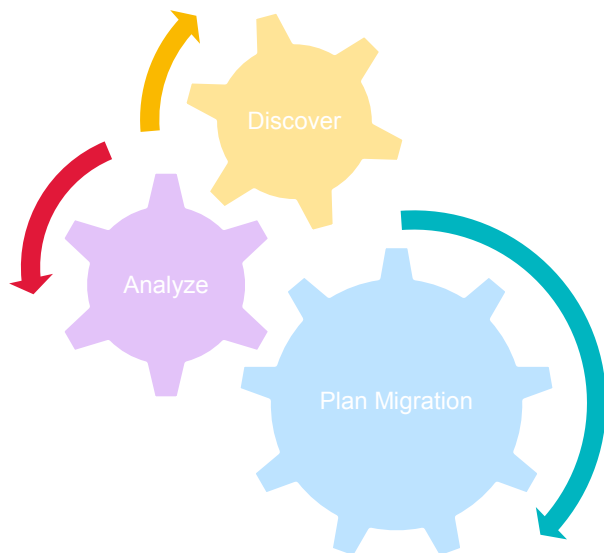




MSA Studio

Enterprise Micro Servicing Suite

Microservices Migration - Challenges



Discover & Map Every Component, Dependencies

Co-ordination with External Team for Knowledge Transition

Understanding Business Flows & Code Sequence

Functionalities have different security needs

Transaction Sensitive Services needs re-implementation

Functionalities have different integration needs

Entities & Access Methods are unique to Each Service

Migration Planning is based on complexity factors

Overarching the solution may be the killer for performance

Service Interdependency may cause migration process to go in cyclic

External dependency to understand business flow will incur time delays

Attaining holistic view of migration opportunity and planning is tedious

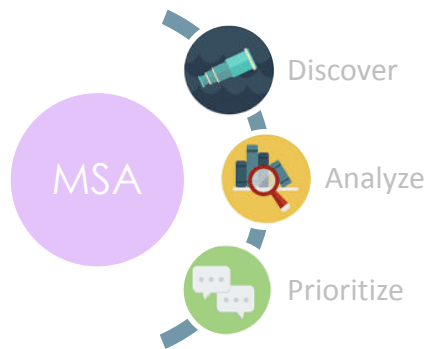
The MSA Studio

“Assess Monolithic application architecture and recommends potential Microservice candidates”

Technologies Supported



Reduces 50% of effort in approximate on analysing monolithic application and driving target state architecture



- Technologies, Frameworks
- Business Flows
- Sequence
- Alternative Sequences
- Components
- Dependencies
- Fatty Methods, Method Calls
- Parameters Size, Structure, Depth
- Session, Request & Server Object References
- Persistence Strategy
- Applicability of Security Fixes
- Transactional Boundaries
- Integration Points
- Evaluate and provide complexity factor
- Plan & Prioritize Service Migration

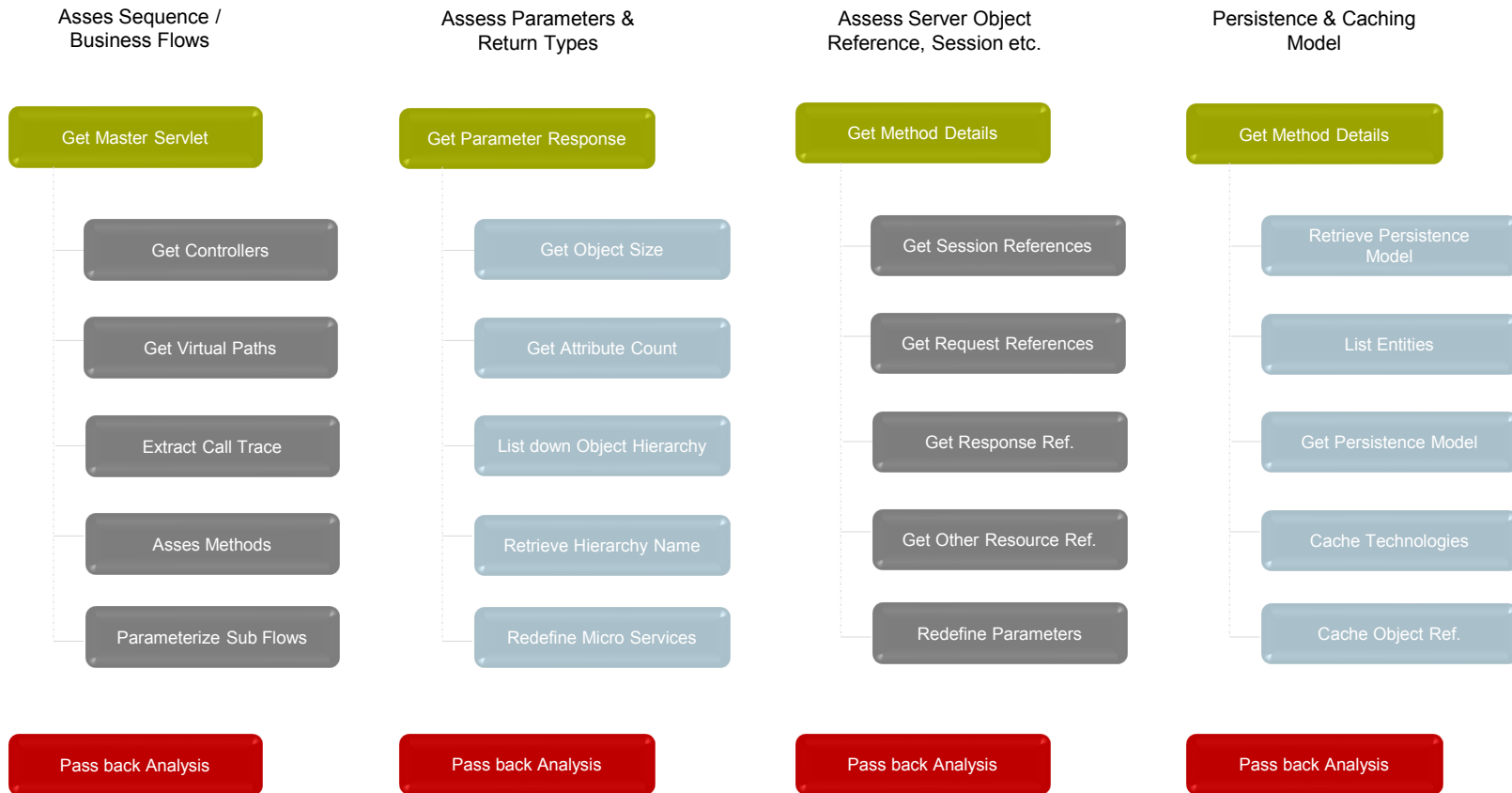
Principles Adopted..

- Decompose by business capability
- Decompose by Subdomain
- Database Per Service
- Shared Database
- Isolate Failures
- Decentralize All Things
- Microservices Chassis

Recommends

- Business Flow Assessment - Recommendation on Functional Decomposition
- Data Access Strategy
- Redefine Security Layer Recommendations, Integration Layer Elements
- Define Matrix of Dependencies with Precede & Successor Services
- Recommend Service Name, Structure, Parameters & Return Types
- Migration Strategy & Roadmap
- Recommendation on Polyglot Persistence, Programming Practices

Assessment Approach – Technical Aspects



Recommendation Basis

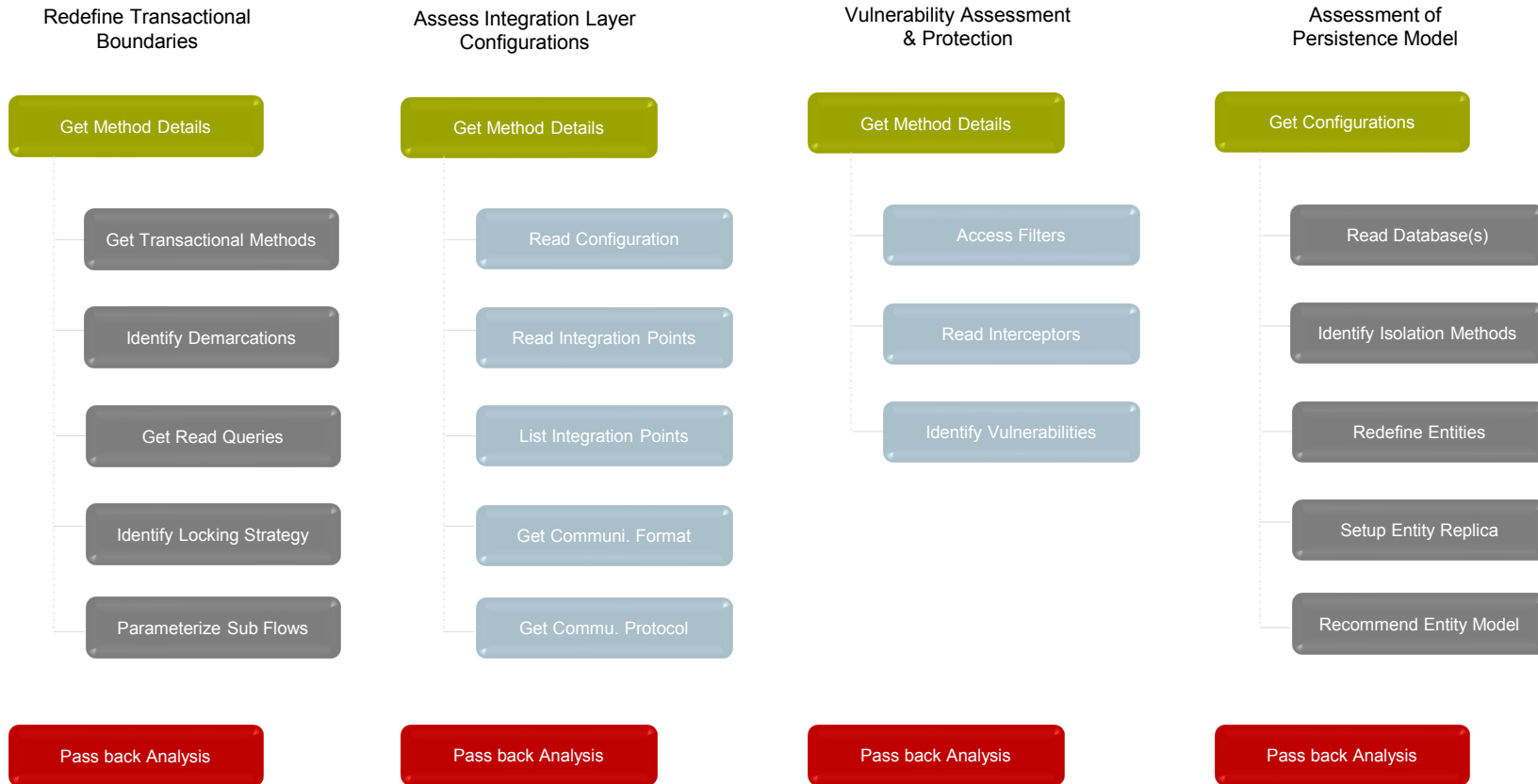
- Method Sequence
- Sub/ Alternative Scenarios
- Method Size

- Response Structure
- Size & Depth of Parameters
- Hierarchy of Structure

- Add param. based on session
- Add param. based on request
- Add other server object ref.

- Data Services
- Entities Associated

Assessment Approach – Technical Aspects



Recommendation Basis

- Compensating Transactions
- Mark Transactional Services

- List Integration Technology
- Add Integration Glue Code
- Redefine Param & Return Values

- List Vulnerability Associated
- Add Mitigation Code to Service

- Micro Services Entity Model
- Persistence Technology
- Data Model Recommendation

HCL

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