

# Documentation Standard: Relationship Flow Diagrams (RFDs)

## 1. Introduction and Rationale

The recent debugging session highlighted a core point of confusion between frontend and backend developers: the **implicit flow and consumption of primary keys (IDs)** across multiple endpoints. Specifically, the relationship between an **Application ID** and a **Document ID** was not immediately clear.

To eliminate this ambiguity, we are introducing **Relationship Flow Diagrams (RFDs)** as a mandatory component of our API documentation for any feature involving chained resource creation (e.g., creating an Application, then attaching a Document to it).

## 2. Introducing Relationship Flow Diagrams (RFDs)

An RFD is a simple, one-page visual tool designed to instantly clarify the sequence of actions and the purpose of every ID consumed or returned by a set of related API endpoints.

### Standard RFD Components

Component	Description	Example ID
Resource Box	Represents a primary database object (e.g., Application, Company, Document).	Application ID (UUID)
Solid Arrow (POST/PUT)	Represents the creation or update of a resource.	POST /api/applications
Dashed Arrow (GET/DELETE)	Represents the retrieval or removal of a resource.	GET /api/document/<id>
Arrow Label (ID)	The ID <b>required</b> by the endpoint (above arrow) and the ID <b>returned</b> (below arrow).	(Requires: Application ID)

## 3. Example: Application and Document Flow

This diagram illustrates the complete lifecycle of a job document, from creating the parent application record to retrieving the final document file.

Flow Explanation by Step

Step	Endpoint	Action	ID Flow	Purpose
1. Create Application	POST /api/applications	Creation	Returns: Application ID (UUID)	Establishes the parent record.
2. Upload Document	POST /api/application/<id>/documents	Link & Create	Requires: Application ID (in URL Path) Returns: Document ID (UUID)	Attaches the document binary to the Application record and generates a unique ID for the file record.
3. Retrieve Document	GET /api/document/<id>	Download	Requires: Document ID (UUID)	Uses the document's unique ID to serve the secure file binary to the frontend.

4. Document Control Information

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