RosettaNet

PIP™ Specification

Cluster 0: Administration
Segment A: Administration

PIP0A1: Notification of Failure

Validated 02.00.00
13 July 2001

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Table of Contents

1 DOCUMENT MANAGEMENT

1.1 LEGAL DISCLAIMER

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1.4 ACKNOWLEDGMENTS

This document has been prepared by Edifecs (http://www.edifecs.com/) based on the Business Collaboration Framework from requirements in conformance with the RosettaNet methodology.

1.5 PREREQUISITES

The audience should be familiar with the RosettaNet User's Guide, "Understanding a PIP Blueprint." This document can be downloaded from the RosettaNet Document Library at the following web address.

> http://www.rosettanet.org/usersguides/

1.6 RELATED DOCUMENTS

- Associated PIP Message Guidelines (included with PIP Blueprint and PIP Specification)
- Associated PIP Message Schemas (included with PIP Specification only)
- RosettaNet Technical Dictionaries
  http://www.rosettanet.org/techdictionaries/
- RosettaNet Business Dictionary
  http://www.rosettanet.org/businessdictionary/

1.7 Supply Chain Requirements

This PIP includes design and technology requirements utilized in all supply chains.

1.8 Document Version History

Version	Date	Document in Development - Update Information
Release 02.00.00	3 Jan 2001	RosettaNet: Approved for Release
Release 02.00.00A	3 May 2001	Validation Update (Limited Distribution)
Validated 02.00.00	13 July 2001	Validated Specification

2 INTRODUCTION

A Partner Interface Process™ (PIP) Specification comprises the following three views of the ebusiness PIP model.

1. **Business Operational View (BOV).** Captures the semantics of business data entities and their flow of exchange between roles as they perform business activities. The content of the BOV section is based on the PIP Blueprint document created for RosettaNet's business community.

2. **Functional Service View (FSV).** Specifies the network component services and agents and the interactions necessary to execute PIPs. The FSV includes all of the transaction dialogs in a PIP Protocol. The purpose of the FSV is to specify a PIP Protocol that is systematically derived from the BOV. The two major components within the FSV are the network component design and network component interactions.

3. **Implementation Framework View (IFV).** Specifies the network protocol message formats and communications requirements between peer-protocols supported by network components in the RosettaNet Implementation Framework. These messages are exchanged when software programs execute a PIP; RosettaNet distributes these as XML Message Guidelines.

3 BUSINESS OPERATIONAL VIEW

3.1 BUSINESS PROCESS DEFINITION

A failure to complete an interface business activity in compliance with the RNIF 2.0 Core Specification can be detected by either of the two parties involved in the interface activity. Some examples are:

1.   The originating party of the business activity times-out when waiting for a specified response for their requesting business document.

2.   The responding party is unable to acknowledge, accept or process the requesting business document.

In the event that failures are caused by an inability to communicate via a particular communication channel, the destination or respondent role of the Notification of Failure SHOULD be notified via an alternate channel or transfer protocol.

3.2 PIP PURPOSE

This PIP provides a mechanism for notification of business activity failures amongst participating partner roles.

The RNIF 2.0 Core Specification provides a complete list of scenarios in which a General Exception signal MUST be sent and a complete list of scenarios under which the Notification of Failure PIP MUST be initiated. This document describes the Notification of Failure PIP to be used in conjunction with the RNIF 2.0 protocol. Please refer to the RNIF 2.0 Core Specification for a complete list of trigger points for this PIP. Note that it is beyond the scope of RosettaNet to provide the business implications of the PIP. For instance, whether the initiation of this PIP implies a mere notification or that the transaction is to be considered null and void, is left up to the Trading Partners. However, for the sake of completeness of the protocol, this PIP MUST be initiated under all conditions mentioned by the RNIF 2.0 Core Specification.
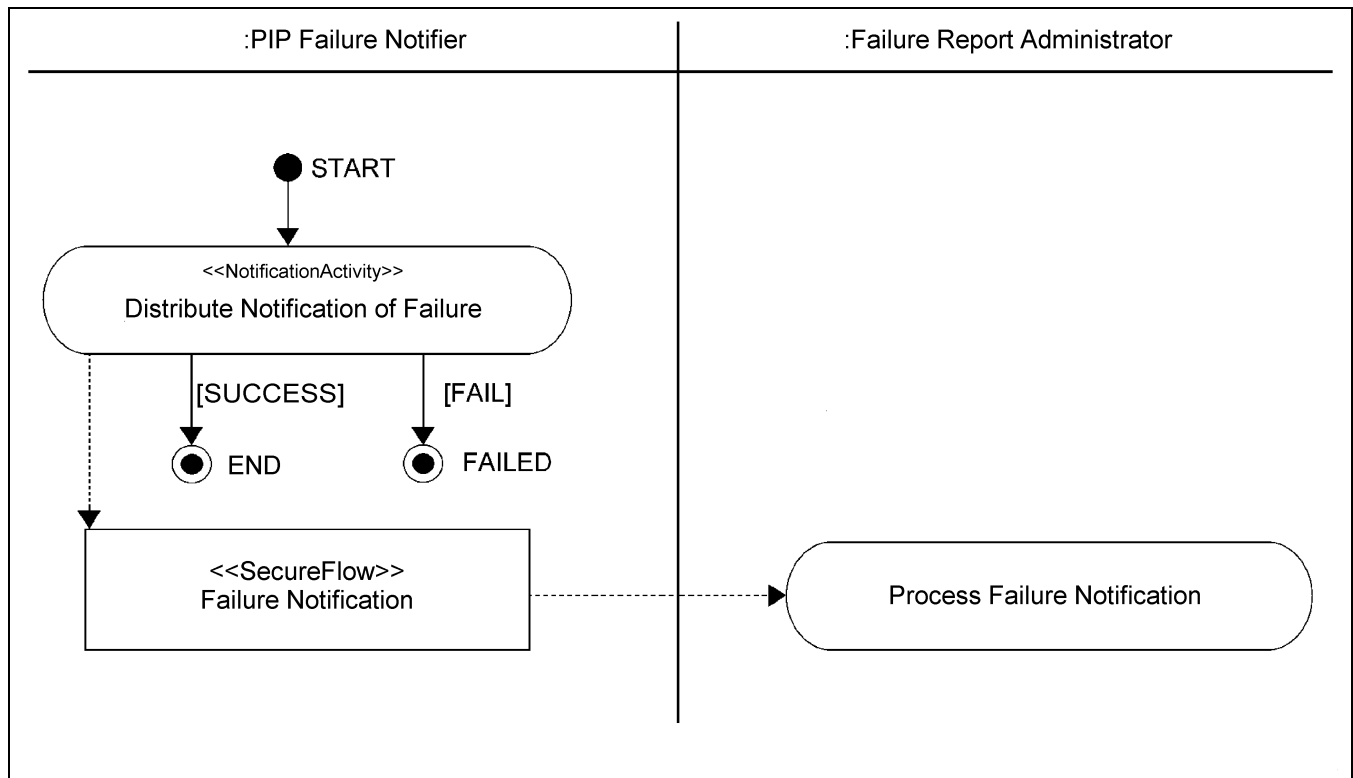
3.3 PIP Business Process Flow Diagram

Figure 3-1: Notification of Failure

3.4 PIP Start State

The start state is comprised of the following conditions:

- TPA Exists.
- Requesting Partner Approved.
- Responding Partner Approved.
- Failure Notification Exists.
- Failure Notification Valid.
- Failure Notification Non-Repudiated.

3.5 PIP End States

End states are comprised of one or more conditions:

END

- Acknowledgment of Receipt Exists.
- Acknowledgment of Receipt Valid.
- Acknowledgment of Receipt Non-Repudiated.

FAILED

- Retry Count Exceeded.
- Not SUCCESS.

3.6 Partner Role Descriptions

Table 3-1 describes the partner roles in this PIP.

TABLE 3-1: PARTNER ROLE DESCRIPTIONS		
Role Name	Role Description	Role Type
PIP Failure Notifier	An organizational process that automatically notifies the appropriate Failure Report Administrator of a PIP process failure.	Organizational
Failure Report Administrator	An employee or organizational entity that receives and processes PIP Failure Notifications.	Functional

3.7 Business Process Activity Controls

Table 3-2 describes the interaction contract between roles performing business activities in this PIP.

TABLE 3-2: BUSINESS ACTIVITY DESCRIPTIONS		
Role Name	**Activity Name**	**Activity Description**
PIP Failure Notifier	Distribute Notification of Failure	Based on the error code supplied this activity forms a Failure Notification and forwards it to the identified management system.

Table 3-3 details the security, audit and process controls relating to activities performed in the PIP.

TABLE 3-3: BUSINESS ACTIVITY PERFORMANCE CONTROLS							
		Acknowledgment of Receipt					
Role Name	**Activity Name**	**Non-Repudiation Required?**	**Time to Acknowledge**	**Time to Perform**	**Retry Count**	**Is Authorization Required?**	**Non-Repudiation of Origin and Content?**
PIP Failure Notifier	Distribute Notification of Failure	Y	2 hrs	N/A	3	Y	Y

3.8 PIP Business Data

3.8.1 PIP Business Documents

Business Documents are generated and exchanged by roles performing activities in this PIP. Business Documents are listed and defined in Table 3-4, and are generated using RosettaNet Message Guidelines. These Message Guidelines can be downloaded via the Uniform Resource Locator (URL) referenced in Section 1.6, "Related Documents."

Table 3-4: PIP Business Documents	
Business Document	**Description**
Failure Notification	An unsolicited formal notification of the failure to perform a business activity.

3.8.2 Business Data Entities

The business data entities, fundamental business data entities, and global identifying properties can be found in the RosettaNet Business Dictionary using the URL specified in Section 1.6, "Related Documents."

Business Data Entity Security

There are no security controls specified for this PIP.

4 FUNCTIONAL SERVICE VIEW

The two major components in the FSV are the network component design and possible network component interactions, listed in sections 4.1 and 4.3.

4.1 NETWORK COMPONENT DESIGN

A network component design specifies the network components necessary to execute the PIP and the network component collaboration. A network component design is comprised of Agent components and Business Service components that enable roles to perform business activities in a networked environment. Network components collaborate by exchanging business action messages and business signal messages.

4.1.1 NETWORK COMPONENT COLLABORATION

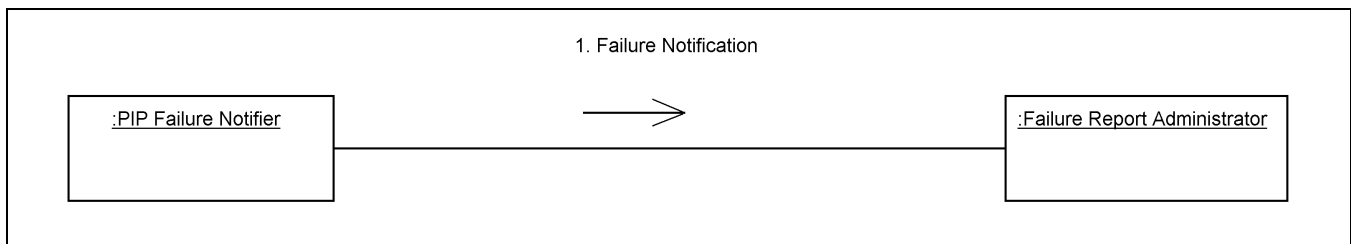Figure 4-1 specifies the network components and their message exchange.

Figure 4-1: Notification of Failure

4.1.2 NETWORK COMPONENT SPECIFICATION

Each network component maps onto a role in the BOV of the PIP model. Table 4-1 specifies the mapping between roles in the BOV and network components in the FSV.

TABLE 4-1: NETWORK COMPONENT SPECIFICATION		
Network Component in FSV	**Classification**	**Maps to Role in BOV**
P I P Failure Notifier Service	Business Service	P I P Failure Notifier
Failure Report Administrator Service	Business Service	Failure Report Administrator

4.2 BUSINESS ACTION AND BUSINESS SIGNAL SPECIFICATION

Each business action maps onto a Business Document in the BOV of the PIP model. Table 4-2 specifies the mapping between Business Documents in the BOV and business actions in the FSV.

TABLE 4-2: BUSINESS ACTION – BUSINESS DOCUMENT MAPPING	
Business Action in FSV	**Maps To Business Document in BOV**
Failure Notification Action	Failure Notification

4.3 Business Transaction Dialog Specification

Each business activity between roles in the BOV is specified as a business transaction dialog between service network components. A service network component implements protocols that include the service layer, transaction and action layer. A service has "network identity" as a business service. The service has an identity URI that can be registered in directories and used for component communication in a distributed computer system.

The rest of section 4.3 specifies the network component configuration for this PIP. Each figure specifies the message exchange sequence as network components collaborate to execute this PIP. Each table shows the properties for each of the messages exchanged by the interactions in the corresponding figure.

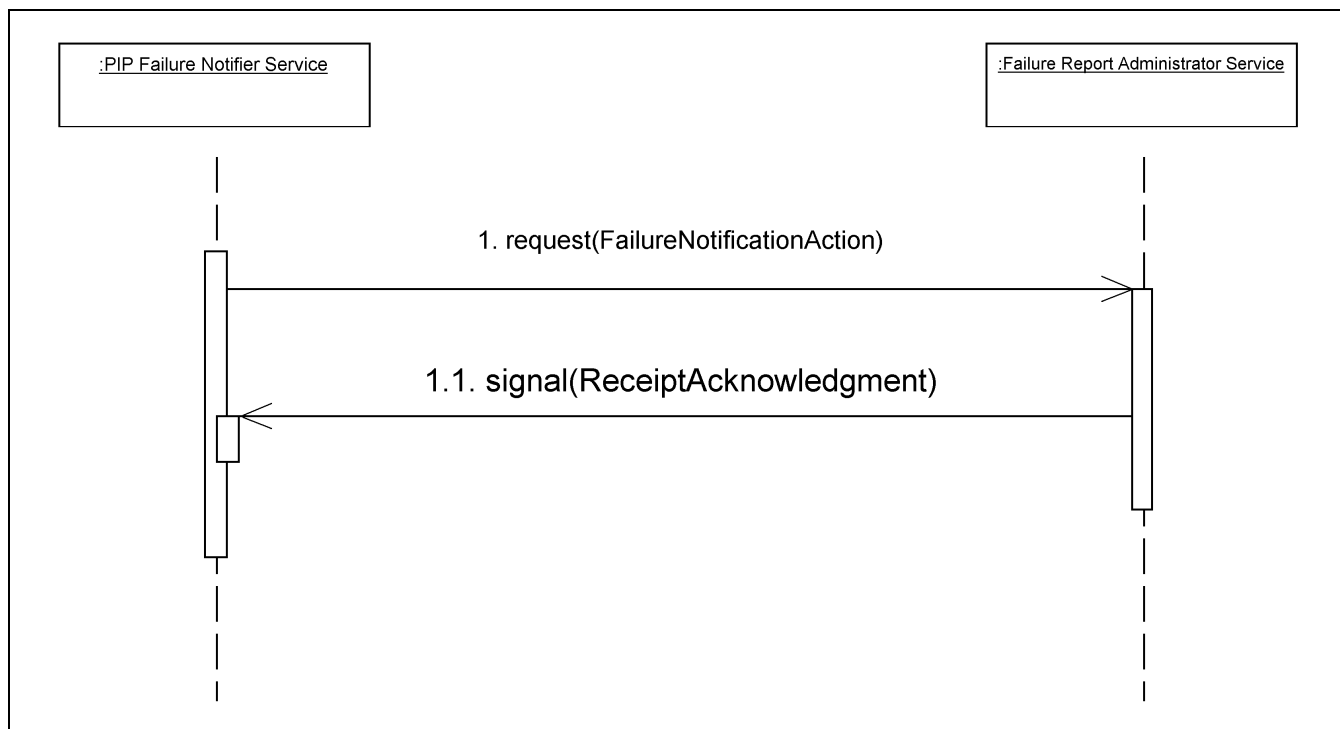## 4.3.1   DISTRIBUTE NOTIFICATION OF FAILURE DIALOG: SERVICE-SERVICE

Figure 4-2: Distribute Notification of Failure Interactions: Service-Service

		Time to Acknowledge Receipt Signal	Time to Respond to Action	Included in Time to Perform	Is Authorization Required?	Is Non-Repudiation Required?	Is Secure Transport Required?	Is Persistent Encryption Required?
Table 4-3: Message Exchange Controls - Distribute Notification of Failure
#	**Name**							
1.	Failure Notification Action	2 hrs	N/A	N/A	Y	Y	Y	N
1.1.	Receipt Acknowledgement	N/A	N/A	N/A	Y	Y	Y	N

5 Implementation Framework View

The business messages and their communications requirements for executing this PIP may be derived from the Business Operational View and Functional Service View described by this document. Refer to *Appendix C: IFV Mapping From BOV and FSV* in the RNIF 2.0 Core Specification for the Implementation Framework View derivation, and to the Message Schema and Guideline that is shipped with this PIP package for the business message specification.