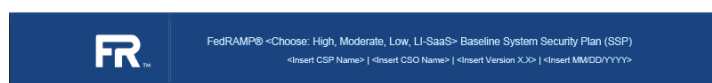


8. Illustrated Architecture and Narratives

The Architecture, Network and Data Flow Diagrams are each represented using the same OSCAL patterns, with only the top level assembly name changing.

Authorization Boundary

The OSCAL approach to this type of diagram is to treat the image data as either a linked or base64-encoded `resource` in the `back-matter` section of the OSCAL file, then reference the diagram using the `link` field. The narrative describing the system architecture must be provided in the `description` field of the `authorization-boundary` assembly.



8 Illustrated Architecture and Narratives

This section contains the diagrams and narratives for the <Insert CSO Name> authorization boundary, network, and data flows. Section 8.1 provides the diagrams, and Section 8.2 provides the associated narratives.

8.1 Illustrated Architecture

This section contains the diagram that represents the authorization boundary, network, and data flows. Following the diagram, there is a narrative that describes the <Insert CSO Name> boundary components, functionality, as well as interactions and flows among internal components and external systems/services.

or

This section contains the diagrams that represent the authorization boundary, network, and data flows. Following each of the diagrams, there is a narrative that describes the <Insert CSO Name> boundary components, functionality, as well as interactions and flows among internal components and external systems/services. If using several illustrations, each must have a narrative.

8.2 Narrative

OSCAL Representation

```
system-security-plan:
```

```
  uuid: 11111111-2222-4000-8000-000000000000
```

```
  system-characteristics:
```

```
    authorization-boundary:
```

```
      description: A holistic, top-level explanation of the FedRAMP authorization boundary.
```

```
diagrams:
- uuid: 11111111-2222-4000-8000-007000000001
  description: A diagram-specific explanation.
  links:
  - href: '#11111111-2222-4000-8000-001000000054'
    rel: diagram
  caption: Authorization Boundary Diagram
```

```
back-matter:
  resources:
  - uuid: 11111111-2222-4000-8000-001000000054
    title: Boundary Diagram
    description: The primary authorization boundary diagram.
    props:
    - name: type
      value: image
      class: authorization-boundary
    rlinks:
    - href: ../attachments/diagrams/boundary.png
```

To represent the **Authorization Boundary** from the legacy SSP in an OSCAL-based System Security Plan, the data is centered within the `system-characteristics` section under the `authorization-boundary` element.

The following elements and structures are used to capture the boundary definition:

- **Boundary Narrative:** An `overall-description` is used to provide a high-level technical and functional summary of the system's limits.
- **Visual Documentation:** The model tracks the total number of boundary diagrams present to ensure compliance with the minimum requirement of at least one visual representation.
- **Diagram Linking:** Each diagram is referenced via a `link` containing a unique identifier or path. This link either points to an external URI or a local reference within the OSCAL document.
- **Resource Storage:** The actual image data or file location for a diagram is stored in the `back-matter` section. This is handled as a `resource` which can either contain the raw `base64` encoded image data or a remote link (`rlink`) to the hosted file.
- **Contextual Details:** Individual diagrams can also include their own specific `description` to clarify the components, data flows, or sub-networks depicted in that particular view.

When multiple diagrams are required to show different perspectives of the boundary, each is listed as a sequential entry within the authorization boundary array.

Network Architecture

The network architecture diagram follows the same patter as the [Authorization Boundary](#) diagram, except the content is placed under `network-architecture` instead of `authorization-boundary`.

OSCAL Representation

```
system-security-plan:
  uuid: 11111111-2222-4000-8000-000000000000
  system-characteristics:
    network-architecture:
      description: A holistic, top-level explanation of the network architecture.
      diagrams:
        - uuid: 11111111-2222-4000-8000-007000000002
          description: A diagram-specific explanation.
          links:
            - href: '#11111111-2222-4000-8000-001000000055'
              rel: diagram
          caption: Network Diagram

      back-matter:
        resources:
          - uuid: 11111111-2222-4000-8000-001000000055
            title: Network Diagram
            description: The primary network diagram.
            props:
              - name: type
                value: image
              class: network-architecture
            rlinks:
              - href: ./attachments/diagrams/network.png
```

Data Flow

The data flow diagram follows the same pattern as the [Authorization Boundary](#) diagram, except the content is placed under `data-flow` instead of `authorization-boundary`.

OSCAL Representation

system-security-plan:

uuid: 11111111-2222-4000-8000-000000000000

system-characteristics:

data-flow:

description: A holistic, top-level explanation of the system's data flows.

diagrams:

- uuid: 11111111-2222-4000-8000-007000000003

description: A diagram-specific explanation.

links:

- href: '#11111111-2222-4000-8000-001000000056'

rel: diagram

caption: Data Flow Diagram

back-matter:

resources:

- uuid: 11111111-2222-4000-8000-001000000056

title: Data Flow Diagram

description: The primary data flow diagram.

props:

- name: type

value: image

class: data-flow

rlinks:

- href: ../attachments/diagrams/dataflow.png

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