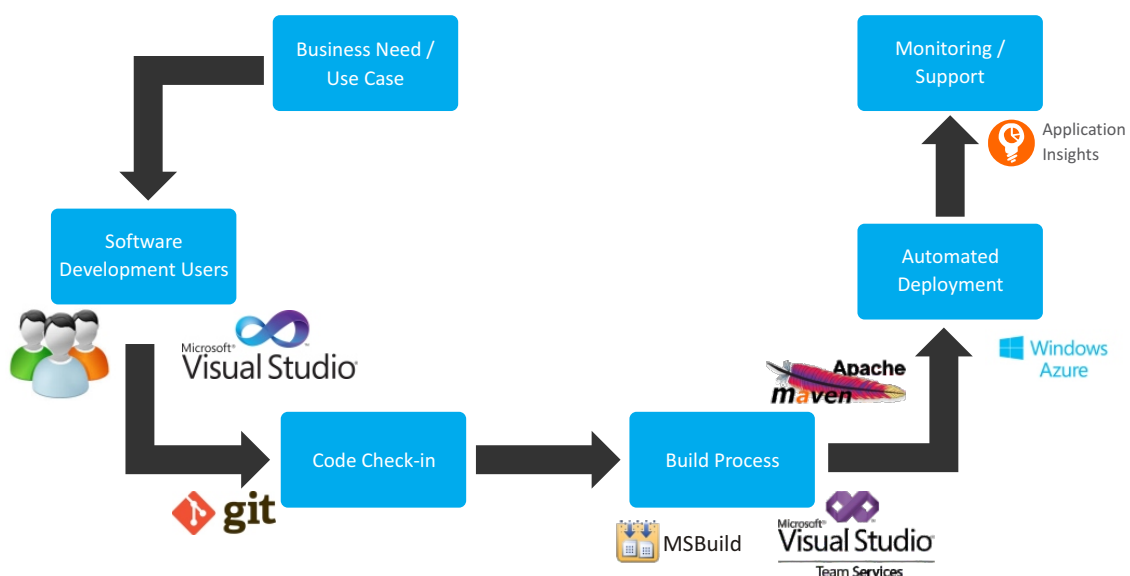
Thus organizations, irrespective of their industry, can adapt to DevOps as a whole or in parts to meet their business needs. Here are the **7 flavours of DevOps Implementation that Aspire Systems advocates and has offered to customers across the world.**

Continuous Integration/Continuous Delivery (CI/CD)

The process of CI/CD encapsulates the philosophy of DevOps- constant integration and consistent testing to guarantee continuous delivery for the customers, especially for the ones with really low appetite for risks. When projects are automated the CI/CD way, the development and the testing teams can build, test and integrate improvements continuously into the original build thereby accelerating time-to-market metrics with faster fixes.

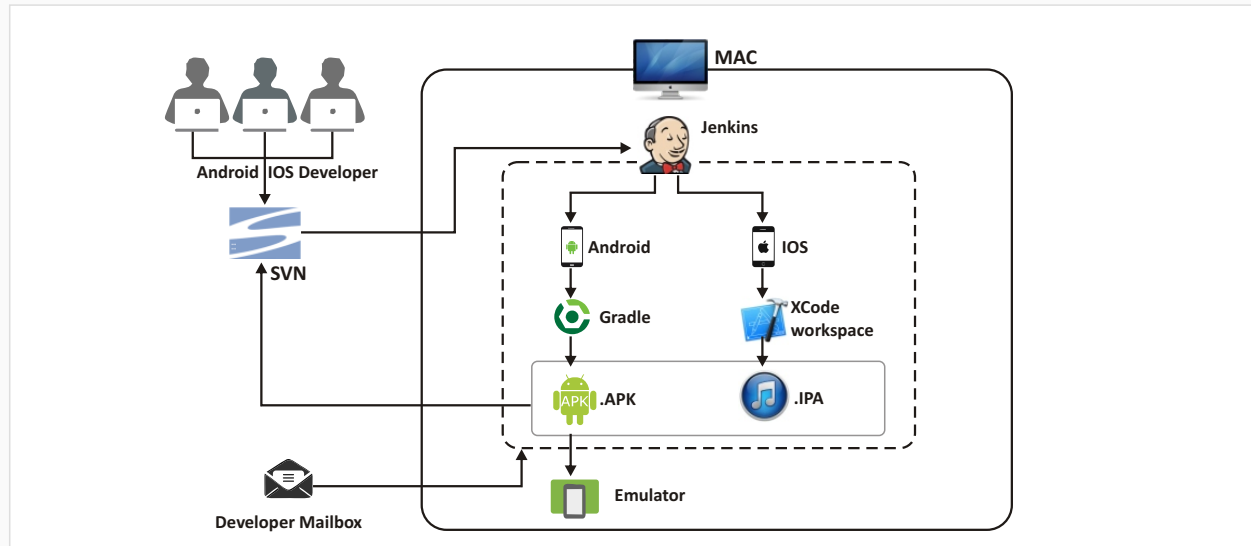
The secret of a well-nurtured DevOps environment lies in how well the details of individual processes are laid out. For companies to realize the complete potential of DevOps through CI/CD, they need several tools and technological building blocks that can work cohesively to create a feedback-based pipeline of project management processes.

Case Study 1: Aspire Systems offered a thorough CI/CD automation by designing five different applications- for a wide range of functions from ticketing to test automation- hosted in Microsoft Azure environment for one of the Big 4 Consulting firms.



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Case Study 2: The company also orchestrated CI/CD practices for native Android and iOS application development environments for a leading jewellery firm in India.



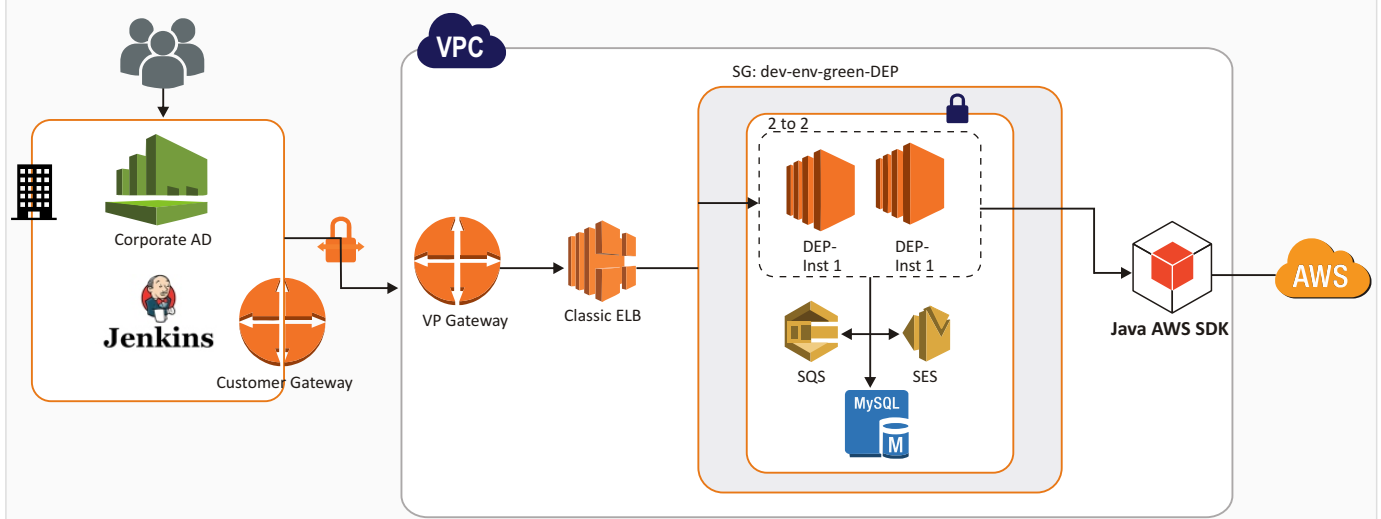
Infrastructure Provisioning

For the IT teams, whether it's the office space or data centres, infrastructure provisioning within company's budget is one of the consistent woes they experience. The rise of agile technologies and their reliance to promote productivity and cost efficiency through resourcefulness has convinced enterprises to actively embrace its inevitability.

As a DevOps implementation, infrastructure provisioning has become an essential component that lets developers and testers manage work sessions with much more independence and agility. With the industry opening up to many new private cloud players, it is now easier than ever for organizations to reap the maximum out of their infrastructure investments.

Case Study 3: Aspire Systems' DevOps team developed an innovative self-servicing portal called "Dynamic Environment Provisioning" (DEP) to automate deployment, configuration and management functions in AWS environments for a US-based Insurance Solutions Provider.

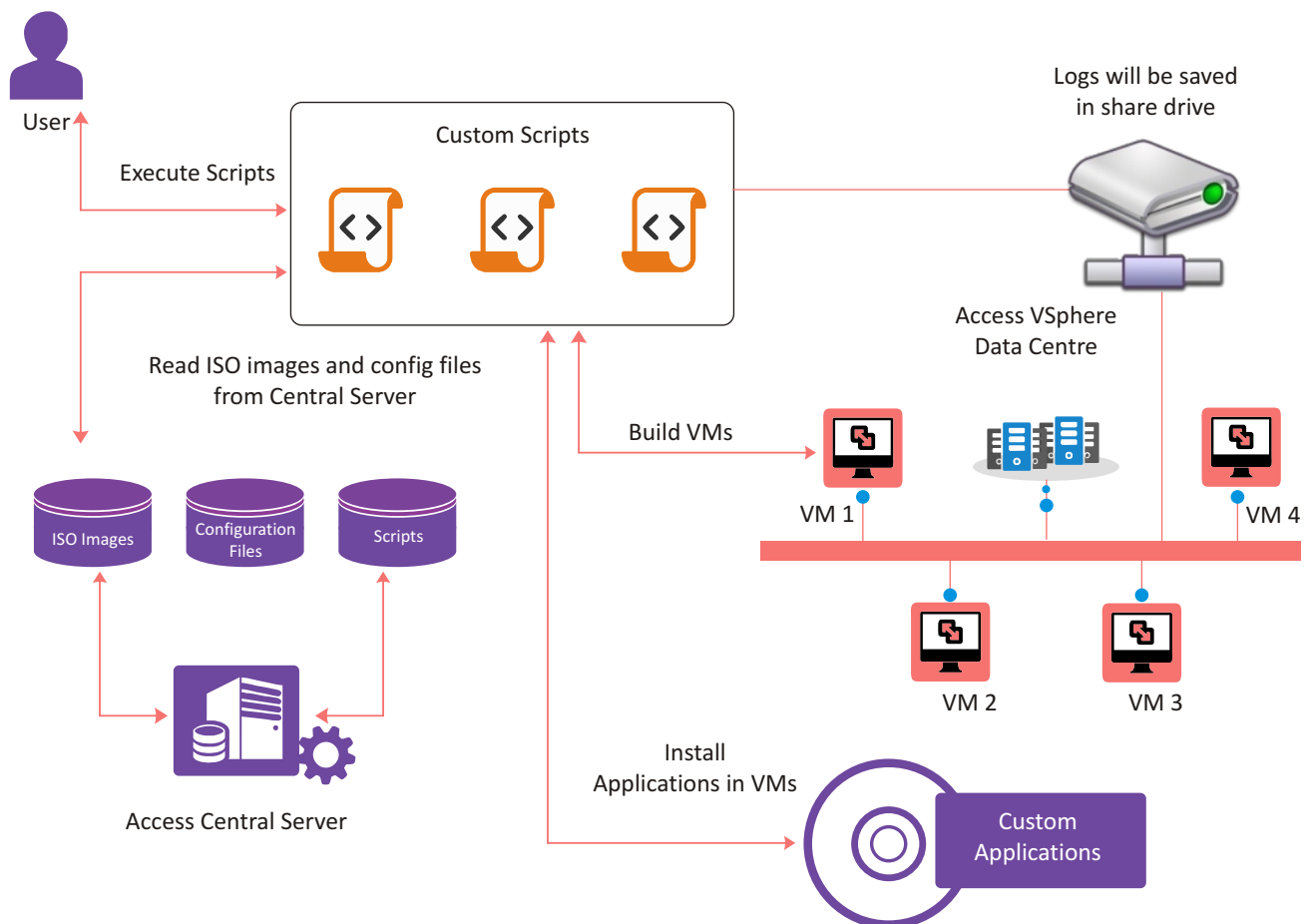
DEP Architecture



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Case Study 4: Aspire's team also developed an infrastructure provisioning solution by automating VM deployment for a US-based Medical Imaging solutions provider.

Un-Attended VM Creation & Application Installation Infrastructure Provisioning



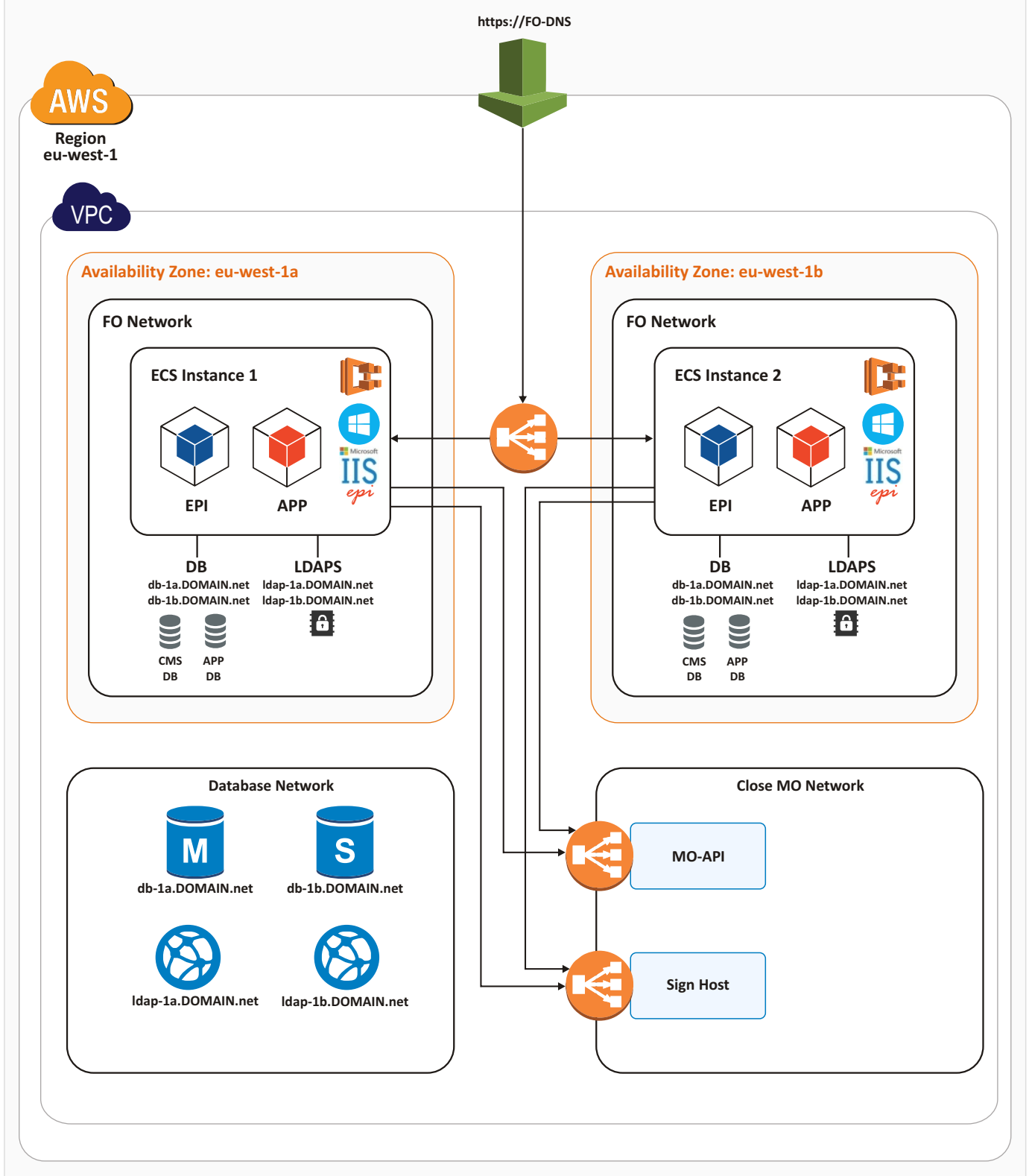
Containerization

A 2016 survey by NGNIX amongst 1800 IT professionals has revealed that containerization and Microservices are two of the top DevOps trends of the year; 2/3rd of the respondents have reported that their organizations are investigating/using containers in production already.

While CI/CD covers the agility aspect of the DevOps philosophy, concepts such as containerization are infusing mobility into the distributed stream of project management. By bundling libraries and environments in containers, companies would be able to achieve improved CPU/operational efficiency and scalability, conditions that are rapidly becoming pre-requisites for living the agile way of life. As Containers as a Service (CaaS) continues to gain momentum, it is imperative that more companies would seek to make containerization mainstream, either by themselves or through expert enablers.

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Case Study 5: Aspire Systems implemented Docker Containerization on AWS with a Universal image structure for a Fintech company resulting in reduced overall cost by 70%.



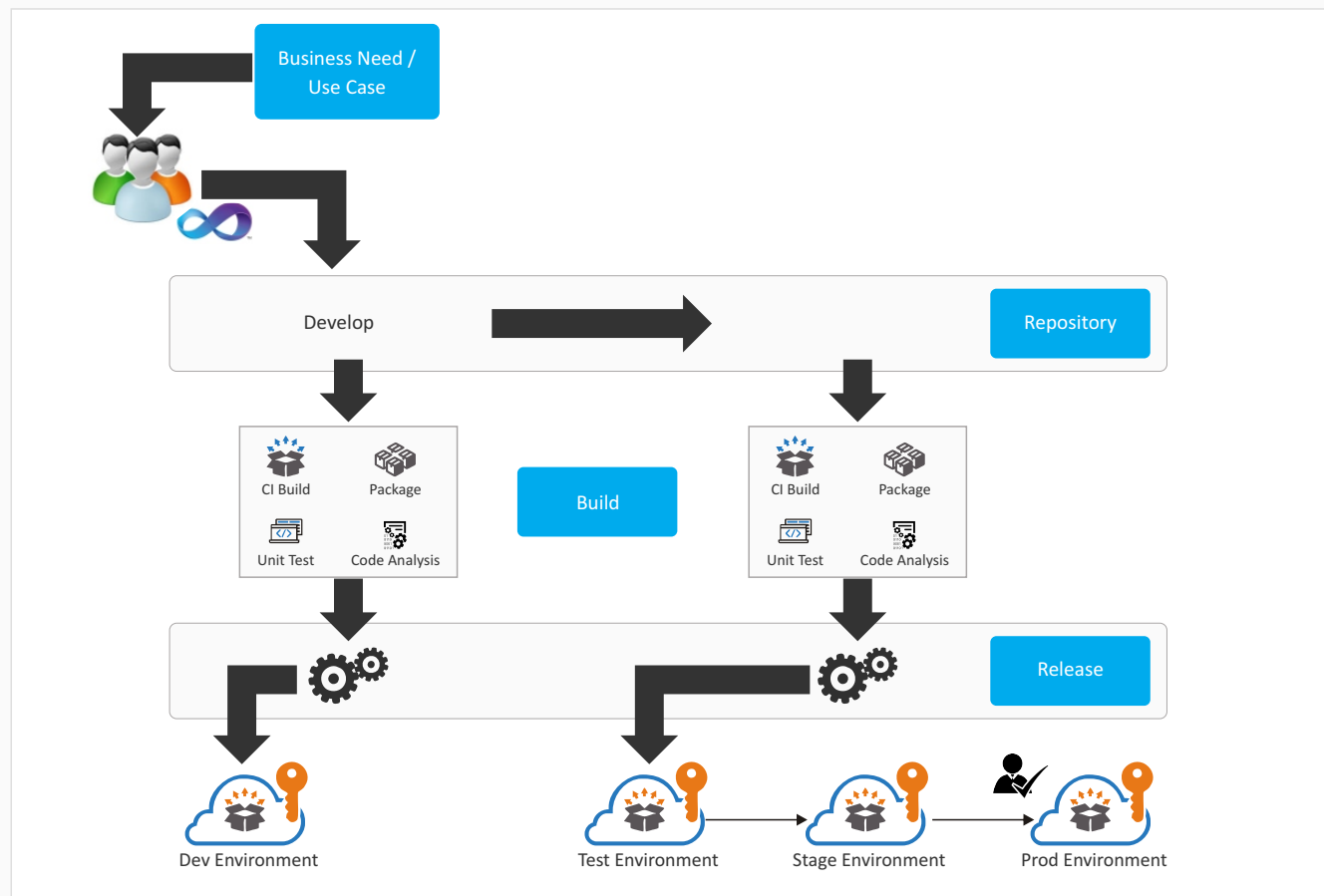
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Agile Methodology and Scrum Implementation

From being considered as two different project models to complementing each other for improved coordination, Agile (and in turn scrum) and DevOps schools of thoughts have come a long way in the evolution of SDLC. While in theory Scrum is considered as a “lightweight subset of agile”, in reality Scrum implementation is aimed at complementing DevOps teams with their everyday, end-to-end project development works.

From automating requirements gathering, generating builds, deployment to reports tracking, Scrum project model in a DevOps environment offers streamlining of processes. In addition to that, a thorough iterative Scrum implementation complements DevOps’ continuous work-flow with increased transparency.

Case Study 6: Aspire’s DevOps team enabled Scrum implementation in an existing TFS environment thereby initiating an end-to-end traceability of the entire project workflow for a middle-eastern education regulatory authority.



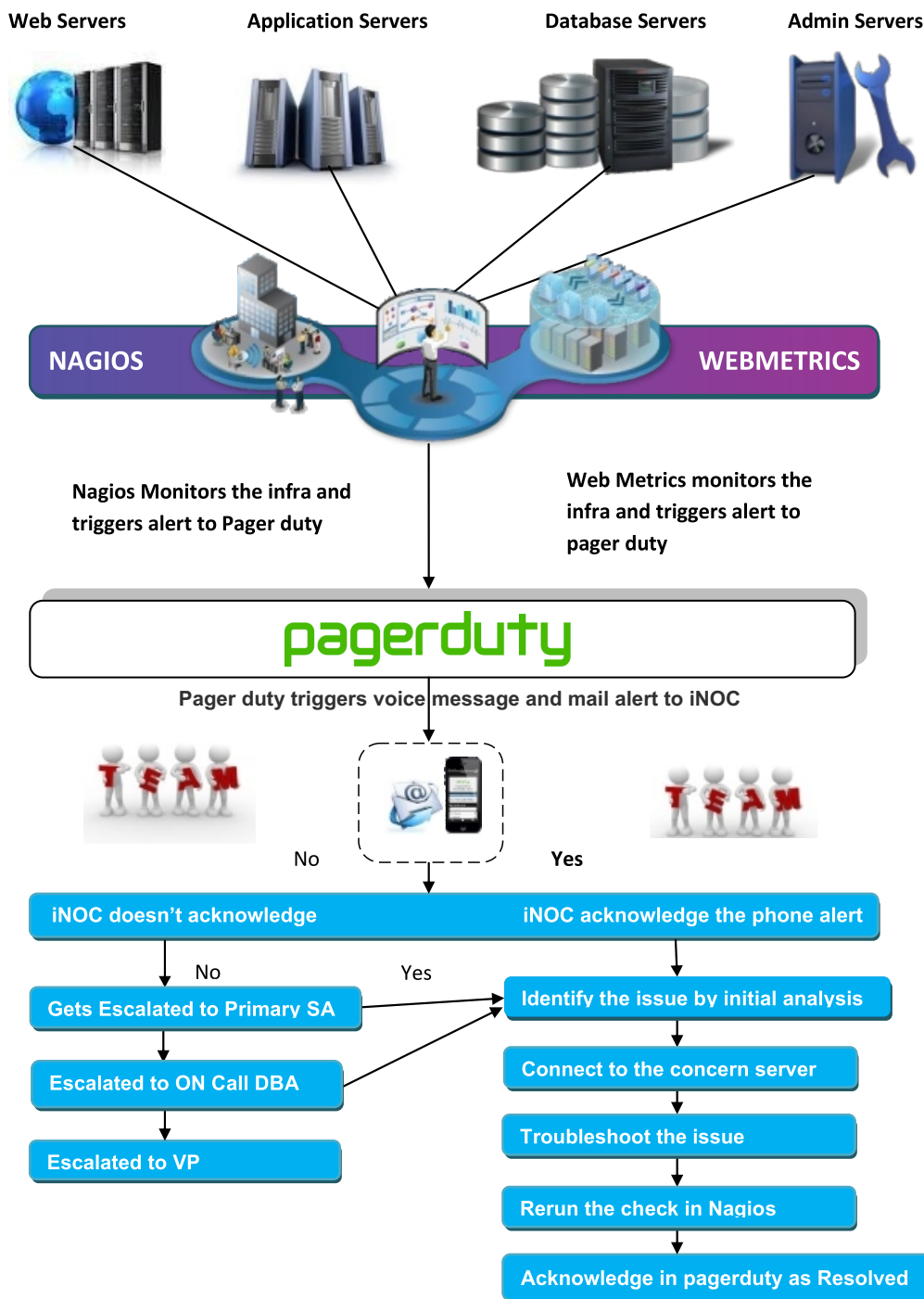
IT Infrastructure Monitoring Automation

A successful implementation of any project model starts right from the stability of its infrastructure. But more often than not, the definition of IT monitoring just boils down to ensuring that the networks and systems are stable. In a DevOps context, the health of IT infrastructure transcends the level of availability to weaving together the actual thread of continuity and collaboration between the process flows. Therefore, DevOps enthusiasts should seek a solid IT infrastructure monitoring framework rather than installing individual tools and matching them to disconnected tasks.

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Case Study 7: Aspire Systems offered IT infrastructure monitoring with their in-built framework iNOC (Integrated Network Operations Center) for a US-based cloud billing and subscriptions solution provider that decreased operational cost by 40% and SLA breaches by 70%.

iNOC Monitoring Workflow



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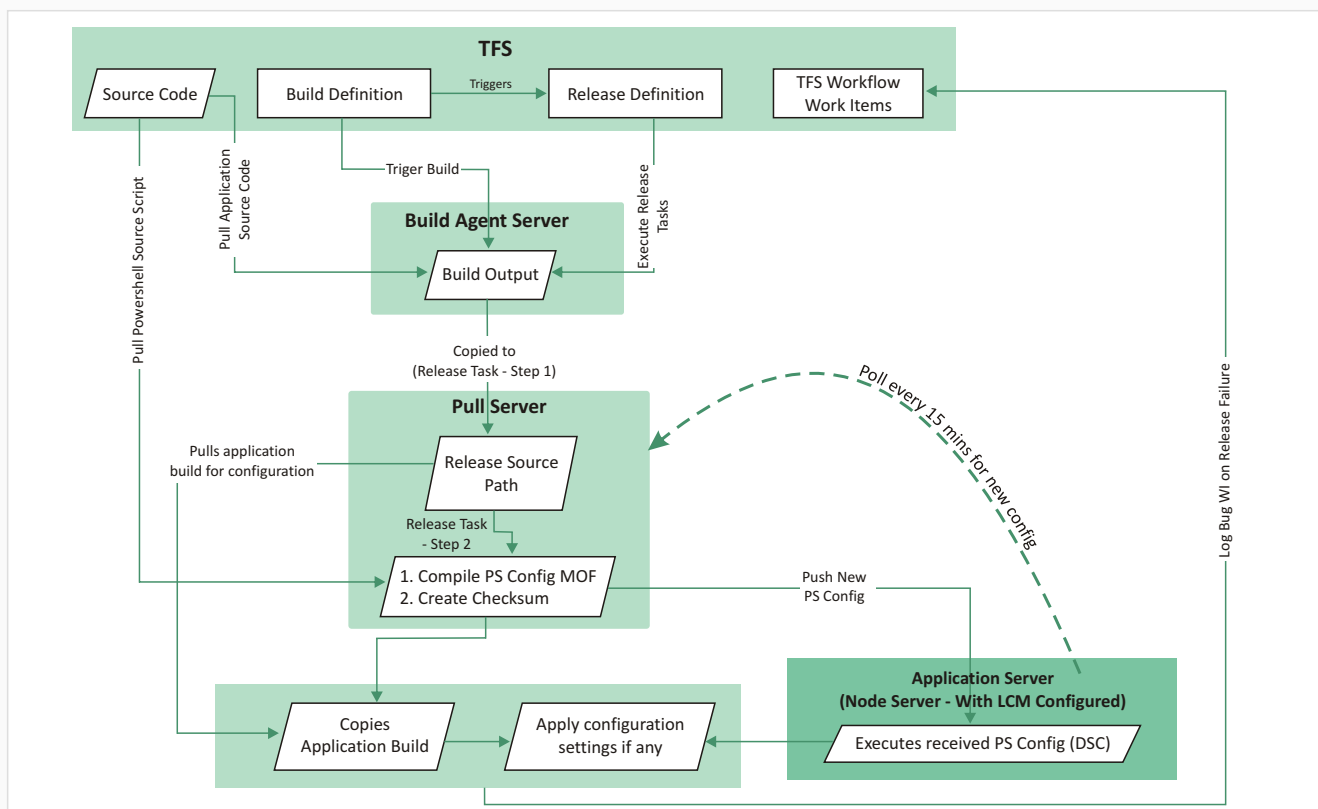
Infrastructure as Code

In order to achieve the absolute potential that an ideal DevOps implementation promises, the work profiles of the stakeholders have to be fluid; a developer should be able to build and run their own infrastructure including their environment necessities and operations team should be empowered to understand the product and identify the gaps and errors, whenever warranted. The concept of Infrastructure as Code (IaC), aka programmable infrastructure, stems from this necessity and compiles the many dimensions of infrastructure requirements across a project lifecycle into a few lines of code.

With IaC, DevOps teams can enable the operations team to develop and install environments by restoring configurations and deploying them on the go, every single time. This ensures that the project teams always have their deployment setups intact without any risk of environment drift in release pipelines.

IaC, as a DevOps concept, is steadily gaining popularity among the masses; a report from Forrester Research titled “Infrastructure as Code: Fueling the fire for faster application delivery” reported that IaC removes friction in several steps of the SDLC and fosters better collaboration between Dev and Ops team. While the report concluded that IaC has now become the accelerator to create a more collaborative and integrated software delivery organization, it also advises that IaC tools alone cannot make it possible. The report recommends the combination of latest IaC tools, collaborative processes and proper skills transfer for the complete DevOps realization.

Case Study 8: Aspire Systems enabled Infrastructure as Code practices using DSC (Desired State Configuration) powershell for a US-based payment solution provider. With automated server deployment, approval-based deployment across release pipelines and other infrastructure configurations, the customer was able to accelerate their CI/CD practices resulting in improved productivity and build quality.



Case Study 9: By introducing the approach of automated deployment of OSS applications, Aspire's DevOps team enabled a faster and effective way for the customer, an American telecommunication company, to build and maintain their operational environment and instances.

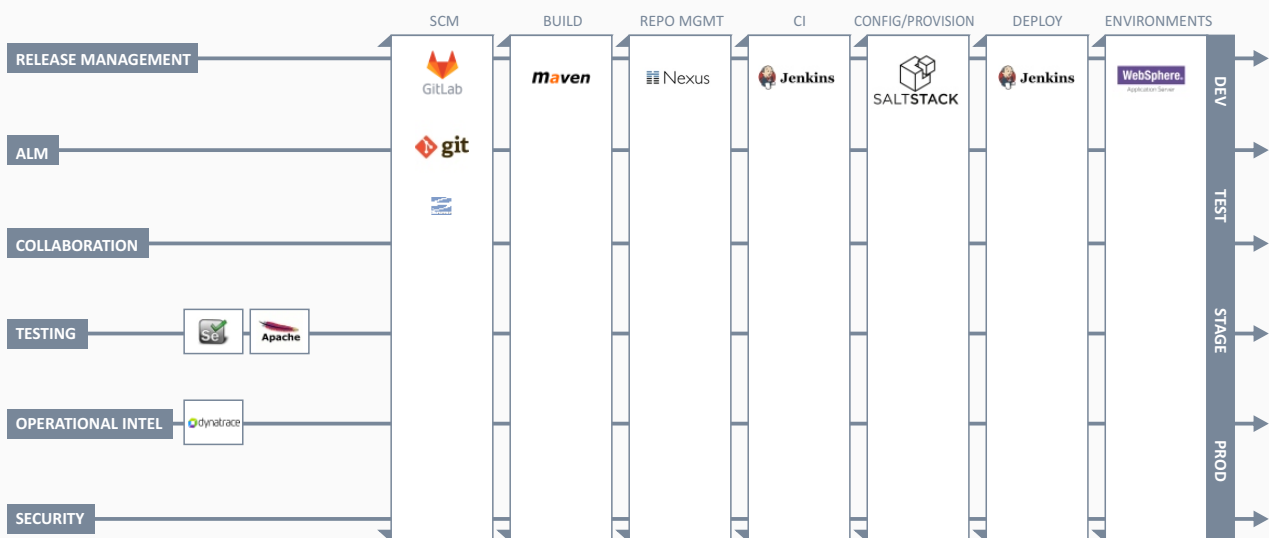
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DevOps Orchestration

The State of Database DevOps research says, “1 in 3 organizations could have a DevOps practice by 2019”. With the boom of DevOps in the software ecosystem, predictably, there has been a splurge of automation and orchestration tools across its implementation cycle making it easier for project managers and business decision-makers. But in reality, not all projects end up with a good fitment of tools for their requisites and requirements; more often than not leaving the business owners clueless about why their DevOps adaption is not yielding the desired results.

This is where an expert DevOps implementation partner comes into the picture; a partner who can be trusted to make an informed decision about the tools, processes and pathways involved in a successful implementation.

Case Study 10: As an expert DevOps Orchestration partner, Aspire Systems has assisted a leading insurance solutions provider from UK in putting together the right tool kit for DevOps implementation. The team had suggested and deployed cutting-edge tools like Temenos UXP, SaltStack in Mulesoft, Select etc. to facilitate a comprehensive DevOps structure for the customer's products.



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Conclusion

The DevOps methodology, as a lifecycle model as well as a software cultural revolution, is here to stay. The winners here will be chosen by their ability to metamorphose before they risk losing relevance.

Aspire Systems' DevOps practice has been conceptualized as a continuous rigorous approach encompassing every component of project lifecycle that will enable your organization to not just adopt a mere development model but to rethink the way products are developed. To know more about our DevOps practice, mail to info@aspiresys.com.



Aspire Systems is a global technology service firm serving as a trusted technology partner for its customers. The company works with some of the world's most innovative enterprises and independent software vendors, helping them leverage technology and outsourcing in Aspire's specific areas of expertise. Aspire System's services include Product Engineering, Enterprise Solutions, Independent Testing Services, Oracle Application Services and IT infrastructure & Application Support Services. The company currently has over 1,600 employees and over 100 customers globally. The company has a growing presence in the US, UK, Middle East, Europe and Singapore. For the seventh time in a row, Aspire has been selected as one of India's "Best Companies to Work For" by the the Great Place to Work® Institute, in partnership with The Economic Times.

SINGAPORE
+65 3163 3050

NORTH AMERICA
+1 630 368 0970

EUROPE
+44 203 170 6115

INDIA
+91 44 6740 4000

MIDDLE EAST
+971 50 658 8831

For more info contact
info@aspiresys.com or visit www.aspiresys.com

