

# Software Architecture Documentation

Reviewing for Conformance to ISO/IEC/IEEE 42010

A Comprehensive Guide to Architecture Description  
Conformance Assessment and Certification

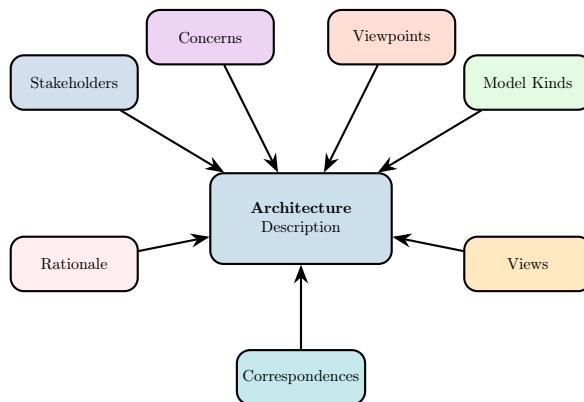
*Architecture Documentation Series*

Based on ISO/IEC/IEEE 42010:2011 and Industry Best Practices

December 9, 2025

## Abstract

ISO/IEC/IEEE 42010:2011 establishes the international standard for architecture descriptions of systems and software. Conformance to this standard ensures that architecture documentation is complete, consistent, and useful to all stakeholders. This comprehensive guide provides detailed question sets, checklists, and assessment procedures for reviewing architecture descriptions against ISO/IEC/IEEE 42010 requirements. The document covers all conformance points including stakeholder identification, concern documentation, viewpoint specification, model kind definition, view construction, correspondence rules, and rationale capture. Whether conducting internal reviews, contract compliance assessments, or formal certification audits, this guide enables systematic and thorough conformance evaluation.



ISO/IEC/IEEE 42010:2011 Core Concepts

## Contents

<b>1</b>	<b>Introduction</b>	<b>3</b>
1.1	Purpose of This Guide . . . . .	3
1.2	About ISO/IEC/IEEE 42010 . . . . .	3
1.3	Conformance Requirements . . . . .	3
1.4	Document Organization . . . . .	3
<b>2</b>	<b>ISO/IEC/IEEE 42010 Conceptual Model</b>	<b>4</b>
2.1	Core Concepts . . . . .	4
2.2	Key Definitions . . . . .	4
2.3	Conformance Scope . . . . .	5
<b>3</b>	<b>Detailed Conformance Requirements</b>	<b>5</b>
3.1	Architecture Description Identification [§5.2] . . . . .	5
3.2	Stakeholder and Concern Identification [§5.3] . . . . .	6
3.3	Viewpoint Specification [§5.4] . . . . .	7
3.4	Model Kind Specification [§5.5] . . . . .	7
3.5	View and Model Requirements [§5.6] . . . . .	8
3.6	Correspondence and Correspondence Rules [§5.7] . . . . .	8
3.7	Rationale Requirements [§5.8] . . . . .	8
3.8	Architecture Framework Usage [§6] . . . . .	9
<b>4</b>	<b>Review Question Sets</b>	<b>9</b>
4.1	Question Set Overview . . . . .	9
4.2	Questions for Architects . . . . .	10
4.3	Questions for Acquirers and Analysts . . . . .	14
<b>5</b>	<b>Conformance Checklists and Matrices</b>	<b>14</b>
5.1	Master Conformance Checklist . . . . .	15
5.2	Conformance Assessment Matrix . . . . .	16
5.3	Stakeholder-Concern-Viewpoint Traceability . . . . .	17
<b>6</b>	<b>Common Non-Conformances and Remediation</b>	<b>17</b>
6.1	Non-Conformance Categories . . . . .	17
6.2	Severity Classification . . . . .	18
<b>7</b>	<b>Review Process Guidelines</b>	<b>19</b>
7.1	Review Process Overview . . . . .	19
7.2	Review Phases . . . . .	19
7.3	Review Team Roles . . . . .	20
7.4	Review Session Agenda . . . . .	21
<b>8</b>	<b>Appendix A: Viewpoint Specification Template</b>	<b>22</b>
<b>9</b>	<b>Appendix B: Non-Conformance Report Template</b>	<b>22</b>
<b>10</b>	<b>Appendix C: Glossary</b>	<b>23</b>

**11 Appendix D: References****23**

## 1 Introduction

### 1.1 Purpose of This Guide

This guide provides comprehensive procedures for reviewing architecture descriptions (ADs) for conformance to ISO/IEC/IEEE 42010:2011, the international standard for architecture description of systems and software. Conformance review ensures that:

- Architecture documentation meets international quality standards
- All required elements are present and properly documented
- Stakeholder needs are adequately addressed
- Documentation is consistent and usable
- Contractual or regulatory requirements are satisfied

### 1.2 About ISO/IEC/IEEE 42010

#### Definition

**ISO/IEC/IEEE 42010:2011** “Systems and software engineering—Architecture description” specifies the manner in which architecture descriptions of systems are organized and expressed. It defines the required content for an architecture description and establishes a conceptual foundation for architecture description.

The standard applies to:

- Software systems
- Systems containing software
- Enterprise and organizational architectures
- Product line architectures
- Reference architectures

### 1.3 Conformance Requirements

#### Warning

##### All Requirements Are Mandatory

ISO/IEC/IEEE 42010 contains no optional requirements or tailoring provisions. For an architecture description to claim conformance, it must satisfy **all** requirements specified in the standard. Partial conformance is not recognized.

### 1.4 Document Organization

This guide is organized as follows:

- **Section 2:** Overview of ISO/IEC/IEEE 42010 conceptual model and requirements
- **Section 3:** Detailed conformance requirements by category
- **Section 4:** Review question sets for conformance assessment
- **Section 5:** Conformance checklists and matrices
- **Section 6:** Common non-conformances and remediation

- **Section 7:** Review process guidelines
- **Appendices:** Templates, examples, and references

## 2 ISO/IEC/IEEE 42010 Conceptual Model

### 2.1 Core Concepts

The standard defines a conceptual model relating the key elements of architecture description. Understanding this model is essential for conformance review.

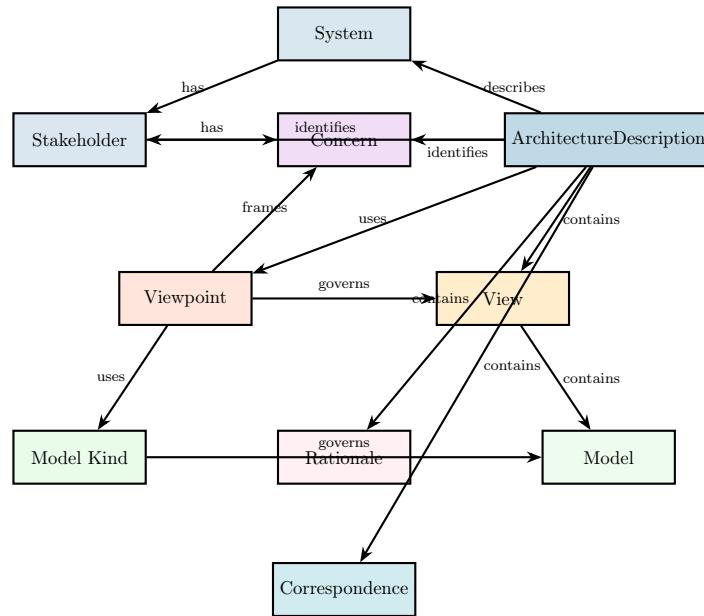


Figure 1: ISO/IEC/IEEE 42010 Conceptual Model (Simplified)

### 2.2 Key Definitions

Table 1: ISO/IEC/IEEE 42010 Key Terms

Term	Definition
Architecture	Fundamental concepts or properties of a system in its environment embodied in its elements, relationships, and in the principles of its design and evolution
Architecture Description	Work product used to express an architecture
Stakeholder	Individual, team, organization, or classes thereof, having an interest in a system
Concern	Interest in a system relevant to one or more of its stakeholders
Viewpoint	Work product establishing the conventions for the construction, interpretation, and use of architecture views to frame specific system concerns

Term	Definition
View	Work product expressing the architecture of a system from the perspective of specific system concerns
Model Kind	Conventions for a type of modeling
Model	An artifact that expresses information about a system from a particular perspective as defined by its model kind
Correspondence	A relation between AD elements; used to express and enforce architecture relations
Correspondence Rule	A rule governing correspondences; defines constraints on AD elements
Architecture Framework	Conventions, principles, and practices for the description of architectures established within a specific domain or stakeholder community
Rationale	Explanation or justification of decisions made

## 2.3 Conformance Scope

### Key Point

#### What Must Conform

ISO/IEC/IEEE 42010 specifies requirements for **architecture descriptions**, not for architectures themselves. The standard does not prescribe how to architect systems; it specifies how to document architectures. Conformance assessment evaluates the documentation, not the quality of architectural decisions.

## 3 Detailed Conformance Requirements

This section presents the conformance requirements organized by category, with references to the relevant standard sections.

### 3.1 Architecture Description Identification [§5.2]

#### AD Identification Requirements

An architecture description shall include information to identify it, including:

1. Date of issue and status
2. Issuing organization
3. Change history
4. Summary
5. Scope
6. Context
7. Glossary of terms
8. References

Table 2: AD Identification Elements

Element	Description	Verification
Date of Issue	Publication or release date	Check document header/metadata
Status	Draft, review, approved, etc.	Check document status indicator
Issuing Organization	Organization responsible for the AD	Check authorship information
Change History	Record of changes across versions	Check change log/revision history
Summary	Brief overview of the AD	Check executive summary section
Scope	What the AD covers and excludes	Check scope statement
Context	Environmental and background information	Check context section
Glossary	Definitions of terms used	Check glossary/definitions section
References	External documents referenced	Check references/bibliography

## 3.2 Stakeholder and Concern Identification [§5.3]

### Stakeholder and Concern Requirements

An architecture description shall identify:

1. The stakeholders having concerns about the system
2. The concerns considered fundamental to the architecture

Every identified concern shall be framed by at least one viewpoint used in the AD.

The AD shall consider at minimum these stakeholder classes:

- Users of the system
- Operators of the system
- Acquirers of the system
- Owners of the system
- Suppliers of the system
- Developers of the system
- Builders of the system
- Maintainers of the system

The AD shall consider at minimum these concerns:

- The purposes of the system
- The suitability of the architecture for achieving system purposes
- The feasibility of constructing and deploying the system
- The potential risks and impacts of the system
- Maintainability and evolvability of the system

### 3.3 Viewpoint Specification [§5.4]

#### Viewpoint Requirements

For each viewpoint used in an AD, the AD shall include or reference a viewpoint specification that includes:

1. Viewpoint name
2. Stakeholders addressed by the viewpoint
3. Concerns framed by the viewpoint
4. Model kinds used in the viewpoint
5. For each model kind:
  - Conventions: languages, notations, modeling techniques
  - Operations on models (if any)
6. Sources for the viewpoint (if any)

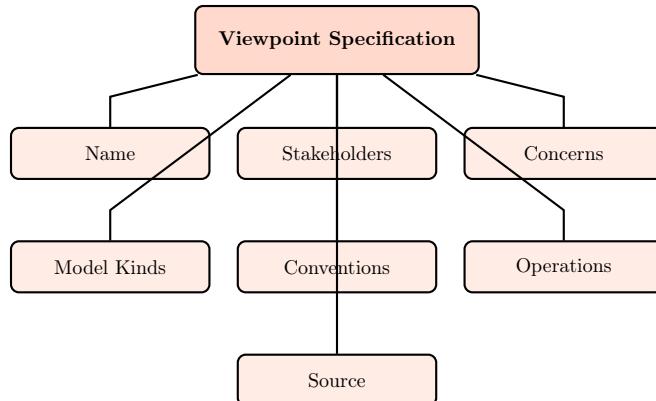


Figure 2: Viewpoint Specification Elements

### 3.4 Model Kind Specification [§5.5]

#### Model Kind Requirements

Each model kind used in an AD shall specify:

1. The conventions for models of that kind, including:
  - Language, notation, or modeling technique used
  - How models of this kind are to be constructed
  - How models of this kind are to be interpreted
2. Operations defined on models of that kind (if applicable)
3. Any correspondence rules associated with the model kind

### 3.5 View and Model Requirements [§5.6]

#### View Requirements

For each viewpoint selected for use in an AD:

1. The AD shall contain exactly one view governed by that viewpoint
2. Each view shall adhere to the conventions of its governing viewpoint
3. Each view shall include one or more models
4. Each model shall adhere to the conventions of its governing model kind

### 3.6 Correspondence and Correspondence Rules [§5.7]

#### Correspondence Requirements

An architecture description shall:

1. Record any correspondences between its AD elements
2. Record any correspondence rules, whether from:
  - Architecture framework requirements
  - Viewpoint specifications
  - Model kind specifications
  - AD-specific rules
3. For each correspondence rule, identify at least one correspondence satisfying that rule, or document known inconsistencies

#### Example

##### Correspondence Rule Example

**Rule:** Every module in the Module Decomposition View shall map to at least one runtime component in the Component-and-Connector View.

##### Satisfying Correspondences:

- OrderModule → OrderService
- PaymentModule → PaymentService
- UserModule → UserService, AuthService

### 3.7 Rationale Requirements [§5.8]

#### Rationale Requirements

An architecture description shall record the rationale for:

1. Selection of viewpoints used
2. Selection of model kinds used
3. Correspondence rules specified
4. Decisions captured in views and models

Rationale may be recorded within views, as separate rationale items, or both.

### 3.8 Architecture Framework Usage [§6]

#### Architecture Framework Requirements

When an AD uses an architecture framework:

1. The AD shall cite the framework
2. The AD shall use the viewpoints defined by the framework (or justify exceptions)
3. The AD shall apply correspondence rules defined by the framework
4. The AD shall conform to any additional requirements of the framework

## 4 Review Question Sets

### 4.1 Question Set Overview

#### Key Point

##### Review Purpose

These question sets assess conformance of an architecture description to ISO/IEC/IEEE 42010 requirements. The questions are organized by conformance area and respondent role. Positive answers with documented evidence indicate conformance.

## 4.2 Questions for Architects

### Architecture Description Identification Questions

#### Conformance Area: AD Identification [§5.2]

1. Does the AD include a clearly visible date of issue?
  - Where is the date located?
  - Is the date format unambiguous (e.g., ISO 8601)?
2. Does the AD include a status indicator (draft, review, approved, etc.)?
  - What is the current status?
  - Who authorizes status changes?
3. Does the AD identify the issuing organization?
  - Is the responsible organization clearly named?
  - Are author(s) identified?
4. Does the AD include a change history?
  - Does the history include version numbers?
  - Are changes summarized for each version?
  - Are change authors and dates recorded?
5. Does the AD include a summary?
  - Does the summary provide a high-level overview?
  - Can a reader quickly understand the AD's purpose?
6. Does the AD define its scope?
  - Is the system being described clearly identified?
  - Are scope boundaries explicit (what's in and out)?
7. Does the AD establish context?
  - Is the system's environment described?
  - Are external entities and interfaces identified?
8. Does the AD include a glossary?
  - Are domain-specific terms defined?
  - Are architecture-specific terms defined?
  - Is terminology used consistently throughout?
9. Does the AD include references?
  - Are external documents properly cited?
  - Are referenced documents accessible to readers?

### Stakeholder and Concern Questions

#### Conformance Area: Stakeholders and Concerns [§5.3]

1. Are stakeholders explicitly identified?
  - Where in the AD is the stakeholder list?
  - Are stakeholders identified by role or by name?
2. Does the AD consider the required stakeholder classes?
  - Users? (Yes/No/N/A with justification)
  - Operators?
  - Acquirers?
  - Owners?
  - Suppliers?
  - Developers?
  - Builders?
  - Maintainers?
3. Are concerns explicitly identified?
  - Where in the AD is the concern list?
  - Are concerns traced to stakeholders?
4. Does the AD consider the required concerns?
  - System purposes?
  - Architectural suitability?
  - Construction feasibility?
  - Deployment feasibility?
  - Risks and impacts?
  - Maintainability?
  - Evolvability?
5. Is every identified concern framed by at least one viewpoint?
  - Show the concern-to-viewpoint mapping
  - Identify any concerns not covered

### Viewpoint Specification Questions

#### Conformance Area: Viewpoints [§5.4]

1. For each viewpoint used, does the AD include or reference a viewpoint specification?
  - List all viewpoints used
  - For each, indicate: included in AD / referenced externally
2. Does each viewpoint specification include a name?
3. Does each viewpoint specification identify the stakeholders it addresses?
4. Does each viewpoint specification identify the concerns it frames?
5. Does each viewpoint specification identify model kinds used?
6. For each model kind, are conventions specified?
  - Languages or notations?
  - Modeling techniques?
  - Construction guidance?
  - Interpretation guidance?
7. Are operations on models specified (if applicable)?
8. Are viewpoint sources cited (if applicable)?

### View and Model Questions

#### Conformance Area: Views and Models [§5.6]

1. For each viewpoint, does the AD contain exactly one corresponding view?
  - List viewpoint-to-view mapping
  - Identify any viewpoints without views
  - Identify any views without viewpoints
2. Does each view adhere to its governing viewpoint's conventions?
3. Does each view contain at least one model?
4. Does each model adhere to its governing model kind's conventions?
5. Is the notation used in each model clearly documented or evident?
6. Are the views complete relative to the concerns they address?

## Correspondence Questions

### Conformance Area: Correspondences [§5.7]

1. Does the AD identify correspondence rules?
  - From architecture framework?
  - From viewpoint specifications?
  - From model kind specifications?
  - AD-specific rules?
2. For each correspondence rule, is there at least one satisfying correspondence?
3. Are any known inconsistencies documented?
  - What is the inconsistency?
  - What is the impact?
  - What is the resolution plan?
4. Does the AD record correspondences between AD elements?
  - Between views?
  - Between models?
  - Between other AD elements?

## Rationale Questions

### Conformance Area: Rationale [§5.8]

1. Is rationale provided for viewpoint selection?
  - Why were these viewpoints chosen?
  - Why were other viewpoints not used?
2. Is rationale provided for model kind selection?
3. Is rationale provided for correspondence rules?
4. Is rationale provided for key architectural decisions?
  - Are major decisions identified?
  - Are alternatives considered documented?
  - Are selection criteria documented?
5. Is the rationale accessible and understandable?
  - Can readers find rationale for specific decisions?
  - Is the rationale sufficient for understanding?

### 4.3 Questions for Acquirers and Analysts

#### Acquirer/Analyst Assessment Questions

**Respondents:** Acquirers, Architecture Analysts, Reviewers

1. **Stakeholder Completeness:** Is the set of identified stakeholders complete?
  - Are all relevant parties represented?
  - Are any stakeholders missing?
  - Would the AD serve all identified stakeholders?
2. **Concern Completeness:** Is the set of identified concerns complete?
  - Are all architecturally significant concerns captured?
  - Are concerns appropriately prioritized?
  - Are any concerns missing?
3. **Viewpoint Completeness:** Is the set of viewpoints complete and minimal?
  - Do the viewpoints address all concerns?
  - Are there redundant viewpoints?
  - Are any essential viewpoints missing?
4. **View Quality:** Are the views complete and communicative?
  - Do views communicate key decisions?
  - Is the level of detail appropriate?
  - Can stakeholders understand the views?
5. **Correspondence Appropriateness:** Are correspondence rules appropriate?
  - Do rules capture important relationships?
  - Are rules verifiable?
  - Are correspondences documented?
6. **Rationale Sufficiency:** Does the rationale support understanding?
  - Can reviewers understand why decisions were made?
  - Is rationale sufficient for analysis?
  - Would rationale help future maintainers?
7. **Framework Compliance:** If a framework is used, is compliance achieved?
  - Are framework viewpoints used?
  - Are framework correspondence rules applied?
  - Are deviations justified?
8. **Contractual Compliance:** Does the AD meet contractual requirements?
  - Are contract-specified views present?
  - Are contract-specified contents present?
  - Are delivery requirements met?

## 5 Conformance Checklists and Matrices

## 5.1 Master Conformance Checklist

### ISO/IEC/IEEE 42010 Conformance Checklist

#### AD Identification [§5.2]

- Date of issue included
- Status indicated
- Issuing organization identified
- Change history present
- Summary provided
- Scope defined
- Context established
- Glossary included
- References listed

#### Stakeholders and Concerns [§5.3]

- Stakeholders identified
- Required stakeholder classes considered
- Concerns identified
- Required concerns considered
- Every concern framed by at least one viewpoint

#### Viewpoints [§5.4]

- Viewpoint specifications included or referenced
- Viewpoint names specified
- Viewpoint stakeholders specified
- Viewpoint concerns specified
- Model kinds specified
- Model kind conventions specified
- Operations specified (if applicable)
- Sources cited (if applicable)

#### Views and Models [§5.6]

- One view per viewpoint
- Views conform to viewpoint conventions
- Each view contains at least one model
- Models conform to model kind conventions

#### Correspondences [§5.7]

- Correspondence rules identified
- Correspondences satisfy rules
- Known inconsistencies documented

#### Rationale [§5.8]

- Viewpoint selection rationale
- Model kind selection rationale
- Correspondence rule rationale
- Decision rationale in views

#### Architecture Framework [§6] (if applicable)

- Framework cited
- Framework viewpoints used
- Framework viewpoints used

## 5.2 Conformance Assessment Matrix

Table 3: Conformance Assessment Matrix Template

Requirement	Conform	Non-Conform	N/A	Evidence / Notes
<b>AD Identification [§5.2]</b>				
Date of issue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Status	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Issuing organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Change history	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Summary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Scope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Glossary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
References	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Stakeholders and Concerns [§5.3]</b>				
Stakeholders identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Required classes considered	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concerns identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Required concerns considered	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concerns framed by viewpoints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Viewpoints [§5.4]</b>				
Specifications present	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Names specified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stakeholders specified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Concerns specified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Model kinds specified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Conventions specified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Views and Models [§5.6]</b>				
One view per viewpoint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Views conform to viewpoints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Models in each view	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Models conform to kinds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Correspondences [§5.7]</b>				
Rules identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Requirement	Conform Non-Conform	N/A	Evidence / Notes
Correspondences satisfy rules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inconsistencies documented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Rationale [§5.8]</b>			
Viewpoint rationale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Model kind rationale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correspondence rationale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decision rationale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 5.3 Stakeholder-Concern-Viewpoint Traceability

Table 4: Stakeholder-Concern-Viewpoint Traceability

Stakeholder	Concern	Viewpoint	Framed	View Present
Developer	Code structure	Module	✓	✓
Developer	Dependencies	Uses	✓	✓
Operator	Deployment	Deployment	✓	✓
Operator	Runtime behavior	C&C	✓	✓
Acquirer	System scope	Context	✓	✓
Acquirer	Decisions	Rationale	✓	✓
Maintainer	Modifiability	Module	✓	✓
User	Functionality	Functional	✓	★

✓ = Complete   ★ = Partial   ✘ = Missing

## 6 Common Non-Conformances and Remediation

### 6.1 Non-Conformance Categories

Table 5: Common Non-Conformances

Category	Typical Issue	Remediation
<b>AD Identification</b>		
Missing metadata	No date, status, or version	Add document control section
No change history	Changes not tracked	Establish version control; add change log
Missing glossary	Terms undefined	Create glossary of domain and architecture terms

### Stakeholders and Concerns

Category	Typical Issue	Remediation
Implicit stakeholders	Stakeholders not listed	Create explicit stakeholder registry
Missing classes	Required classes not considered	Review against standard's list; justify exclusion
Concerns not traced	Concerns not linked to stakeholders	Create stakeholder-concern mapping
Unframed concerns	Concerns without viewpoints	Add viewpoints or extend existing ones
<b>Viewpoints</b>		
Missing specifications	Viewpoints used but not defined	Create or reference viewpoint specifications
Incomplete specifications	Required elements missing	Complete specification with all required elements
No model kinds	Model kinds not specified	Define model kinds for each viewpoint
Missing conventions	Languages/notations not specified	Document notation and modeling conventions
<b>Views and Models</b>		
View-viewpoint mismatch	Views don't match viewpoints	Align views to viewpoint specifications
Empty views	Views without models	Add required models to each view
Convention violations	Models don't follow conventions	Revise models to conform to model kind specs
<b>Correspondences</b>		
No correspondence rules	Rules not documented	Identify and document correspondence rules
Unsatisfied rules	Rules without correspondences	Create correspondences or document inconsistencies
Hidden inconsistencies	Inconsistencies not documented	Document known inconsistencies with impact
<b>Rationale</b>		
Missing rationale	No decision justification	Add rationale for viewpoints, models, decisions
Incomplete rationale	Some decisions unjustified	Identify gaps; add missing rationale
Inaccessible rationale	Rationale hard to find	Organize rationale; add cross-references

## 6.2 Severity Classification

Table 6: Non-Conformance Severity Levels

Severity	Definition	Examples
<b>Critical</b>	Prevents conformance claim; must be resolved	Missing viewpoint specifications; no stakeholder identification; views without models
<b>Major</b>	Significant gap; high priority for resolution	Incomplete viewpoint specs; missing required concerns; inadequate rationale
Minor	Partial gap; should be resolved	Minor metadata missing; incomplete glossary; some conventions unstated

## 7 Review Process Guidelines

### 7.1 Review Process Overview

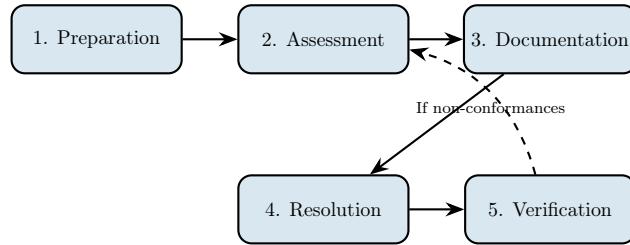


Figure 3: Conformance Review Process

### 7.2 Review Phases

Table 7: Review Phase Activities

Phase	Activities	Outputs
1. Preparation	Gather AD and supporting materials; identify reviewers; schedule review; distribute question sets	Review plan; reviewer assignments; materials distributed
2. Assessment	Reviewers complete question sets; identify conformances and gaps; gather evidence	Completed question sets; preliminary findings
3. Documentation	Compile findings; classify non-conformances; create assessment report	Conformance assessment report; non-conformance list
4. Resolution	Architect addresses non-conformances; updates AD; documents resolutions	Updated AD; resolution documentation

---

5. Verification	Re-assess resolved items; verify conformance; issue final report	Final conformance report; certificate (if applicable)
-----------------	--	---

---

### 7.3 Review Team Roles

Table 8: Review Team Roles

Role	Responsibilities	Qualifications
Review Lead	Plan and coordinate review; facilitate sessions; compile report	ISO 42010 expertise; review experience
Architect	Present AD; answer questions; resolve non-conformances	System and AD knowledge
Domain Expert	Assess stakeholder/concern completeness	Domain knowledge; stakeholder perspective
Standards Expert	Verify conformance to ISO 42010 requirements	ISO 42010 expertise
Recorder	Document findings and decisions	Technical writing skills

---

## 7.4 Review Session Agenda

### Best Practice

#### Typical Conformance Review Session (4-6 hours)

##### 1. Opening (30 min)

- Introductions and role assignments
- Review objectives and process
- Overview of ISO 42010 requirements

##### 2. AD Presentation (60 min)

- Architect presents AD structure and content
- Walkthrough of key sections
- Questions for clarification

##### 3. Conformance Assessment (120-180 min)

- Systematic review using question sets
- Evidence gathering for each requirement
- Discussion of findings

##### 4. Non-Conformance Documentation (30-60 min)

- Compile non-conformances
- Classify severity
- Identify resolution approach

##### 5. Closing (30 min)

- Summarize findings
- Agree on next steps
- Schedule follow-up if needed

## 8 Appendix A: Viewpoint Specification Template

Viewpoint Specification Template	
<b>Viewpoint Name:</b>	[Unique, descriptive name]
<b>Viewpoint Overview:</b>	[Brief description of the viewpoint's purpose]
<b>Stakeholders Addressed:</b>	Stakeholder 1 Stakeholder 2
<b>Concerns Framed:</b>	Concern 1 Concern 2
<b>Model Kinds:</b>	<p><i>Model Kind 1:</i></p> <ul style="list-style-type: none"> <li>• <b>Name:</b> [Model kind name]</li> <li>• <b>Language/Notation:</b> [e.g., UML Component Diagram]</li> <li>• <b>Construction Conventions:</b> [How to build models]</li> <li>• <b>Interpretation Conventions:</b> [How to read models]</li> <li>• <b>Operations:</b> [Analyses or transformations, if any]</li> </ul> <p><b>Source:</b> [Reference to published viewpoint, if applicable]</p> <p><b>Correspondence Rules:</b> [Rules relating this viewpoint to others]</p>

## 9 Appendix B: Non-Conformance Report Template

Non-Conformance Report	
<b>Report ID:</b>	NCR-[number]
<b>Date Identified:</b>	[date]
<b>AD Reference:</b>	[AD identifier and version]
<b>Requirement Reference:</b>	ISO/IEC/IEEE 42010 §[section]
<b>Requirement Text:</b>	[Quote or paraphrase the requirement]
<b>Non-Conformance Description:</b>	[Detailed description of how the AD fails to meet the requirement]
<b>Evidence:</b>	[Specific references to AD sections; what was expected vs. found]
<b>Severity:</b>	Critical / Major / Minor
<b>Impact:</b>	[Impact on AD usability, stakeholder needs, or conformance claim]
<b>Recommended Resolution:</b>	[Specific actions to achieve conformance]
<b>Resolution Status:</b>	Open / In Progress / Resolved / Verified
<b>Resolution Notes:</b>	[How the non-conformance was resolved; verification evidence]

## 10 Appendix C: Glossary

**Architecture** Fundamental concepts or properties of a system embodied in its elements, relationships, and principles of design and evolution

**Architecture Description**

Work product used to express an architecture

**Architecture Framework**

Conventions, principles, and practices for architecture description in a specific domain

**Concern** Interest in a system relevant to one or more stakeholders

**Conformance** Fulfillment of specified requirements

**Correspondence**

Relation between AD elements expressing architecture relationships

**Correspondence Rule**

Rule governing correspondences; defines constraints on AD elements

**Model** Artifact expressing information from a perspective defined by a model kind

**Model Kind** Conventions for a type of modeling

**Stakeholder** Individual, team, or organization with interest in a system

**View** Work product expressing architecture from perspective of specific concerns

**Viewpoint** Conventions for constructing, interpreting, and using views

## 11 Appendix D: References

1. ISO/IEC/IEEE 42010:2011. *Systems and software engineering—Architecture description*.
2. ISO/IEC/IEEE 42020:2019. *Software, systems and enterprise—Architecture processes*.
3. ISO/IEC/IEEE 42030:2019. *Software, systems and enterprise—Architecture evaluation framework*.
4. Clements, P., et al. (2010). *Documenting Software Architectures: Views and Beyond* (2nd ed.). Addison-Wesley.
5. Rozanski, N., & Woods, E. (2011). *Software Systems Architecture* (2nd ed.). Addison-Wesley.
6. Hilliard, R. (2011). “ISO/IEC/IEEE 42010—The New Standard for Architecture Description.” *IEEE Software*, 28(3).
7. The Open Group. (2018). *TOGAF Standard, Version 9.2*. Van Haren Publishing.
8. Kruchten, P. (1995). “The 4+1 View Model of Architecture.” *IEEE Software*, 12(6), 42-50.