

# kit-template Documentation

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Eclipse Tractus-X

Generated: 2026-02-04

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Source: README.md

## KIT Template

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### Remove this file before publishing

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This directory contains the comprehensive template structure for creating a new KIT (Keep It Together) in the Eclipse Tractus-X ecosystem.

## Quick Start

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### Prerequisites

Before creating a new KIT, ensure you have:

- A clear understanding of the business problem your KIT addresses
- Familiarity with the [KIT Framework Documentation](#)
- Read the [TRG 10.01 - KIT Architecture](#)
- Read the [TRG 10.02 - KIT Content Structure](#)
- Reviewed existing KITs for reference at [Eclipse Tractus-X KITs](#)

### How to Use This Template

Follow these steps to create your KIT:

## 1. Copy and Rename

```
# From the docs-kits/kits/ directory
cp -r ../kit-template ./<kit-id>-kit
cd <kit-id>-kit
```

## 2. Update Placeholders

Search and replace all `[PLACEHOLDER]` text with your KIT-specific information:

- `[KIT_NAME]` → Your KIT's official name
- `[DESCRIPTION]` → Brief description of your KIT
- `[YOUR_COMPANY]` → Your company name
- `[YYYY]` → Current year
- `[GITHUB_USERNAME]` → Your GitHub username

## 3. Select Your Views

Based on your KIT's maturity level, implement the required views:

- **Sandbox:** Minimum - Adoption View
- **Incubating:** Adoption + Development Views
- **Graduated:** All Views (Adoption + Development + Operations + Industry Extensions)

## 4. Update Master Data

Register your KIT in `/data/kitsData.js` :

- Add KIT metadata (name, description, logo, routes)
- Assign to appropriate category (Foundation, Industry Core, Cross-Industry, Industry-Specific)
- Follow the [JSON schema](#)

## 5. Configure Sidebar

Add your KIT to `/sidebarsDocsKits.js` to make it navigable

## 6. Set Code Owners

Add maintainers to `/.github/CODEOWNERS` :

```
/docs-kits/kits/your-kit-name-kit/ @your-github-username
```

# Directory Structure

---

```
kit-template/
├─ README.md                # Main guide - START HERE (REMOVE THIS FILE BEFORE PUBLISHING)
├─ changelog.md             # Version history template
|
├─ adoption-view/          # Business documentation (MANDATORY for all)
|   └─ _category_.json
|       └─ adoption-view.md # Vision, mission, business value, use cases
|
├─ development-view/        # Technical documentation (Required for Incubating+)
|   └─ _category_.json
|       └─ development-view.md # Architecture, APIs, semantic models
|
├─ operations-view/         # Operations documentation (Required for Graduation)
|   └─ _category_.json
|       └─ operations-view.md # Deployment, monitoring, security
|
├─ industry-extensions/     # Industry-specific adaptations (Required for Graduation)
|   └─ _category_.json
|       └─ README.md        # Overview of industry extensions
|           └─ automotive/  # Example: Automotive industry extension
|               └─ _category_.json
|                   └─ overview.md # Catena-X standards, automotive models
|
├─ success-stories/         # Reference implementations (Recommended for Graduation)
|   └─ _category_.json
|       └─ overview.md      # Case studies, reference implementations
|
├─ documentation/          # Additional resources (Optional)
|   └─ _category_.json
|       └─ overview.md      # External links, glossary, FAQ
|
└─ resources/              # Images, diagrams, files
    └─ img/
        └─ REUSE.toml       # License from each image
```

# Maturity Levels

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Your KIT will progress through different maturity levels, each with specific requirements:

## Sandbox

Initial development phase with basic structure

### Required Artifacts:

- CHANGELOG.md
- Copyright notices in all files
- Adoption View (Vision, Mission, Business Value, Use Case)

## Incubating

Active development with growing feature set

### Required Artifacts:

- All Sandbox requirements
- Development View (Architecture, APIs, Semantic Models)
- Standards documentation
- Business Process documentation
- Test cases
- Code Owner (recommended)

### Incubating Sub-states:

- **Draft:** Initial structure and documentation
- **In Progress:** Active implementation of features
- **In Review:** Expert review and quality assurance

## Graduated

Production-ready with complete documentation

### Required Artifacts:

- All Incubating requirements

- Operations View (Deployment, Monitoring, Security)
- Industry Extensions (at least one)
- Reference Implementation
- Sample Data
- Code Owner (mandatory)
- Success Stories (recommended)

For detailed artifact requirements, see [TRG 10.03 - KIT Lifecycle](#).

## Required Files by Maturity Level

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### Mandatory for All Maturity Levels

File/Artifact	Description	Reference
<code>CHANGELOG.md</code>	Version history following semantic versioning	<a href="#">TRG 1.03</a>
Copyright Notice	CC-BY-4.0 license in <b>every file</b>	<a href="#">TRG 7.07</a> , <a href="#">TRG 7.08</a>
Adoption View	At minimum: vision, mission, business value	<a href="#">TRG 10.02</a>

### Required for Graduation

File/Artifact	Description	Reference
<code>CODEOWNERS</code>	Maintainer assignments	<a href="#">TRG 10.02</a>
Development View	Complete technical documentation	<a href="#">TRG 10.02</a>
Operations View	Deployment and operations guides	<a href="#">TRG 10.02</a>
Industry Extensions	At least one industry implementation	<a href="#">TRG 10.02</a>
Reference Implementation	Working COTS or OSS implementation	<a href="#">TRG 10.04</a>
Test Cases	Validation and testing documentation	<a href="#">TRG 10.03</a>

# Documentation Guidelines

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## Adoption View

**Target Audience:** Business stakeholders, decision-makers, non-technical users

**Focus:** Business value, use cases, and strategic benefits

**Required Content:**

- **Vision & Mission:** Strategic objectives and inspiration for solution providers
- **Business Value:** 3-5 key benefits with descriptions (ROI, cost savings, market access)
- **Use Case Explanation:** Industry problem, current challenges, and benefits by stakeholder type
- **Business Processes:** Process flows, access policies, and data sovereignty considerations
- **Semantic Models:** Data structure definitions for interoperability
- **Standards:** Industry standards and compliance requirements
- **Tutorials** (Optional for Sandbox/Incubating): Videos or step-by-step guides

**Best Practices:**

- Use clear, non-technical language
- Include visual diagrams and flowcharts
- Provide real-world examples
- Highlight competitive advantages
- Show value from multiple stakeholder perspectives (OEM, SME, Solution Provider)

## Development View

**Target Audience:** Software developers, architects, technical implementers

**Focus:** Technical implementation, APIs, and development resources

**Required Content:**

- **Architecture Overview:** System design, components, and architectural patterns

- **Component/Sequence Diagrams:** Visual representations of system interactions
- **API Specifications:** OpenAPI/Swagger files with endpoint documentation
- **Standards:** Technical standards and protocol compliance
- **Logic/Schema:** Business logic definitions and data flow diagrams
- **Semantic Models:** Detailed data structures and relationships
- **Test Cases:** Unit tests, integration tests, and validation scenarios
- **Sample Data:** Example datasets and payloads
- **Tutorials:** Developer quick-start guides and code examples

### **Best Practices:**

- Include working code examples
- Provide API endpoint examples with request/response samples
- Document error handling and edge cases
- Include architecture diagrams (C4, UML, etc.)
- Link to live API documentation
- Provide sample data in multiple formats (JSON, XML, CSV)

## **Operations View**

**Target Audience:** DevOps engineers, system administrators, operators

**Focus:** Deployment, operations, and maintenance

## **Industry Extensions**

**Target Audience:** Industry-specific implementers

**Focus:** Industry-specific adaptations while maintaining core interoperability

### **Required Content:**

- **Industry Overview:** Specific industry context and requirements
- **Industry Standards:** Compliance with industry-specific standards (e.g., Catena-X, IDTA, ISO/DIN)
- **Semantic Models:** Industry-specific data models and extensions
- **Use Cases:** Industry-specific scenarios and implementations
- **Code Owner:** Industry extension maintainer(s)

# Implementation Checklist

---

## Phase 1: Setup (Sandbox)

- [ ] Copy template directory to `/docs-kits/kits/your-kit-name-kit/`
- [ ] Update README.md with KIT-specific information
- [ ] Create CHANGELOG.md with initial version
- [ ] Add copyright notices to all files
- [ ] Implement basic Adoption View (vision, mission, business value)
- [ ] Create KIT logo and banner in `/assets/`
- [ ] Register KIT in `/data/kitsData.js`
- [ ] Add sidebar configuration in `/sidebarsDocsKits.js`
- [ ] Create initial GitHub issue in [sig-release](#)

## Phase 2: Development (Incubating)

- [ ] Complete Adoption View documentation
- [ ] Implement Development View structure
- [ ] Document architecture and components
- [ ] Create API specifications (OpenAPI)
- [ ] Document semantic models and data structures
- [ ] Add business process documentation
- [ ] Create developer tutorials
- [ ] Implement test cases
- [ ] Add sample data
- [ ] Document standards compliance
- [ ] Set recommended code owner in CODEOWNERS

## Phase 3: Production (Graduated)

- [ ] Complete Operations View documentation
- [ ] Create deployment guides and scripts
- [ ] Document monitoring and security
- [ ] Implement at least one Industry Extension
- [ ] Add reference implementations



- [ ] Document success stories
- [ ] Set mandatory code owner in CODEOWNERS
- [ ] Complete expert review process
- [ ] Submit graduation request in [sig-release](#)

## Compliance Requirements

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Your KIT **MUST** comply with these Tractus-X Release Guidelines (TRGs):

TRG	Title	Requirement
<a href="#">TRG 10.01</a>	KIT Architecture	KIT category classification and registration in master data
<a href="#">TRG 10.02</a>	KIT Content Structure	Required content sections and structure
<a href="#">TRG 10.03</a>	KIT Lifecycle	Maturity levels and artifact requirements
<a href="#">TRG 10.04</a>	KIT Graduation Process	Requirements and process for graduation
<a href="#">TRG 10.05</a>	KIT Deprecation Process	Deprecation criteria and procedures
<a href="#">TRG 7.07</a>	Legal Notice for Non-Code	Image and media licensing (CC-BY-4.0)
<a href="#">TRG 7.08</a>	Legal Notice for Documentation	Documentation licensing (CC-BY-4.0)
<a href="#">TRG 1.03</a>	CHANGELOG.md	Semantic versioning and changelog format

## Additional Resources

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### Documentation

- [KIT Framework Documentation](#) - Complete KIT structure and artifacts guide

- [KIT Getting Started Guide](#) - Step-by-step KIT creation guide
- [KIT Lifecycle Guide](#) - Maturity levels and progression
- [KIT Master Data Overview](#) - Master data structure and registration

## Examples

Browse existing KITs for reference:

- [Connector KIT](#) - Dataspace Foundation
- [Digital Twin KIT](#) - Industry Core Foundation
- [PCF Exchange KIT](#) - Cross-Industry Use Case
- [MaaS KIT](#) - Industry-Specific Use Case

## Tools

- [JSON Schema for KIT Master Data](#) - Validation schema for master data
- [Artifact Requirements Data](#) - Detailed artifact requirements by maturity level

# Support and Community

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## Get Help

- **KIT Community Office Hours:** Weekly alignment meetings - [Join Meeting](#)
- **Matrix Chat:** Daily discussions and support - [#tractusx-kits:matrix.eclipse.org](#)
- **GitHub Issues:** Report bugs or request features - [Create Issue](#)

## Alignment Mechanisms

Channel	Purpose	Frequency	Link
Alignment Day	Quarterly refinement sessions	Quarterly	<a href="#">Release Process</a>
Open Planning Day	Open planning sessions	Quarterly	<a href="#">Release Process</a>
KIT Office Hours	Community alignment	Weekly	<a href="#">Join Meeting</a>
Matrix Chat	Daily support	Ongoing	<a href="#">Join Chat</a>

## Contributing

Before creating a KIT, follow the contribution process:

1. **Discuss Idea:** Share in [GitHub Discussions](#) (optional but recommended)
2. **Create Ticket:** Submit ticket in [sig-release](#)
3. **Present:** Present your KIT in Open Planning Day of target release
4. **Build:** Develop your KIT in your fork following this template
5. **Submit PR:** Create pull request to main repository with changelog and updated master data
6. **Review:** Get approval from responsible committer
7. **Publish:** KIT published in target release changelog

For detailed contribution guidelines, see [KIT Getting Started Guide](#).

### Happy KIT Building!

For questions, reach out via [Matrix Chat](#) or [KIT Office Hours](#).

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## Adoption View

---

Welcome to the **[KIT\_NAME] KIT Adoption View**. This view provides business value, strategic benefits, and use cases for business stakeholders and decision-makers.

**info:** Target Audience

Business Managers, Product Owners, Solution Architects, Industry Experts, and Decision Makers.

## Business Value

---

### Value Proposition #1: [Title]

**Benefit:** [Primary benefit description]

**Target Stakeholders:** [OEMs | SMEs | Solution Providers | etc.]

**Measurable Outcomes:** [Key metrics]

### Value Proposition #2: [Title]

**Benefit:** [Second benefit description]

**Target Stakeholders:** [Target audience]

**Measurable Outcomes:** [Key metrics]

## Value Proposition #3: [Title]

**Benefit:** [Third benefit description]

**Target Stakeholders:** [Target audience]

**Measurable Outcomes:** [Key metrics]

## Use Case Context

---

### Industry Challenge

[Describe current industry problems and pain points]

#### Current Challenges:

- **Challenge 1:** [Problem description and impact]
- **Challenge 2:** [Problem description and impact]
- **Challenge 3:** [Problem description and impact]

### The Solution

[Explain how this KIT addresses the challenges]

#### Solution Components:

1. **[Component 1]:** [Description]
2. **[Component 2]:** [Description]
3. **[Component 3]:** [Description]

## Business Processes

---

**tip:** For industry-specific business processes, see the [Industry Extensions](#) documentation.

### Core Business Process: [Process Name]

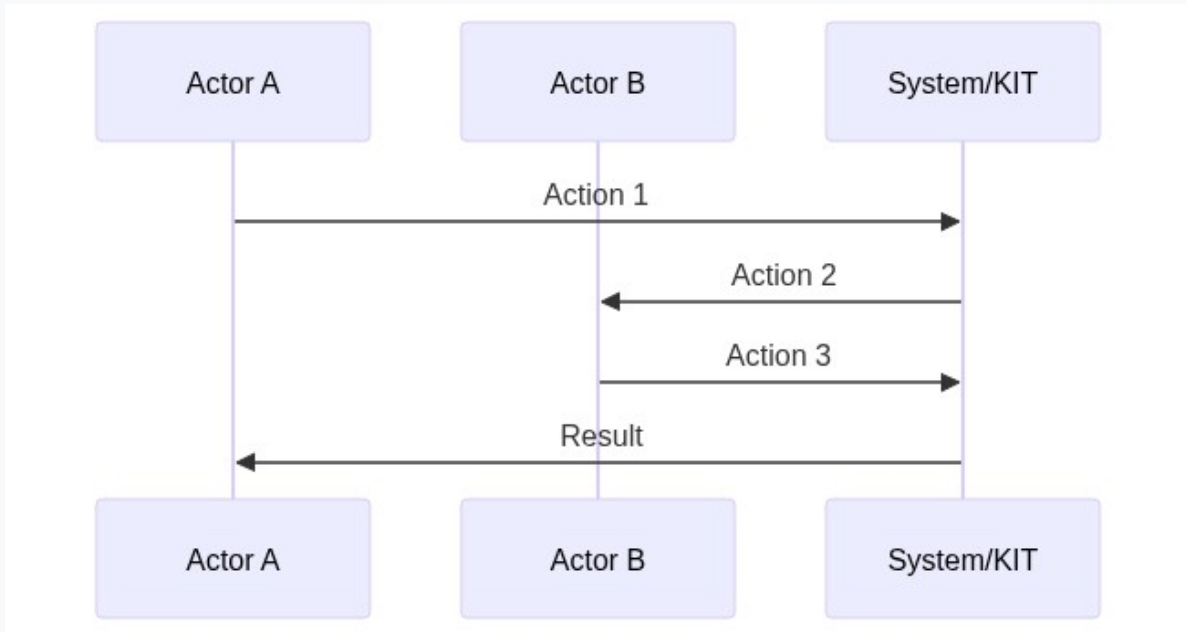
**Purpose:** [Business goal]

**Stakeholders:** [List key stakeholders]

## Process Steps:



### Diagram



Source Code:

```
sequenceDiagram
    participant A as Actor A
    participant B as Actor B
    participant C as System/KIT
    A->>C: Action 1
    C->>B: Action 2
    B->>C: Action 3
    C->>A: Result
```

**Process Description:** [Brief description of key steps]

## Access & Usage Policies

**warning:** Industry-Specific Policies

For industry-specific policy requirements, refer to the [Industry Extensions](#) section.

## Example Access Policy

```
{
  "policy": {
    "permission": {
      "action": "use",
      "constraint": {
        "leftOperand": "UsagePurpose",
        "operator": "isAnyOf",
        "rightOperand": [
          "mx.core.digitalTwinRegistry:1"
        ]
      }
    }
  }
}
```

[Brief policy explanation]

## Standards

---

**warning:** Industry-Specific Standards

For industry-specific standards, refer to the [Industry Extensions](#) section.

### Supported Standards

Standard	Version	Description	Compliance Level	Link
[Standard 1]	X.Y	[Description]	Mandatory/Optional	[Link]
[Standard 2]	X.Y	[Description]	Mandatory/Optional	[Link]

## Tutorials & Resources

---

### Getting Started Tutorial

[Link to tutorial or brief description]

## Video Resources

Title	Duration	Link
[Video 1]	[X min]	[Link]

## Whitepaper

[Link to whitepaper if available]

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# Changelog

---

All notable changes to this KIT will be documented in this file.

The format is based on [Keep a Changelog](#),  
and this project adheres to [Semantic Versioning](#).

## [Unreleased]

---

### Added

### Changed

### Deprecated

### Removed

### Fixed

### Security

---

## Version History

---

### [1.0.0] - YYYY-MM-DD

---

#### Added

- Initial release of [KIT\_NAME] KIT
- Complete adoption view documentation including:
  - Vision and mission statement
  - Business value propositions

- Use case documentation
- Business process descriptions
- Semantic models
- Standards compliance documentation
- Complete development view documentation including:
  - Architecture overview and diagrams
  - API specifications (OpenAPI/Swagger)
  - Component and sequence diagrams
  - Logic and schema definitions
  - Sample data and test cases
  - Developer tutorials
- Complete operations view documentation including:
  - Deployment guides and scripts
  - Configuration management
  - Monitoring and logging guidelines
  - Security best practices
  - Troubleshooting guides
  - Industry extensions for [INDUSTRY\_NAME]
  - Reference implementation documentation
  - Success stories and case studies

## **Changed**

## **Deprecated**

## **Removed**

## **Fixed**

## **Security**

# Architecture View

---

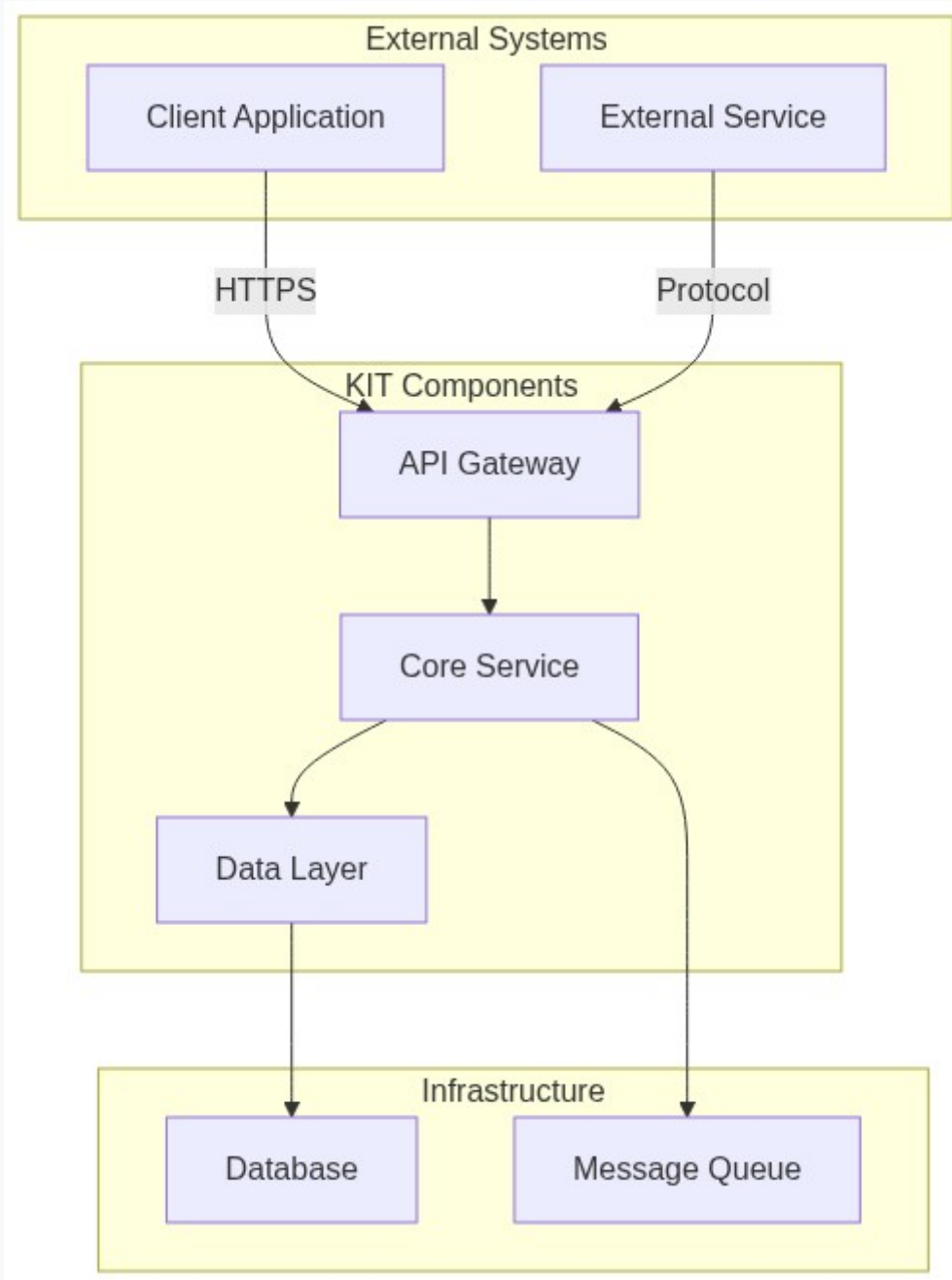
## Architecture Overview

---

### System Architecture

[High-level architecture diagram and explanation]

## Diagram



Source Code:

```

graph TB
    subgraph External_Systems [External Systems]
        A[Client Application]
        B[External Service]
    end

    subgraph KIT_Components [KIT Components]
        C[API Gateway]
        D[Core Service]
        E[Data Layer]
    end

    subgraph Infrastructure
        F[Database]
        G[Message Queue]
    end

    A -->|HTTPS| C
    B -->|Protocol| C
    C --> D
    D --> E
    E --> F
    D --> G

```

## Architecture Principles

1. **Modularity:** Loosely coupled components
2. **Scalability:** Horizontal scaling support
3. **Security:** End-to-end encryption
4. **Interoperability:** Standards-based APIs
5. **Observability:** Built-in monitoring and logging

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## Development View

---

Technical documentation for developers, architects, and implementers.

**info:** Target Audience

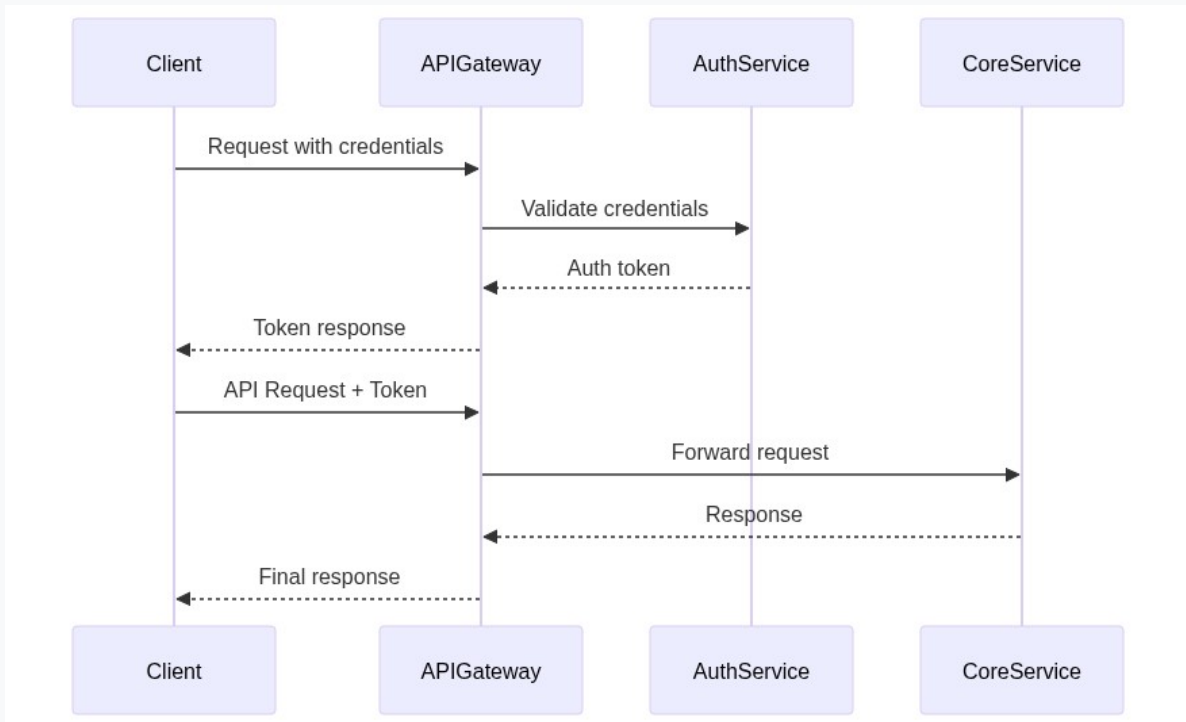
Software Developers, Solution Architects, Technical Leads, API Developers, Integration Engineers.

## Sequence Diagrams

---

### Authentication Flow

## Diagram



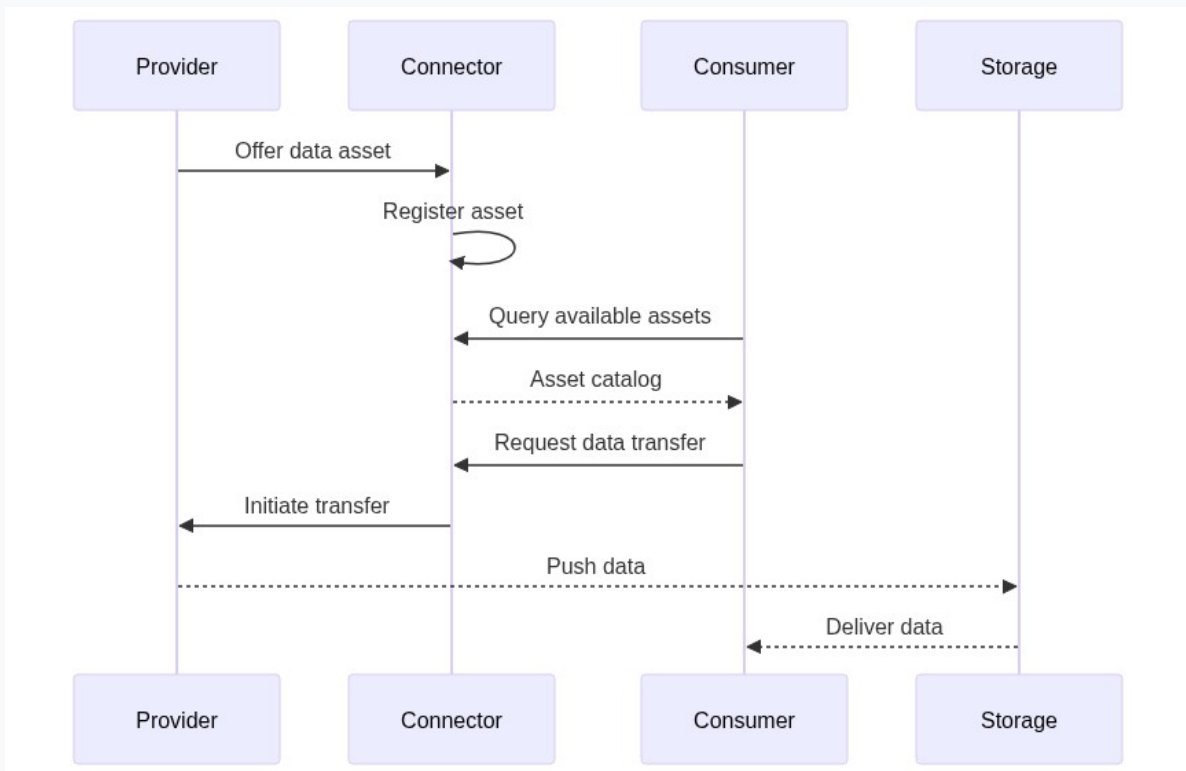
Source Code:

```
sequenceDiagram
    participant Client
    participant APIGateway
    participant AuthService
    participant CoreService
    Client->>APIGateway: Request with credentials
    APIGateway->>AuthService: Validate credentials
    AuthService-->>APIGateway: Auth token
    APIGateway-->>Client: Token response
    Client->>APIGateway: API Request + Token
    APIGateway->>CoreService: Forward request
    CoreService-->>APIGateway: Response
    APIGateway-->>Client: Final response
```

[Brief flow description]

## Data Exchange Flow

## Diagram



Source Code:

```
sequenceDiagram
    participant Provider
    participant Connector
    participant Consumer
    participant Storage
    Provider->>Connector: Offer data asset
    Connector->>Connector: Register asset
    Consumer->>Connector: Query available assets
    Connector-->>Consumer: Asset catalog
    Consumer->>Connector: Request data transfer
    Connector->>Provider: Initiate transfer
    Provider-->>Storage: Push data
    Storage-->>Consumer: Deliver data
```

[Brief flow description]



# Standards Compliance

Standard	Version	Compliance	Description
[Standard 1]	X.Y	Mandatory	[Description]
[Standard 2]	X.Y	Optional	[Description]

## Standard Details

[Standard Name]

**Compliance Level:** [Mandatory | Optional | Recommended]

**Implementation:** [Brief description]

**Reference:** [Link]

## Semantic Models

**Model:** [Model Name]

**Version:** X.Y.Z

**Namespace:** urn:samm:org.eclipse.tractusx.[domain]:[version]#

**Description:** [Model description]

**Key Properties:**

Property	Type	Required	Description
property1	string	Yes	[Description]
property2	integer	No	[Description]

**Example:**

```
{
  "@context": {
    "@vocab": "urn:samm:org.eclipse.tractusx.[domain]:[version]#"
  },
  "property1": "value1",
  "property2": 42
}
```

**Reference:** [Link to SAMM specification]

## Sample Data

---

### Sample Dataset: [Dataset Name]

**Purpose:** [Sample purpose]

**Format:** JSON

**Download:** [Link]

**Example:**

```
{
  "sampleData": [
    {
      "id": "sample-001",
      "field1": "value1"
    }
  ]
}
```

## Integration Examples

---

### Integration with [System Name]

**Java Example:**

```
public class KitIntegration {  
    private final KitClient client;  
  
    public KitIntegration(String apiUrl, String apiKey) {  
        this.client = new KitClient(apiUrl, apiKey);  
    }  
  
    public Resource getResource(String resourceId) {  
        return client.resources().get(resourceId);  
    }  
}
```

### Python Example:

```
from kit_sdk import KitClient  
  
client = KitClient(api_url="https://api.example.com", api_key="your-key")  
resource = client.resources.get("resource-id")
```

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## Sample data

---

```
{  
  ...  
}
```

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## Automotive Industry Extension

---

This extension adapts the **[KIT\_NAME] KIT** for the automotive industry with Catena-X standards compliance.

**info:** Extension Purpose

Adds: Catena-X standards, automotive semantic models, business processes, and policies.

## Semantic Models

---

### Serial Part (CX-0002)

**Version:** 3.0.0

**Aspect Model:** urn:samm:io.catenax.serial\_part:3.0.0#SerialPart

**Key Attributes:** catenaXId , localIdentifiers , manufacturingInformation , partTypeInformation

**Example:**

```
{
  "catenaXId": "urn:uuid:ed2ace5b-b25d-4e64-9b54-c2fb13c35a5c",
  "localIdentifiers": [
    {
      "key": "manufacturerPartId",
      "value": "95657362-83"
    }
  ],
  "manufacturingInformation": {
    "date": "2023-02-04T14:48:54",
    "country": "DEU"
  },
  "partTypeInformation": {
    "manufacturerPartId": "95657362-83",
    "nameAtManufacturer": "High Voltage Battery"
  }
}
```

[Semantic Hub](#)

# Access & Usage Policies

---

## Catena-X Framework Policy

```
{
  "@context": {"odrl": "http://www.w3.org/ns/odrl/2/"},
  "@type": "PolicyDefinitionRequestDto",
  "@id": "cx-policy",
  "policy": {
    "@type": "Policy",
    "odrl:permission": [{
      "odrl:action": "USE",
      "odrl:constraint": {
        "odrl:leftOperand": "BusinessPartnerNumber",
        "odrl:operator": {"@id": "odrl:eq"},
        "odrl:rightOperand": "BPNL000000003CRHK"
      }
    }]
  }
}
```

## Compliance

---

Regulation	Region	Relevance
GDPR	EU	Data protection
Battery Regulation	EU	Battery passport
Supply Chain Due Diligence	DE	ESG reporting

**Certifications:** ISO/TS 16949, VDA 6.3, TISAX

## Resources

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- [Catena-X Standard Library](#)
- [Tractus-X Open Source](#)

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- Source URL: <https://github.com/eclipse-tractusx/eclipse-tractusx.github.io>



# Shop-Floor Industry Extension

---

## Overview

---

This extension adapts the **[KIT\_NAME] KIT** for shop-floor operations and manufacturing environments.

**info:** Extension Purpose

Adds: Manufacturing-X standards, shop-floor semantic models, MES processes, and real-time data exchange.

## Semantic Models

---

### Production Order

**Version:** 1.0.0

**Aspect Model:** `urn:samm:io.manufacturingx.production_order:1.0.0#ProductionOrder`

**Key Attributes:** `orderId` , `orderType` , `productIdentifier` , `quantity` , `scheduledTime` , `status` , `assignedResources`

**Example:**

```
{
  "orderId": "PO-2025-11-21-001234",
  "orderType": "STANDARD",
  "productIdentifier": {
    "productId": "PART-A-12345",
    "productName": "Gear Housing Assembly"
  },
  "quantity": {
    "planned": 500,
    "produced": 342,
    "unit": "pieces"
  },
  "status": "IN_PROGRESS",
  "assignedResources": [
    {"resourceType": "MACHINE", "resourceId": "CNC-MILL-03"}
  ]
}
```

## Machine State

**Version:** 1.0.0

**Aspect Model:** urn:samm:io.manufacturingx.machine\_state:1.0.0#MachineState

**Key Attributes:** machineId , machineType , operationalStatus , performance , alarms , maintenance , timestamp

**Example:**

```
{
  "machineId": "CNC-MILL-03",
  "machineType": "5-Axis CNC Milling Center",
  "operationalStatus": "PRODUCING",
  "performance": {
    "oee": 78.5,
    "availability": 92.3,
    "quality": 95.5
  },
  "alarms": [
    {"severity": "WARNING", "type": "TOOL_WEAR", "message": "Tool #5 approaching wear limit"}
  ],
  "timestamp": "2025-11-21T12:00:00Z"
}
```

## Access & Usage Policies

---

### Manufacturing-X Framework Policy

```
{
  "@context": {"odrl": "http://www.w3.org/ns/odrl/2/"},
  "@type": "PolicyDefinitionRequestDto",
  "@id": "mx-policy",
  "policy": {
    "@type": "Policy",
    "odrl:permission": [{
      "odrl:action": "USE",
      "odrl:constraint": {
        "odrl:leftOperand": "DataspaceParticipant",
        "odrl:operator": {"@id": "odrl:eq"},
        "odrl:rightOperand": "did:web:example.com"
      }
    }]
  }
}
```

## Compliance

---

Regulation	Region	Relevance
GDPR	EU	Data protection
ISO 9001	Global	Quality management

**Certifications:** ISO/TS 16949, VDA 6.3

## Resources

---

- [Manufacturing-X](#)
- [Tractus-X Open Source](#)

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- Source URL: <https://github.com/eclipse-tractusx/eclipse-tractusx.github.io>

## Operations View

---

Guidance for deploying, operating, and maintaining this KIT in production environments.

**info:** Target Audience

DevOps Engineers, System Administrators, Site Reliability Engineers, Cloud Architects, Infrastructure Teams.

## Deployment

---

### Docker Compose

```
git clone https://github.com/eclipse-tractusx/[repository-name].git
cd [repository-name]
docker-compose up -d
```

**docker-compose.yml:**

```

version: '3.8'
services:
  app:
    image: [registry]/[kit-name]:latest
    ports:
      - "8080:8080"
    environment:
      - DB_HOST=postgres
      - DB_NAME=[kit_db]
      - DB_USER=[kit_user]
      - DB_PASSWORD=[CHANGE_ME]
    depends_on:
      - postgres

  postgres:
    image: postgres:14-alpine
    environment:
      - POSTGRES_DB=[kit_db]
      - POSTGRES_USER=[kit_user]
      - POSTGRES_PASSWORD=[CHANGE_ME]
    volumes:
      - postgres-data:/var/lib/postgresql/data

volumes:
  postgres-data:

```

## Kubernetes

```

helm repo add tractusx https://eclipse-tractusx.github.io/charts
helm install [kit-name] tractusx/[kit-name] --namespace [kit-name]

```

### deployment.yaml:

```

apiVersion: apps/v1
kind: Deployment
metadata:
  name: [kit-name]
spec:
  replicas: 2
  selector:
    matchLabels:
      app: [kit-name]
  template:
    metadata:
      labels:
        app: [kit-name]
    spec:
      containers:
        - name: [kit-name]
          image: [registry]/[kit-name]:1.0.0
          ports:
            - containerPort: 8080
          resources:
            limits:
              cpu: 1000m
              memory: 1Gi

```

## Monitoring

---

### Health Checks

Endpoint	Purpose
/health	Overall health status
/health/liveness	Liveness probe
/health/readiness	Readiness probe

### Metrics

Prometheus metrics: /actuator/prometheus

# Troubleshooting

---

## Common Issues

### Application Won't Start

- Check database connectivity
- Verify environment variables
- Check logs: `docker-compose logs` OR `kubectl logs`

### High Memory Usage

- Monitor: `kubectl top pods`
- Increase memory limits in deployment config
- Tune JVM settings

## Diagnostic Commands

```
# Docker
docker-compose logs [service-name]

# Kubernetes
kubectl logs -n [kit-name] [pod-name]
kubectl describe pod -n [kit-name] [pod-name]
```

## Scaling

---

```
# Manual scaling
kubectl scale deployment [kit-name] --replicas=5

# Auto-scaling
kubectl autoscale deployment [kit-name] --cpu-percent=70 --min=2 --max=10
```

---

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- Source URL: <https://github.com/eclipse-tractusx/eclipse-tractusx.github.io>

## [Your Application Name] - Success Story

---

or [Application Logo]

**Organization:** [Company/Organization Name]

**Industry:** [Industry Sector]

**Implementation Type:** COTS / Open Source / Custom

**Go-Live Date:** [Month Year]

**KIT Version:** [e.g., 1.2.0]

**Link to Repo:** [if exists]

## The Challenge

---

### Business Problem

[Describe the business problem or opportunity that led to implementing this KIT]

#### Key Pain Points:

- [Pain point 1]
- [Pain point 2]
- [Pain point 3]

### Technical Requirements

- [Technical requirement 1]

- [Technical requirement 2]
- [Technical requirement 3]

## Demos

[Include here demo videos]

## Results & Impact

### Business Outcomes

Metric	Before	After	Improvement
[Metric 1]	[Value]	[Value]	[X%]
[Metric 2]	[Value]	[Value]	[X%]
[Metric 3]	[Value]	[Value]	[X%]

### Quantified Benefits

- **Cost Savings:** [e.g., "Reduced operational costs by 25%"]
- **Time Savings:** [e.g., "Decreased processing time from 2 hours to 15 minutes"]
- **Quality Improvement:** [e.g., "Reduced error rate by 40%"]
- **Revenue Impact:** [e.g., "Enabled new revenue stream worth €X million"]

### Qualitative Benefits

- [Benefit 1 - e.g., "Improved customer satisfaction"]
- [Benefit 2 - e.g., "Enhanced data transparency"]
- [Benefit 3 - e.g., "Better compliance management"]

## Testimonial

"[Quote from project sponsor or key stakeholder about the implementation and its impact]"

## Future Plans

---

- [ ] [Planned enhancement 1]
- [ ] [Planned enhancement 2]
- [ ] [Planned expansion to other business units/regions]

## Related Resources

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- [Link to implementation guide]
- [Link to technical documentation]
- [Link to presentation or webinar]

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