# HIE Accelerator Documentation

## 1.0 Overview

HIE Accelerator is a workflow designed to enhance the efficiency, speed, or security of health information exchange. This involves electronic sharing of health-related information among organizations, improving interoperability between different healthcare systems, ensuring data integrity and security, and facilitating the rapid and secure exchange of patient information among healthcare providers.

## 1.1 Scope

Upon receipt of the CCD XML document from the service provider, the system initiates processing of the workflow. The CCD XML serves as a standardized format for exchanging patient summary information.

Service providers or HIEs generate the CCD messages containing patient health information. These messages adhere to industry standards and are ready for transmission.

The workflow includes creating an ITI-8 Patient Information Feed (PIF) in ADT format and an ITI-41 Provide and Register (PnR) in CCD format. These prepared data sets are then transmitted to the Health Information Exchange (HIE) via different protocols.

The Transformed Patient Identity Feed (ITI-8) will be an ADT trigger event A08 containing segments MSH, EVN, PID, PV1, and PD1.

**It's important to note that this accelerator does not include source or destination connection (SFTP, API, HTTP etc...) and leaves it upon users' choice on how they will receive or send the CCD and ADTs forward to any HIE.**

The accelerator has 1 main workflow to execute:

1. **hie_main_connect** – Upon receiving a CCD from external sources (e.g., healthcare providers), Bridgegate initiates the processing of the workflow.

## 1.2 Workflow

The workflow is triggered when a CCD is received by the service provider.

The received CCD is transformed into an ITI-8 PIF in ADT format, extracting relevant patient information and ITI-41 PnR in CCD format, ensuring compatibility with HIE requirements.

The ITI-8 PIF in ADT format is sent to the HIE via a socket connection and the ITI-41 PnR in CCD format is sent to the HIE via HTTPS for secure transmission.

Synchronous responses for PIF and PnR data are received from the HIE. The received responses are handled at our end and utilized for further workflow processing.

Success and failure messages received from the HIE are stored in the system for reference. In case of failure to deliver the messages to HIE, the messages are stored to a temporary holding location in the system. If necessary, users have the option to reprocess these stored messages at a later stage.
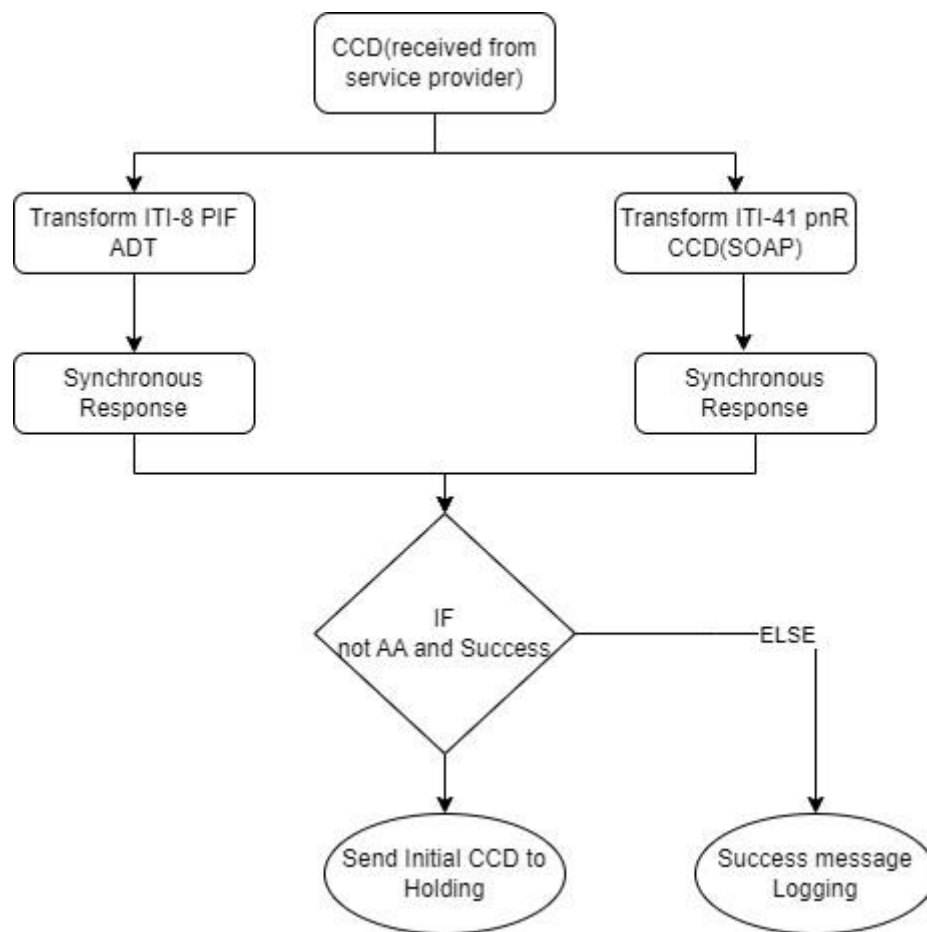


*Figure 1 HIE Accelerator Flowchart*

## 1.3 Prerequisites

Before using the HIE Connect Accelerator, ensure that you have the following prerequisites in place:

1. **Socket Communication**
   - Configure the custom socket communication protocol for sending ITI-8 PIF data.

2. **HTTPS Communication**
   - Configure HTTPS communication for secure transmission of ITI-41 PnR data.

3. **Network Configuration**
   - Ensure that the necessary ports for both socket and HTTPS communication are open and accessible. If required, adjust firewall rules to allow incoming and outgoing traffic on the specified ports.

4. **HIE Endpoint**
   - Obtain the correct endpoint URLs for both socket and HTTPS communication from the HIE. Obtain and configure the required authentication credentials (e.g., certificates, API keys) for communicating with the HIE.

## 1.4 Step-By-Step Process with Screenshots.

**Step 1: Configuring your accelerator**

1. Open **BridgeGate Health** Workbench.
2. Check if the folder you moved is available in the following tabs:
   a. Inbound Tab
   b. Outbound Tab
   c. Workflow Tab
3. The Workflow **"hie_main"** is triggered when a CCD is sent to the "**Get Data**" module, where the source can be configured as SFTP, HTTP, or any other connection.
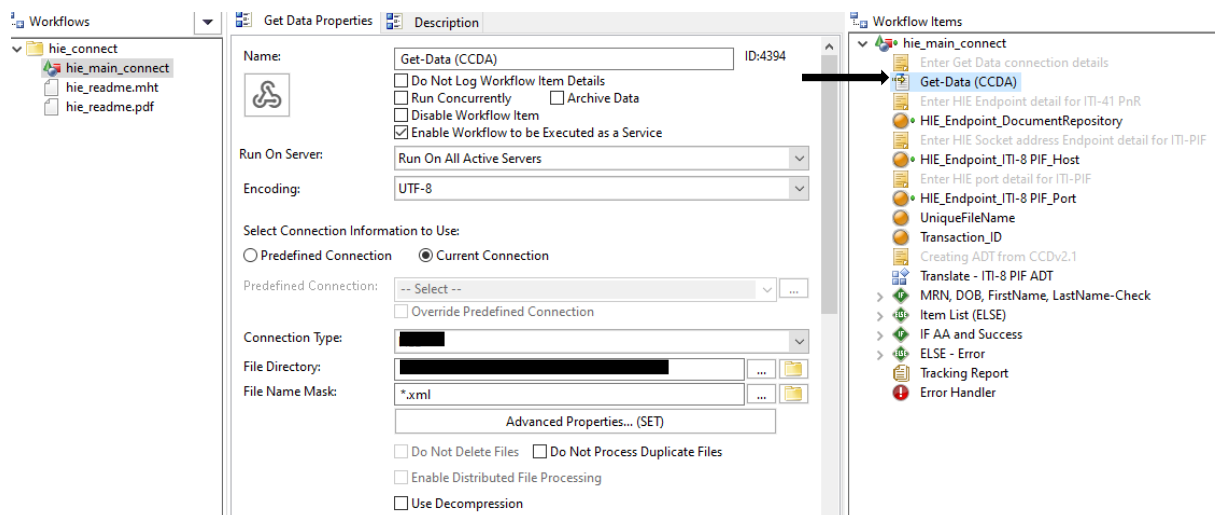


*Figure 2 Bridgegate Workflow screen:Get Data*

4. The below three variables will be used to store the HIE endpoint details for PnR and PIF.
   **HIE_Endpoint_DocumentRepository:** This should be the HTTPS endpoint for PnR.

**HIE_Endpoint_ITI-8 PIF_Host:** This should be the socket ID endpoint for PIF.
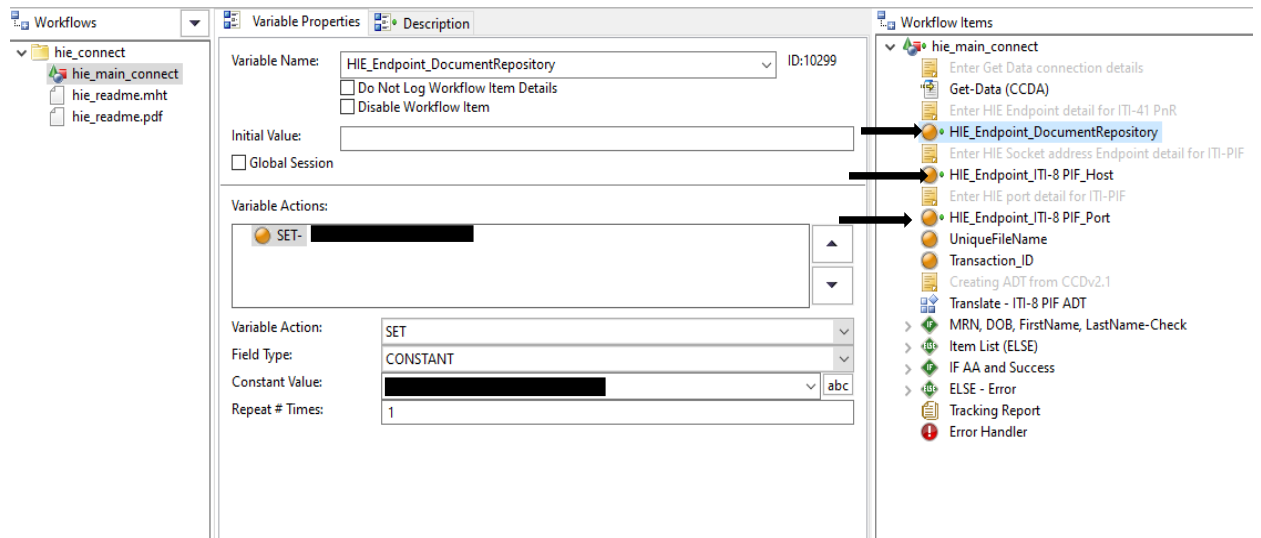**HIE_Endpoint_ITI-8 PIF_Port:** This should be the socket port for PIF.



*Figure 3 Bridgegate Workflow screen: Endpoint details*

5. **Send HIE CCD To Holding:** This should contain the file location where user can store the initially received CCD that failed to process.
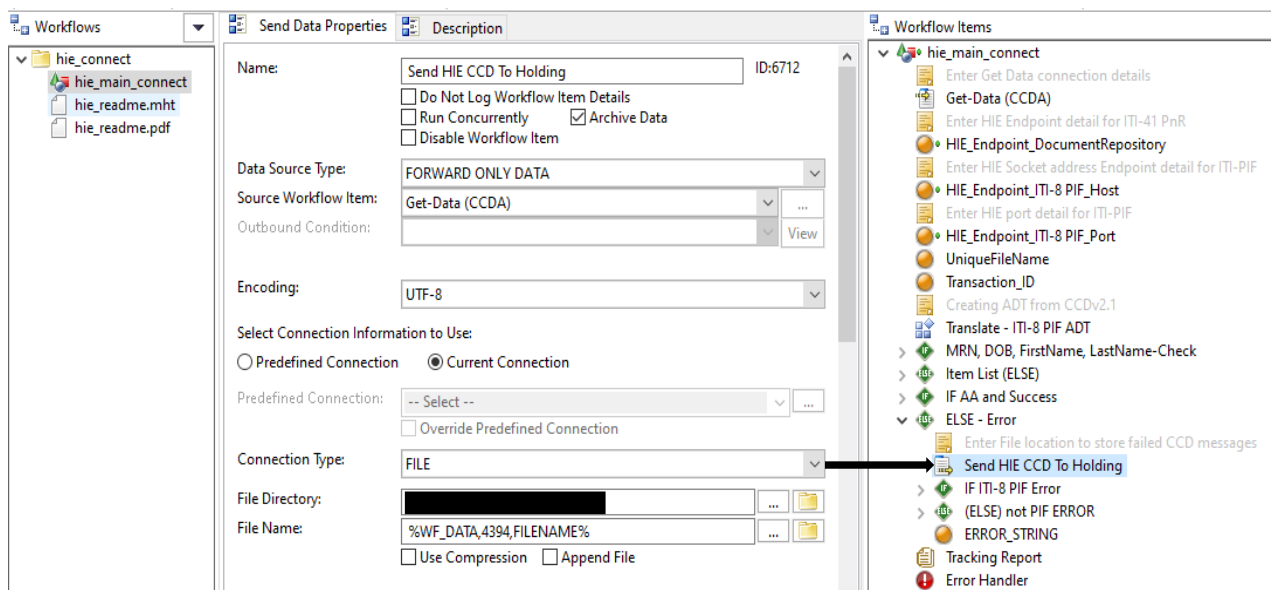


*Figure 4 Bridgegate Workflow screen: CCD Holding*