

DevOps Assessment - Approach

We propose the following approach for the assessment. The goals driving the approach are: assess maturity, identify gaps, design of the future state DevOps implementation, applicability of OpeNgine, and high level roadmap to achieve it.

Online and offline discovery

- Discover and document current state of Cloud Infrastructure and DevOps.
- Document stakeholders' vision, goals and requirements for future state Cloud Infrastructure and DevOps.

Maturity assessment

- Assess and validate current state against 7 orthogonal maturity categories, document current maturity level.
- Define and document stakeholders' expectations of the target maturity per category.

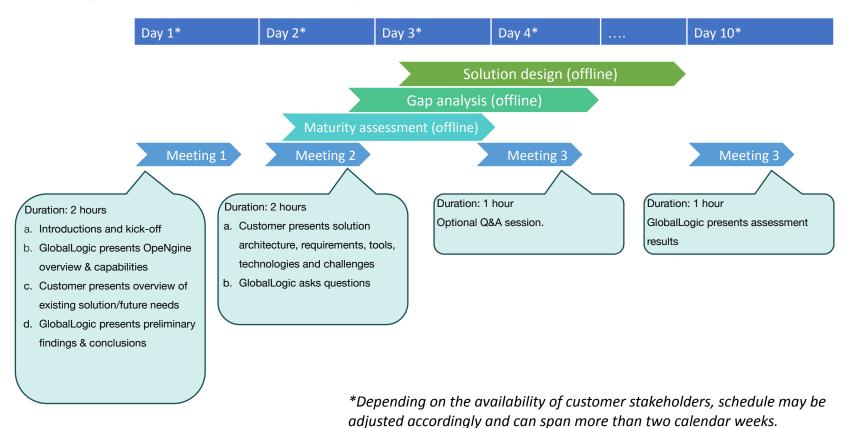
Gap analysis

- Identify gaps per category.
- Define options to close the gaps.
- Define recommended actions.
- Identify and agree on toolset.
- Define requirements for future state solution.

Solution design

- Design and document future state architecture covering Infrastructure (IaC), CI\CD, Operations and Governance.
- Document proposed high level implementation roadmap.
- Define high level implementation plan and estimates.

DevOps Assessment – Proposed Timelines



DevOps Assessment – State Deliverables

Typical artifacts that we deliver as a generic state summary. It is usually a solid foundation for the starting point to build plan on. Having correct view of the structure and process is crucial for the roadmap to lead to the success.

Title	Description
Current State Report	A PDF Document which captures the discovery report for current Cloud Infrastructure and DevOps implementation: architecture, tools and processes.
Maturity Assessment and Gap Analysis Report	A PDF Document which captures the results of Cloud Infrastructure and DevOps implementation maturity assessment and gap analysis against 7 orthogonal categories.
High-level Requirements	A PDF document which captures the High-level Requirements that are expected of the Cloud Infrastructure and DevOps implementation.

DevOps Assessment – Transition Deliverables

Transition artifacts cover various aspects of changes required for the final state.

Title	Description
Future State Cloud and DevOps Solution	A PDF Document which captures the Architecture, Technology and Tooling aspects of a proposed Future State Cloud and DevOps implementation.
Pre Build-Phase Planning Artifacts	A PDF Document which captures high-level Roadmap, indicative Timeline and rough effort estimates which can be used as input to the the detailed planning of a subsequent Build Phase.
Team composition and knowledge gaps	A PDF Document with list of key roles that are poorly covered or redundant. List of areas requiring improvements, list of possible trainings and training plan.

DevOps Assessment - Target Stakeholders

- Key Business Owners
- Key Platform/Project Owners
- Project Management & SDLC team
- Producing Stakeholders
- Development Architects/Engineers
- QA team leads

- Consuming Stakeholders
- Governance Team: Architecture,
 Data, Security and Compliance
- OnPrem/Cloud Hosting & Infrastructure Team
- DevOps Team

The above are a candidate list of Stakeholders that GlobalLogic normally requests to make available for interview during a DevOps Assessment engagement.

The main goal is to ensure that all relevant Stakeholder concerns are clearly understood and addressed within any proposed Future State DevOps solution.



Cloud and DevOps: high-level overview

Discovery elements in this area will include (existing and envisioned):

- Clouds and major technologies used, eg:
 - Cloud providers
 - Container orchestration tools
 - laC frameworks
 - Development languages
 - Additional managed and unmanaged services
- Delivery pipeline:
 - All stages and job types
 - Affected teams and stakeholders
 - List of environments and tiers

- Brief overview of:
 - DevOps team composition
 - Team cooperation process
 - Development team involvement in infra decisions
 - Testing process
 - Data migration and upgrade
 - Data replication, disaster recovery
 - Monitoring tools and process
 - Artifacts and secrets management
 - Cost management

Cloud and DevOps: requirements management

Action items in this area will include:

Investigation part:

- Revising key requirements:
 - Updating architecture diagrams to the latest state
 - Describing each component's goals and reasons behind choices made
 - Getting roadmaps, plans and list of commitments
 - Collecting requirements from every key stakeholder
- Mapping known and assumed requirements to the strategic goals
- Doing requirements workshops with every team to ensure completeness

Decision part:

- 1. Basic requirement compliance assessment:
 - Checking for obvious whiteholes in the current architecture and process
 - Mapping current state to the GlobalLogic DevOps maturity assessment matrix
 - Finding "pain spots" in the full delivery process
 - Tracking latest failed commitments
- 2. Choosing appropriate target maturity level
- 3. Creating final list of target ASRs

Cloud and DevOps maturity: beginner level

Discovery elements in this area will include (existing and envisioned):

- Autotests (unit and integrational):
 - Testing environments
 - QA team involvement
 - Reporting
- Basic release management:
 - Code/release tagging and VCS flow
 - Manual/automatic deployment triggers
 - Parameters handling
- Deployment and pipeline templates
- Usage of cloud native services
- Code quality analysis tools
- Documentation coverage

- Basic security review:
 - List of exposed services and ports, network topology
 - Keys usage
 - Authentication and authorization flows
 - Data encryption
 - Update management
 - Vulnerability scanning process
- Development culture:
 - Backlog state and technology debt
 - Current metrics related to agile process
 - Estimation process

Cloud and DevOps maturity: advanced+ level

Discovery elements in this area will include (existing and envisioned):

- Possibility of fully automating performance and security testing
- Business value metrics and testing
- Zero downtime deploy considerations and limits
- DB rollback
- Changes to the approval process required for automatic prod deployment
- List of manually-provisioned resources (for full IaC)
- Metrics and data for dynamic dashboards

- Services and applications that could be made cloud native
- Extended usage of serverless applications
- AI/ML usage for services and infrastructure
- Continuous security reviews, pentesting
- Parts requiring self-healing infrastructure

Depending on the target maturity level many additional investigation areas could be added.

Workshop structure

Depending on the workshop goals process can differ. We suggest the following for the investigation part:

- Communication to every new team or key stakeholder on a big part of the infrastructure, process or DevOps aspect starts with initial list of generic questions
- 2. Workshop starts with a brief overview of answers and a quick Q&A session to find main focus points
- 3. After key areas are identified go topic by topic until they are covered
 - Customer representative does demo/showcase/overview if possible
 - We try to get high-level picture by going through another Q&A session
 - Usually this means collecting as much information as possible spending less time on small questions

- 4. We check again if some focus points are missed
- 5. For each big subject identified in case of obvious lack of coverage a separate meeting is scheduled
- 6. If new stakeholders are identified they either join existing meeting schedule or go through this process one more time
- To ensure us being on the same page we can also provide some summary diagrams, presentations or overviews as a mirrored depiction on the GlobalLogic side

