Platform Maturity (S3P) Casablanca Proposal

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Proposed Requirement Level Definition – Security

**Project-level requirements**

- **Level 0**: None
- **Level 1**: CII Passing badge
  - *Including no critical and high known vulnerabilities > 60 days old*
- **Level 2**: CII Silver badge, plus:
  - All internal/external system communications shall be able to be encrypted.
  - All internal/external service calls shall have common role-based access control and authorization using CADI framework.
- **Level 3**: CII Gold badge

**ONAP Platform-level requirements per release**

- **Level 1**: 70% of the projects passing the level 1
  - with the non-passing projects reaching 80% passing level
  - Non-passing projects MUST pass specific cryptography criteria outlined by the Security Subcommittee*
- **Level 2**: 70% of the projects passing silver
  - with non-silver projects:
    - completed passing level and 80% towards silver level
    - internal/external system communications shall be able to be encrypted.
- **Level 3**: 70% of the projects passing gold
  - with non-gold projects achieving silver level and achieving 80% towards gold level
- **Level 4**: 100% passing gold.
<table>
<thead>
<tr>
<th>Area</th>
<th>Priority</th>
<th>Min. Level</th>
<th>Stretch Goal</th>
<th>Level Description (abbreviated)</th>
</tr>
</thead>
</table>
| Security  | High     | **Platform Level 1**<br>**Absolute Minimum expectation:**<br>- CII badging passing level  
- Continuously retaining no critical or high known vulnerabilities > 60 days old  
- All communication shall be able to be encrypted and have common role-based access control and authorization.  
Desired expectation is full CII badging silver level, if not 75% towards that.  | **Project Level 2** | • 1 – 70% pass level 1 (CII Passing plus more)  
• 2 – 70% pass CII Silver (plus more)  
• 3 – 70% pass CII Gold (plus more)  
• 4 – 100% pass CII Gold |
Recommended Performance Levels

**Performance**
- **Level 0**: no performance testing done
- **Level 1**: baseline performance criteria identified and measured (such as response time, transaction/message rate, latency, footprint, etc. to be defined on a per component basis)
- **Level 2**: performance improvement plan created & implemented for 1 release (improvement measured for equivalent functionality & equivalent hardware)
- **Level 3**: performance improvement plan implemented for 2 consecutive releases (improvement measured for equivalent functionality & equivalent hardware)

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</table>
| Performance | Low/Med  | **Level 1/Level 2** – closed-loop projects  
**Level 0** – remaining projects | **Level 1** – remaining | • 0 -- none  
• 1 -- baseline performance criteria identified and measured  
• 2 & 3 – performance improvement plans created & implemented |
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<tbody>
<tr>
<td>Stability</td>
<td>Medium</td>
<td>Level 1</td>
<td></td>
<td>•0 – none</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Level 2</td>
<td></td>
<td>•1 – 72 hour component level soak w/random transactions</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•2 – 72 hour platform level soak w/random transactions</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•3 – 6 month track record of reduced defect rate</td>
</tr>
<tr>
<td>Resiliency</td>
<td>High</td>
<td>Level 2 – run-time projects</td>
<td>Level 3 – run-time projects</td>
<td>•0 – none</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Level 1 – remaining projects</td>
<td>Level 2 – remaining projects</td>
<td>•1 – manual failure and recovery (&lt; 30 minutes)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•2 – automated detection and recovery (single site)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•3 – automated detection and recovery (geo redundancy)</td>
</tr>
<tr>
<td>Scalability</td>
<td>Low</td>
<td>Level 1 – run-time projects</td>
<td>Level 1</td>
<td>•0 – no ability to scale</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Level 0 – remaining projects</td>
<td></td>
<td>•1 – single site horizontal scaling</td>
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<td></td>
<td></td>
<td></td>
<td>•2 – geographic scaling</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•3 – scaling across multiple ONAP instances</td>
</tr>
</tbody>
</table>
Proposed Requirement Level Definition – Manageability

Manageability

- **Level 1:**
  - All ONAP components will use a single logging system.
  - Instantiation of a simple ONAP system should be accomplished in <1 hour with a minimal footprint.

- **Level 2:**
  - A component can be independently upgraded without impacting operation interacting components
  - **Transaction tracing across components**
  - Component configuration to be externalized in a common fashion across ONAP projects
  - All application logging to adhere to [ONAP Application Logging Specification v1.2](#)

- **Level 3:**
  - Transaction tracing across components

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</thead>
</table>
| Manageability| High     | **Level 1**| **Level 2**  | **Level 3**
|              |          |            |              | • 1 – single logging system across components; instantiation in < 1 hour                         |
|              |          |            |              | • 2 – ability to upgrade a single component; externalized configuration management; adhere to application logging spec V1.2 |
|              |          |            |              | • 3 - tracing across components;                                                              |
Proposed Requirement Level Definition – Usability

• Level 1
  - User guide created
  - Deployment documentation
  - API documentation
  - Adherence to coding guidelines

• Level 2
  - API Documentation
    • All new API's must adhere to the ONAP API Common Versioning Strategy and Documentation Guidelines; All existing APIs must be documented in Swagger 2.0
  - Consistent UI across ONAP projects
  - Usability testing conducted
  - Projects contribute to end-to-end tutorials

• Level 3
  - Consistent UI across ONAP projects
  - Usability testing conducted
  - API Documentation
    • All new API’s, all external APIs, and all existing API’s that are modified must adhere to the ONAP API Common Versioning Strategy and Documentation Guidelines

• Level 4
  - API Documentation
    • All API’s for a given project must adhere to the ONAP API Common Versioning Strategy and Documentation Guidelines
Recommended Platform Maturity Levels for Casablanca

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<tbody>
<tr>
<td>Usability</td>
<td>Moderate</td>
<td>Level 1</td>
<td>External APIs follow Policy</td>
<td>1 – user guide; deployment documentation; API documentation; adherence to coding guidelines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Level 2</td>
<td></td>
<td>2 – API Documentation (new APIs follow policy, rest Swagger 2.0); tutorial documentation</td>
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<td></td>
<td></td>
<td>3- UI consistency; usability testing; API Documentation (changed and external APIs follow policy)</td>
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<td>4 – API Documentation (all follow policy)</td>
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Current Requirements Levels – Performance, Stability

**Performance**
- **Level 0:** no performance testing done
- **Level 1:** baseline performance criteria identified and measured (such as response time, transaction/message rate, latency, footprint, etc. to be defined on per component)
- **Level 2:** performance improvement plan created & implemented for 1 release (improvement measured for equivalent functionality & equivalent hardware)
- **Level 3:** performance improvement plan implemented for 2 consecutive releases (improvements in each release)

**Stability**
- **Level 0:** none beyond release requirements
- **Level 1:** 72 hour *component*-level soak test (random test transactions with 80% code coverage; steady load)
- **Level 2:** 72 hour *platform*-level soak test (random test transactions with 80% code coverage; steady load)
- **Level 3:** track record over 6 months of reduced defect rate
Current Requirements Levels – Resiliency

• **Level 0**: no redundancy

• **Level 1**: support manual failure detection & rerouting or recovery within a single site; tested to complete in 30 minutes

• **Level 2**: support automated failure detection & rerouting
  - within a single geographic site
  - stateless components: establish baseline measure of failed requests for a component failure within a site
  - stateful components: establish baseline of data loss for a component failure within a site

• **Level 3**: support automated failover detection & rerouting
  - across multiple sites
  - stateless components
    - improve on # of failed requests for component failure within a site
    - establish baseline for failed requests for site failure
  - stateful components
    - improve on data loss metrics for component failure within a site
    - establish baseline for data loss for site failure
Current Requirements Levels – Security

Project-level requirements
• **Level 0**: None
• **Level 1**: CII Passing badge
• **Level 2**: CII Silver badge, plus:
  - All internal/external system communications shall be able to be encrypted.
  - All internal/external service calls shall have common role-based access control and authorization.
• **Level 3**: CII Gold badge

ONAP Platform-level requirements per release
• **Level 1**: 70% of the projects passing the level 1
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• **Level 3**: 70% of the projects passing gold
  - with non-gold projects achieving silver level and achieving 80% towards gold level
• **Level 4**: 100% passing gold.
Current Requirements Levels – Scalability, Manageability

Scalability

- **Level 0**: no ability to scale
- **Level 1**: supports single site horizontal scale out and scale in, independent of other components
- **Level 2**: supports geographic scaling, independent of other components
- **Level 3**: support scaling (interoperability) across multiple ONAP instances

Manageability

- **Level 1**:
  - All ONAP components will use a single logging system.
  - Instantiation of a simple ONAP system should be accomplished in <1 hour with a minimal footprint
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  - API documentation
  - Adherence to coding guidelines

• **Level 2**
  - Consistent UI across ONAP projects
  - Usability testing conducted
  - Tutorial documented