

FIS ISOI 8583 Processor Interface Specifications Manual - (PIISOI)

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1

Introduction

The FIS ISOI 8583 PI Specifications Manual (PIISOI) is intended to help institutions, networks, or other EFT providers that want to interchange financial transactions using an ISO 8583 message structure to design and implement communications with the Connex on HP NonStop System. This manual provides a definitive source of information about the ISO 8583 on-line message standards used with the Connex on HP NonStop System.

This manual is intended as a reference source to use, during the development of acquirer or issuer applications that interface with Connex on HP NonStop System.

NOTE:

Cardholder processors are referred to as **issuers** and terminal processors as **acquirers** throughout this manual.

Audiences

- **Programmers**
This manual provides programmers responsible for developing acquirer and issuer applications with detailed and highly specific definitions of all data elements, records, and message formats on which to base their programming efforts.
- **Software Engineers**
This manual provides complete technical information about message formatting and similar topics for software engineers responsible for developing acquirer or issuer applications to work within the network.
- **Systems Analysts**
This manual is also useful to systems analysts who need to make decisions regarding hardware and software selection and installation. It offers an authoritative source of information regarding network communications requirements.

Revision Log

Date	Effective w/Version	Chapter	Description
June 2021	V1.76	5	<ul style="list-style-type: none"> DE 124 FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Updated the Fraud Scoring Information section on page 467.
May 2021	V1.76	5	<ul style="list-style-type: none"> DE 124 FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Added valid values for the Interchange Tier tag on page 472. DE 125 FIS Tags, Issuer/Network Management Information (FIS-Defined): <ul style="list-style-type: none"> Added valid values for the Interchange Tier tag on page 502.
April 2021	V1.76	4	<ul style="list-style-type: none"> Updated the attributes for DE125 for the following message types: <ul style="list-style-type: none"> 0800 Network Management Request on page 259. 0820 Network Management Request (Protocol Acknowledgment) on page 261.
		5	<ul style="list-style-type: none"> DE 109 Sender Data: <ul style="list-style-type: none"> Updated the following fields on page 377: <ul style="list-style-type: none"> Sender Place, Apartment, Suite, Office, etc. Sender Country Structured Sender Name - Second Name (Middle Name) Structured Sender Name Updated the Note on page 381.

Date	Effective w/Version	Chapter	Description
			<ul style="list-style-type: none"> DE 110 Receiver Data: <ul style="list-style-type: none"> Updated the following fields on page 384: <ul style="list-style-type: none"> Receiver Place, Apartment, Suite, Office, etc. Receiver Country Structured Sender Name - Second Name (Middle Name) Structured Sender Name Updated the Note on page 387.
			<ul style="list-style-type: none"> DE 111 Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Updated the VISA® DCS Format on page 392. Updated the VISA® EVES Format on page 394. Updated the MasterCard® CIS Format on page 397. Updated the MasterCard® MDS Format on page 400. Updated the MasterCard® IPM Format on page 402. Updated the STAR Access Format on page 409.
			<ul style="list-style-type: none"> DE 124 FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Updated the Strong Customer Authentication Data Tag on page 464. DE 125 FIS Tags, Issuer/Network Management Information (FIS-Defined): <ul style="list-style-type: none"> Updated the Electronic Commerce Data tag on page 495. DE 127 Acquirer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Updated the Visa® Base II Format on page 525.
		Appendix B	<ul style="list-style-type: none"> Updated the Amount Type table on page 625. Updated the Amount Type (Transaction-Related) table on page 627. Updated the Advice Reason Codes - Position 2 table values on page 636.

Date	Effective w/Version	Chapter	Description
March 2021	V1.76	5	<ul style="list-style-type: none"> DE 109 Sender Data: <ul style="list-style-type: none"> Updated the following fields: <ul style="list-style-type: none"> E-mail Address on page 375. URL - WEB Address of Online Merchant on page 381. DE 110 Receiver Data: <ul style="list-style-type: none"> Updated the following field: <ul style="list-style-type: none"> E-mail Address on page 382.
January 2021	V1.76	5	<ul style="list-style-type: none"> DE 123 AVS/Check Auth Data/New PIN (FIS-Defined): <ul style="list-style-type: none"> Updated the Financial Transactions, Multiple-Tag Format on page 435. DE 126 Issuer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Updated the MasterCard® CIS Format on page 518.
		Appendix B	<ul style="list-style-type: none"> Updated the Amount Type table on page 624.
November 2020	V1.76	5	<ul style="list-style-type: none"> DE 125 FIS Tags, Issuer/Network Management Information (FIS-Defined): <ul style="list-style-type: none"> Updated the tags and description for Special Issuer Interchange Flag Information Format (Example 4) on page 508. DE 126 Issuer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Updated the MasterCard® CIS Format on page 518. Added the EPOC Format on page 518. Deleted the PLUS® Format. DE 127 Acquirer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Deleted the PLUS® Format.
October 2020	V1.76	5	<ul style="list-style-type: none"> DE 44 Additional Response Data: <ul style="list-style-type: none"> Updated the Attributes section on page 307. DE 111 Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Updated the Discover® Credit Format on page 406. DE 127 Acquirer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Updated the American Express® GCAG Format on page 522.

Date	Effective w/Version	Chapter	Description
September 2020	V1.76	5	<ul style="list-style-type: none"> DE 59 National Point-Of-Service Geographic Data (ANSI-defined): <ul style="list-style-type: none"> Updated the Message Types table on page 332. DE 121 Additional Data, Private Issuer (FIS-Defined): <ul style="list-style-type: none"> Updated the STAR Access Format on page 428. DE 124 FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Updated the ACCEL sub-tag on page 479. Updated the STAR sub-tag on page 483.
August 2020	V1.76	All	<ul style="list-style-type: none"> Updated the version of the manual to V1.76.
		5	<ul style="list-style-type: none"> DE 109 Sender Data: <ul style="list-style-type: none"> Updated the length of Account Number from 34 to 50. Added the field Account Type. DE 110 Receiver Data: <ul style="list-style-type: none"> Updated the length of Account Number from 34 to 50. Added the field Account Type. DE 111 Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Updated the VISA® DCS Format on page 392. Updated the VISA® EVES Format on page 394.
			<ul style="list-style-type: none"> DE 121 Additional Data, Private Issuer (FIS-Defined): <ul style="list-style-type: none"> Updated the MasterCard® MDS Format on page 426. DE 124 FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Updated the tags for Payment Token Data on page 456.

Date	Effective w/Version	Chapter	Description
			<ul style="list-style-type: none"> DE 125 FIS Tags, Issuer/Network Management Information (FIS-Defined): <ul style="list-style-type: none"> Added the section Electronic Commerce Data on page 495. Updated the FIS Tag Identifiers table on page 494.
		Appendix B	<ul style="list-style-type: none"> Updated the Advice Reason Codes - Position 2 table values on page 636.
July 2020	V1.75	5	<ul style="list-style-type: none"> DE 47 - Additional Data, National: <ul style="list-style-type: none"> Added the American Express® SafeKey table on page 312. Added the American Express® Payment Token table on page 313. Updated the values for the UCAF Collection Indicator sub-element on page 314. DE 105 - Large Private Data 1: <ul style="list-style-type: none"> Deleted the VA tag on page 365. DE 111 Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the American Express® GCAG Format on page 388.
			<ul style="list-style-type: none"> DE 121 Additional Data, Private Issuer (FISDefined): <ul style="list-style-type: none"> Added the American Express® GCAG Format on page 421. DE 123 AVS/Check Auth Data/New PIN (FISDefined): <ul style="list-style-type: none"> Updated the Financial Transactions, Multiple-Tag Format table on page 439. Updated the Financial Transactions, Single-Tag Format table on page 442.
			<ul style="list-style-type: none"> DE 126 Issuer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Added the American Express® GCAG Format on page 517. DE 127 Acquirer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Added the American Express® GCAG Format on page 522.

Date	Effective w/Version	Chapter	Description
May 2020	V1.75	5	<ul style="list-style-type: none"> DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the Discover® Credit Format on page 406. DE126 - Issuer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Added the Discover® Credit Format on page 521. DE 127 - Acquirer Trace Data: <ul style="list-style-type: none"> Added the Discover® Credit Format on page 527.
March 2020	V1.75	5	DE124 - FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Updated the Network Data Information for ACCEL on page 479 and page 481.
		5	DE 47 - Additional Data, National <ul style="list-style-type: none"> Updated the length of data element on page 311. Added a note on page 311. Added the MasterCard Digital Payment Data on page 316.
		5	DE 127 - Acquirer Trace Data <ul style="list-style-type: none"> Added the MasterCard IPM Format on page 526.
		5	DE124 - FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Updated the Directory Server Transaction ID section on page 487. Updated the Strong Customer Authentication Data Tag section on page 463, page 464 and page 465 and page 465. Updated the value of PAN Source on page 460.
October 2019	V1.75	5	DE 22 Point-of-Service Entry Mode: <ul style="list-style-type: none"> Updated the Status Information section on page 291.
		4	<ul style="list-style-type: none"> Updated the 0200/0201 Financial Transaction Request message on page 120.

Date	Effective w/Version	Chapter	Description
		5	DE 55 - Integrated Chip Card Data <ul style="list-style-type: none"> Added the Message Types and Status Information table on page 326.
September 2019	V1.75	4	<ul style="list-style-type: none"> Updated the 0100/0101 Authorization Request message on page 120.
		5	DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Updated the Online File Maintenance Format for Visa® SMS on page 394. Deleted the Visa® DCS CRIS Format on page 394. Deleted the PLUS Format on page 402.
		Appendix B	<ul style="list-style-type: none"> Updated the Advice Reason Codes - Position 2 table values on page 636.
		5	DE124 - FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Updated the 0382 AP File Update Information section on page 491. Added a hyperlink for Override Limit Information with Expiration Date (Cardholder Segment 09) on page 491.
		Appendix A	Cardholders Records: <ul style="list-style-type: none"> Added the Override Limit Information with Expiration Date (Cardholder Segment 09) section on page 561.

Date	Effective w/Version	Chapter	Description
August 2019	V1.75	5	<p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the Visa® DCS Format on page 390. Updated the Visa® EVES Format on page 393. Updated the Pulse format table on page 404 and page 405. <p>DE124 - FIS Tags, Acquirer / Info, Text (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the FIS Tag Identifiers on page 446. Updated the Strong Customer Authentication Data Tag on page 463. Added the Token Authentication Tags on page 450. Updated the Token Device Tags on page 458. Added the Token User Data on page 458. Updated the value of W8 tag on page 460. Updated the Fraud Product Identifier table on page 467.
		Appendix B	<p>Advice Reason Codes</p> <ul style="list-style-type: none"> Updated the Position 1 table on page 634. Updated the Position 2 table on page 636.
		5	<p>DE124 - FIS Tags, Acquirer / Info, Text (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the MasterCard Strong Customer Authentication Data tag information on page 437. <p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the MasterCard® MDS Format on page 398 and page 400. Updated the MasterCard® CIS Format on page 395. Updated the MasterCard® IPM Format on page 401.

Date	Effective w/Version	Chapter	Description
July 2019	V1.75	5	DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the Culiance Format table on page 413. Added the NYCE Format table on page 413.
		5	DE124 - FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Updated the EC tag on page 463.
		Appendix B	<ul style="list-style-type: none"> Updated the Response Codes (bit 039) on page 622.
			DE126 - Issuer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Updated the length of Banknet Reference Number on page 518.
June 2019	V1.75	All	Updated the version of the manual to V1.75.
			DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the EPOC Format table on page 414.
		5	DE 46 - Additional Fees (FIS Defined): <ul style="list-style-type: none"> Updated the Data Element table on page 310.
May 2019	V1.74	5	DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Updated the FIS ISO MasterCard CIS format on page 397.
		5 Appendix A	<ul style="list-style-type: none"> Rearranged the tags in the alphabetical order in sections DE 124 and DE 125. Deleted the following headings: <ul style="list-style-type: none"> Financial Messages - FIS Tags Acquirer Financial Messages - FIS Tags Issuer
April 2019	V1.74	5	DE124 - FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Updated the section Layout for Financial Messages on page 446. DE 125 - FIS Tags, Issuer/Network Management Information (FIS-Defined): <ul style="list-style-type: none"> Updated the section Layout for Financial Messages on page 493.

Date	Effective w/Version	Chapter	Description
		5	<ul style="list-style-type: none"> Updated the Fraud Product Identifier table on page 467 and page 497.
		5	<ul style="list-style-type: none"> Moved content of the following sections from Appendix A to Chapter 5: <ul style="list-style-type: none"> Fraud/Score Data - DE124 on page 466. Data Elements Additional Information - DE124 on page 489. Fraud/Score Data - DE125 on page 497. Data Elements Additional Information - DE125 on page 497.
		Appendix A	<ul style="list-style-type: none"> Deleted the entire section Financial Messages Connex on IBM Online - FIS Tags Acquirer.
		All	<ul style="list-style-type: none"> Removed references of Connex IBM from the entire manual.
		5	DE124 - FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Added values for Device Type on page 457.
March 2019	V1.74	5	DE 47 - AVS/Check Auth Data/New PIN (FIS-Defined): <ul style="list-style-type: none"> Added the Pulse Discover Debit ProtectBuy 3D Secure 2.0 section on page 312.
February 2019	V1.74	Appendix B	<ul style="list-style-type: none"> Updated the Response Codes (bit 039) on page 622. Updated the Position 4 - POS Cardholder Presence table on page 629.
		5	DE124 - FIS Tags, Acquirer / Info, Text (FIS-Defined): <ul style="list-style-type: none"> Updated the FIS Program ID on page 485.

Date	Effective w/Version	Chapter	Description
		5	<p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the MasterCard® CIS Format on page 397. Updated the MasterCard® MDS Format on page 400. Updated the MasterCard® IPM Format on page 401. <p>DE124 - FIS Tags, Acquirer / Info, Text (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the FIS Tag Identifiers section on page 447. Added the Directory Server Transaction ID on page 484. <p>DE 125 - FIS Tags, Issuer/Network Management Information (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the FIS Tag Identifiers section on page 494. Added the Directory Server Transaction ID on page 513.
		Appendix B	Added a note to the 01XX Purchase Return Authorization section on page 586 .
		5	<p>DE 47 - AVS/Check Auth Data/New PIN (FIS-Defined):</p> <ul style="list-style-type: none"> Added the ProtectBuy 3D Secure 2.0 section on page 274. <p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the Discover® Debit Format on page 408.
		5	<p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the Shazam Dual Message Transactions Format on page 413.

Date	Effective w/Version	Chapter	Description
		5	<p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the STAR Access Format on page 409. <p>DE 121 - Additional Data, Private Issuer (FIS-Defined):</p> <ul style="list-style-type: none"> Added the STAR Access Format on page 428. <p>DE124 - FIS Tags, Acquirer / Info, Text (FISDefined):</p> <ul style="list-style-type: none"> Added the Network Data Information on page 483.
		5	<p>DE 127 - Acquirer Trace Data</p> <ul style="list-style-type: none"> Updated the Visa® Base II Format on page 524. <p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the Visa® DCS Format on page 392. Updated the Visa® EVES Format on page 394. <p>DE124 - FIS Tags, Acquirer / Info, Text (FISDefined):</p> <ul style="list-style-type: none"> Updated the FIS Tag Identifiers section on page 447. Added the Electronic Commerce Data tag on page 401. <p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the FIS ISO Visa® Base II Format - BPVISA on page 404.
		All	Manual version changed to version 1.74.

Date	Effective w/Version	Chapter	Description
January 2019	V1.73	5	<p>DE 125 - FIS Tags, Issuer/Network Management Information (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the section Layout for Network Management Messages on page 493. Added the ANSI Key Block Information section on page 499. Updated the FIS Tag Identifiers section on page 494. <p>DE 127 - Acquirer Trace Data</p> <ul style="list-style-type: none"> Added the Settlement Service Level Code on page 526.
November 2018	V1.73	5	<p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Added the field MPOS Acceptance Data on page 397, page 400, and page 402.
			<p>DE124 - FIS Tags, Acquirer / Info, Text (FISDefined):</p> <ul style="list-style-type: none"> Added the Ancillary Service Charges tag on page 449. Added the AS tag on the FIS Tag Identifiers section on page 446. <p>DE 47 - AVS/Check Auth Data/New PIN (FIS-Defined):</p> <ul style="list-style-type: none"> Added the Program Protocol field on page 315. Updated the MasterCard examples on page 316 and page 316.
		5	<p>DE 22 - Point-of-Service Entry Mode:</p> <ul style="list-style-type: none"> Added a note in the Status Information section of Point of Service Entry Mode on page 291.
		5	<p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the Transaction Status Indicator on page 365. Added the "MasterCard Gateway Format" on page 409.

Date	Effective w/Version	Chapter	Description
August 2018	V1.73	All Appendix B 5	<p>Updated the version of the manual.</p> <p>DE 60 - Advice/Reversal Reason Code (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the Position 2 values - “Token expiry update” on page 636. <p>DE 111 - Additional Data, Private Acquirer (FIS-Defined):</p> <ul style="list-style-type: none"> Added the ATM Routing Table Unique Identifier on page 392. Added the Transaction Status Indicator field on page 365. <p>DE124 - FIS Tags, Acquirer / Info, Text (FISDefined):</p> <ul style="list-style-type: none"> Added the “VAT Tax Registration Info” on page 488. Added the VT tag in the FIS Tag Identifiers on page 447. Added the following values for Device Type D1 <ul style="list-style-type: none"> “18 – Personal Computer” on page 457 “19 – Cloud” on page 457. <p>DE 125 - FIS Tags, Issuer/Network Management Information (FIS-Defined):</p> <ul style="list-style-type: none"> Added the RI tag in the FIS Tag Identifiers on page 494. Added the ATM Routing Table Unique Identifier on page 512. <p>DE 127 - Acquirer Trace Data</p> <ul style="list-style-type: none"> Added the field Discover assigned Original Network Reference ID on page 528.
July 2018	V1.5	2 5	<ul style="list-style-type: none"> Added the Token transactions section on page 41. <p>DE124 - FIS Tags, Acquirer / Info, Text (FISDefined):</p> <ul style="list-style-type: none"> Updated the T5 tag description on page 452.
March 2018	V1.5	Appendix B	<p>DE 60 - Advice/Reversal Reason Code (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the Position 2 values on page 636.

Date	Effective w/Version	Chapter	Description
	V1.5	5	DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the Shazam Dual Message Transactions Format on page 412. DE121 - Additional Data, Private Issuer (FIS-Defined): <ul style="list-style-type: none"> Added the Shazam Transactions Format on page 427.
	V1.5	5	DE 127 - Acquirer Trace Data <ul style="list-style-type: none"> Updated the MDS Format table on page 527. DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the Visa field 48, Usage 9a Text Messages on page 391.
November 2017	V1.5	5	DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Updated the Pulse format table on page 404. Updated the MasterCard MDS Format on page 399.
September 2017	V1.5	5	DE 109 - Sender Data <ul style="list-style-type: none"> Updated the note on page 381. DE 110 - Receiver Data <ul style="list-style-type: none"> Updated the note on page 387. DE124 - FIS Tags, Acquirer / Info, Text (FISDefined): <ul style="list-style-type: none"> Added the value SZ = Shazam generated Token data in Payment Token data tag T5. Added the value DP = Discover Debit in the Payment Token data tag TP. Updated the description for FIS PIN Indicator on page 486.
		5	DE124 - FIS Tags, Acquirer / Info, Text (FISDefined): <ul style="list-style-type: none"> Added the value WA = Wallet and PA = Pseudo Account for the Token Type tag. DE125 - FIS Tags, Issuer/Network Management Information (FIS-Defined): <ul style="list-style-type: none"> Added the values WA = Wallet and PA = Pseudo Account to the Token Type tag.

Date	Effective w/Version	Chapter	Description
		5	DE 111 Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Updated the Visa field Additional Authorization Indicators to VD and VE tags on page 391 and page 394 respectively.
			DE 124 - FIS Tags, Acquirer / Info, Text (FISDefined): <ul style="list-style-type: none"> Added the tags TR - TW, TX on page 447. Added the description of TR-TW and TX tag on page 456.
		Appendix B	<ul style="list-style-type: none"> Updated the value of Bar Code to Bar code or QR code in the PAN Entry Mode Codes table. Updated the value of Bar Code to Bar code or QR code in the Card Data Input Capability (Position 11) table.
March 2017	V1.5	5	DE 111 Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Updated the Star Access Format table on page 408. Added the subelement SMS/DMS Indicator to the Star Access Format table on page 409.
		5	DE 124 - FIS Tags, Acquirer / Info, Text (FISDefined): <ul style="list-style-type: none"> Added sub tag Shazam to ND tag on page 481. Modified subtag ACCEL to ND tag on page 479.
		5	DE 124 - FIS Tags, Acquirer / Info, Text (FISDefined): <ul style="list-style-type: none"> Deleted position '30 - 59' (MC DE 48.39) on page 469. Updated the description of Account Data Compromise Information on page 448.
		5	DE 124 - FIS Tags, Acquirer / Info, Text (FISDefined): <p>Added the following values to D1 (Device Type):</p> <ul style="list-style-type: none"> 18 – Personal Computer 19 – Cloud

Date	Effective w/Version	Chapter	Description
			<ul style="list-style-type: none"> Tags TR - TW, DI, WO, and WQ are reserved for future use as indicated on page 456, page 458, and page 463.
			Updated the following tags: <ul style="list-style-type: none"> W1 WJ
			DE 104 - Transaction Description: Added the following sections: <ul style="list-style-type: none"> Check Deposit Format. Unknown Deposit Format
February 2017	V1.5	5	DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the following fields to subelement MD: <ul style="list-style-type: none"> Assessment Score Score Reason Code. Rules Score Rule Reason Code 1 Rule Reason Code 2
			<ul style="list-style-type: none"> Added the following fields to subelement MC: <ul style="list-style-type: none"> Merchant Transaction Fraud Scoring Indicator Rules Score Rule Reason Code 1 Rule Reason Code 2.
			<ul style="list-style-type: none"> Updated the Fraud Scoring Information layout on page 468. Updated the Fraud Security Services Information layout on page 469. Added the TQ Tag under Payment Token Data on page 455. Updated the TQ tag on page 447.
			DE125 - FIS Tags, Issuer/Network Management Information (FIS-Defined): <ul style="list-style-type: none"> Added the Fraud Scoring Information. layout section on page 497. Added the Fraud Security Services Information layout section on page 499. Updated the tags FS and FD on page 494.

Date	Effective w/Version	Chapter	Description
November 2016	V1.5	5	DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the value C = Fee Assessed to the subelement Visa Charge Indicator in the Visa® DCS Format table.
October 2016	V1.5	5	DE126 - Issuer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Added a sub-element on page 520. DE127 - Acquirer Trace Data (FIS-Defined): <ul style="list-style-type: none"> Added a sub-element on page 525.
September 2016	V1.5	Appendix C	Updated the following information for the Belarus currency <ul style="list-style-type: none"> Currency name from BYR to BYN on page 643. Currency number from 974 to 933 on page 658. Minor units (exponent) from 0 to 2 on page 658.
		5	DE 123 - AVS/Check Auth Data/New PIN (FIS-Defined): <ul style="list-style-type: none"> Deleted the “Length” field for the Track1 Name Matching in the Single Tag Format table on page 441.
August 2016	V1.5	5	DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the subelement POS Environment on page 393.
		5	DE 124 - FIS Tags, Acquirer / Info, Text (FISDefined): <ul style="list-style-type: none"> Added the field “Payment Account Reference Number (PAR)” on page 488. DE125 - FIS Tags, Issuer/Network Management Information (FIS-Defined): <ul style="list-style-type: none"> Added the field “Payment Account Reference Number (PAR)” on page 511. DE 127 - Acquirer Trace Data (FIS-Defined) <ul style="list-style-type: none"> Added the subelement Original Transaction Identifier on page 523 and page 524.

Date	Effective w/Version	Chapter	Description
		5	DE 124 - FIS Tags, Acquirer / Info, Text (FISDefined): <ul style="list-style-type: none"> Modified the title as “Detailed Layout of MI Tag for Online 0100/0120/0420 Messages” on page 473. Modified the title as “Detailed Layout of ID Tag for Online 0100/0120/0420 Messages” on page 474. Added a note on MasterCard Installment Payment transactions on page 477.
		5	DE 104 - Transaction Description: <ul style="list-style-type: none"> Added the Aggregation Format table on page 364.
			DE 111 - Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the STAR Access Format table on page 408.
		5	DE121 - Additional Data, Private Issuer (FIS-Defined): Added the following entries in the table “MasterCard® CIS Format”: <ul style="list-style-type: none"> “Original E-Comm SLI and UCAF Collection Indicator” on page 425. “Reason for UCAF Collection Indicator Downgrade” on page 425. Added the following entries in the table “MasterCard® MDS Format”: <ul style="list-style-type: none"> “Original E-Comm SLI and UCAF Collection Indicator” on page 426. “Reason for UCAF Collection Indicator Downgrade” on page 426.
June 2016	V1.5	5	DE123 AVS/Check Auth Data/New PIN (FIS-Defined): <ul style="list-style-type: none"> Added the following entries in the Financial transactions - Multiple tag format: <ul style="list-style-type: none"> Unformatted MICR New PIN.

Date	Effective w/Version	Chapter	Description
			DE 111 Additional Data, Private Acquirer (FIS-Defined): <ul style="list-style-type: none"> Added the following entry in the MasterCard® CIS Format table: <ul style="list-style-type: none"> Token Provisioning Message Type.
April 2016	V1.5	Appendix B	DE 60 - Advice/Reversal Reason Codes (bit 060): <ul style="list-style-type: none"> Added the following entries in Advice Reason Codes: <ul style="list-style-type: none"> PAN expiration date update PAN replacement.
March 2016	V1.5	5	DE109 - Sender Data: <ul style="list-style-type: none"> Updated the length of Sender Name from 24 to 41. Added the following fields: <ul style="list-style-type: none"> Masked PAN Transaction Description. DE110 - Receiver Data: <ul style="list-style-type: none"> Updated the length of Receiver Name from 24 to 41. Added the following field: <ul style="list-style-type: none"> Masked PAN.
February 2016	V1.5	5	DE109 - Sender Data: <ul style="list-style-type: none"> Updated the value of FIS Attributes FIS: ans..999. Updated the name of the following fields: <ul style="list-style-type: none"> From Source of Funds to Funding Source From State, Province, Local Government/Regional Identifier to Sender Identification Number.
			<ul style="list-style-type: none"> Added the following fields: <ul style="list-style-type: none"> Sender Identification Type Sender Identification Country Code Sender Identification Expiration Date Sender Nationality Sender Country of Birth Transaction Purpose. Sorted the tags on page 375 in alphabetical order.

Date	Effective w/Version	Chapter	Description
		5	<p>DE110 - Receiver Data:</p> <ul style="list-style-type: none"> Updated the value of FIS Attributes FIS: ans..999. Updated the name of the following field: <ul style="list-style-type: none"> Receiver Identification Number. Added the following fields: <ul style="list-style-type: none"> Receiver Identification Type Receiver Identification Country Code Receiver Identification Expiration Date Receiver Nationality Receiver Country of Birth. Sorted the tags on page 382 in alphabetical order.

Date	Effective w/Version	Chapter	Description
		5	<p>DE124 - FIS Tags, Acquirer / Info, Text (FISDefined):</p> <ul style="list-style-type: none"> Updated the following information: <ul style="list-style-type: none"> Name of "FIS Reserve Tag Identifiers" section as "FIS Tag Identifiers". Description of FIS Tag Identifiers on page 446. Updated the tags in the FIS Tag Identifiers table on page 446. Deleted the following tags from the FIS Tag Identifiers table: <ul style="list-style-type: none"> AA-AB AD-F0 F3-FC FE-NH NJ-ZZ 00-9Z. Updated the FS tag description on page 469. Added the OB tag on page 487. Modified the title - "Detailed Layout of MI Tag" on page 473. Modified the title - "Detailed Layout of ID Tag" on page 474. Added the following sections: <ul style="list-style-type: none"> Detailed Layout of MI tag for Batch 0220 messages on page 475. Detailed Layout of ID tag for Batch 0220 messages on page 476. Added the TO tag to the Payment Token Data table on page 455. Updated the Payment Token Data format on page 513.
			<ul style="list-style-type: none"> In the section, Installment Payment Information, made the following changes: <ul style="list-style-type: none"> Added the value - Total Amount Due on page 474 and page 474. Modified the Example 1 on page 475. Deleted the Example 2. Modified the value of the Length of Data on page 474. Modified the note on page 474, page 475, page 476, and page 476.

Date	Effective w/Version	Chapter	Description
		5	<p>DE125 - FIS Tags, Issuer/Network Management Information (FIS-Defined):</p> <ul style="list-style-type: none"> Updated the following information: <ul style="list-style-type: none"> Name of “FIS Reserve Tag Identifiers” section as “Falcon Credit Data (Tag ID's “F1” and “F2”)”. Description of FIS Tag Identifiers on page 494. Updated the tags in the FIS Tag Identifiers table on page 496. Deleted the following tags from the FIS Tag Identifiers table: <ul style="list-style-type: none"> AA-AB AD-F0 F3-FC FE-NH NJ-ZZ 00-9Z. Added the OB tag on page 510.
			<ul style="list-style-type: none"> In the section, Installment Payment Information, made the following changes: <ul style="list-style-type: none"> Added the value - Total Amount Due on page 505 and page 506. Modified the Example 1 on page 506. Deleted the Example 2. Modified the value of the Length of Data on page 505. Modified the note on page 505 and page 506.
January 2016	V1.5	5	<p>DE124 - FIS Tags, Acquirer / Info, Text (FISDefined):</p> <ul style="list-style-type: none"> Updated the FS tag layout on page 469 and description on page 469. Modified the entire content for the section Installment Payment Information on page 472. <p>DE125 - FIS Tags, Acquirer / Info, Text (FIS-Defined):</p> <ul style="list-style-type: none"> Added the section Installment Payment Information on page 504.
March 2013	V1.5		Initial release of the manual for V1.5.

2

Overview

The FIS ISO 8583 Processor Interface (PI) is an optional component of the Connex on HP NonStop. It specifies a common interface for bank card-originated messages that relate to EFT, ATM, and POS transactions between acquiring and card-issuing institutions or their agents.

The processor interface provides system messages based on the International Standards Organization's (ISO) standard set for *ISO 8583-1987 - Bank Card Originated Messages - Interchange Message Specifications - Content for Financial Transactions*.

It optionally incorporates the American National Standards Institute's (ANSI) standard set in *ANSI X9.2 Interchange Message Specification for Debit and Credit Card Message Exchange Among Financial Institutions*, dated May 16, 1989.

Token Transactions

FIS supports tokenization that allows financial institutions to take advantage of emerging digital payment technologies. See the *FIS Tokenization Manual* for information about how FIS tokenization works from an issuing perspective.

Note the following points when acquiring a token transaction:

- The transaction must be acquired as a "07", "90", or "91". Refer to the sections ["022 Point-of-Service Entry Mode" on page 290](#) and ["Point-of-Service Entry Mode \(bit 022\)" on page 612](#) for more information.
- Token transactions must contain the Payment Token Tags in DE124, and these tags must be passed to the issuer. Refer to the sections ["124 FIS Tags, Acquirer / Info, Text \(FIS-Defined\)" on page 445](#), ["Payment Token Data" on page 450](#), and ["Data Element 124 - Additional Information" on page 489](#) for more information.
- Issuers must note that when the payment token data (T1-T6 tags) is present, no track data (DE035 and DE045) will be present. The PAN will be in DE002.

ISO Message Structure

The figure below shows the general structure of each standard message in the FIS ISO 8583 PI.

Message Type Identifier	Primary Bit Map	Secondary Bit Map	Data Elements 002 through 064	Data Elements 065 through 128
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The bit map associates each data element in a message with a specific bit in the bit maps. If the bit associated with a particular data element is set to **1**, that data element is present in the message. If that bit is set to **0**, that data element is not present in the message.

In the ISO message structure, each message always contains a primary bit map, indicating the presence of bits 002 through 064. If a message contains any data elements associated with bit numbers 065 through 128, the Secondary Bit Map is also included.

Options

The FIS ISO 8583 PI can be set up to suit your individual business and performance requirements.

Message Text Options

You can select a combination of the following message text options:

- ASCII or EBCDIC alphanumeric characters
- Packed or unpacked bit maps
- Packed or unpacked numeric data
- Fixed or variable length data fields

Data Element Requirements

You can add mandatory data elements with fixed bit maps and fixed-length data fields or you can define a fixed message format.

Totals Processing Option

A host may elect to send or receive totals. If the host is sending totals, the FIS ISO PI can be set up to save totals based on the host's business date. If FIS, formerly known as EFD/eFunds Corporation, is sending totals, the FIS ISO PI can be set up to save totals based on the network business date.

Duplicate Monitoring

Duplicate monitoring affects the processing of repeat transaction types. Refer to [“Message Flows” on page 44](#) for more information about the duplicate monitoring option.

Network Management Options

Following are supported network management options.

- No online network management messages are sent.
- A single network management message is sent for both the issuer and the acquirer.
- Separate network management messages are sent to the acquirer and the issuer.

Reversal Processing Options

Following are available reversal processing options.

- You can elect to send/receive reversals for late/unsolicited responses or send/receive reversals at time-out.
- You can elect to receive partial reversals for misdisbursements or a full reversal followed by a forced post/advice for misdisbursements.

Multiple Message Transactions

This functionality allows the issuer to send a series of continuation messages to the acquirer when the response data does not fit in one message. This option is used for transactions, such as statement print requests, that contain more than 255 bytes of information.

Integrated Circuit Card (ICC) Support

Networks are implementing rules to replace magnetic stripe authentication with EuroPay MasterCard Visa (EMV) chip card authentication. The benefits of using EMV chip card authentications include:

- More secure method of validating cardholders.
- Decreased susceptibility to fraud schemes such as skimming.

3

Message Flows

This section illustrates the message flows between acquirers, issuers, and the Connex™ System for the message types listed below.

- Authorization/Financial Transaction Messages
- Reversal Messages
- File Update Messages
- Reconciliation Messages
- Administrative Messages
- Network Management Messages

When various message flow options are available, the flows associated with each option are shown.

Authorization/Financial Transaction Messages

Message flows are included for authorization/financial transaction request and advice messages.

Duplicate Monitoring Option

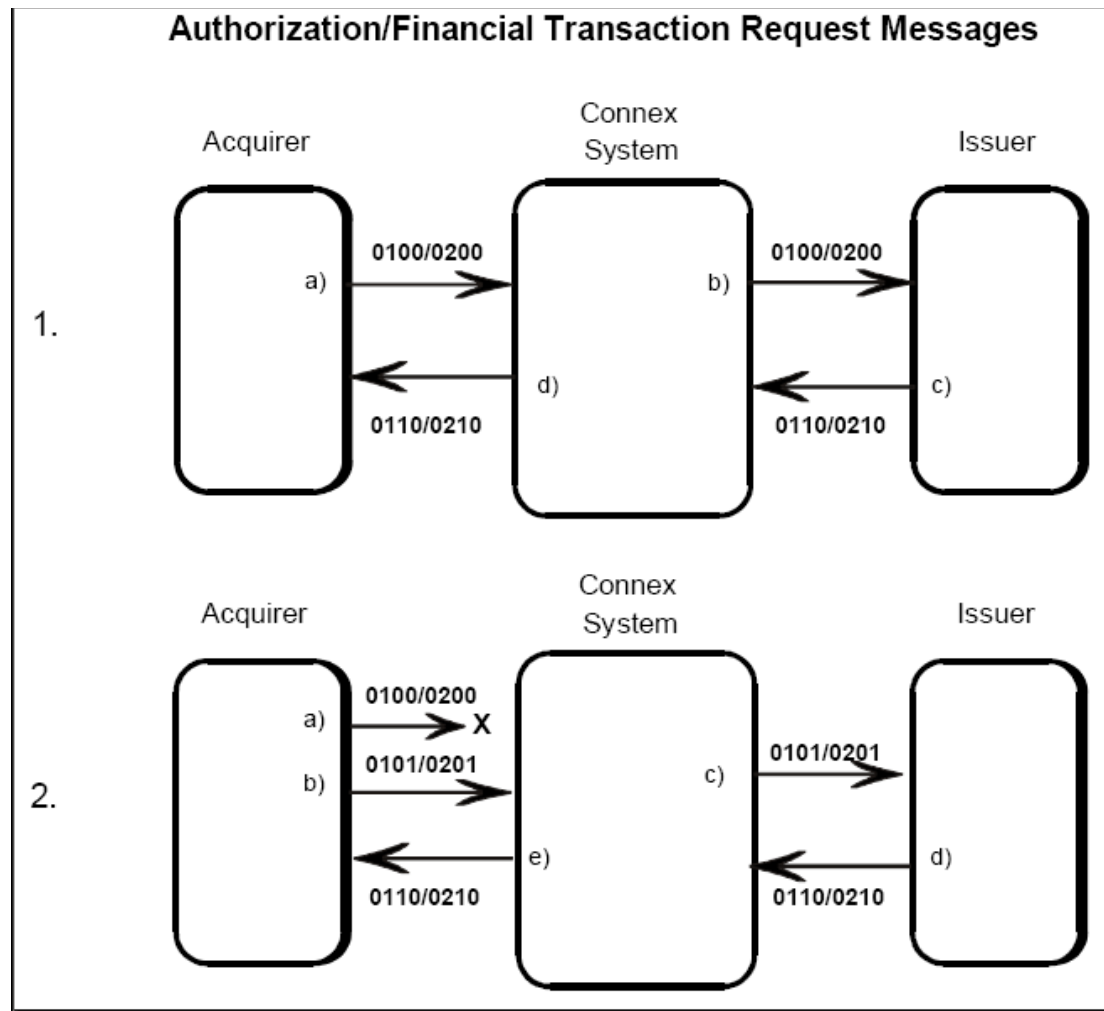
The authorization/financial transaction messages show how the Connex™ System handles message repeats (0101/0201, 0121/0221, 0421) when the duplicate monitoring option is selected.

The FIS ISO 8583 PI saves information on a request for a specified time period. If a repeat request is received *within* the specified time period and the duplicate monitoring option is selected, the repeat message is not passed on to the issuer and there is no response back to the acquirer.

If the repeat is received *outside* of the specified time period, it is passed along to an ISO issuer as received.

Authorization/Financial Transaction Request Messages

The Authorization/Financial Transaction Request message flows follow.



1. Authorization/Financial Transaction request with response
 - a. The acquirer sends a 0100/0200 request message.
 - b. The Connex™ System routes the 0100/0200 request message to the issuer.
 - c. The issuer sends a 0110/0210 request response message.
 - d. The Connex System routes the 0110/0210 response message to the acquirer.

2. Authorization/Financial Transaction request repeat with response

NOTE:

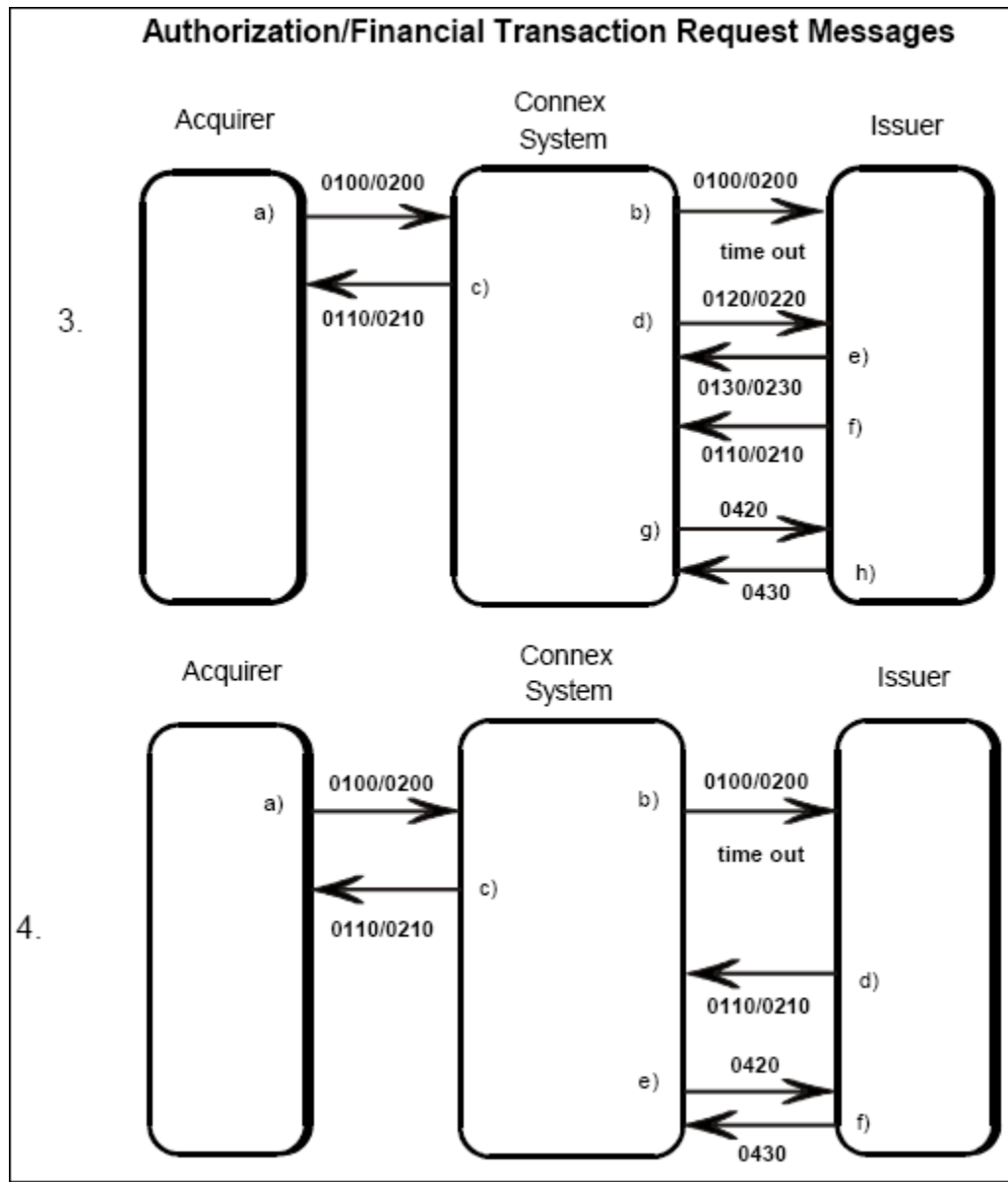
This example illustrates how the Connex System handles a 0101/0201 repeat message when the duplicate monitoring option is selected.

- a. The acquirer sends a 0100/0200 request message. The Connex System does not receive the request message.
- b. The acquirer then sends a 0101/0201 repeat message.

NOTE:

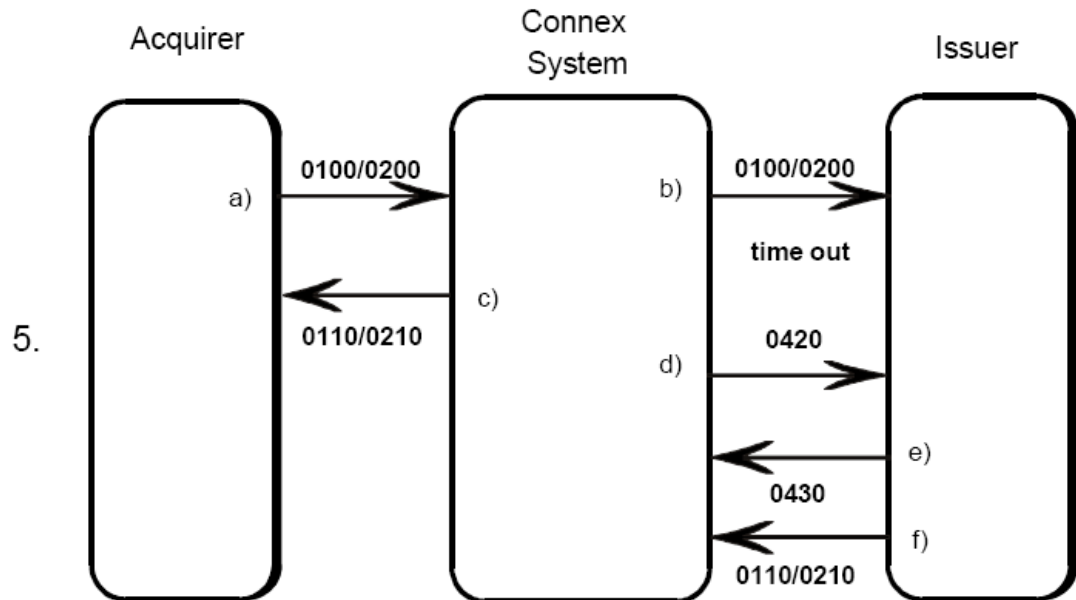
The FIS system as an acquirer does not re-transmit repeat request messages. However, if a non-FIS acquirer sends in a 0101/0201 request repeat message, FIS sends the repeat message to the issuer.

- c. The Connex System routes the 0101/0201 request repeat message to the issuer.
- d. The issuer sends a 0110/0210 request response message.
- e. The Connex System routes the 0110/0210 response message to the acquirer.



3. Authorization/Financial Transaction request time out with stand-in
 - a. The acquirer sends a 0100/0200 request message.
 - b. The Connex™ System routes the 0100/0200 message to the issuer. The issuer does not respond to the message within the time-out limit.
 - c. The Connex System performs stand-in authorization for the issuer and sends a 0110/0210 request response message to the acquirer.
 - d. The Connex System sends a 0120/0220 advice message to the issuer. (optional)
 - e. The issuer sends a 0130/0230 advice response message to the Connex System. (optional)
 - f. The issuer sends a late 0110/0210 request response message to the Connex System.
 - g. The Connex System sends a 0420 reversal advice message to the issuer.
 - h. The issuer sends a 0430 reversal advice response message to the Connex System.
4. Authorization/Financial Transaction request time out without stand-in
 - a. The acquirer sends a 0100/0200 request message.
 - b. The Connex System routes the 0100/0200 message to the issuer, but the issuer does not respond to the message within the time-out limit.
 - c. The Connex System performs stand-in authorization for the issuer and denies the transaction. The Connex System sends a 0110/0210 request response message to the acquirer.
 - d. The issuer returns a late 0110/0210 request response message to the Connex System.
 - e. The Connex System sends a 0420 reversal advice message to the issuer.
 - f. The issuer optionally sends a 0430 reversal advice response message to the Connex System. (optional)

Authorization/Financial Transaction Request Messages

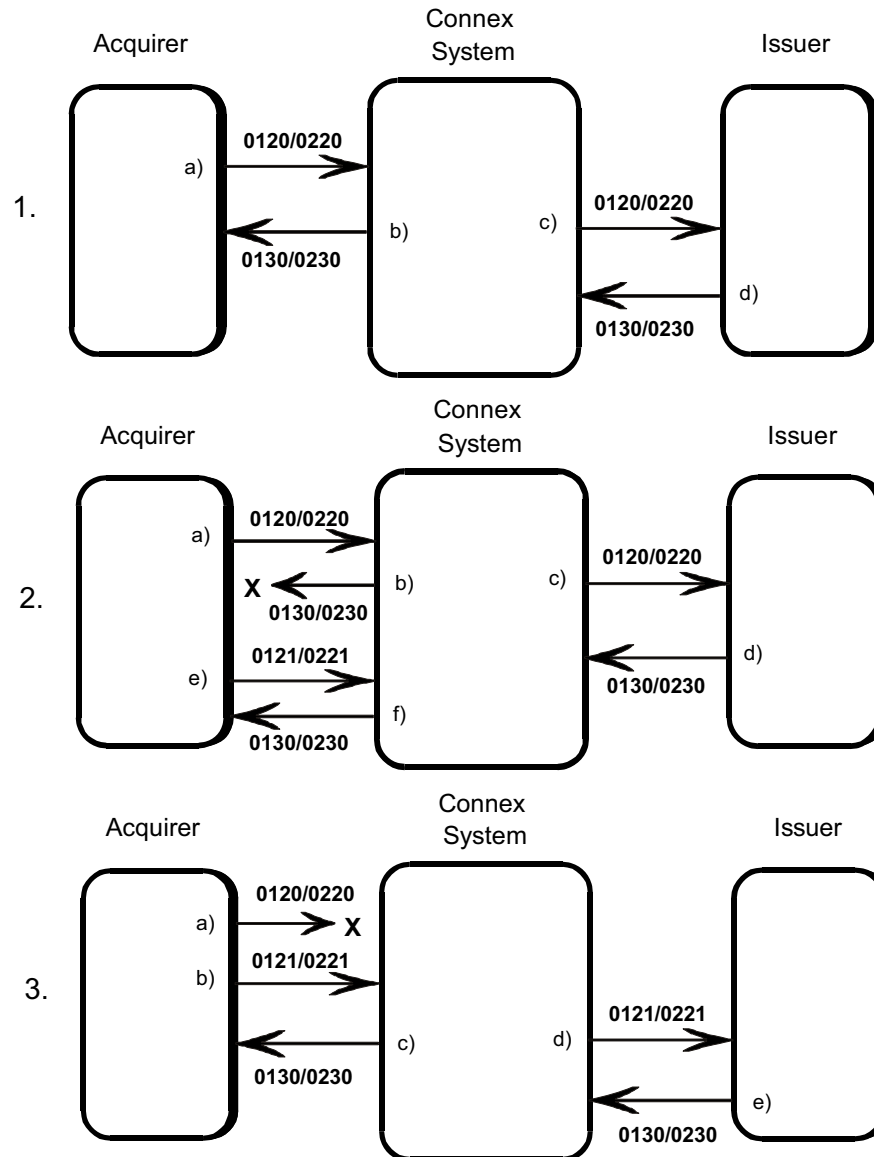


5. Authorization/Financial Transaction request with reversal at time out option
 - a. The acquirer sends a 0100/0200 request message.
 - b. The Connex™ System routes the 0100/0200 message to the issuer, but the issuer does not respond within the time-out limit.
 - c. The Connex System sends a 0110/0210 request response message to the acquirer.
 - d. The Connex System sends a 0420 reversal advice message to the issuer.
 - e. The issuer sends a 0430 reversal advice response message to the Connex System. (optional)
 - f. If the issuer sends a 0110/0210 request response message to the Connex System, the message is ignored.

Authorization/Financial Transaction Advice Messages

The Authorization/Financial Transaction Advice message flows follow.

Authorization/Financial Transaction Advice Messages



1. Authorization/Financial Transaction advice
 - a. The acquirer sends a 0120/0220 advice message. (optional)
 - b. The Connex™ System returns a 0130/0230 response message to the acquirer. (optional)
 - c. The Connex System sends a 0120/0220 advice message to the issuer. (optional)
 - d. The issuer sends a 0130/0230 advice response message. (optional)

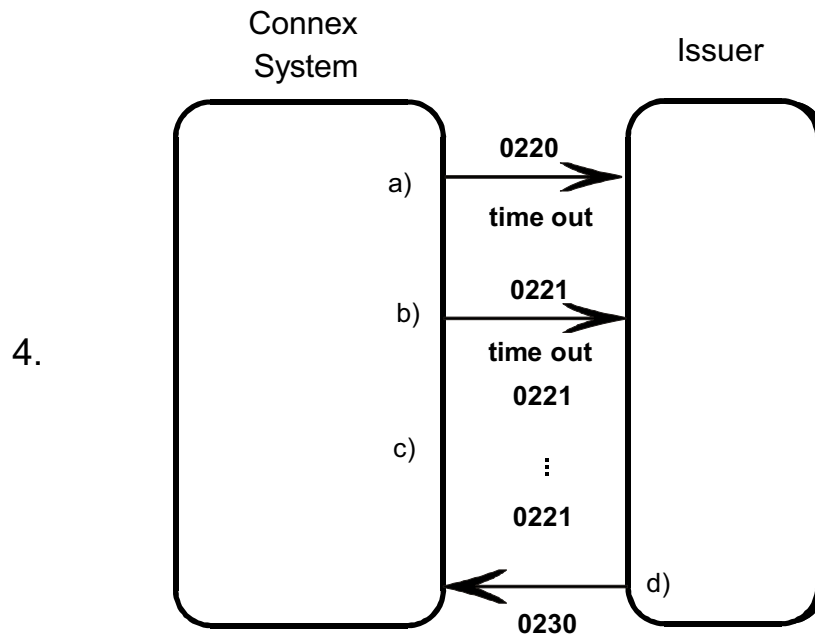
2. Authorization/Financial Transaction advice followed by a repeat

NOTE:

This example illustrates how the Connex System handles a 0121/0221 repeat message when the duplicate monitoring option is selected.

- a. The acquirer sends a 0120/0220 advice message. (optional)
 - b. The Connex System is unable to deliver the 0130/0230 response message to the acquirer. (optional)
 - c. The Connex System routes the 0120/0220 message to the issuer. (optional)
 - d. The issuer sends a 0130/0230 advice response message. (optional)
 - e. The acquirer sends a 0121/0221 advice repeat message.
If the duplicate monitoring option is selected, the Connex System drops the repeat message.
 - f. The Connex System routes the 0130/0230 response message to the acquirer. (optional)
3. Authorization/Financial Transaction advice repeat with response
 - a. The acquirer sends a 0120/0220 advice message. The Connex System does not receive the 0120/0220 message. (optional)
 - b. The acquirer sends a 0121/0221 advice repeat message.
 - c. The Connex System sends a 0130/0230 message to the acquirer. (optional)
 - d. The Connex System routes the 0121/0221 message to the issuer.
 - e. The issuer sends a 0130/0230 advice response message. (optional)

Authorization/Financial Transaction Advice Messages



4. Financial Transaction advice time out

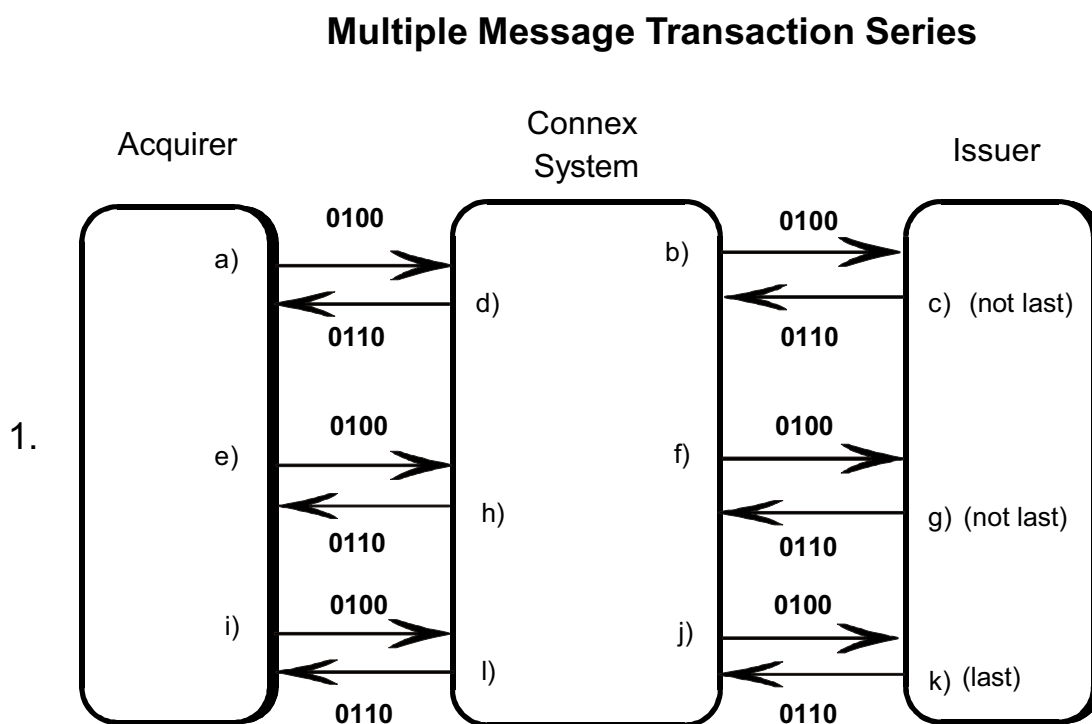
- The Connex™ System routes a 0220 advice message to the issuer.
- If the issuer does not respond within the time-out limit, the Connex System sends a 0221 advice repeat message to the issuer.
- The Connex System continues to send a 0221 repeat message until the issuer responds.
- The issuer sends a 0230 advice response message. (optional)

NOTE:

The receipt of a 022x message may only require a protocol acknowledgment (ACK).

Multiple Message Transaction Series

The Multiple Message Transaction Series message flows follow.



1. Multiple Message Transaction request with normal completion

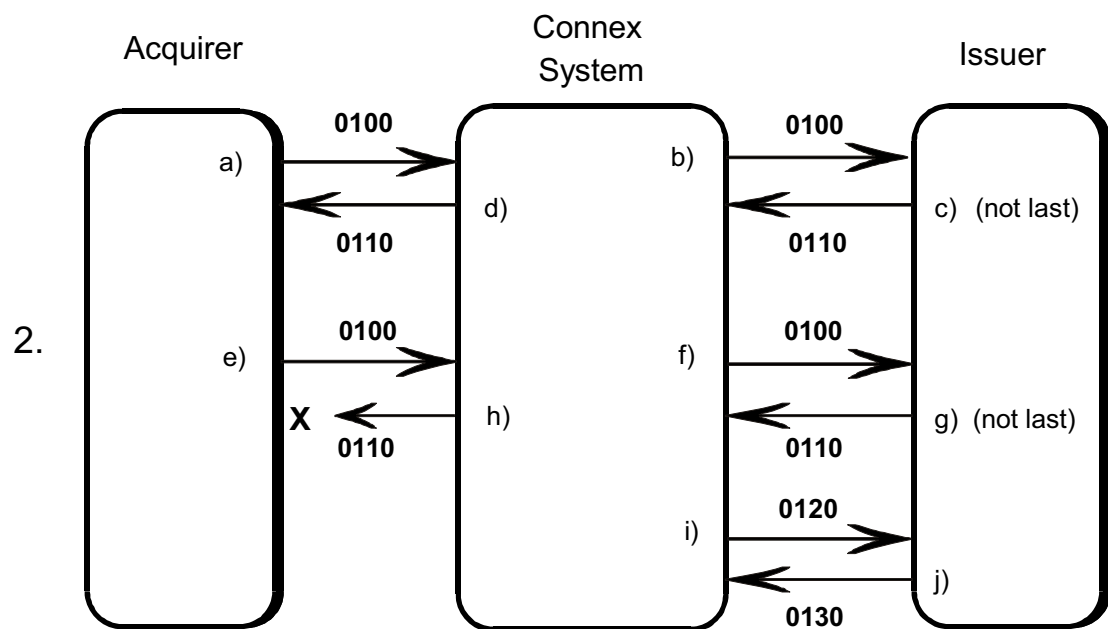
NOTE:

The flow indicated in steps a-d repeats as long as the issuer indicates that more data is available.

- a. The acquirer sends a 0100 request message.
- b. The Connex™ System routes the 0100 request message to the issuer.
- c. The issuer sends a 0110 response message, setting a flag to indicate that more data is available.
- d. The Connex System routes the 0110 response message to the acquirer.
- e. The acquirer sends another 0100 request message.
- f. The Connex System routes the 0100 request message to the issuer.
- g. The issuer sends a 0110 response message, setting a flag to indicate that more data is available.

- h. The Connex System routes the 0110 response message to the acquirer.
- i. The acquirer sends another 0100 request message.
- j. The Connex System routes the 0100 request message to the issuer.
- k. The issuer sends a 0110 response message, setting a flag to indicate that no more data is available.
- l. The Connex System routes the 0110 response message to the acquirer.

Multiple Message Transaction Series



- 2. Incomplete Multiple Message Transaction request with advice
 - a. The acquirer sends a 0100 request message.
 - b. The Connex™ System routes the 0100 request message to the issuer.
 - c. The issuer sends a 0110 response message, setting a flag to indicate that more data is available.
 - d. The Connex System routes the 0110 response message to the acquirer.

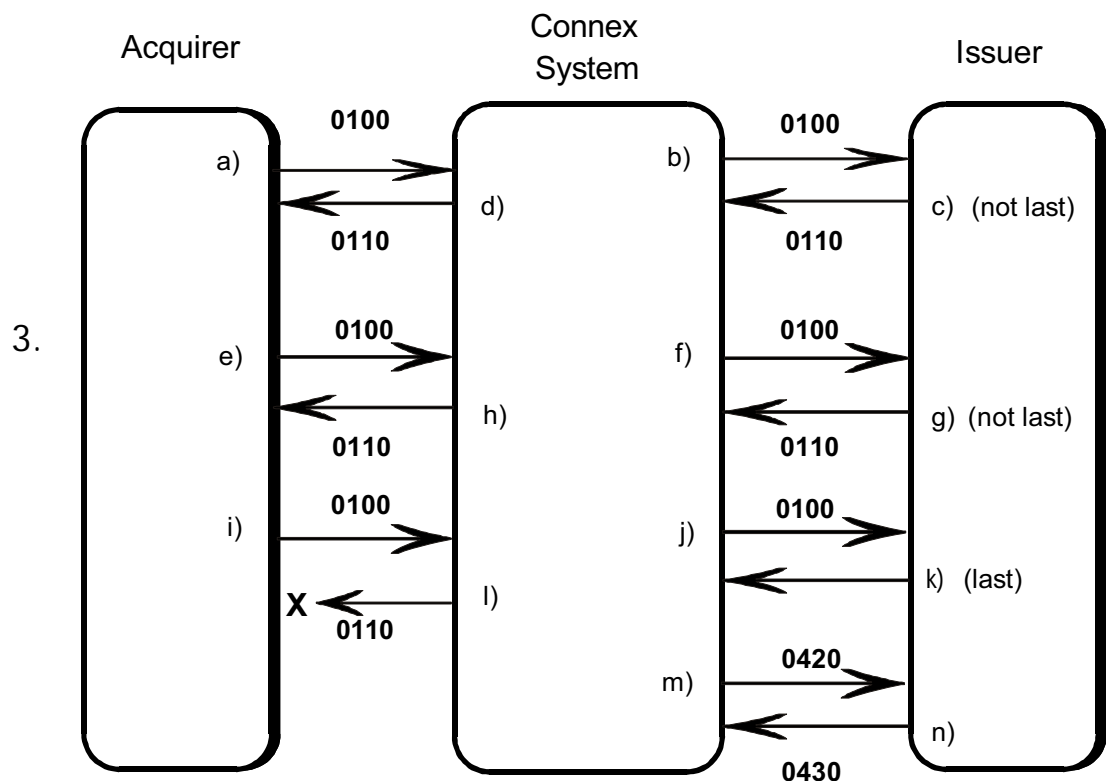
- e. The acquirer sends another 0100 request message.
- f. The Connex System routes the 0100 request message to the issuer.
- g. The issuer sends a 0110 response message, setting a flag to indicate that more data is available.
- h. The Connex System routes the 0110 response message to the acquirer.
- i. The Connex System is unable to deliver the 0110 response to the acquirer.
- j. If the transaction was not the last in the series, then the Connex System forwards a 0120 negative advice message to the issuer. (optional)

NOTE:

The transaction cannot be reversed until the Connex System attempts to deliver the last message in a multiple message series.

- k. The issuer sends a 0130 response message. (optional)

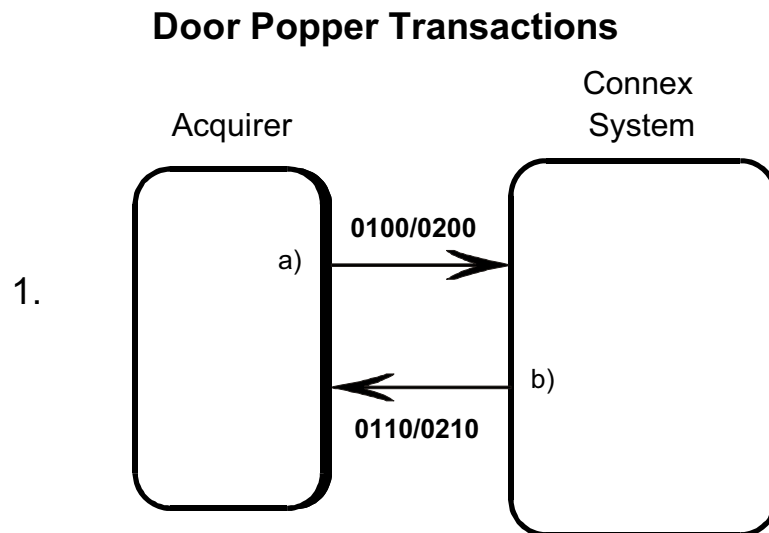
Multiple Message Transaction Series



3. Reversal of a Multiple Message Series

- a. The acquirer sends a 0100 request message.
- b. The Connex™ System routes the 0100 request message to the issuer.
- c. The issuer sends a 0110 response message, setting a flag to indicate that more data is available.
- d. The Connex System routes the 0110 response message to the acquirer.
- e. The acquirer sends another 0100 request message.
- f. The Connex System routes the 0100 request message to the issuer.
- g. The issuer sends a 0110 response message, setting a flag to indicate that more data is available.
- h. The Connex System routes the 0110 response message to the acquirer.
- i. The acquirer sends another 0100 request message.
- j. The Connex System routes the 0100 request message to the issuer.
- k. The issuer sends a 0110 response message, setting a flag to indicate that no more data is available.
- l. The Connex System routes the 0110 response message to the acquirer.
- m. The Connex System is unable to deliver the 0110 response to the acquirer. Since this was the last message in a multiple message series, the transaction can be reversed.
- n. The Connex System sends a 0420 reversal advice message to the issuer.
- o. The issuer sends a 0430 reversal advice response message to the Connex System. (optional)

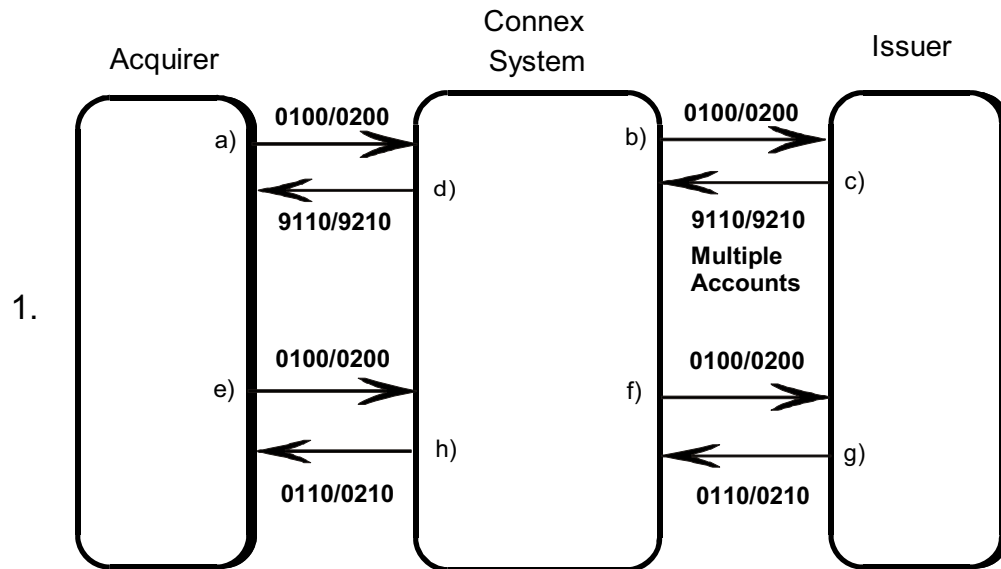
Door Popper Transactions



1. Door Popper Transaction request
 - a. The acquirer sends a 0100/0200 request message.
 - b. The Connex™ System sends the 0110/0210 response message to the acquirer.

Open Account Relationship Transactions

Open Account Relationship Transaction Messages



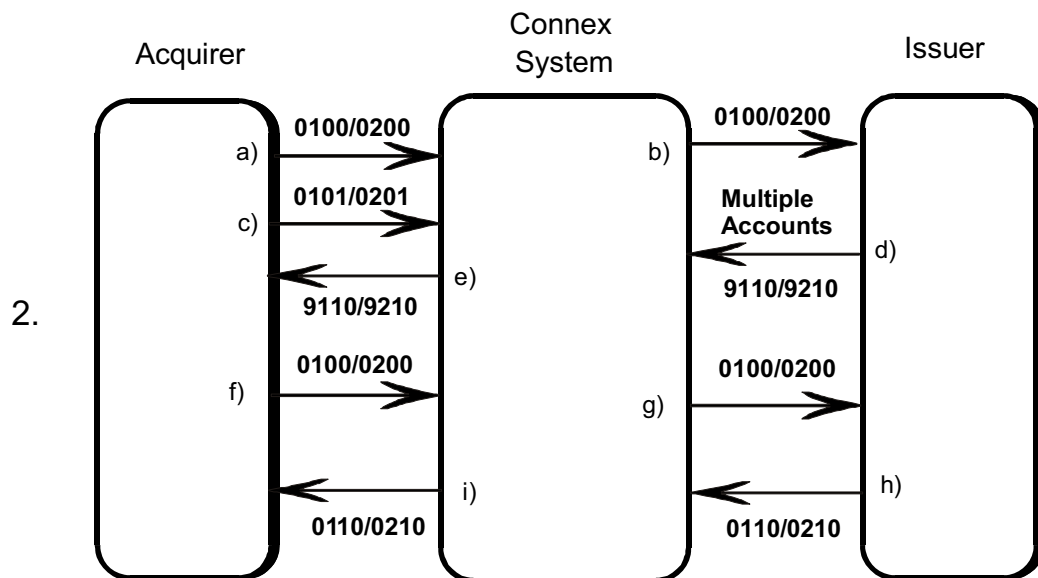
1. Open Account Relationship Transaction request with response
 - a. The acquirer sends an Open Account Relationship 0100/0200 request message.
 - b. The Connex™ System routes the eligible 0100/0200 request message to the issuer.
 - c. The issuer sends a 9110/9210 Open Account Relationship response message with multiple account information.
The value in the OAR Eligible Flag (bit 063) indicates either:
 - 1 = There is more information to send.
 - 2 = There is no more information to send.
 - d. The Connex System routes the 9110/9210 response message with multiple account information to the acquirer.

NOTE:

Upon receiving a 9110/9210 response message which indicates that there is more information to send, the acquirer is not required to ask for the rest of the account information. The acquirer may either request more account information or send the final 0100/0200 financial request message.

- e. The acquirer sends a 0100/0200 request message with selected multiple account information.
- f. The Connex System routes the eligible 0100/0200 request message to the issuer.
- g. The issuer sends a 0110/0210 Open Account Relationship request response.
- h. The Connex System routes the 0110/0210 request response message to the acquirer.

Open Account Relationship Transaction Messages



2. Open Account Relationship Transaction request followed by a repeat with a response

NOTE:

This example illustrates how the Connex™ System handles a 0101/0201 repeat message with multiple accounts when the duplicate monitoring option is selected.

- a. The acquirer sends an Open Account Relationship 0100/0200 request message.
- b. The Connex™ System routes the eligible 0100/0200 request message to the issuer.

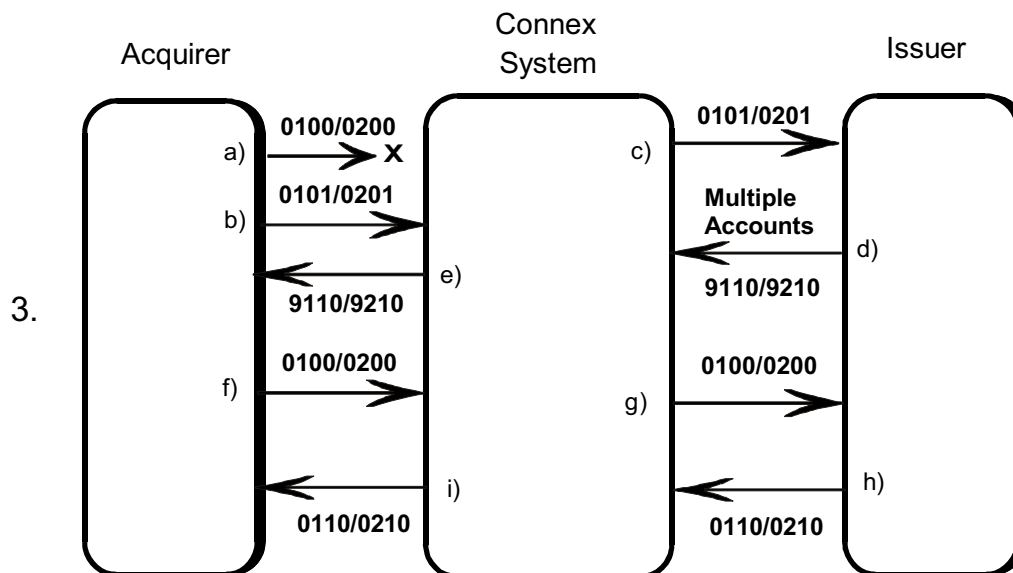
- c. The acquirer does not receive a response message within the specified time period, so they send a 0101/0201 repeat message. The Connex System, having received the 0100/0200 message, drops the 0101/0201 repeat message.
- d. The issuer sends a 9110/9210 Open Account Relationship response message with multiple account information.
The value in the OAR Eligible Flag (bit 063) indicates either:
 - 1 = There is more information to send.
 - 2 = There is no more information to send.
- e. The Connex System routes the 9110/9210 response message with multiple account information to the acquirer.

NOTE:

Upon receiving a 9110/9210 response message which indicates that there is more information to send, the acquirer is not required to ask for the rest of the account information. The acquirer may either request more account information or send the final 0100/0200 financial request message.

- f. The acquirer sends a 0100/0200 request message with selected multiple account information.
- g. The Connex System routes the eligible 0100/0200 request message to the issuer.
- h. The issuer sends a 0110/0210 Open Account Relationship request response.
- i. The Connex System routes the 0110/0210 request response message to the acquirer.

Open Account Relationship Transaction Messages



3. Open Account Relationship Transaction request repeat with response

NOTE:

This example illustrates how the Connex™ System handles a 0101/0201 repeat message with multiple accounts when the duplicate monitoring option is selected.

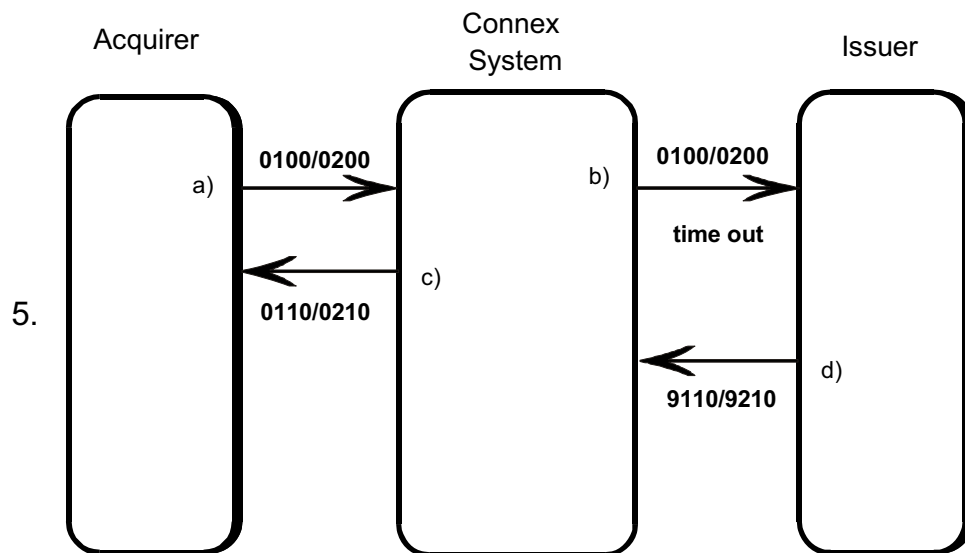
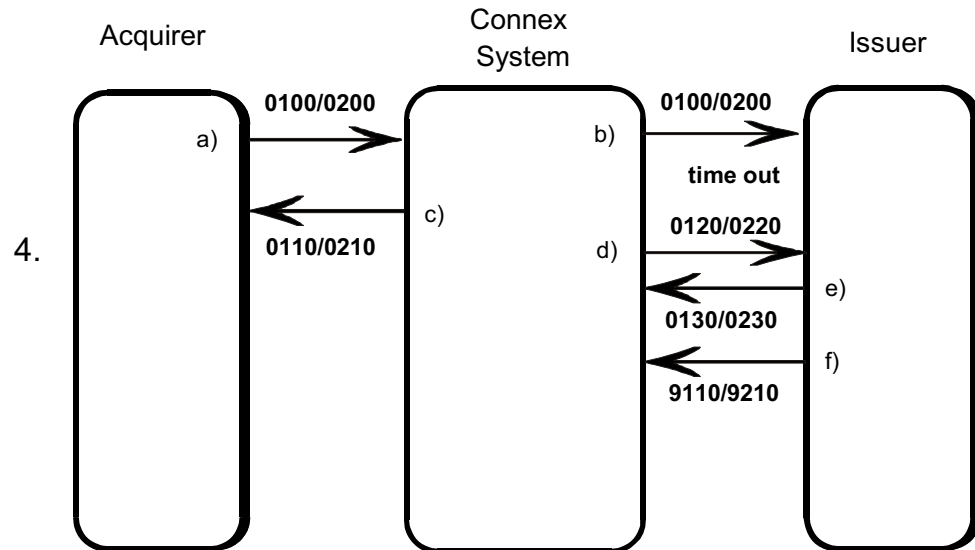
- The acquirer sends an Open Account Relationship 0100/0200 request message. The Connex™ System does not receive the request message.
- The acquirer then sends a 0101/0201 repeat message.
- The Connex System routes the 0101/0201 repeat message to the issuer.
- The issuer sends the 9110/9210 response message with multiple account information to the acquirer.
The value in the OAR Eligible Flag (bit 063) indicates either:
 - 1 = There is more information to send.
 - 2 = There is no more information to send.
- The Connex System routes the 9110/9210 response message with multiple account information to the acquirer.

NOTE:

Upon receiving a 9110/9210 response message which indicates that there is more information to send, the acquirer is not required to ask for the rest of the account information. The acquirer may either request more account information or send the final 0100/0200 financial request message.

- f. The acquirer sends a 0100/0200 request message with selected multiple account information.
- g. The Connex System routes the eligible 0100/0200 request message to the issuer.
- h. The issuer sends a 0110/0210 Open Account Relationship request response.
- i. The Connex System routes the 0110/0210 request response message to the acquirer.

Open Account Relationship Transaction Messages



4. Open Account Relationship Transaction request time out with stand-in
 - a. The acquirer sends an Open Account Relationship 0100/0200 request message.
 - b. The Connex™ System routes the eligible 0100/0200 request message to the issuer. The issuer does not respond to the message within the time-out limit.
 - c. The Connex System performs stand-in authorization for the issuer and sends a 0110/0210 request response message to the acquirer.
 - d. The Connex System sends a 0120/0220 advice message to the issuer. (optional)
 - e. The issuer sends a 0130/0230 advice response message to the Connex System. (optional)
 - f. The issuer sends a 9110/9210 Open Account Relationship response message to the Connex System.
The value in the OAR Eligible Flag (bit 063) indicates either:
 - 1 = There is more information to send.
 - 2 = There is no more information to send.

NOTE:

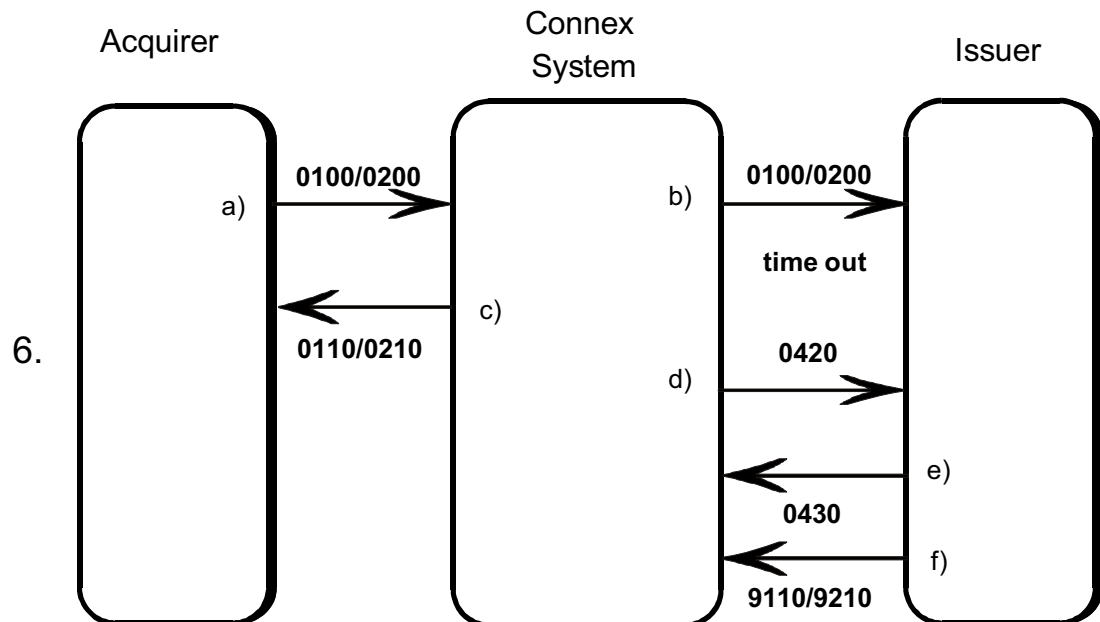
The late 9110/9210 response message is not reversed.

5. Open Account Relationship Transaction request time out without stand-in
 - a. The acquirer sends an Open Account Relationship 0100/0200 request message.
 - b. The Connex System routes the eligible 0100/0200 request message to the issuer, but the issuer does not respond to the message within the time-out limit.
 - c. The Connex System performs stand-in authorization for the issuer and denies the transaction. The Connex System sends a 0110/0210 request response message to the acquirer.
 - d. The issuer returns a late 9110/9210 Open Account Relationship request response message to the Connex System.
The value in the OAR Eligible Flag (bit 063) indicates either:
 - 1 = There is more information to send.
 - 2 = There is no more information to send.

NOTE:

The late 9110/9210 response message is not reversed.

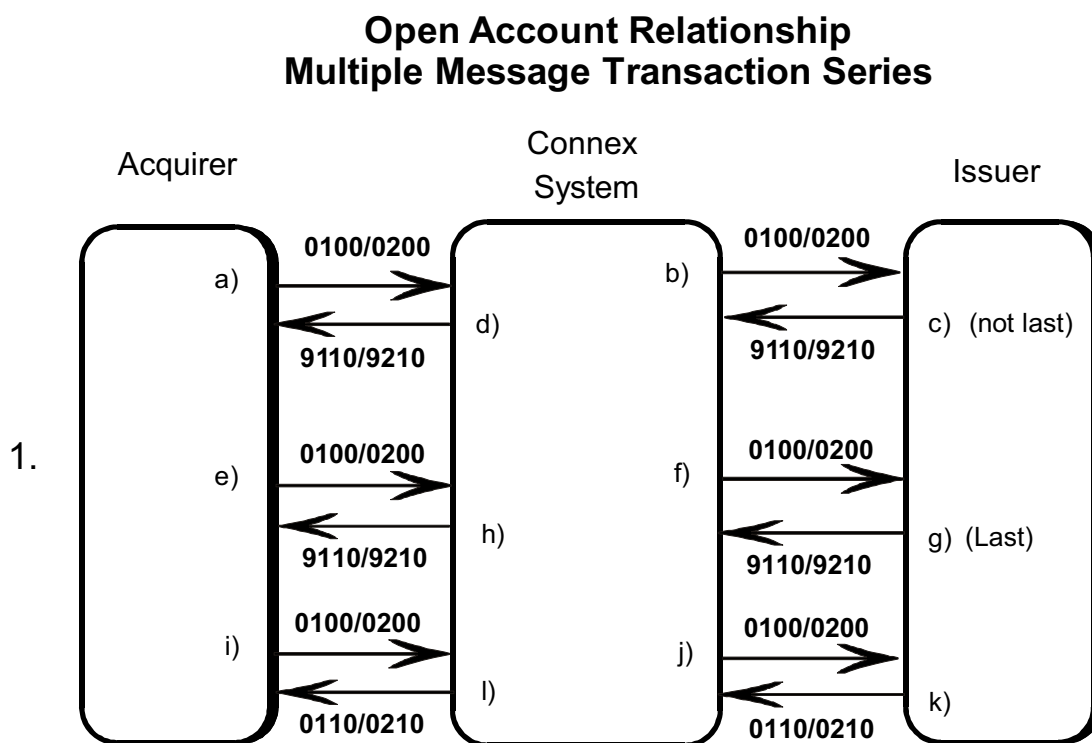
Open Account Relationship Transaction Messages



6. Open Account Relationship Transaction request with reversal at time out option
 - a. The acquirer sends an Open Account Relationship 0100/0200 request message.
 - b. The Connex™ System routes the eligible 0100/0200 message to the issuer, but the issuer does not respond within the time-out limit.
 - c. The Connex System sends a 0110/0210 request response message to the acquirer.
 - d. The Connex System sends a 0420 reversal advice message to the issuer if the transaction was marked as complete.
 - e. The issuer sends a 0430 reversal advice response message to the Connex System. (optional)
 - f. If the issuer sends a 9110/9210 Open Account Relationship request response message to the Connex System, the message is ignored.

Open Account Relationship Multiple Message Transaction Series

The Open Account Relationship Multiple Message Transaction Series message flows follow.



1. Open Account Relationship Multiple Message Transaction request with normal completion

NOTE:

The flow indicated in steps a-d can repeat as long as the issuer indicates that more data is available.

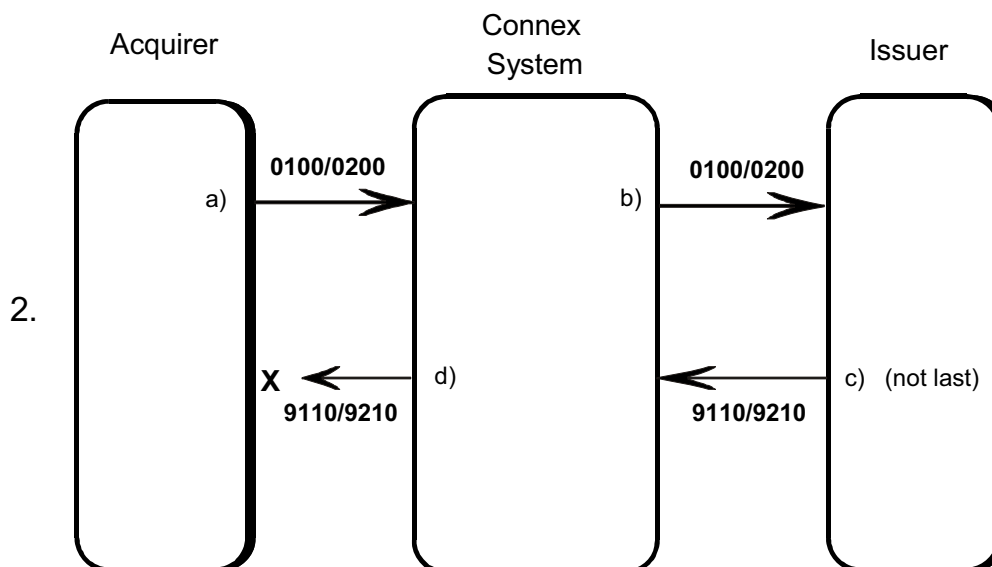
- a. The acquirer sends a 0100/0200 request message.
- b. The Connex™ System routes the 0100/0200 request message to the issuer.
- c. The issuer sends a 9110/9210 response message, setting a flag to indicate that more data is available.
- d. A value of 1 in the OAR Eligible Flag (bit 063) indicates that there is more information to send.
- e. The Connex System routes the 9110/9210 response message to the acquirer.

NOTE:

Upon receiving a 9110/9210 response message which indicates that there is more information to send, the acquirer is not required to ask for the rest of the account information. The acquirer may either request more account information or send the final 0100/0200 financial request message.

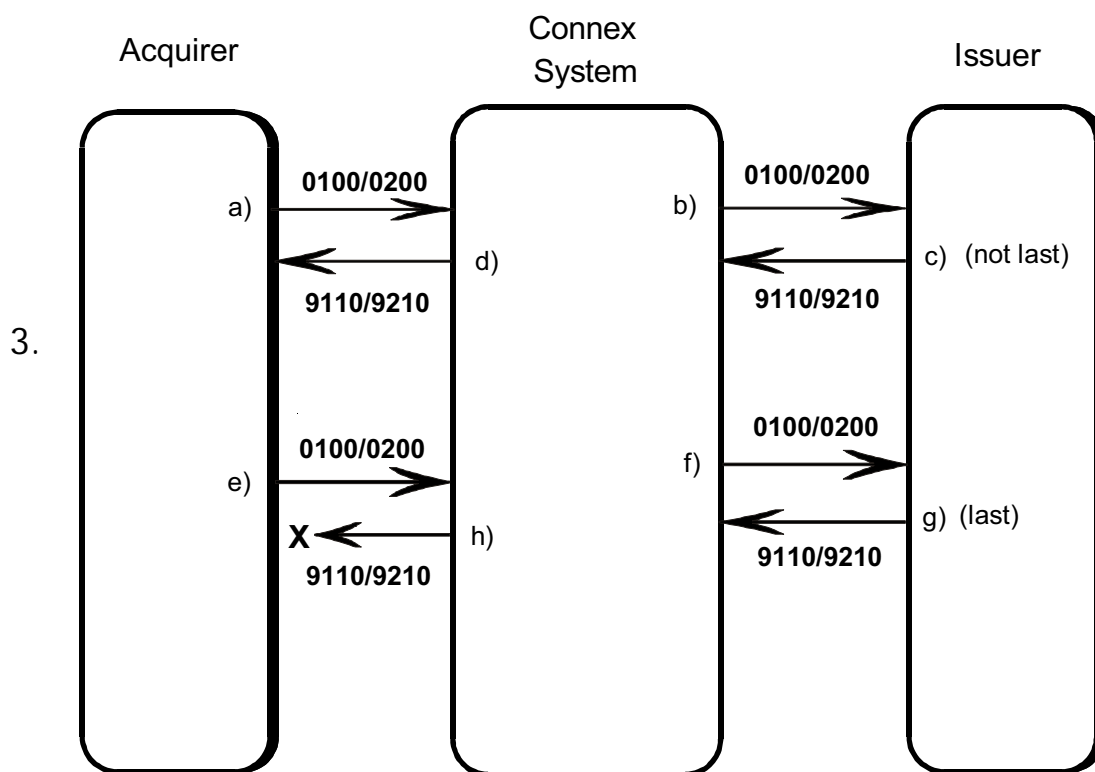
- f. The acquirer sends another 0100/0200 request message.
- g. The Connex System routes the 0100/0200 request message to the issuer.
- h. The issuer sends a 9110/9210 response message, setting a flag to indicate that no more data is available.
- i. A value of 2 in the OAR Eligible Flag (bit 063) indicates that there is no more information to send.
- j. The Connex System routes the 9110/9210 response message to the acquirer.
- k. The customer selects the specific account and the acquirer sends a 0100/0200 request message for the transaction and account selected by the customer.
- l. The Connex System routes the 0100/0200 request to the issuer.
- m. The issuer sends a 0110/0210 response message.
- n. The Connex System routes the 0110/0210 response message to the acquirer.

Open Account Relationship Multiple Message Transaction Series



2. Incomplete Open Account Relationship Multiple Message Transaction request with advice
 - a. The acquirer sends another 0100/0200 request message.
 - b. The Connex™ System routes the 0100/0200 request message to the issuer.
 - c. The issuer sends a 9110/9210 response message, setting a flag to indicate that more data is available.
A value of 1 in the OAR Eligible Flag (bit 063) indicates that there is more information to send.
 - d. The Connex System routes the 9110/9210 response message to the acquirer.

Open Account Relationship Multiple Message Transaction Series



3. Incomplete Open Account Relationship Multiple Message Series transaction request

- a. The acquirer sends a 0100/0200 request message.
- b. The Connex™ System routes the 0100/0200 request message to the issuer.
- c. The issuer sends a 9110/9210 response message, setting a flag to indicate that more data is available.
A value of 1 in the OAR Eligible Flag (bit 063) indicates that there is more information to send.
- d. The Connex System routes the 9110/9210 response message to the acquirer.

NOTE:

Upon receiving a 9110/9210 response message which indicates that there is more information to send, the acquirer is not required to ask for the rest of the account information. The acquirer may either request more account information or send the final 0100/0200 financial request message.

- e. The acquirer sends another 0100/0200 request message.
- f. The Connex System routes the 0100/0200 request message to the issuer.
- g. The issuer sends a 9110/9210 response message, setting a flag to indicate that no more data is available.
A value of 2 in the OAR Eligible Flag (bit 063) indicates that there is no more information to send.
- h. The Connex System routes the 9110/9210 response message to the acquirer.

Reversal Messages

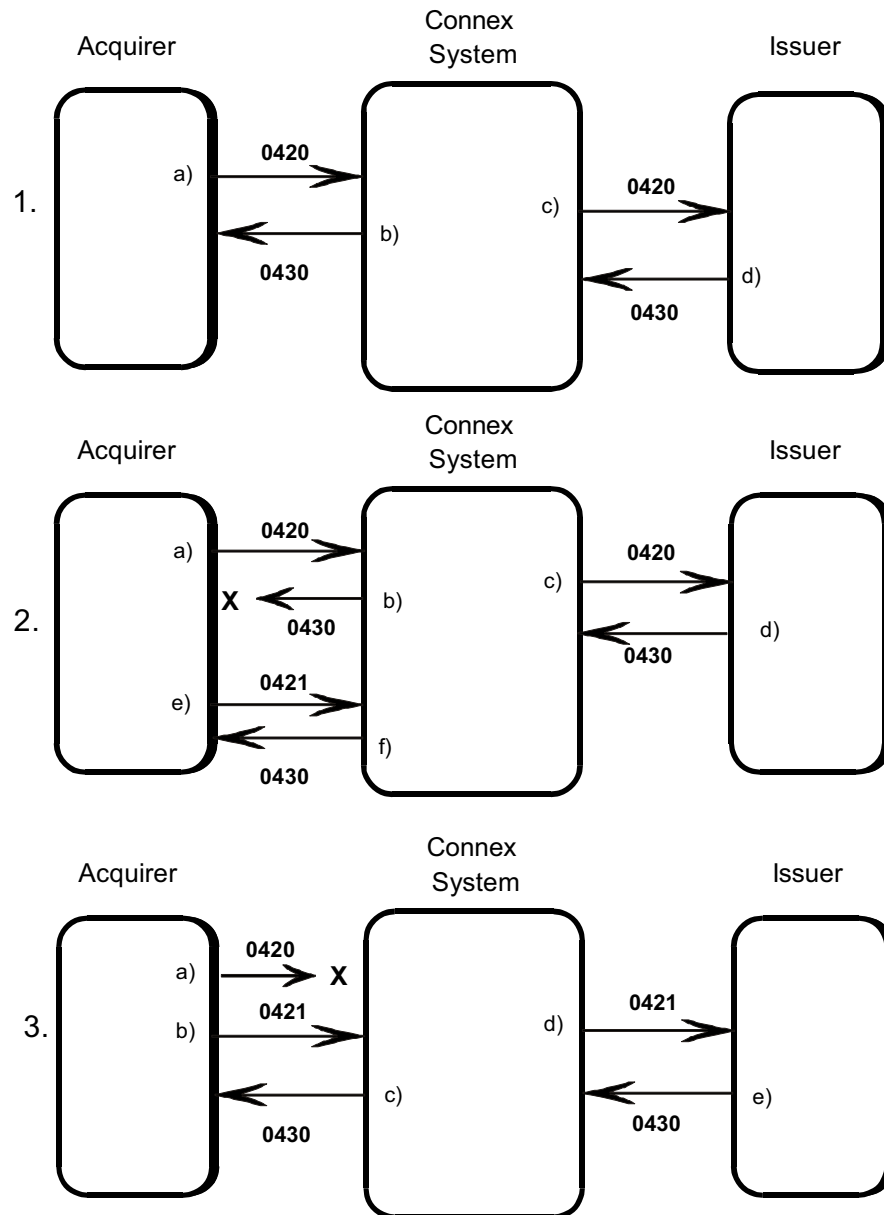
The flow of each reversal message is described on the following pages.

- Financial reversal
- Financial reversal followed by a repeat
- Financial reversal repeat with response
- Financial reversal (do not send partial reversals)
- Financial reversal (send partial reversals)
- Financial reversal time out

Partial Dispense Reversals

This section includes message flows involving partial dispense reversals.

Reversal Messages



1. Financial reversal
 - a. The acquirer sends a 0420 reversal advice message.
 - b. The Connex™ System routes the 0430 message to the acquirer. (optional)
 - c. The Connex System routes the 0420 message to the issuer.
 - d. The issuer sends a 0430 reversal advice response message. (optional)

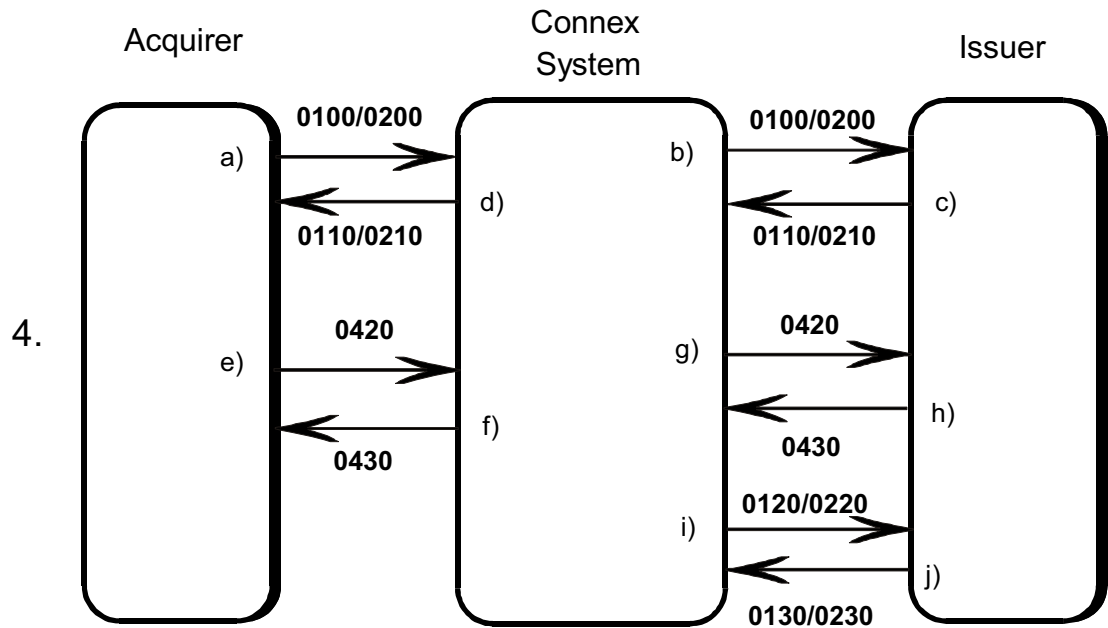
2. Financial reversal followed by a repeat

NOTE:

This example illustrates how the Connex System handles a 0421 repeat message when the duplicate monitoring option is selected.

- a. The acquirer sends a 0420 reversal advice message.
 - b. The Connex System routes the 0430 message to the acquirer, but is unable to deliver the message.
 - c. The Connex System routes the 0420 message to the issuer.
 - d. The issuer sends a 0430 reversal advice response message. (optional)
 - e. The acquirer sends a 0421 repeat message.
If the duplicate monitoring option is selected, the Connex System drops the 0421 repeat message.
 - f. The Connex System routes the 0430 message to the acquirer. (optional)
3. Financial reversal repeat with response
 - a. The acquirer sends a 0420 reversal advice message, but the Connex System does not receive the message.
 - b. The acquirer sends a 0421 reversal advice repeat message.
 - c. The Connex System routes the 0430 message to the acquirer.
 - d. The Connex System routes the 0421 message to the issuer.
 - e. The issuer sends a 0430 reversal advice response message. (optional)

Reversal Messages



4. Financial reversal (do not send partial reversals)

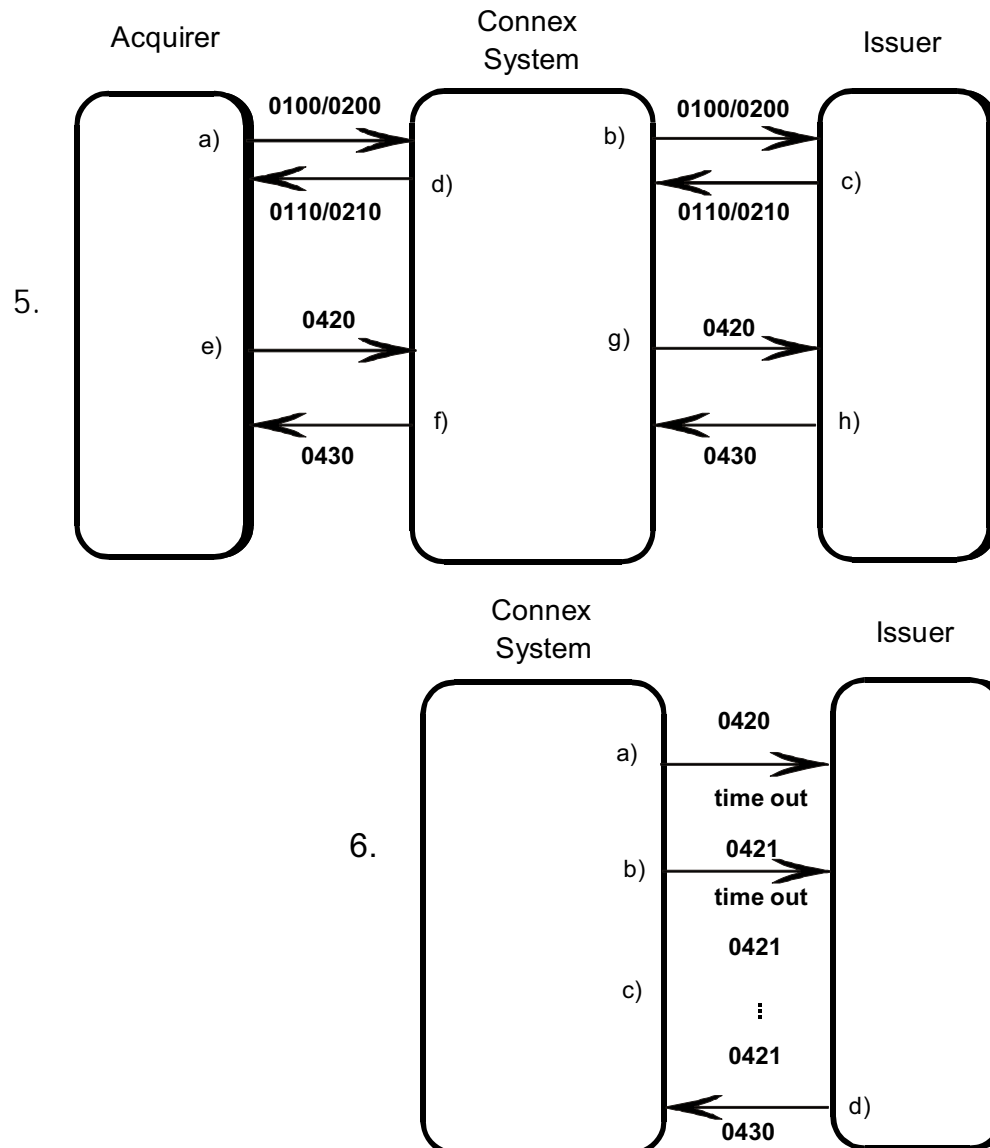
NOTE:

This example illustrates the message flow which results when an issuer *cannot* accept a partial dispense reversal.

- The acquirer sends a 0100/0200 request message.
- The Connex™ System routes the 0100/0200 request message to the issuer.
- The issuer sends a 0110/0210 request response message.
- The Connex System routes the 0110/0210 response message to the acquirer. A partial dispense was made.
- The acquirer sends a 0420 reversal advice message with the full amount the cardholder requested and the actual dispensed amount.
- The Connex System routes a 0430 reversal advice response message to the acquirer. (optional).
- The Connex System routes the 0420 message to the issuer (full reversal).
- The issuer sends a 0430 reversal advice response message. (optional).

- i. The Connex System sends a 0120/0220 message (forced post) to the issuer, indicating the amount that was dispensed to the cardholder. (optional)
- j. The issuer sends a 0130/0230 advice response message to the Connex System. (optional)

Reversal Messages



5. Financial reversal (send partial reversals)

NOTE:

This example illustrates the message flow which results when an issuer *can* accept a partial dispense reversal.

- a. The acquirer sends a 0100/0200 request message.
- b. The Connex™ System routes the 0100/0200 request message to the issuer.
- c. The issuer sends a 0110/0210 request response message.
- d. The Connex System routes the 0110/0210 response message to the acquirer. A partial dispense was made.
- e. The acquirer sends a 0420 reversal advice message with the full amount the cardholder requested and the actual dispensed amount.
- f. The Connex System routes a 0430 reversal advice response message to the acquirer. (optional)
- g. The Connex System routes the 0420 message to the issuer.
- h. The issuer sends a 0430 reversal advice response message. (optional)

6. Financial reversal time-out

- a. The Connex System routes a 0420 reversal advice message to the issuer.
- b. If the issuer does not respond within the resend interval, the Connex System sends a 0421 reversal advice repeat message to the issuer.
- c. The Connex System continues to send a 0421 repeat message until the issuer responds.
- d. The issuer sends a 0430 reversal advice response message. (optional)

NOTE:

The receipt of a 042x message may only require a protocol acknowledgment (ACK).

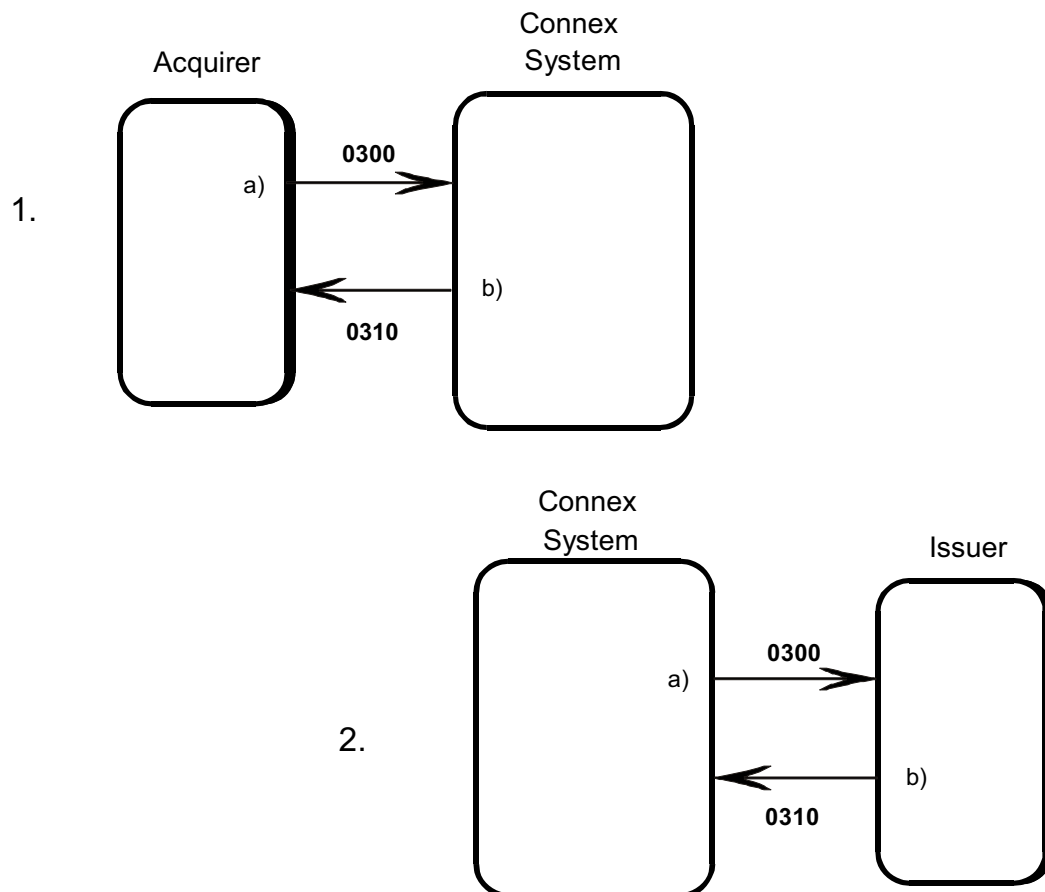
File Update Messages

The flow of each file update message is described on the following pages.

- Negative File Update Messages
- Authorization Processor File Update Messages

Negative File Update Messages

Negative File Update Messages



1. Acquirer to Connex™ System

- a. The acquirer sends a 0300 request message to the Connex System.

NOTE:

If the Connex System does not respond within the resend interval, the acquirer continues to resend the 0300 request message until the Connex System responds.

- b. The Connex System performs the requested file update task and sends a 0310 response message back to the acquirer.
The value in the Response Code data element (bit 039) indicates whether the file update request was successfully completed.

2. Connex System to Issuer

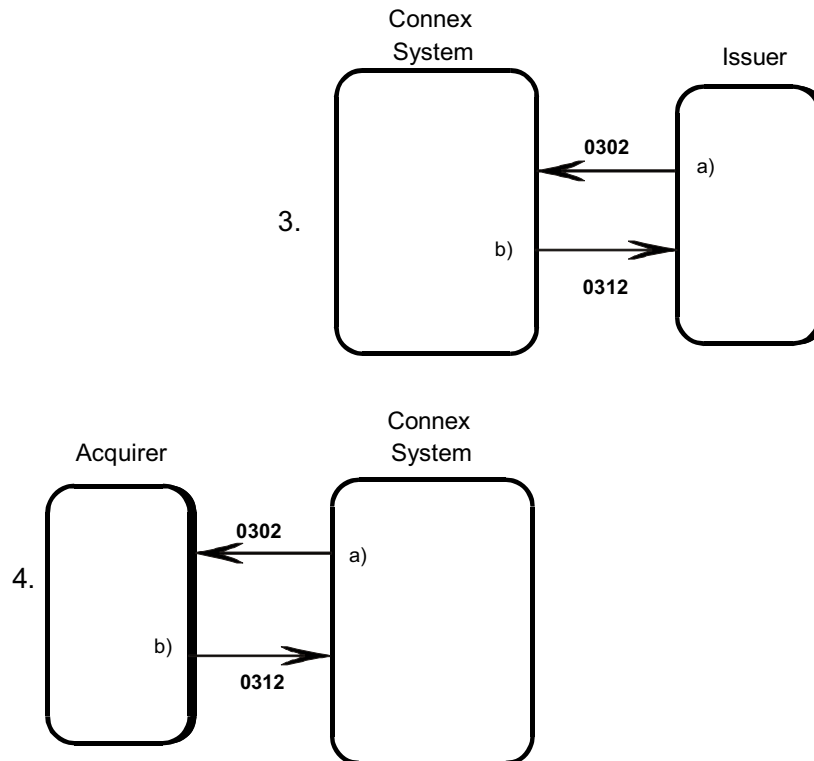
- a. The Connex System may send a 0300 request message on to an issuer.

NOTE:

If the issuer does not respond within the resend interval, the Connex System continues to resend the 0300 request message until the issuer responds.

- b. The issuer then sends a 0310 response message to the Connex System.

Negative File Update Messages



3. Issuer to Connex™ System

- a. The issuer sends a 0302 request message to the Connex System.

NOTE:

If the Connex™ System does not respond within the resend interval, the issuer continues to resend the 0302 request message until the Connex System responds.

- b. The Connex™ System performs the requested file update task and sends a 0312 response message back to the issuer.
The value in the Response Code data element (bit 039) indicates whether the file update request was successfully completed.

4. Connex System™ to Acquirer

- a. The Connex System may send a 0302 request message on to an acquirer.

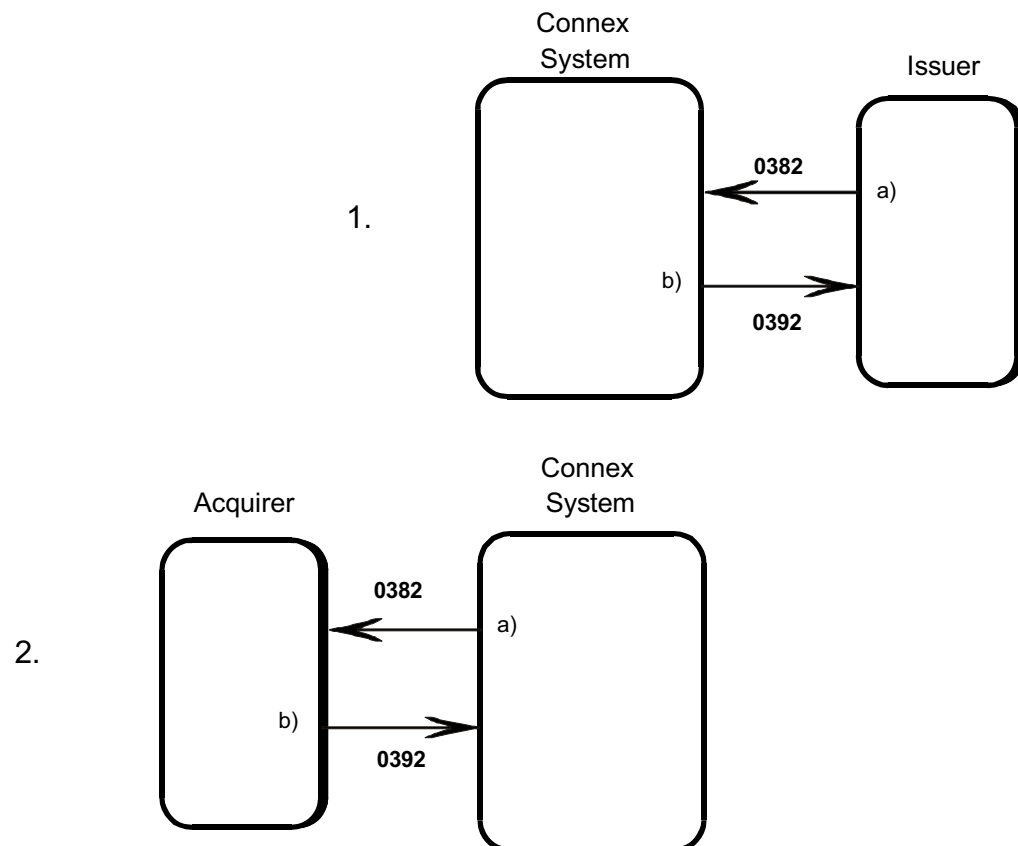
NOTE:

If the acquirer does not respond within the resend interval, the Connex System continues to resend the 0302 request message until the acquirer responds.

- b. The acquirer then sends a 0312 response message to the Connex System.

Authorization Processor File Update Messages

AP File Update Messages



1. Issuer to Connex™ System

- a. The issuer sends a 0382 request message to the Connex System.

NOTE:

If the Connex System does not respond within the resend interval, the issuer continues to resend the 0382 request message until the Connex System responds.

- b. The Connex System performs the requested file update task and sends a 0392 response message back to the issuer.
The value in the Response Code data element (bit 039) indicates whether the file update request was successfully completed.

2. Connex System to Acquirer

- a. The Connex System sends a 0382 request message to the acquirer.

NOTE:

If the acquirer does not respond within the resend interval, the Connex System continues to resend the 0382 request message until the acquirer responds.

- b. The acquirer sends a 0392 response message back to the Connex System.

Reconciliation Messages

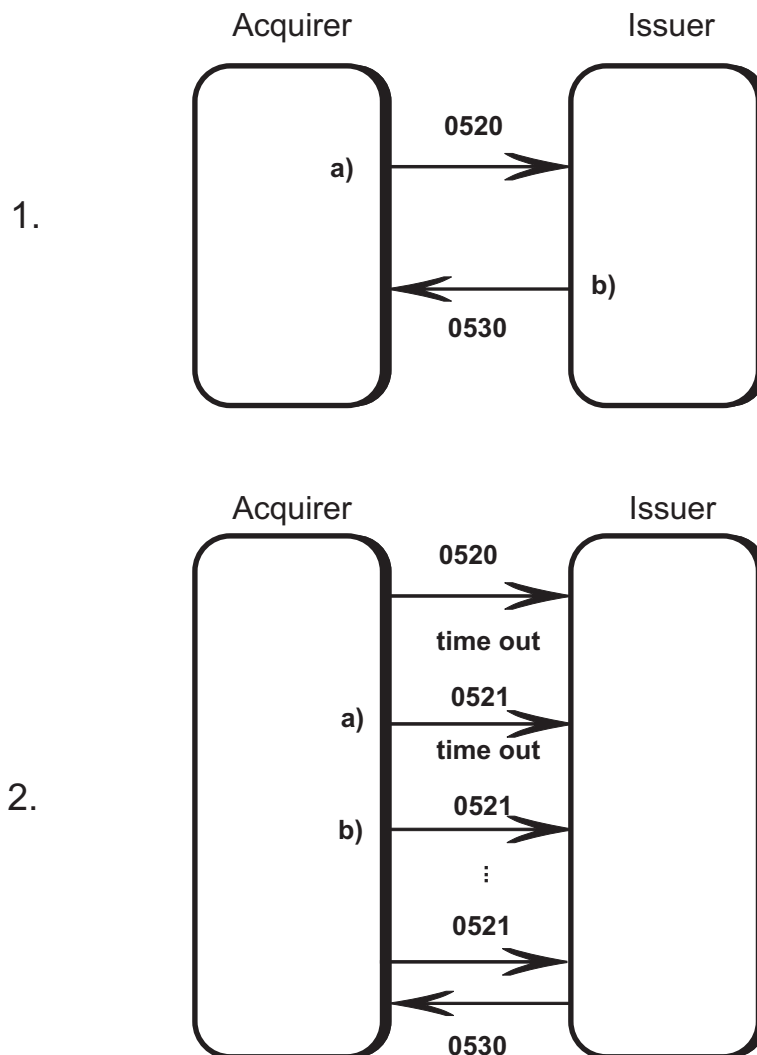
There are two categories of reconciliation messages.

- Acquirer Reconciliation Advice Messages
- Card Issuer Reconciliation Advice Messages

Acquirer Reconciliation Messages

The Acquirer Reconciliation message flows follow.

Acquirer Reconciliation Advice Messages

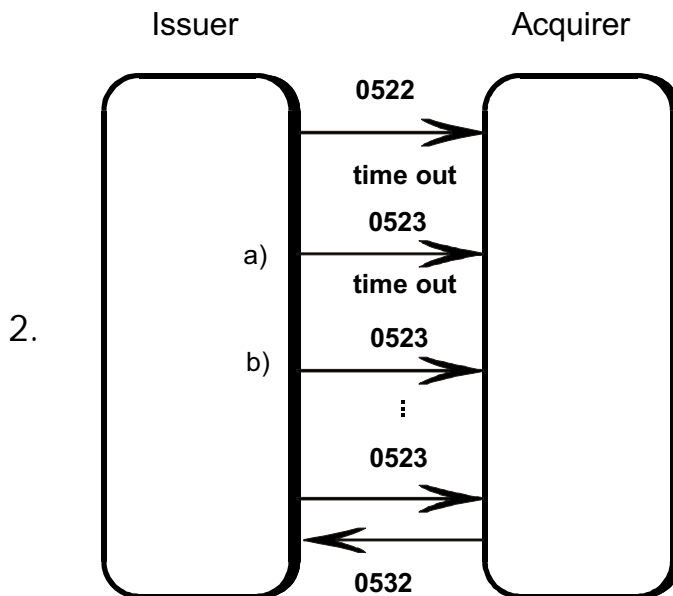
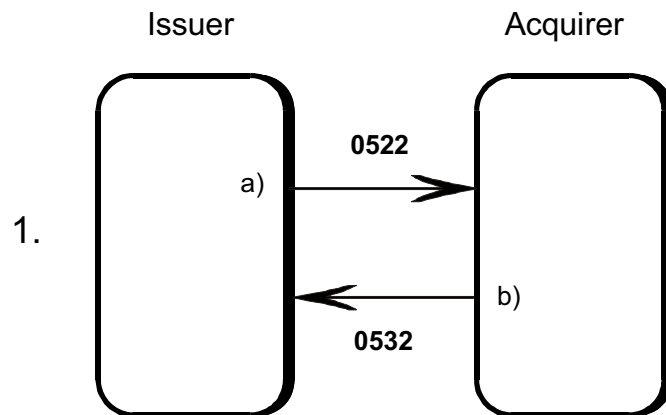


1. Acquirer reconciliation advice
 - a. An acquirer originates the 0520 advice message.
 - b. A 0530 advice response message must acknowledge the 0520 advice message.
2. Acquirer totals message flow with time-out
 - a. If the issuer does not send a 0530 response message within a specified time period, the acquirer sends a 0521 repeat message.
 - b. The acquirer continues to send a 0521 repeat message until the issuer sends a 0530 advice response message.

Issuer Reconciliation Messages

The Issuer Reconciliation Advice message flows follow.

Issuer Reconciliation Advice Messages



1. Issuer reconciliation advice

- a. The issuer originates a 0522 advice message.
- b. A 0532 advice response message must acknowledge the 0522 advice message.

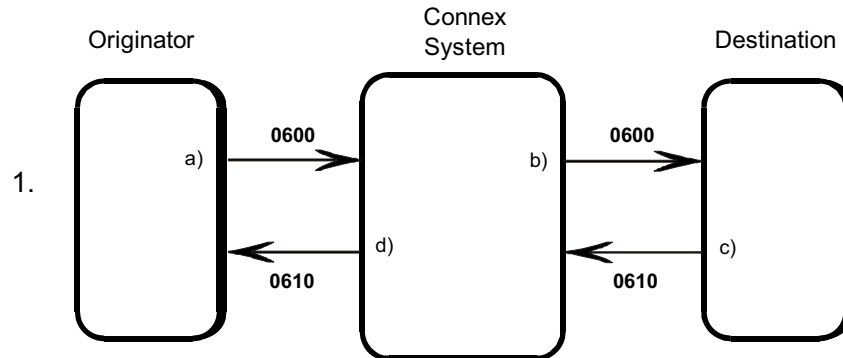
2. Issuer totals message flow with time-out
 - a. If the acquirer does not send a 0532 response message within a specified time period, the issuer sends a 0523 repeat message.
 - b. The issuer continues to send a 0523 repeat message until the acquirer sends a 0532 advice response message.

Administrative Messages

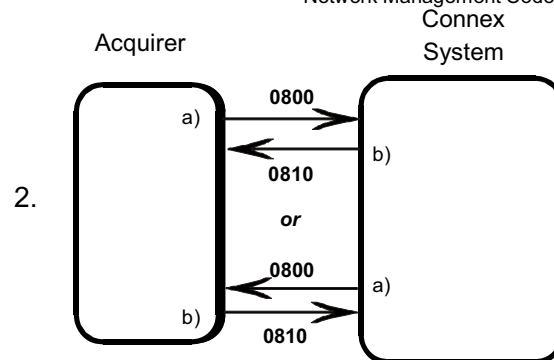
The flow of each administrative message is described on the following pages.

- Administrative Request Message
- Special Instructions Message
- Administrative advice (Reject) Message
- Administrative Risk Message

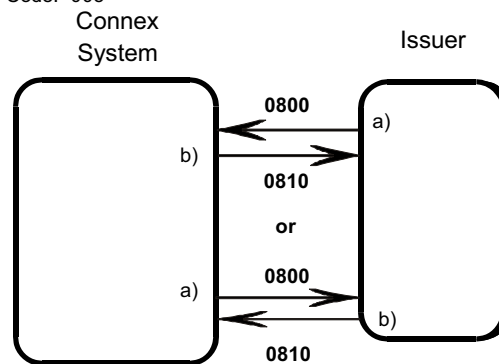
Administrative Messages



Network Management Code: 800



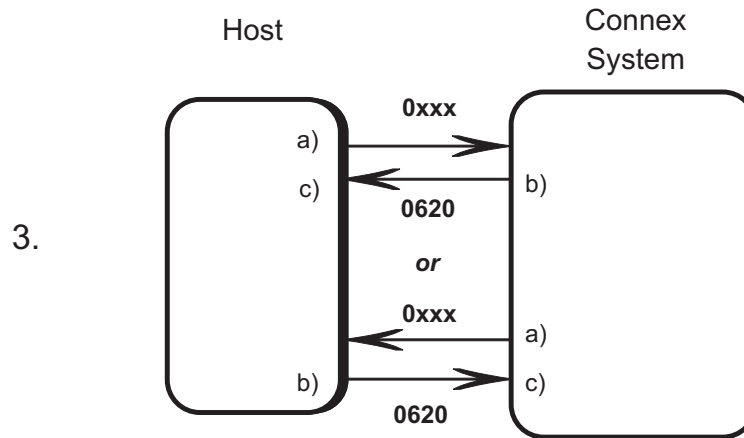
Network Management Code: 005



Network Management Code: 005

1. Administrative request
 - Network Management Information Code (bit 070) = 800
 - a. An endpoint sends a 0600 request (electronic mail) message to another endpoint within the network.
 - b. The Connex™ System routes the 0600 message to the designated endpoint.
 - c. The recipient of the 0600 message sends a 0610 response message.
 - d. The Connex System routes the 0610 response message to the appropriate endpoint.
2. Special Instructions Message
 - Network Management Information Code (bit 070) = 005
 - a. An endpoint linked directly to the Connex System can either originate or receive a 0800 special instructions message.
 - b. A 0810 response message must acknowledge the 0800 special instructions message.

Administrative Messages



Network Management Code: 900

3. Administrative advice (reject)
 - Network Management Information Code (bit 070) = 900
 - a. Any endpoint in the network can format and deliver a message that the recipient cannot recognize and process.
 - b. Upon receipt of an unrecognized message, the recipient formats a 0620 advice (reject) message.

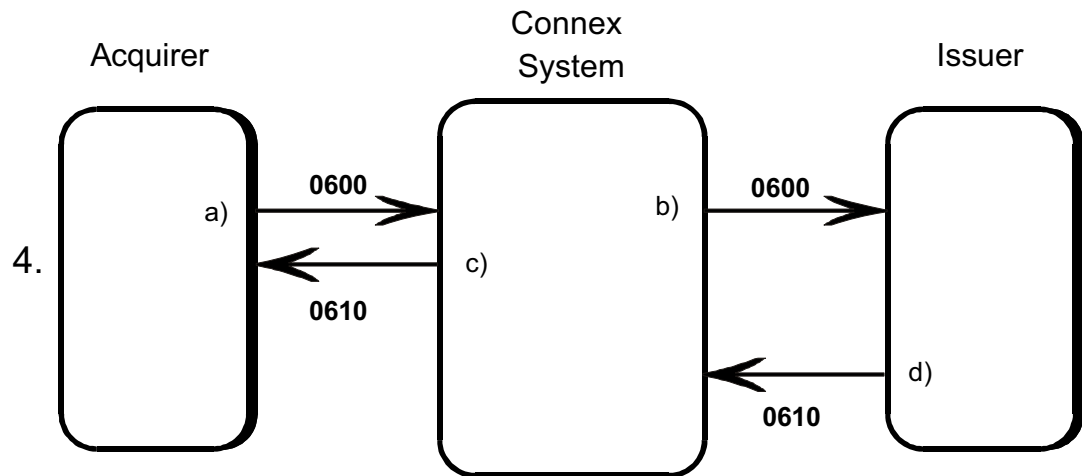
NOTE:

The endpoint should make every effort to decipher the message and respond with the associated ISO 8583 response message when possible. Refer to DE39 Response Code description for further details.

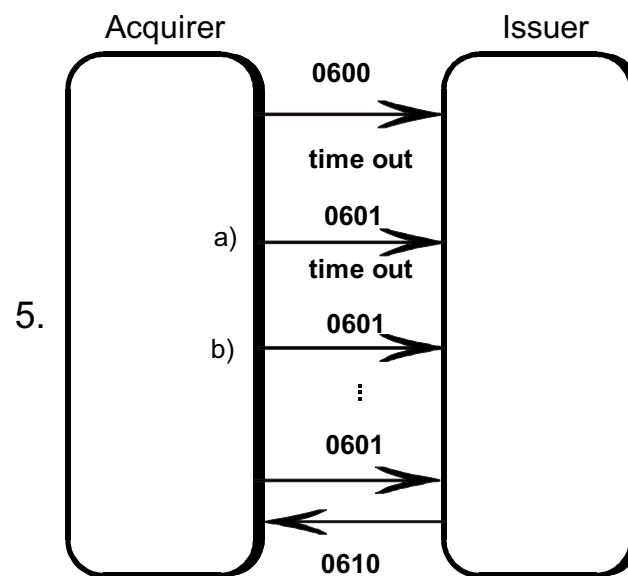
The following situations can produce an unrecognized message:

- An error is encountered while parsing the message.
- A message is missing a mandatory data element.
- A message has a MAC verification error.
- c. The endpoint that receives a 0620 advice (reject) message should examine the Info, Text data element (bit 124) to determine which message was rejected. If the rejected message is an advice message (0120, 0220, 0420), the 0620 advice message should stop the advice in error from being resent.

Administrative Messages



Network Management Code: 601



4. Administrative risk message

Network Management Information Code (bit 070) = 601

- a. An originating endpoint sends a 0600 administrative risk message to another endpoint within the network.
 - b. The Connex™ System routes the 0600 message to the designated endpoint.
 - c. The Connex System routes a 0610 response message to the originating endpoint.
 - d. The recipient of the 0600 message sends a 0610 response message to the Connex System.
5. Administrative risk message flow with time-out
- a. If the issuer does not send a 0610 response message within a specified time period, the acquirer sends a 0601 repeat message.
 - b. The acquirer continues to send a 0601 repeat message until the issuer sends a 0610 response message.

Network Management Messages

NOTE:

The Connex System is represented as acquirer or issuer in this section.

Flows for these types of network management messages are included in this section.

- Signon Messages
- Signoff Messages
- Key Change Messages
- Key Change Request Messages
- Cutoff Messages
- Echo Test (Handshake) Messages

Network Management Information Codes

Each network management message contains a related Network Management Information Code data element (bit 070), which is used to describe a specific purpose or function of each network management message. Refer to [“Network Management Information Codes \(bit 070\)” on page 636](#) for more information.

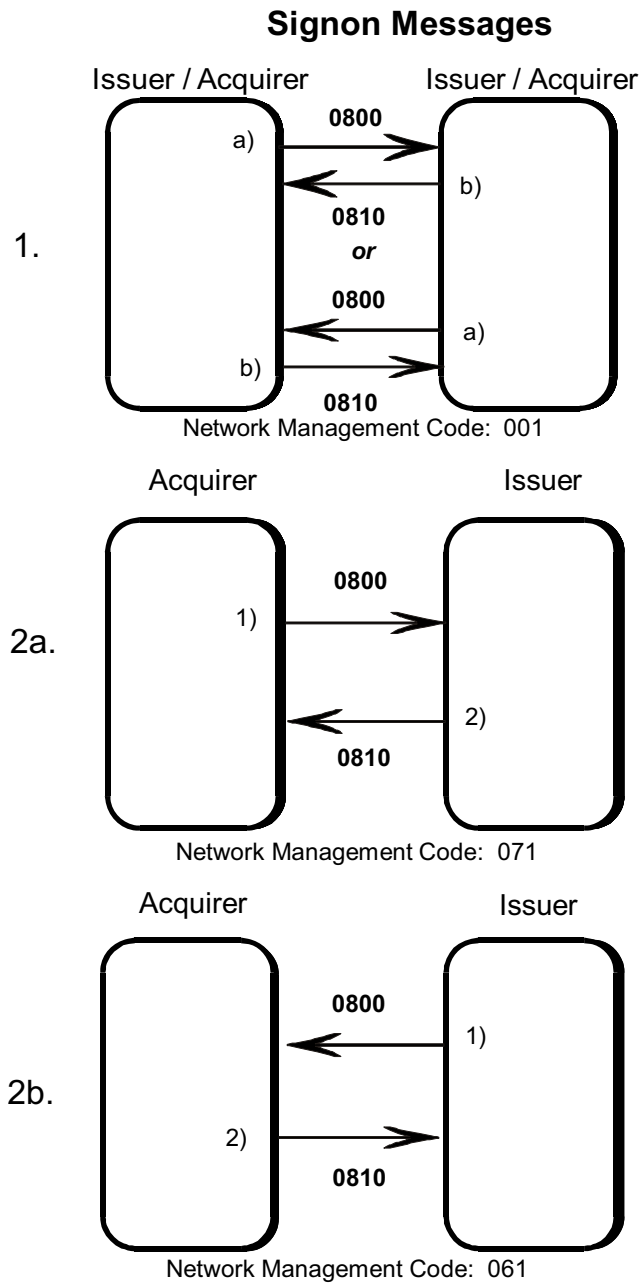
Network Management Message Options

The flow of each network management message is shown for two message flow options:

- A single network management message for issuer/acquirer
- Separate network management messages for acquirer and issuer

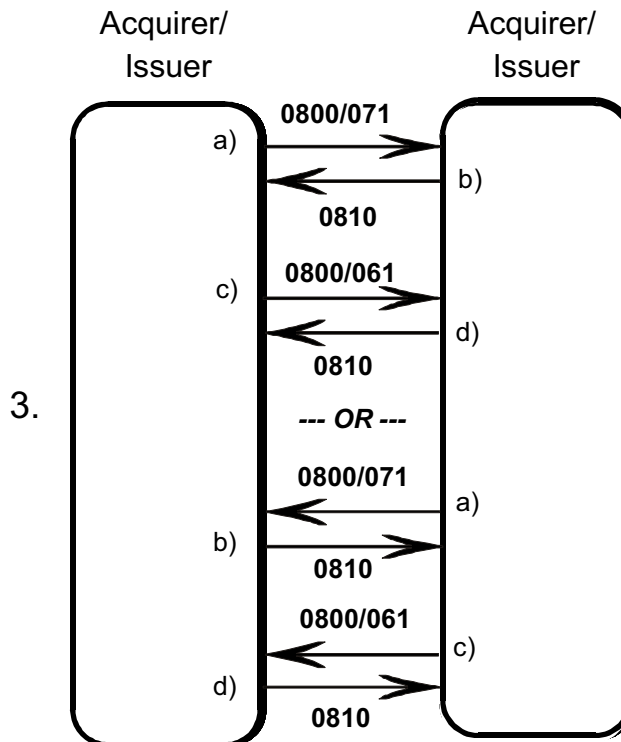
Signon Messages

The Signon message flows follow.



1. One signon message for issuer/acquirer
 - Network Management Information Code (bit 070) = 001
 - a. Any endpoint linked directly to the Connex™ System can either originate or receive the 0800 signon message for both issuer and acquirer.
 - b. A 0810 request response message must acknowledge the 0800 request message.
Both processors are now signed on, and financial transactions can flow from both processors.
2. Separate signon messages for acquirer and issuer
 - a. Sign on as acquirer
 - Network Management Information Code (bit 070) = 071
3. The acquirer originates the 0800 signon as acquirer message.
4. A 0810 response message must acknowledge the 0800 request message.
The acquirer is now signed on to the issuer. The acquirer can originate transactions and the issuer can respond to them.
 - a. Sign on as issuer
 - Network Management Information Code (bit 070) = 061
5. The issuer originates the 0800 signon as issuer message.
6. A 0810 request response message must acknowledge the 0800 request message.
The issuer is now signed on to the acquirer. The acquirer can originate transactions and the issuer can respond to them.

Signon Messages



7. Sign on as both issuer and acquirer when using separate signon messages for acquirer and issuer
- The value of the Network Management Information Code (bit 070) for each signon request is provided on the message flow diagram following the message type. These requests are represented as:

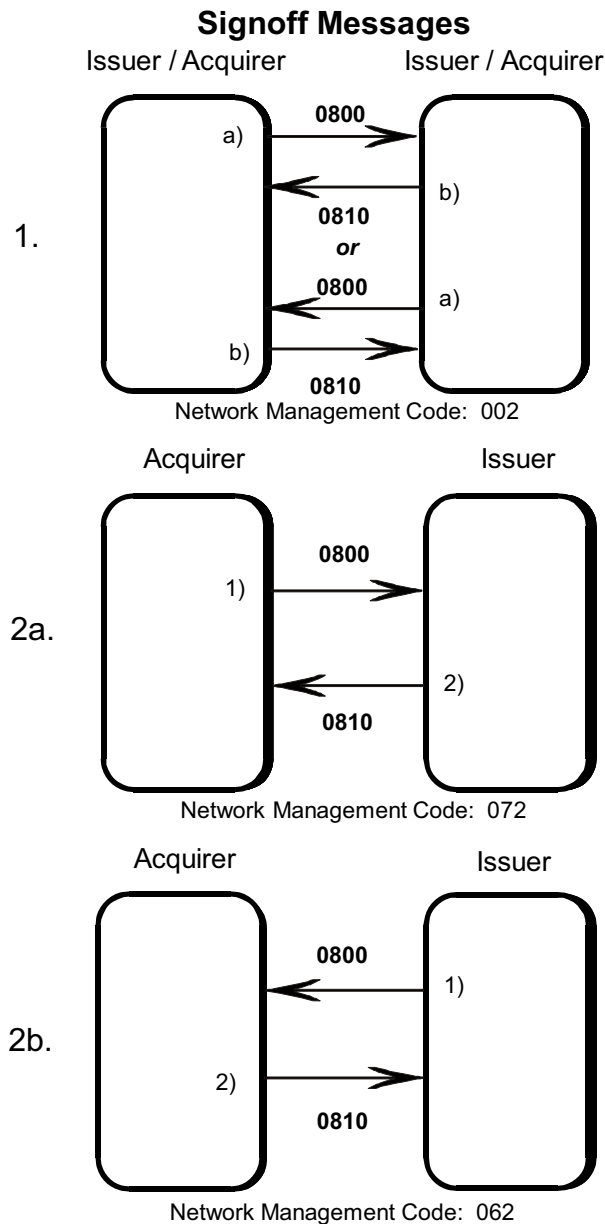
- Sign on as acquirer = 0800/071
- Sign on as issuer = 0800/061

- a. An issuer/acquirer sends a 0800 signon as acquirer request message.
- b. The recipient acknowledges the 0800 request message with a 0810 request response message.
- c. An issuer/acquirer sends a 0800 signon as issuer request message.
- d. The recipient acknowledges the 0800 request message with a 0810 request response message.

Each processor is now signed on as both acquirer and issuer, and financial transactions can flow from either processor.

Signoff Messages

The Signoff message flows follow.



1. One signoff message for issuer/acquirer
 - Network Management Information Code (bit 070) = 002
 - a. Any endpoint linked directly to the Connex™ System can either originate or receive the 0800 signoff message for both issuer and acquirer.
 - b. A 0810 request response message must acknowledge the 0800 request message.

Both processors are now signed off.

2. Separate signoff messages for acquirer and issuer

a. Sign off as acquirer

- Network Management Information Code (bit 070) = 072

- The acquirer originates the 0800 signoff as acquirer message.
- A 0810 response message must acknowledge the 0800 request message.

The acquirer is signed off from the issuer.

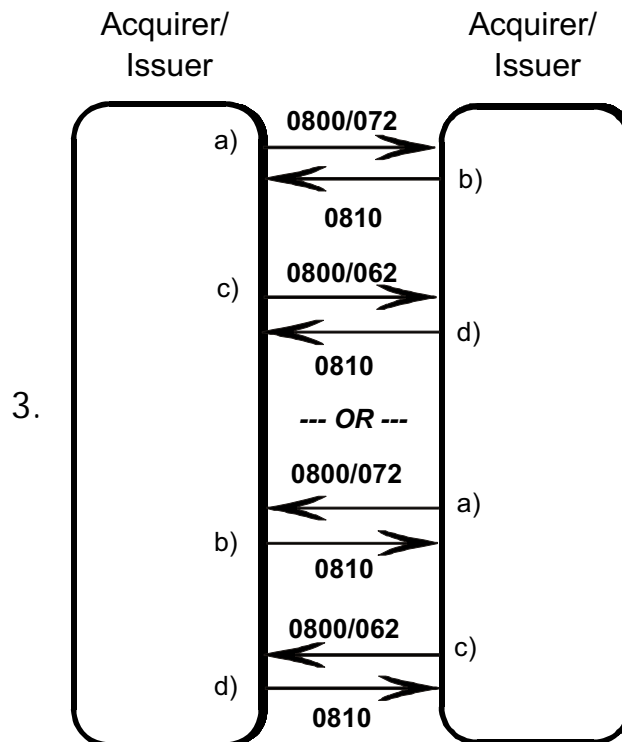
b. Sign off as issuer

- Network Management Information Code (bit 070) = 062

- An issuer originates the 0800 signoff as issuer request message.
- A 0810 response message must acknowledge the 0800 request message.

The issuer is signed off from the acquirer.

Signoff Messages



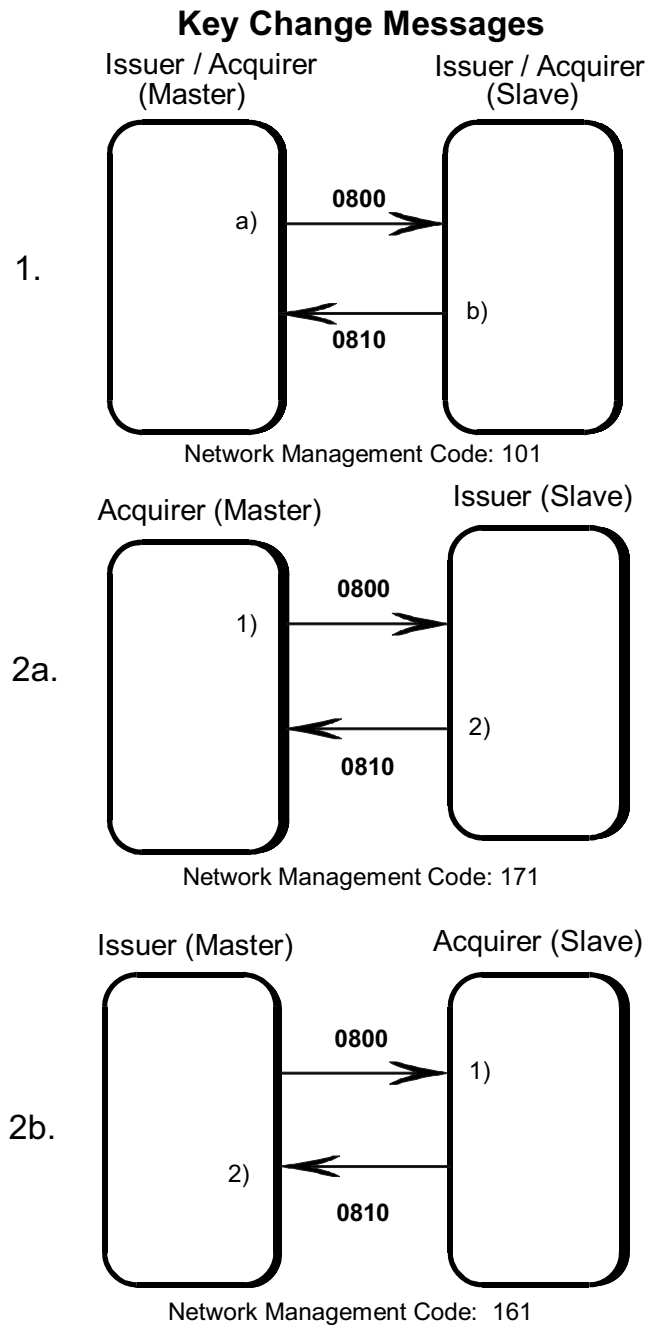
3. Sign off as both issuer and acquirer when using separate signoff messages for acquirer and issuer

The value of the Network Management Information Code (bit 070) for each signoff request is provided on the message flow diagram following the message type. These requests are represented as:

- Signoff as acquirer = 0800/072
 - Signoff as issuer = 0800/071
- a. An issuer/acquirer sends a 0800 signoff as acquirer message.
 - b. The recipient acknowledges the 0800 request message with a 0810 request response message.
 - c. An issuer/acquirer sends a 0800 signoff as issuer message.
 - d. The recipient acknowledges the 0800 request message with a 0810 request response message.
- Each processor is now signed off.

Key Change Messages

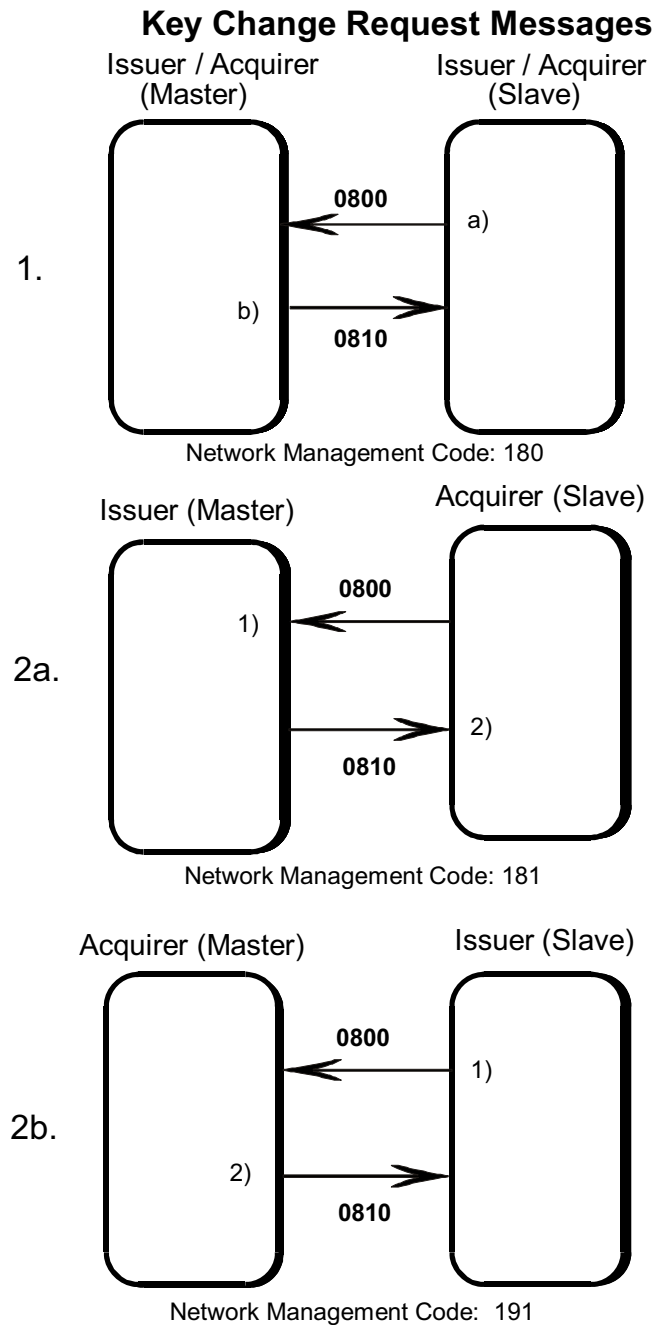
The Key Change message flow follows.



1. One key change message for issuer/acquirer
 - Network Management Information Code (bit 070) = 101
 - a. The primary endpoint, which controls the keys, originates the 0800 key change message for both issuer and acquirer.
 - b. A 0810 request response message must acknowledge the 0800 request message.
2. Separate key change messages for acquirer and issuer
 - a. Acquirer key change
 - Network Management Information Code (bit 070) = 171
 - i. The primary endpoint, which controls the keys, originates the 0800 acquirer key change message.
 - ii. A 0810 response message must acknowledge the 0800 request message.
 - b. Issuer key change
 - Network Management Information Code (bit 070) = 161
 - i. The primary endpoint, which controls the keys, originates the 0800 issuer key change message.
 - ii. A 0810 response message must acknowledge the 0800 request message.

Key Change Request Messages

The Key Change Request message flow follows.



1. One key change request message for issuer/acquirer
 - Network Management Information Code (bit 070) = 180
 - a. The secondary endpoint, which does not control the keys, must originate the 0800 key change request message for both issuer and acquirer.
 - b. A 0810 request response message must acknowledge the 0800 request message.
2. Separate key change request messages for acquirer and issuer
 - a. Acquirer key change request
 - Network Management Information Code (bit 070) = 181
 - i. The secondary endpoint, which does not control the keys, must originate the 0800 acquirer key change request message.
 - ii. A 0810 response message must acknowledge the 0800 request message.
 - b. Issuer key change request
 - Network Management Information Code (bit 070) = 191
 - i. The secondary endpoint, which does not control the keys, must originate the 0800 issuer key change request message.
 - ii. A 0810 response message must acknowledge the 0800 request message.

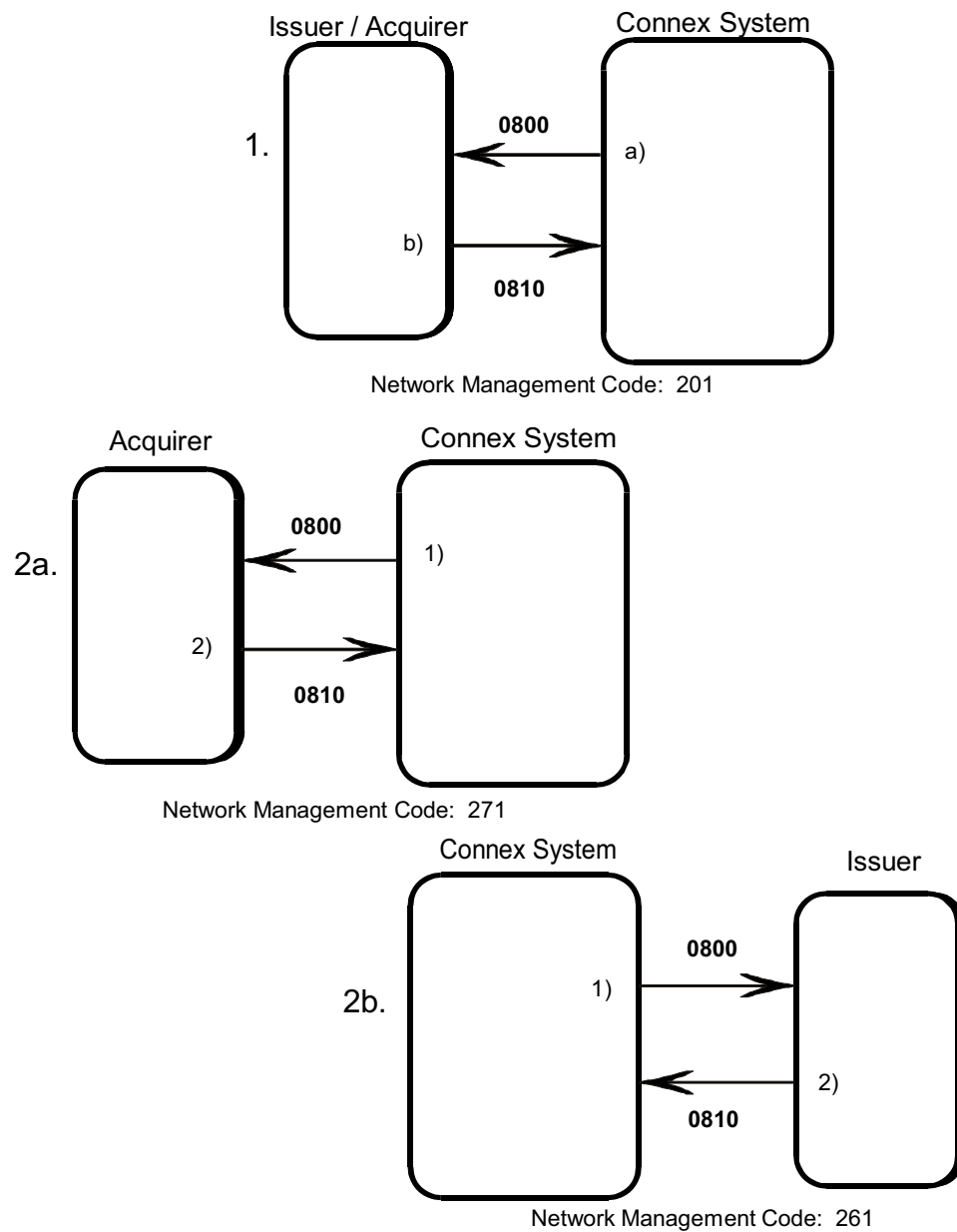
NOTE:

The Key Change Request message should be followed by a Key Change message. See [“Key Change Messages” on page 95](#) for message flow information.

Cutoff Initiation Messages

The Cutoff Initiation message flow follows.

Cutoff Initiation Messages

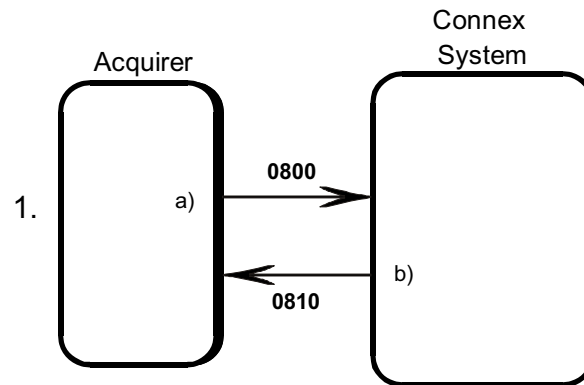


1. One cutoff initiation message for issuer/acquirer
 - Network Management Information Code (bit 070) = 201
 - a. The Connex™ System originates the 0800 cutoff initiation message for both issuer and acquirer.
 - b. A 0810 request response message must acknowledge the 0800 request message.
2. Separate cutoff initiation messages for acquirer and issuer
 - a. Initiate cutoff as acquirer
 - Network Management Information Code (bit 070) = 271
 - i. The Connex System originates the cutoff initiation as acquirer message.
 - ii. A 0810 response message must acknowledge the 0800 request message.
 - b. Initiate cutoff as issuer
 - Network Management Information Code (bit 070) = 261
 - i. The Connex System originates the 0800 cutoff initiation as issuer message.
 - ii. A 0810 response message must acknowledge the 0800 request message.

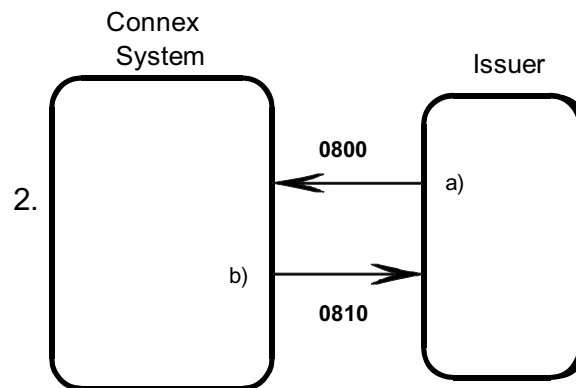
Terminal and Cardholder Application Cutoff Messages

The Terminal and Cardholder Application Cutoff message flow follows.

Terminal Cutoff/Cardholder Application Cutoff



Network Management Code: 281

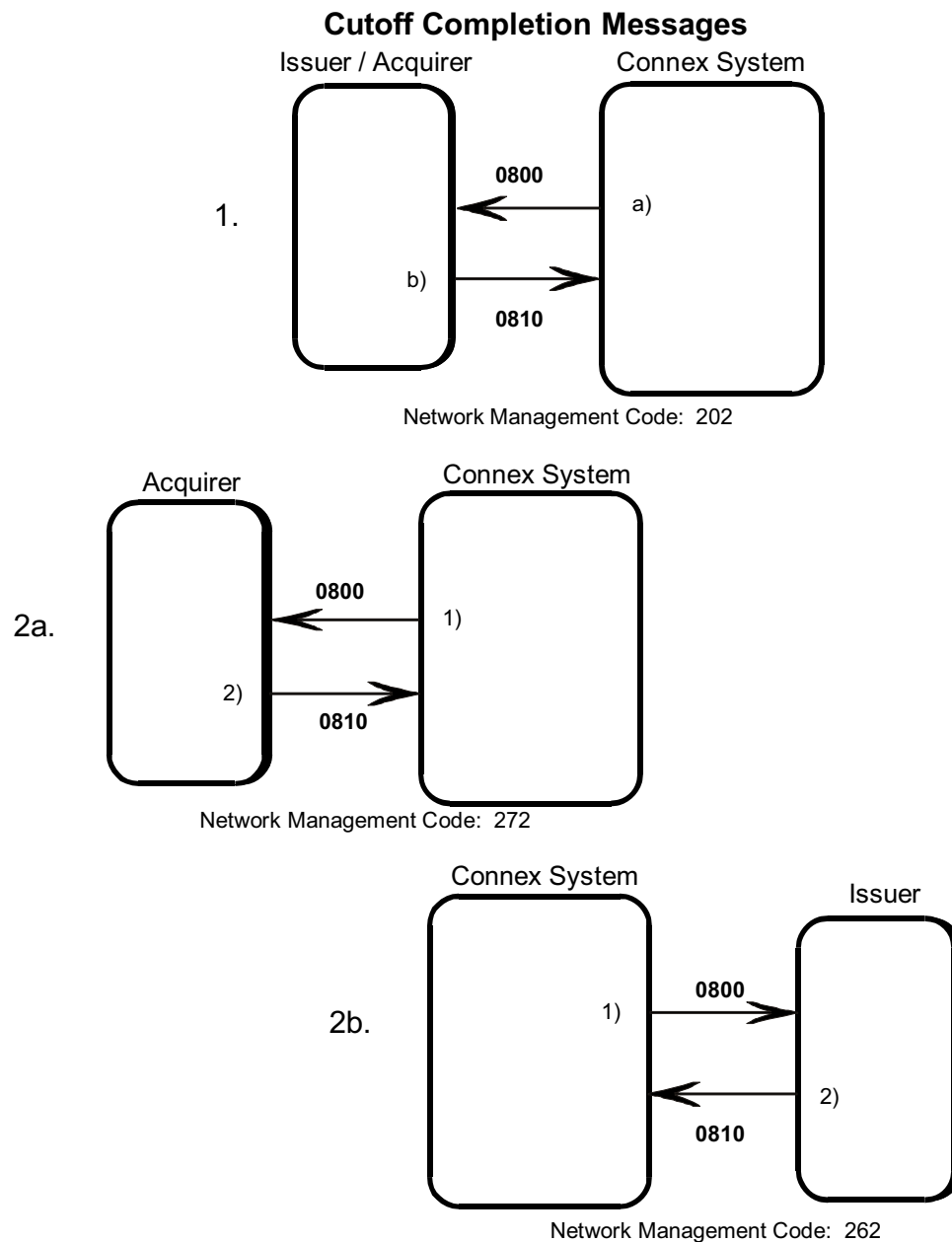


Network Management Code: 282

1. Terminal Cutoff
 - Network Management Information Code (bit 070) = 281
 - a. The acquirer determines that one or all of its terminals was balanced or settled for the day, so it sends a 0800 request message to the Connex™ System.
 - b. The Connex System sends a 0810 response message to the acquirer.
2. Cardholder Application Cutoff
 - Network Management Information Code (bit 070) = 282
 - a. The issuer determines that one or all of its subsidiary accounting systems closed processing for the current business day, so it sends a 0800 request message to the Connex System.
 - b. Connex System sends a 0810 response message to the issuer.

Cutoff Completion Messages

The Cutoff Completion message flow follows.

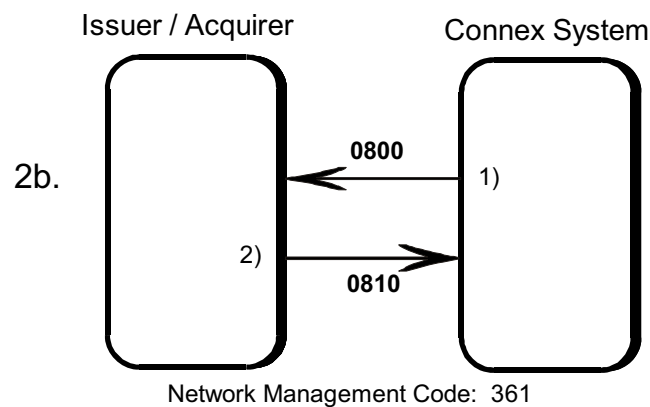
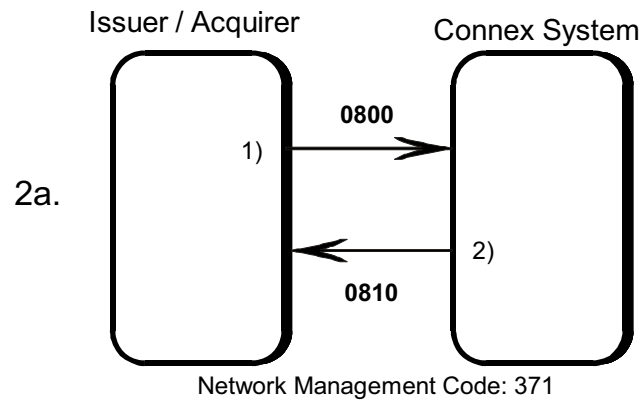
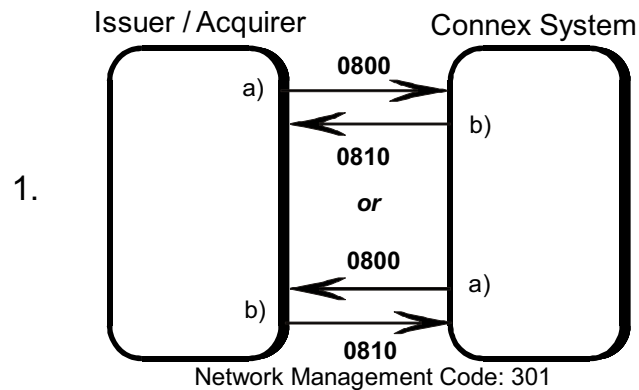


1. One cutoff completion message for issuer/acquirer
 - Network Management Information Code (bit 070) = 202
 - a. The Connex™ System originates the 0800 cutoff completion message for both issuer and acquirer.
 - b. A 0810 request response message must acknowledge the 0800 request message.
2. Separate cutoff completion messages for acquirer and issuer
 - a. Cutoff complete as acquirer
 - Network Management Information Code (bit 070) = 272
 - i. The Connex System originates the 0800 cutoff completion as acquirer request message.
 - ii. A 0810 response message must acknowledge the 0800 request message.
 - b. Cutoff complete as issuer
 - Network Management Information Code (bit 070) = 262
 - i. The Connex System originates the 0800 cutoff completion as issuer request message.
 - ii. A 0810 response message must acknowledge the 0800 request message.

Echo Test (Reply Required Handshake) Messages

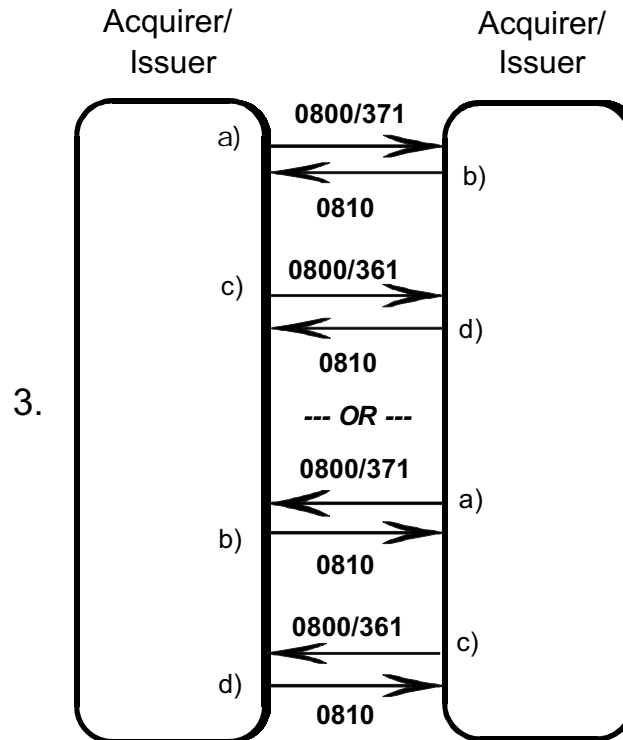
The Reply Required Handshake message flow follows.

Reply Required Handshake Messages



1. One handshake message for issuer/acquirer
 - Network Management Information Code (bit 070) = 301
 - a. Any endpoint linked directly to the Connex™ System can either originate or receive the 0800 reply required handshake message.
 - b. A 0810 response message must acknowledge the 0800 request message.
2. Separate handshake message for acquirer and issuer
 - a. Reply required acquirer handshake
 - Network Management Information Code (bit 070) = 371
 - i. The acquirer originates the 0800 reply required acquirer handshake message.
 - ii. A 0810 response message must acknowledge the 0800 request message.
 - b. Reply required issuer handshake
 - Network Management Information Code (bit 070) = 361
 - i. The issuer originates the 0800 reply required issuer handshake message.
 - ii. A 0810 response message must acknowledge the 0800 request message.

Reply Required Handshake Messages



3. Reply required handshake as both issuer and acquirer when using separate handshake messages for acquirer and issuer

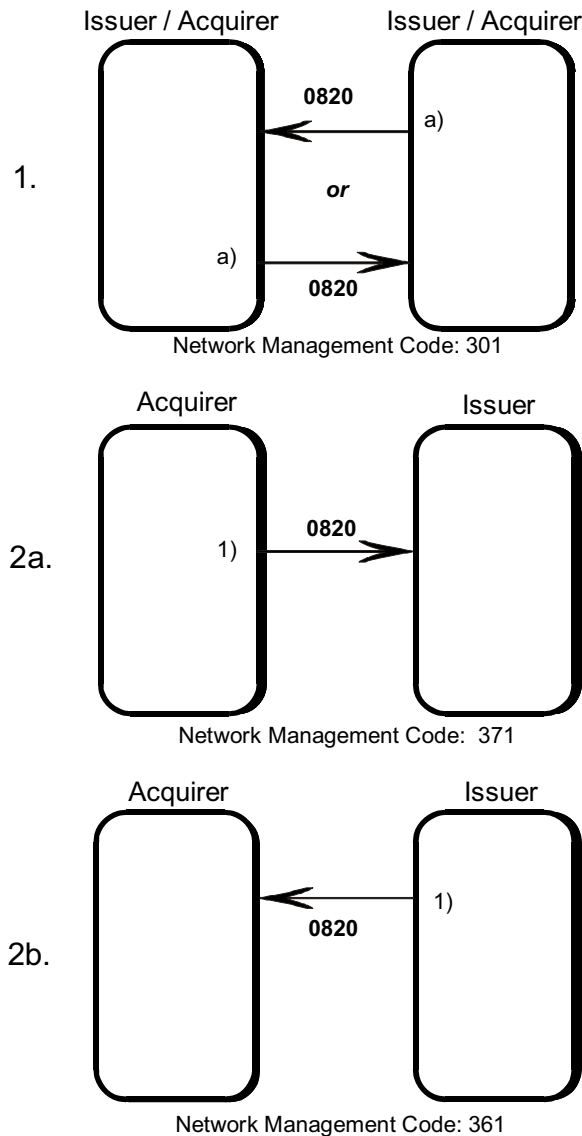
The value of the Network Management Information Code (bit 070) for each reply required handshake message is provided on the message flow diagram following the message type. These requests are represented as:

- Reply required acquirer handshake = 0800/371
 - Reply required issuer handshake = 0800/361
- a. An issuer/acquirer sends a 0800 reply required acquirer handshake message.
 - b. The recipient acknowledges the 0800 request message with a 0810 request response message.
 - c. An issuer/acquirer sends a 0800 reply required issuer handshake message.
 - d. The recipient acknowledges the 0800 request message with a 0810 request response message.

Echo Test (Protocol Acknowledgment Handshake)

The Protocol Acknowledgment Handshake message flow follows.

Protocol Acknowledgement Handshake Messages



1. One handshake message for issuer/acquirer
 - Network Management Information Code (bit 070) = 301
 - a. Any endpoint linked directly to the Connex™ System can either originate or receive the 0820 protocol acknowledgment handshake message.
No response message is required.

2. Separate handshake messages for acquirer and issuer
 - a. Acquirer protocol acknowledgment handshake
 - Network Management Information Code (bit 070) = 371
 - i. The acquirer originates the 0820 acquirer protocol acknowledgment message.
No response is required.
 - b. Issuer protocol acknowledgment handshake
 - Network Management Information Code (bit 070) = 361
 - i. The 0820 protocol acknowledgment handshake message originates from an issuer.
No response is required.

4

Message Structure

Message Components

Each message in the FIS ISO 8583 PI consists of three basic items:

- Message type identifier
- One or more bit maps
- A series of data elements in the order of the bit map representation

Message Type Identifier

Each message begins with a four position numeric message type indicator. The first two positions identify the message class:

01xx	Authorization Messages
02xx	Financial Transaction Messages
03xx	File Update Messages
04xx	Reversal/Chargeback Messages
05xx	Reconciliation/Totals Messages
06xx	Administrative Messages
08xx	Network Management Messages
9x10	Open Account Relationship Response Messages

Primary Bit Map

The primary bit map is the control record that describes which data elements are being sent.

Data Elements

The remainder of the message consists of a series of data elements in the order of the bit map representation. These data elements are described in detail in “Section 5. Data Element Definitions.”

FIS Edit Method

Edits are performed on the first transaction entering the processor. Whenever possible, if the same element enters the processor again, the saved element is used.

For example, all edits are completed on a 0200 Financial Transaction Request message, but only new data elements are edited on the 0210 Financial Transaction Response message.

Additional Data Element Support

The data elements defined by FIS as conditional or optional may be required to interchange with endpoints using other message structures. Refer to the requirements specifications document for the specific link to determine additional data element requirements.

Message Repeats

Whenever a repeat message is identified, the repeat message is the same as the original message except for the message type identifier, which increases by one. For example, a repeat message for a 0100 Authorization Request has a message type identifier of 0101.

Authorization Messages

Authorization messages are passed between the acquirer and the issuer to obtain the approval necessary to complete a financial transaction.

Message Code	Description
0100	Authorization Request Check Verification/Guarantee Request
0101	0100 Repeat—Authorization Request
0110	Authorization Request Response Check Verification/Guarantee Response
0120	Authorization Advice
0121	Repeat 0120—Authorization Advice
0130	Authorization Advice Response
9110	Open Account Relationship Authorization Response

Financial Transaction Messages

The Financial Transaction messages handle ATM and POS transactions generated by cardholders using their access cards at terminals driven by an acquirer or at terminals connected to the Connex™ System.

Message Code	Description
0200	Financial Transaction Request
0201	Repeat 0200-Financial Transaction Request
0210	Financial Transaction Response
0220	Financial Transaction Advice
0221	Repeat 0220-Financial Transaction Advice
0230	Financial Transaction Advice Response
9210	Open Account Relationship Financial Transaction Response

Shared Branch Transaction Messages

See the *Shared Branch Support* manual for information on shared branch transaction messages.

Negative File Maintenance Messages

The Negative File Maintenance messages are used by issuers who choose Stand-In (Delay) processing when communication is lost between the issuer and the Connex System. The Negative File Maintenance messages allow the issuer to maintain the Negative File while on-line to the Connex System.

Message Code	Description
0300	Acquirer File Update Request (PI Negative)
0302	Card Issuer File Update Request
0310	Acquirer File Update Response (PI Negative)
0312	Card Issuer File Update Response

An issuer's Negative File can be completely replaced during a scheduled system outage. Before production and during certification testing, the issuer forwards a tape of Negative File messages to the network office.

Authorization Processor (AP) Maintenance Messages

Authorization Processor (AP) Maintenance messages perform AP cardholder and account maintenance on-line. These messages should only be used if a positive cardholder file resides in the Connex™ System. In order to use these messages, AP must be configured into your system.

Message Code	Description
0382	Card Issuer File Update Request (AP files)
0392	Card Issuer File Update Response (AP files)

Reversal Messages

These messages inform the sender of the original message that the message cannot be processed as instructed. Following are some reasons why a Reversal message is sent:

- The message cannot be delivered.
- The message cannot be processed.
- The message has been canceled by the receiver.

Message Code	Description
0420	Acquirer Reversal Advice
0421	Repeat 0420-Acquirer Reversal Advice
0430	Acquirer Reversal Advice Response

Reconciliation/Totals Messages

These messages are used by the processor to communicate settlement-related information to the acquirer or issuer. All statistics are totals since the last settlement cutoff.

Message Code	Description
0520	Acquirer Reconciliation Advice
0521	Repeat 0520—Acquirer Reconciliation Advice
0522	Card Issuer Reconciliation Advice
0523	Repeat 0522—Card Issuer Reconciliation Advice
0530	Acquirer Reconciliation Advice Response
0532	Card Issuer Reconciliation Advice Response

Administrative Messages

Administrative messages pass system-related information between the system and the issuer.

Message Code	Description
0600	Administrative Risk Electronic Mail Request Administrative Request
0601	Repeat 0600—Administrative Request
0610	Administrative Risk Response Electronic Mail Response Administrative Request Response
0620	Administrative Advice

Network Management Messages

Network Management messages are used to coordinate system or network events or tasks, and to communicate network status conditions. Within each network management request and response message is a related Network Management Information Code data element that is used to describe a specific purpose or function of each message. Refer to [“Network Management Information Codes \(bit 070\)” on page 636](#) for detailed information on the codes that are used within this message series.

Message Code	Description
0800	Network Management Request
0810	Network Management Response
0820	Network Management Request (protocol acknowledgment)

Message Arrangement

Each FIS ISO message is arranged as follows:

- Message description
- Message structure

Message Description

The message description provides the purpose of the message along with suggestions for processing. Each definition includes a reference to the originator of the message and the expected response.

Message Structure

The message structure is provided in chart form. The following information is included in the chart for each message:

- Bit Number
- Data Element Name
- Format
- Attributes
- Status
- Notes

Bit Number and Data Element Name

In addition to providing information regarding which data elements are being sent in a message, the Bit Number is a key to finding a complete description of a data element in “Section 5. Data Element Definitions.”

Format

This column indicates the format of the data element, where applicable. See [“Format” on page 272](#) for an explanation of the abbreviations used in this column.

Attributes

NOTE:

The attributes listed in this column reflect the implementation of the ISO standard by FIS.

See [“Legend for Attributes Abbreviations” on page 274](#) for a description of the abbreviations used in this column.

Fixed Length Data Elements

All fixed length **n** data elements are assumed to be right justified with leading zeros. All other fixed length data elements are left-justified with trailing blanks.

All fixed length **b** data elements are assumed to be left-justified with trailing zeros.

Variable Length Data Elements

Throughout this section, the length of the variable length sub element is shown as if the numeric packing option is not set. If the numeric packing option is set, the length sub element is one byte long, except for fields that support expanded length (length of that data element is greater than 255), and are setup for that support, in which case the length sub element is two bytes long.

NOTE:

The maximum data element length of the 1-byte binary is 255.

The length of a variable data element may exceed the maximum message size defined by FIS. When this occurs, only the message size defined by FIS will pass through the processor.

Variable length data elements may be sent or received with a value of zeroes in the length field.

Status Information

The data element status provides additional information regarding the completion of the data element. The message structure chart contains an abbreviation of the status for each data element.

Following are the different data element statuses and a description of each.

Status	Description
M (Mandatory)	The data element is mandatory.
C (Conditional)	The data element is required when specific conditions are satisfied. The applicable conditions are identified in the Notes column of the message structure chart.
O (Optional)	The data element is optional and may be provided at the option of the originator of the message. If the data element is present in the message, it may be forwarded.
F (Future)	Currently unsupported.

Notes

Any special notes or format information is provided in this column. Do not rely solely on this information; refer to [“Data Element Definitions” on page 272](#) for additional detail and data element edits.

0100/0101 Authorization Request

Description

Either the Connex™ System generates the 0100 Authorization Request message in response to an incoming message from a direct-attached device, or an acquirer generates it in response to a foreign item received at one of its devices. The Connex System can use the same structure when interfacing to an acquirer and issuer. In either situation, the Connex System routes the 0100 Authorization Request to the appropriate issuer for approval or denial of the transaction to proceed.

Generated by

Connex System or acquirer

Expected Response

0110 Authorization Request Response from the issuer

Message Structure

Following is the structure of the 0100/0101 Authorization Request message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0100 initially; 0101 if repeated by acquirer.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	C	Required if data elements specified in the Secondary Bit Map (065 to 128) are used.
002	Primary Account Number	LLVAR	nP..19	C	Required if PAN manually entered. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
003	Processing Code		nP 6	M	Valid codes are listed in "Data Element Code Tables" on page 578.
004	Amount, Transaction		nP 12	M	
005	Amount, Settlement		nP 12	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
006	Amount, Cardholder Billing		nP 12	C	Required if cardholder and settlement currencies are different.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
008	Amount, Cardholder Billing Fee		nP 8	O	Can be sent if using cooperative authorization, and AP is performing service fees. This data element is required only if it is requested by the issuer.
009	Conversion Rate, Settlement		nP 8	C	Required if cardholder and transaction currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
010	Conversion Rate, Cardholder Billing		nP 8	C	Required if cardholder and settlement currencies are different.
011	System Trace Audit Number		nP 6	M	
012	Time, Local Transaction	hhmmss	nP 6	M	
013	Date, Local Transaction	MMDD	nP 4	M	
014	Date, Expiration	YYMM	nP 4	C	
015	Date, Settlement	MMDD	nP 4	M	
016	Date, Conversion	MMDD	nP 4	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
017	Date, Capture	MMDD	nP 4	O	This data element is required only if it is requested by the issuer.
018	Merchant Type		nP 4	C	Required for transactions from a point-of-sale device.
019	Acquiring Institution Country Code		nP 3	C	Sent if Acquiring Institution's Country Code is not the same as the Issuing Institution's Country Code.
020	PAN Extended Country Code		nP 3	C	Required if PAN Extended (bit 034) is sent.
021	Forwarding Institution Country Code		nP 3	C	Required if different from Acquiring Institution Country Code (bit 019).
022	Point-of-Service Entry Mode		nP 3	C	<p>Required for transactions from:</p> <ul style="list-style-type: none"> • A point-of-sale device • An ATM acquirer participating in a CVV program, or • A chip-related ATM transaction <p>Valid codes are listed in "Point-of-Service Entry Mode (bit 022)" on page 612.</p>
023	Card Sequence Number		nP 3	O	May be used to send a card sequence (plastic) number if Track 2 (bit 035) is not sent.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
025	Point-of-Service Condition Code		nP 2	C	Although either this bit or bit 058 is required, FIS prefers that you use bit 058 in place of this bit for all transactions. Valid codes are listed in “Point-of-Service Condition Codes (bit 025)” on page 614.
026	Point-of-Service PIN Capture Code		nP 2	O	Required if PIN data (bit 052) is in the message, and the device cannot accept 12-digit PINs.
027	Authorization Identification Response Length		nP 1	C	Optional for use by acquirers that cannot accept 6-byte long authorization ID responses (bit 038).
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
029	Amount, Settlement Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different and the Amount, Transaction Fee is present.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
030	Amount, Transaction Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. This data element is required only if it is requested by the issuer.
031	Amount, Settlement Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different. This data element is required only if it is requested by the issuer.
032	Acquiring Institution Identification Code	LLVAR	nP..11	M	
033	Forwarding Institution Identification Code	LLVAR	nP..11	C	Required if different from Acquiring Institution Identification Code (bit 032).
034	PAN Extended	LLVAR	nsP..28	C	Required if PAN Extended is manually entered. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
035	Track 2 Data	LLVAR	nsP..37	C	Required if Track 2 was machine read. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
036	Track 3 Data	LLLVAR	nsP..104	C	Required if Track 3 was machine read. One of these data elements is required: 002, 034, 035, 036, 045, or 100.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
037	Retrieval Reference Number		an 12	M	
038	Authorization Identification Response		an 6	C	May be used to supply the issuer with an authorization number for EBT transactions.
040	Service Restriction Code		an 3	O	May be used to send service code if Track 1 (bit 045), Track 2 (bit 035), or Track 3 (bit 036) is not sent and the data element is requested by the issuer. This data element is required only if it is requested by the issuer.
041	Card Acceptor Terminal Identification		an 8	M	
042	Card Acceptor Identification Code		an 15	O	This data element is required only if it is requested by the issuer.
043	Card Acceptor Name and Location		an 40	C	Sent if available.
044	Additional Response Data	LLVAR	an..25	O	May contain statement print information. When the response code (bit 039) is 30, then this bit contains the bit number in error.
045	Track 1 Data	LLVAR	ans..76	C	Required if Track 1 was machine read. One of these data elements is required: 002, 034, 035, 036, 045, or 100.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
047	Additional Data, National	LLLVAR	ans..100	C	Sent if available.
048	Merchant/Bank Name	LLLVAR	ans..025	C	Sent if available.
049	Currency Code, Transaction		nP 3	M	
050	Currency Code, Settlement		nP 3	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
051	Currency Code, Cardholder Billing		nP 3	C	Required if cardholder and settlement currencies are different.
052	PIN Data		b 64	C	Required if a PIN is required during authorization processing.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys, and either PIN Data (bit 052) is present or message authentication (MACing) is being performed.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
054	Additional Amounts	LLLVAR	ans..120	O	Sent if transaction-related amounts or balances are present.
055	ICC Data	LLLVAR	b.. 255	C	Required on EMV transactions.
057	Authorization Life Cycle	LLLVAR	an..003	C	Required for pre-authorizations.
058	National Point-of-Service Condition Code	LLLVAR	an..030	C	<p>Although either this bit or bit 025 is required, FIS prefers that you use this bit for all transactions. Valid codes are listed in “National POS Condition Code (bit 058)” on page 627.</p> <p>Note: The attributes for this data element are n..030 for the alternate format.</p>
059	National Point-of-Service Geographic Data	LLLVAR	an..017	O	May be required to qualify for lower fees from VISA® or MasterCard®. This data element is required only if it is requested by the issuer.
061	Acquirer Transport Data	LLLVAR	ans..100	O	This data is echoed to the acquirer in the response to their request, but it is not forwarded to the issuer. This data element is required only if it is requested by the issuer.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
063	FIS Data	LLLVAR	ans..050		The following subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if multiple pseudo terminals are required.
--	Issuer Network Identification		an 3	C	Required for direct routing.
--	Acquirer Network Identification		an 3	O	Sent if the issuer wants to know which network acquired the transaction.
--	Processor ID		an 6	O	Sent if the issuer wants to know which processor acquired the transaction.
--	Auth Timeout		an 2	O	Sent to the issuer to indicate the time-out of this transaction.
--	Open Account Relationship Data		an 15	O	Sent when supporting Open Account Relationship requests.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Processing Flags		an 5	C	<p>Required when supporting externally settled transactions, also required when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. See the document titled <i>Externally Settled Transactions</i> for more information.</p> <p>Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.</p>
064	Message Authentication Code		b 64	C	<p>This data element is required when MACing messages and no data element from 065-191 is present in the message.</p>
067	Extended Payment Code		nP 2	O	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
090	Original Data Elements		nP 42	C	Outbound from the Connex™ System, the original message type, system trace audit number, and local date and time are sent if available. Remaining subelements are zero-filled. Inbound to the Connex System, this data element is not supported.
098	Payee		ans 25	C	Sent if available and if this transaction is a payment or payment return transaction.
100	Receiving Institution ID Code	LLVAR	nP..11	C	Sent if routing is based on this data element instead of the PAN.
102	Account ID 1	LLVAR	ans..28	C	May be required in outbound messages if the processor looks up account numbers for the issuer.
103	Account ID 2	LLVAR	ans..28	C	May be required in outbound messages if the processor looks up account numbers for the issuer, and the transaction is a transfer.
104	Transaction Description	LLLVAR	ans..100	C	Sent if available.
105	Large Data 1	LLLVAR	ans..255	O	
106	Large Data 2	LLLVAR	ans..255	O	
107	Large Data 3	LLLVAR	ans..255	O	
108	Large Data 4	LLLVAR	ans..255	O	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
109	Sender Data	LLLVAR	ans..255	O	
110	Receiver Data	LLLVAR	ans..255	O	
111	Additional Data, Private Acquirer	LLLVAR	ans..255	O	For EBT transactions, sent if available.
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	This data element is required only if it is requested by the issuer.
120	Account Qualifiers	LLLVAR	an..006	O	This data element is required only if it is requested by the issuer.
122	Sponsor Bank ID	LLLVAR	an..011	O	This data element is required only if it is requested by the issuer.
123	AVS/Check Auth Data	LLLVAR	ans..050	C	This data element is required when doing address verification.
124	Tag Data, Acquirer	LLLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
125	Tag Data, Issuer	LLLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
126	Issuer Trace Data	LLLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
127	Acquirer Trace Data	LLLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0100/0101 Check Verification/Guarantee Request

Description

Either the Connex™ System generates the 0100 Check Verification/Guarantee Request message in response to an incoming message from a direct-attached device, or an acquirer generates it in response to a foreign item received at one of its devices. In either situation, the Connex System routes the 0100 request to the appropriate issuer to process check verification and check guarantee transactions.

This structure must be used if verification lookup is based on information other than the PAN, such as Driver's License Number or MICR number.

Generated by

Connex System or acquirer

Expected Response

0110 Check Verification/Guarantee Response from the issuer

Message Structure

Following is the structure of the 0100/0101 Check Verification/Guarantee Request message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0100 or 0101.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
003	Processing Code		nP 6	M	Valid codes are listed in "Data Element Code Tables" on page 578.
004	Amount, Transaction		nP 12	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
008	Amount, Cardholder Billing Fee		nP 8	O	Can be sent if using cooperative authorization, and AP is performing service fees. This data element is required only if it is requested by the issuer.
011	System Trace Audit Number		nP 6	M	
012	Time, Local Transaction	hhmmss	nP 6	M	
013	Date, Local Transaction	MMDD	nP 4	M	
018	Merchant Type		nP 4	M	
019	Acquiring Institution Country Code		nP 3	C	Sent if Acquiring Institution's Country Code is not the same as the Issuing Institution's Country Code.
021	Forwarding Institution Country Code		nP 3	C	Required if different from Acquiring Institution Country Code (bit 019).
025	Point-of-Service Condition Code		nP 2	C	Although either this bit or bit 058 is required, FIS prefers that you use bit 058 in place of this bit for all transactions. Valid codes are listed in "Point-of-Service Condition Codes (bit 025)" on page 614
027	Authorization Identification Response Length		nP 1	C	May be used by acquirers that cannot accept 6-byte long authorization ID responses (bit 038).
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
030	Amount, Transaction Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. This data element is required only if it is requested by the issuer.
032	Acquiring Institution Identification Code	LLVAR	nP..11	M	
033	Forwarding Institution Identification Code	LLVAR	nP..11	C	Required if different from Acquiring Institution Identification Code (bit 032).
037	Retrieval Reference Number		an 12	M	
041	Card Acceptor Terminal Identification		an 8	M	
042	Card Acceptor Identification Code		an 15	O	This data element is required only if it is requested by the issuer.
043	Card Acceptor Name and Location		an 40	C	Sent if available.
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
047	Additional Data, National	LLLVAR	ans..100	C	Sent if available.
048	Merchant/Bank Name	LLLVAR	ans..025	C	Sent if available.
049	Currency Code, Transaction		nP 3	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
053	Security Related Control Information	nP 16	nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
054	Additional Amounts	LLLVAR	ans..120	O	This data element is sent if transaction-related amounts are present.
055	ICC Data	LLLVAR	b.. 255	C	Required on EMV transactions.
058	National Point-of-Service Condition Code	LLLVAR	an..030	C	Although either this bit or bit 025 is required, FIS prefers that you use this bit for all transactions. Valid codes are listed in “National POS Condition Code (bit 058)” on page 627 . Note: The attributes for this data element are n..030 for the alternate format.
059	National Point-of-Service Geographic Data	LLLVAR	an..017	O	May be required to qualify for lower fees from VISA® or MasterCard®. This data element is required only if it is requested by the issuer.
061	Acquirer Transport Data	LLLVAR	ans..100	O	This data element is echoed to the acquirer in the response to their request, but it is not forwarded to the issuer. This data element is required only if it is requested by the issuer.
063	FIS Data	LLLVAR	ans..050		The following subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Pseudo Terminal		an 6	C	Required if multiple pseudo terminals are required.
--	Issuer Network Identification		an 3	C	Required for direct routing.
--	Acquirer Network Identification		an 3	O	Sent if the issuer wants to know which network acquired the transaction.
--	Processor ID		an 6	O	Sent if the issuer wants to know which processor acquired the transaction.
--	Auth Timeout		an 2	O	Sent to the issuer to indicate the time-out of this transaction.
--	Open Account Relationship Data		an 15	O	Sent when supporting Open Account Relationship (OAR) requests.
--	Processing Flags		an 5	C	<p>Required when supporting externally settled transactions, also required when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. See the document titled <i>Externally Settled Transactions</i> for more information.</p> <p>Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.</p>

Bit No.	Data Element Name	Format	Attributes	Status	Notes
090	Original Data Elements		nP 42	C	Outbound from the Connex™ System, the original message type, system trace audit number, and local date and time are sent if available. Remaining subelements are zero-filled. Inbound to the Connex System, this data element is not supported.
100	Receiving Institution ID	LLVAR	nP..11	M	This data element indicates the ID of the check guarantor.
122	Sponsor Bank ID	LLLVAR	an..011	O	The length of this data element must be six. This data element is required only if it is requested by the issuer.
123	AVS/Check Auth Data	LLLVAR	ans..050	M	Three formats are supported: driver's license, MICR number, and plastic card number.
124	Tag Data, Acquirer	LLLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
125	Tag Data, Issuer	LLLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
126	Issuer Trace Data	LLLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
127	Acquirer Trace Data	LLLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0110 Authorization Response

Description

The Connex™ System or the issuer generates the 0110 Authorization Response message in response to a 0100 Authorization Request or a 0101 Authorization Request repeat. The same structure is used for both accepted and denied transactions. The acquirer receives this message and processes or denies the cardholder's request based on information in the 0110 message.

The Connex System generates a 0110 response if the system rejects the 0100 request (for example, a PIN Validation Failure of an Invalid Transaction Type) or if the system handles the transaction in Stand-In processing (for example, 0100 requests have timed out or the issuer is not logged on).

Generated by

Connex System or issuer

Expected Response

None

Message Structure

Following is the structure of the 0110 Authorization Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0110.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	C	Required if data elements specified in the Secondary Bit Map (bits 065 through 128) are used.
002	Primary Account Number	LLVAR	nP..19	C	Required if received in the 0100 message.
003	Processing Code		nP 6	M	Normally copied from the 0100 message. Bytes 3-4 and 5-6 may be changed from an unspecified account type (00) to a specified account type. Valid codes are listed in "Data Element Code Tables" on page 578 .
004	Amount, Transaction		nP 12	M	Copied from the 0100 message.
005	Amount, Settlement		nP 12	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connexion HP NonStop system which uses CCS.
006	Amount, Cardholder Billing		nP 12	C	Required if cardholder and settlement currencies are different.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
008	Amount, Cardholder Billing Fee		nP 8	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
009	Conversion Rate, Settlement		nP 8	C	Required if cardholder and transaction currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
010	Conversion Rate, Cardholder Billing		nP 8	C	Required if cardholder and settlement currencies are different.
011	System Trace Audit Number		nP 6	M	Copied from the 0100 message.
012	Time, Local Transaction	hhmmss	nP 6	M	Copied from the 0100 message.
013	Date, Local Transaction	MMDD	nP 4	M	Copied from the 0100 message.
014	Date, Expiration	YYMM	nP 4	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
015	Date, Settlement	MMDD	nP 4	M	
016	Date, Conversion	MMDD	nP 4	C	This data element is returned if it is available. Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
018	Merchant Type		nP 4	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
019	Acquiring Institution Country Code		nP 3	C	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
020	PAN Extended Country Code		nP 3	C	Required if PAN Extended (bit 034) is sent.
021	Forwarding Institution Country Code		nP 3	C	Required if received in the 0100 message.
022	Point-of-Service Entry Mode		nP 3	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses. Valid codes are listed in “Point-of-Service Entry Mode (bit 022)” on page 612 .
023	Card Sequence Number		nP 3	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
025	Point-of-Service Condition Code		nP 2	C	Either this bit or bit 058 must be returned.
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if received in the 0100 message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
029	Amount, Settlement Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different and the Amount, Transaction Fee is present.
030	Amount, Transaction Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. This data element may be returned by the issuer if received in the request and they want it returned to them in reversals for late or unsolicited responses.
031	Amount, Settlement Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different. This data element may be returned by the issuer if received in the request and they want the data element returned to them in reversals for late or unsolicited responses.
032	Acquiring Institution Identification Code	LLVAR	nP..11	M	Copied from the 0100 message.
033	Forwarding Institution Identification Code	LLVAR	nP..11	C	Required if received in the 0100 message.
034	PAN Extended	LLVAR	nsP..28	C	Required if received in the 0100 message.
035	Track 2 Data	LLVAR	nsP..37	C	Required if received in the 0100 message.
036	Track 3 Data	LLLVAR	nsP..104	C	Required if received in the 0100 message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
037	Retrieval Reference Number		an 12	M	Copied from the 0100 message.
038	Authorization Identification Response		an 6	C	May be used by the issuer to return an authorization number for accepted transactions.
039	Response Code		an 2	M	If the response code is 30, then Additional Response Data (bit 044) contains the bit number in error.
040	Service Restriction Code		an 3	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
041	Card Acceptor Terminal Identification		an 8	M	Copied from the 0100 message.
042	Card Acceptor Identification Code		an 15	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
043	Card Acceptor Name and Location		an 40	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
044	Additional Response Data	LLVAR	an..25	O	If the response code (bit 039) is 30, then this bit contains the bit number in error. May contain statement print information.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
045	Track 1 Data	LLVAR	ans..76	C	Required if received in the 0100 message.
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
047	Additional Data, National	LLLVAR	ans..100	C	Sent if available.
048	Merchant/Bank Name	LLLVAR	ans..025	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
049	Currency Code, Transaction		nP 3	M	Copied from the 0100 message.
050	Currency Code, Settlement		nP 3	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
051	Currency Code, Cardholder Billing		nP 3	C	Required if cardholder and settlement currencies are different.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
054	Additional Amounts	LLLVAR	ans..120	O	This data element is returned if additional amounts were received in the 010x message or if balances were received from the authorizer.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
055	ICC Data	LLLVAR	b.. 255	C	Required on EMV transactions.
057	Authorization Life Cycle	LLLVAR	an..003	C	Required if in the 0100 message.
058	National Point-of-Service Condition Code	LLLVAR	an..030	C	Either this bit or bit 025 must be returned. Note: The attributes for this data element are n..030 for the alternate format.
059	National Point-of-Service Geographic Data	LLLVAR	an..017	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
061	Acquirer Transport Data	LLLVAR	ans..100	C	Required if in the 0100 message.
063	FIS Data	LLLVAR	ans..050		The following subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if received in the 0100 message.
--	Issuer Network Identification		an 3	O	Sent if the acquirer wants to know which network authorized the transaction.
--	Acquirer Network Identification		an 3	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Processor ID		an 6	O	Sent if the acquirer wants to know which processor authorized the transaction.
--	Auth Timeout		an 2	O	If this subelement is present, it contains zeroes.
--	Open Account Relationship Data		an 15	O	Sent when supporting Open Account Relationship (OAR) requests.
--	Processing Flags		an 5	C	<p>Required when supporting externally settled transactions, also required when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. See the document titled <i>Externally Settled Transactions</i> for more information.</p> <p>Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.</p>
067	Extended Payment Code		nP 2	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
098	Payee		ans 25	O	This data element may be returned by the issuer if received in the request and they want the data element returned to them in reversals for late or unsolicited responses.
100	Receiving Institution ID Code	LLVAR	nP..11	C	Required if received in the 0100 message.
102	Account ID 1	LLVAR	ans..28	O	
103	Account ID 2	LLVAR	ans..28	O	
104	Transaction Description	LLLVAR	ans..100	O	This data element may be returned by the issuer if received in the request and they want the data element returned to them in reversals for late or unsolicited responses.
105	Large Data 1	LLLVAR	ans..255	O	
106	Large Data 2	LLLVAR	ans..255	O	
107	Large Data 3	LLLVAR	ans..255	O	
108	Large Data 4	LLLVAR	ans..255	O	
109	Sender Data	LLLVAR	ans..255	O	
110	Receiver Data	LLLVAR	ans..255	O	
111	Additional Data, Private Acquirer	LLLVAR	ans..255	O	For EBT transactions, sent if available.
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	This data element is sent if available and you are using FIS-Defined private data elements. Refer to “FIS Private Use Data Elements and Subelements” on page 549 .

Bit No.	Data Element Name	Format	Attributes	Status	Notes
114	Authorizing Agent Country Code	LLLVAR	an..003	C	Sent if the Acquiring Institution's Country Code (bit 019) is not the same as the Issuing Institution's Country Code.
120	Account Qualifiers	LLLVAR	an..006	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
121	Additional Data, Private Issuer	LLLVAR	ans..255	O	For statement printing or check inquiry, this data element contains print data. This data element is sent if available and you are using FIS-Defined private data elements. Refer to "FIS Private Use Data Elements and Subelements" on page 549 .
122	Sponsor Bank ID	LLLVAR	an..011	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
123	AVS/Check Auth Data	LLLVAR	ans..050	C	Required if the issuer returns the address verification result.
124	Tag Data, Acquirer	LLLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
125	Tag Data, Issuer	LLLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
126	Issuer Trace Data	LLLVAR	ans..100	O	This data element is sent if available and you are using FIS-Defined private data elements. Refer to “FIS Private Use Data Elements and Subelements” on page 549 .
127	Acquirer Trace Data	LLLVAR	ans..100	O	This data element is required only if it is requested by the acquirer.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0110 Check Verification/Guarantee Response

Description

The Connex™ System or the issuer generates the 0110 Check Verification/Guarantee Response message in response to a 0100 Check Verification/Guarantee Request or a 0101 repeat message. The same structure is used for both accepted and denied transactions. The acquirer or direct-attached device receives this message and processes or denies the cardholder's request based on information in the 0110.

The Connex System generates a 0110 response if the system rejects the 0100 request or if the system handles the transaction in Stand-In processing (for example, 0100 requests have timed out or the issuer is not logged on).

Generated by

Connex System or issuer

Expected Response

None

Message Structure

Following is the structure of the 0110 Check Verification/Guarantee Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0110.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	C	Required if data elements specified in the Secondary Bit Map (065 to 128) are used.
003	Processing Code		nP 6	M	Valid codes are listed in "Data Element Code Tables" on page 578.
004	Amount, Transaction		nP 12	M	Copied from the 0100 message.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
008	Amount, Cardholder Billing Fee		nP 8	O	
011	System Trace Audit Number		nP 6	M	Copied from the 0100 message.
012	Time, Local Transaction	hhmmss	nP 6	M	Copied from the 0100 message.
013	Date, Local Transaction	MMDD	nP 4	M	Copied from the 0100 message.
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if received in the 0100 message.
030	Amount, Transaction Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. This data element is required only if it is requested by the issuer.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
037	Retrieval Reference Number		an 12	M	Copied from the 0100 message.
038	Authorization Identification Response		an 6	C	May be used by the issuer to return an authorization code.
039	Response Code		an 2	M	If the response code is 30, then Additional Response Data (bit 044) contains the bit number in error.
041	Card Acceptor Terminal Identification		an 8	M	Copied from the 0100 message.
044	Additional Response Data	LLVAR	an..25	O	If the response code (bit 039) is 30, then this bit contains the bit number in error.
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
047	Additional Data, National	LLLVAR	ans..100	C	Sent if available.
049	Currency Code, Transaction		nP 3	M	Copied from the 0100 message.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
055	ICC Data	LLLVAR	b.. 255	C	Required on EMV transactions.
061	Acquirer Transport Data	LLLVAR	ans..100	C	Required if present in the 0100 message.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
063	FIS Data	LLVAR	ans..050		The following subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if received in the 0100 message.
--	Issuer Network Identification		an 3	O	Sent if the acquirer wants to know which network authorized the transaction.
--	Acquirer Network Identification		an 3	O	May be echoed from the request.
--	Processor ID		an 6	O	Sent if the acquirer wants to know which processor authorized the transaction.
--	Auth Timeout		an 2	O	If this subelement is present, it contains zeroes.
--	Open Account Relationship Data		an 15	O	Not sent for check authorization, but present if issuer supports Open Account Relationship (OAR) requests.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
--	Processing Flags		an 5	C	<p>Required when supporting externally settled transactions, also required when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. See the document titled <i>Externally Settled Transactions</i> for more information.</p> <p>Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.</p>
124	Tag Data, Acquirer	LLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
125	Tag Data, Issuer	LLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
126	Issuer Trace Data	LLLVAR	ans..100	O	This data element is required only if it is requested by the acquirer.
127	Acquirer Trace Data	LLLVAR	ans..100	O	This data element is required only if it is requested by the acquirer.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0120/0121 Authorization Advice

Description

The Connex™ System generates the 0120 Authorization Advice message in response to a Store-and-Forward Stand-In authorization, or an acquirer generates it in response to a forced post generated by one of its endpoints. In both cases, the 0120 message is sent to the issuer. The issuer must accept and process the 0120 message.

Generated by

Connex System or acquirer

Expected Response

0130 Authorization Advice Response from the issuer.

Message Structure

Following is the structure of the 0120/0121 Authorization Advice message.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
--	Message Type		nP 4	M	Value 0120 initially; 0121 if repeated by acquirer.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	C	Required if data elements specified in the Secondary Bit Map (065 to 128) are used.
002	Primary Account Number	LLVAR	nP..19	C	Required if PAN manually entered. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
003	Processing Code		nP 6	M	Valid codes are listed in "Data Element Code Tables" on page 578.
004	Amount, Transaction		nP 12	M	

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
005	Amount, Settlement		nP 12	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
006	Amount, Cardholder Billing		nP 12	C	Required if cardholder and settlement currencies are different.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
008	Amount, Cardholder Billing Fee		nP 8	O	Can be sent if using cooperative authorization, and AP is performing service fees. This data element is required only if it is requested by the issuer.
009	Conversion Rate, Settlement		nP 8	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
010	Conversion Rate, Cardholder Billing		nP 8	C	Required if cardholder and settlement currencies are different.
011	System Trace Audit Number		nP 6	M	
012	Time, Local Transaction	hhmmss	nP 6	M	
013	Date, Local Transaction	MMDD	nP 4	M	
014	Date, Expiration	YYMM	nP 4	C	

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
015	Date, Settlement	MMDD	nP 4	M	
016	Date, Conversion	MMDD	nP 4	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
017	Date, Capture	MMDD	nP 4	O	This data element is required only if it is requested by the issuer.
018	Merchant Type		nP 4	C	Required for transactions from a point-of-sale device.
019	Acquiring Institution Country Code		nP 3	C	Sent if Acquiring Institution's Country Code is not the same as the Issuing Institution's Country Code.
020	PAN Extended Country Code		nP 3	C	Required if PAN Extended (bit 034) is sent.
021	Forwarding Institution Country Code		nP 3	C	Required if different from Acquiring Institution Country Code (bit 019).
022	Point-of-Service Entry Mode		nP 3	C	<p>Required for transactions from:</p> <ul style="list-style-type: none"> • A point-of-sale device • An ATM acquirer participating in a CVV program, or • A chip-related ATM transaction <p>Valid codes are listed in "Point-of-Service Entry Mode (bit 022)" on page 612.</p>

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
023	Card Sequence Number		nP 3	O	May be used to send a card sequence (plastic) number if Track 2 (bit 035) is not sent.
025	Point-of-Service Condition Code		nP 2	C	Although either this bit or bit 058 is required, FIS prefers that you use bit 058 in place of this bit for all transactions. Valid codes are listed in “Point-of-Service Condition Codes (bit 025)” on page 614
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
029	Amount, Settlement Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different and the Amount, Transaction Fee is present.
030	Amount, Transaction Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. This data element is required only if it is requested by the issuer.
031	Amount, Settlement Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different, and if it is requested by the issuer.
032	Acquiring Institution Identification Code	LLVAR	nP..11	M	

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
033	Forwarding Institution Identification Code	LLVAR	nP..11	C	Required if different from Acquiring Institution Identification Code (bit 032).
034	PAN Extended	LLVAR	nsP..28	C	Required if PAN Extended is manually entered. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
035	Track 2 Data	LLVAR	nsP..37	C	Required if Track 2 was machine read. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
036	Track 3 Data	LLLVAR	nsP..104	C	Required if Track 3 was machine read. One of these data elements is required: 002, 034, 035, 036, 045 or 100.
037	Retrieval Reference Number		an 12	M	
038	Authorization Identification Response		an 6	C	Sent if available.
039	Response Code		an 2	M	
040	Service Restriction Code		an 3	O	May be used to send service code if Track 1 (bit 045), Track 2 (bit 035), or Track 3 (bit 036) is not sent and the data element is requested by the issuer. This data element is required only if it is requested by the issuer.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
041	Card Acceptor Terminal Identification		an 8	M	
042	Card Acceptor Identification Code		an 15	O	This data element is required only if it is requested by the issuer.
043	Card Acceptor Name and Location		an 40	C	Sent if available.
045	Track 1 Data	LLVAR	ans..76	C	Required if Track 1 was machine read. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
047	Additional Data, National	LLLVAR	ans..100	C	Sent if available.
048	Merchant/Bank Name	LLLVAR	ans..025	C	Sent if available.
049	Currency Code, Transaction		nP 3	M	
050	Currency Code, Settlement		nP 3	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
051	Currency Code, Cardholder Billing		nP 3	C	Required if cardholder and settlement currencies are different.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
054	Additional Amounts	LLVAR	ans..120	C	This data element is required if transaction-related amounts or balances are present.
055	ICC Data	LLVAR	b.. 255	C	Required on EMV transactions.
057	Authorization Life Cycle	LLVAR	an..003	C	Required for pre-authorizations.
058	National Point-of-Service Condition Code	LLVAR	an..030	C	Although either this bit or bit 025 is required, FIS prefers that you use this bit for all transactions. Valid codes are listed in “National POS Condition Code (bit 058)” on page 627 . Note: The attributes for this data element are n..030 for the alternate format.
059	National Point-of-Service Geographic Data	LLVAR	an..017	O	May be required to qualify for lower fees from VISA® or MasterCard®. This data element is required only if it is requested by the issuer.
060	Advice/ Reversal Reason Code	LLVAR	an..006	C	Required if available.
--	Byte Map		an 2	C	Indicates whether subelements are present.
--	Advice Reason		an 2	C	
061	Acquirer Transport Data	LLVAR	ans..100	O	This data is echoed to the acquirer in the response to their request, but it is not forwarded to the issuer.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
063	FIS Data	LLVAR	ans..050		The following subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if multiple pseudo terminals are required.
--	Issuer Network Identification		an 3	C	Required for direct routing.
--	Acquirer Network Identification		an 3	O	Sent if the issuer wants to know which network acquired the transaction.
--	Processor ID		an 6	O	Sent if the issuer wants to know which processor acquired the transaction.
--	Auth Timeout		an 2	O	If this subelement is present, it contains zeroes.
--	Open Account Relationship Data		an 15	O	Sent when supporting Open Account Relationship (OAR) requests.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
--	Processing Flags		an 5	C	<p>Required when supporting externally settled transactions, also required when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. See the document titled <i>Externally Settled Transactions</i> for more information.</p> <p>Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.</p>
067	Extended Payment Code		nP 2	O	
090	Original Data Elements		nP 42	C	<p>Outbound from the Connex™ System, the original message type, system trace audit number, and local date and time are sent if available. Remaining subelements are zero-filled. Inbound to the Connex System, this data element is not supported.</p>
098	Payee		ans 25	C	Sent if available and if this is a payment transaction.
100	Receiving Institution ID Code	LLVAR	nP..11	C	Sent if routing is based on this data element instead of the PAN.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
102	Account ID 1	LLVAR	ans..28	C	May be required in outbound messages if the processor looks up account numbers of the issuer.
103	Account ID 2	LLVAR	ans..28	C	May be required in outbound messages if the processor looks up account numbers for the issuer and the transaction is a transfer.
104	Transaction Description	LLLVAR	ans..100	C	Sent if available.
105	Large Data 1	LLLVAR	ans..255	O	
106	Large Data 2	LLLVAR	ans..255	O	
107	Large Data 3	LLLVAR	ans..255	O	
108	Large Data 4	LLLVAR	ans..255	O	
109	Sender Data	LLLVAR	ans..255	O	
110	Receiver Data	LLLVAR	ans..255	O	
111	Additional Data, Private Acquirer	LLLVAR	ans..255	O	For EBT transactions, sent if available.
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	This data element is required only if it is requested by the issuer.
120	Account Qualifiers	LLLVAR	an..006	O	This data element is required only if it is requested by the issuer.
122	Sponsor Bank ID	LLLVAR	an..011	O	This data element is required only if it is requested by the issuer.
123	AVS/Check Auth Data	LLLVAR	ans..050	C	This data element is required when doing address verification.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
124	Tag Data, Acquirer	LLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
125	Tag Data, Issuer	LLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
126	Issuer Trace Data	LLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
127	Acquirer Trace Data	LLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0130 Authorization Advice Response

Description

The 0130 Authorization Advice Response message acknowledges that Connex™ System or an issuer received the 0120 Authorization Advice message. This message ensures that critical 0120 messages are received.

The use of a 0130 is optional for an endpoint in response to an 0120/0121 Authorization Advice message. If a 0130 message is not desired, a protocol acknowledgment is the only verification that a 0120 message was properly delivered.

Generated by

Connex System or issuer

Expected Response

None

Message Structure

Following is the structure of the 0130 Authorization Advice Response message.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
--	Message Type		nP 4	M	Always 0130.
--	Bit Map, Primary		b 64	M	
003	Processing Code		nP 6	M	Valid codes are listed in “Data Element Code Tables” on page 578.
004	Amount, Transaction		nP 12	M	
005	Amount, Settlement		nP 12	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop® system which uses CCS.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
009	Conversion Rate, Settlement		nP 8	O	Returned if received in the 012x message.
011	System Trace Audit Number		nP 6	M	Copied from the 012x message.
012	Time, Local Transaction	hhmmss	nP 6	M	Copied from the 012x message.
013	Date, Local Transaction		nP 4	M	Copied from the 012x message.
015	Settlement Date	MMDD	nP 4	M	
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if received in the 012x message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
029	Amount, Settlement Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different and the Amount, Transaction Fee is present.
037	Retrieval Reference Number		an 12	M	Copied from the 012x message.
038	Authorization Identification Response		an 6	O	Copied from the 012x message.
039	Response Code		an 2	M	Must be 00.
044	Additional Response Data	LLVAR	an..25	O	If the response code (bit 039) is 30, then this bit contains the bit number in error. May contain statement print information.
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
049	Currency Code, Transaction		nP 3	M	Copied from the 012x message.
050	Currency Code, Settlement		nP 3	C	Returned if received in the 012x message.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
055	ICC Data	LLLVAR	b.. 255	C	Required on EMV transactions.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
058	National Point-Of-Service Condition Code	LLLVAR	an..030	O	Copied from the 012x message. Note: The attributes for this data element are n..030 for the alternate format.
061	Acquirer Transport Data	LLLVAR	ans..100	C	Required if present in the 012x message.
063	FIS Data	LLLVAR	ans..050		The next two subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if present in the 012x message.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0200/0201 Financial Transaction Request

Description

The 0200 Financial Transaction Request message is sent to request approval for a transaction which, if approved, can be immediately applied to the cardholder's account for billing or statement purposes. Either the Connex™ System generates the 0200 request message in response to an incoming message from a direct-attached device,

or an acquirer generates it in response to a foreign item received at one of its devices. In either situation, the Connex System routes the 0200 request to the appropriate issuer for approval or denial of the transaction.

Generated by

Connex System or acquirer

Expected Response

0210 Financial Transaction Request Response from the issuer

Message Structure

Following is the structure of the 0200/0201 Financial Transaction Request message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value is 0200 initially; 0201 if repeated by acquirer.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	C	Required if data elements specified in the Secondary Bit Map (065 to 128) are used.
002	Primary Account Number	LLVAR	nP..19	C	Required if PAN manually entered. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
003	Processing Code		nP 6	M	Valid codes are listed in "Data Element Code Tables" on page 578.
004	Amount, Transaction		nP 12	M	
005	Amount, Settlement		nP 12	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
006	Amount, Cardholder Billing		nP 12	C	Required if cardholder and settlement currencies are different.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
008	Amount, Cardholder Billing Fee		nP 8	O	Can be sent if using cooperative authorization, and AP is performing service fees. This data element is required only if it is requested by the issuer.
009	Conversion Rate, Settlement		nP 8	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
010	Conversion Rate, Cardholder Billing		nP 8	C	Required if cardholder and settlement currencies are different.
011	System Trace Audit Number		nP 6	M	
012	Time, Local Transaction	hhmmss	nP 6	M	
013	Date, Local Transaction	MMDD	nP 4	M	
014	Date, Expiration	YYMM	nP 4	C	
015	Date, Settlement	MMDD	nP 4	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
016	Date, Conversion	MMDD	nP 4	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
017	Date, Capture	MMDD	nP 4	O	This data element is required only if it is requested by the issuer.
018	Merchant Type		nP 4	C	Required for transactions from a point-of-sale device.
019	Acquiring Institution Country Code		nP 3	C	Sent if Acquiring Institution's Country Code is not the same as the Issuing Institution's Country Code.
020	PAN Extended Country Code		nP 3	C	Required if PAN Extended (bit 034) is sent.
021	Forwarding Institution Country Code		nP 3	C	Required if different from Acquiring Institution Country Code (bit 019).
022	Point-of-Service Entry Mode.		nP 3	C	<p>Required for transactions from:</p> <ul style="list-style-type: none"> • A point-of-sale device • An ATM acquirer participating in a CVV program, or • A chip-related ATM transaction <p>Valid codes are listed in "Point-of-Service Entry Mode (bit 022)" on page 612.</p>
023	Card Sequence Number		nP 3	C	May be used to send a card sequence (plastic) number if Track 2 (bit 035) is not sent.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
025	Point-of-Service		nP 2	C	Although either this bit or bit 058 is required, FIS prefers that you use bit 058 in place of this bit for all transactions. Valid codes are listed in “Point-of-Service Condition Codes (bit 025)” on page 614
026	Point-of-Service PIN Capture Code		nP 2	O	Required if PIN data (052) is in the message, and the device cannot accept 12-digit PINs.
027	Authorization Identification Response Length		nP 1	O	May be used by acquirers that cannot accept 6-byte long authorization ID responses (bit 038).
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
029	Amount, Settlement Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different and the Amount, Transaction Fee is present.
030	Amount, Transaction Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. This data element is required only if it is requested by the issuer.
031	Amount, Settlement Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different, and if it is requested by the issuer.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
032	Acquiring Institution Identification Code	LLVAR	nP..11	M	
033	Forwarding Institution Identification Code	LLVAR	nP..11	C	Required if different from Acquiring Institution Identification Code (bit 032).
034	PAN Extended	LLVAR	nsP..28	C	Required if PAN Extended is manually entered. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
035	Track 2 Data	LLVAR	nsP..37	C	Required if Track 2 was machine read. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
036	Track 3 Data	LLLVAR	nsP..104	C	Required if Track 3 was machine read. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
037	Retrieval Reference Number		an 12	M	In a pre-authorized request, this must be the same value as in pre-authorization.
038	Authorization Identification Response		an 6	C	May be used to supply the issuer with an authorization number for EBT transactions.
040	Service Restriction Code		an 3	O	May be used to send service code if Track 1 (bit 045), Track 2 (bit 035), or Track 3 (bit 036) is not sent and the data element is requested by the issuer. This data element is required only if it is requested by the issuer.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
041	Card Acceptor Terminal Identification		an 8	M	
042	Card Acceptor Identification Code		an 15	O	This data element is required only if it is requested by the issuer.
043	Card Acceptor Name and Location		an 40	M	
045	Track 1 Data	LLVAR	ans..76	C	Required if Track 1 was machine read. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
047	Additional Data, National	LLLVAR	ans..100	C	Sent if available.
048	Merchant/Bank Name	LLLVAR	ans..025	C	Sent if available.
049	Currency Code, Transaction		nP 3	M	
050	Currency Code, Settlement		nP 3	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
051	Currency Code, Cardholder Billing		nP 3	C	Required if cardholder and settlement currencies are different.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
052	PIN Data		b 64	C	Required if a PIN is required during authorization processing.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys, and either PIN Data (bit 052) is present or message authentication (MACing) is being performed.
054	Additional Amounts	LLLVAR	ans..120	O	Sent if transaction-related amounts or balances are present.
055	ICC Data	LLLVAR	b.. 255	C	Required on EMV transactions.
058	National Point-of-Service Condition Code	LLLVAR	an..030	C	Although either this bit or bit 025 is required, FIS prefers that you use this bit for all transactions. Valid codes are listed in “National POS Condition Code (bit 058)” on page 627 . Note: The attributes for this data element are n..030 for the alternate format.
059	National Point-of-Service Geographic Data	LLLVAR	an..017	O	May be required to qualify for lower fees from VISA® or MasterCard®. This data element is required only if it is requested by the issuer.
061	Acquirer Transport Data	LLLVAR	ans..100	O	This data is echoed to the acquirer in the response to their request, but it is not forwarded to the issuer.
063	FIS Data	LLLVAR	ans..050		The following subelements are defined in the FIS message standard.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if multiple pseudo terminals are required.
--	Issuer Network Identification		an 3	C	Required for direct routing.
--	Acquirer Network Identification		an 3	O	Sent if the issuer wants to know which network acquired the transaction.
--	Processor ID		an 6	O	Sent if the issuer wants to know which processor acquired the transaction.
--	Auth Timeout		an 2	O	Sent to the issuer to indicate the time-out of this transaction.
--	Open Account Relationship Data		an 15	O	Sent when supporting Open Account Relationship (OAR) requests.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Processing Flags		an 5	C	<p>Required when supporting externally settled transactions, also required when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. See the document titled <i>Externally Settled Transactions</i> for more information.</p> <p>Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.</p>
067	Extended Payment Code		nP 2	O	
090	Original Data Elements		nP 42	C	<p>Outbound from the Connex™ System, the original message type, system trace audit number, and local date and time are sent if available. Remaining subelements are zero-filled. Inbound to the Connex System, this data element is not supported.</p>
098	Payee		ans 25	C	<p>Sent if available and if this transaction is a payment or payment return transaction.</p>
100	Receiving Institution ID Code	LLVAR	nP..11	C	<p>Sent if routing is based on this data element instead of the PAN.</p>

Bit No.	Data Element Name	Format	Attributes	Status	Notes
102	Account ID 1	LLVAR	ans..28	C	May be required in outbound messages if the processor looks up account numbers for the issuer.
103	Account ID 2	LLVAR	ans..28	C	May be required in outbound messages if the processor looks up account numbers for the issuer, and the transaction is a transfer.
104	Transaction Description	LLLVAR	ans..100	C	Sent if available.
105	Large Data 1	LLLVAR	ans..255	O	
106	Large Data 2	LLLVAR	ans..255	O	
107	Large Data 3	LLLVAR	ans..255	O	
108	Large Data 4	LLLVAR	ans..255	O	
109	Sender Data	LLLVAR	ans..255	O	
110	Receiver Data	LLLVAR	ans..255	O	
111	Additional Data, Private Acquirer	LLLVAR	ans..255	O	For EBT transactions, sent if available.
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	This data element is required only if it is requested by the issuer.
120	Account Qualifiers	LLLVAR	an..006	O	This data element is required only if it is requested by the issuer.
122	Sponsor Bank ID	LLLVAR	an..011	O	This data element is required only if it is requested by the issuer.
123	AVS/Check Auth Data	LLLVAR	ans..050	C	This data element is required when doing address verification.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
124	Tag Data, Acquirer	LLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
125	Tag Data, Issuer	LLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
126	Issuer Trace Data	LLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
127	Acquirer Trace Data	LLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0210 Financial Transaction Response

Description

The Connex™ System or the issuer generates the 0210 Financial Transaction Response message in response to either a 0200 Financial Transaction Request or a 0201 Financial Transaction Request repeat. The same structure is used for both accepted and denied transactions.

The acquirer receives this message and processes or denies the cardholder's request based on information in the 0210 message. An approval initiates the updating of settlement or reconciliation controls between the acquirer and card issuer.

Generated by

Connex System or issuer

Expected Response

None

Message Structure

Following is the structure of the 0210 Financial Transaction Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0210.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	C	Required if data elements specified in the Secondary Bit Map (bits 065 to 128) are used.
002	Primary Account Number	LLVAR	nP..19	C	Required if received in the 0200 message.
003	Processing Code		nP 6	M	Normally copied from the 0200 message. Bytes 3-4 and 5-6 may be changed from an unspecified account type (00) to a specified account type. Valid codes are listed in "Data Element Code Tables" on page 578 .
004	Amount, Transaction		nP 12	M	Copied from the 0200 message.
005	Amount, Settlement		nP 12	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
006	Amount, Cardholder Billing		nP 12	C	Required if cardholder and settlement currencies are different.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
008	Amount, Cardholder Billing Fee		nP 8	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
009	Conversion Rate, Settlement		nP 8	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
010	Conversion Rate, Cardholder Billing		nP 8	C	Required if cardholder and settlement currencies are different.
011	System Trace Audit Number		nP 6	M	Copied from the 0200 message.
012	Time, Local Transaction	hhmmss	nP 6	M	Copied from the 0200 message.
013	Date, Local Transaction	MMDD	nP 4	M	Copied from the 0200 message.
014	Date, Expiration	YYMM	nP 4	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
015	Date, Settlement	MMDD	nP 4	M	
016	Date, Conversion	MMDD	nP 4	C	Returned if available. Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
018	Merchant Type		nP 4	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
019	Acquiring Institution Country Code		nP 3	C	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
020	PAN Extended Country Code		nP 3	C	Required if PAN Extended (bit 034) is sent.
021	Forwarding Institution Country Code		nP 3	C	Required if received in the 0200 message.
022	Point-of-Service Entry Mode		nP 3	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
023	Card Sequence Number		nP 3	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
025	Point-of-Service Condition Code		nP 2	C	Either this bit or bit 058 must be returned.
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if received in the 0200 message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
029	Amount, Settlement Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different and the Amount, Transaction Fee is present.
030	Amount, Transaction Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
031	Amount, Settlement Processing Fee		x + n 8	O	x + C (credit) or D (debit) amount. Required if transaction and settlement currencies are different. May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
032	Acquiring Institution Identification Code	LLVAR	nP..11	M	
033	Forwarding Institution Identification Code	LLVAR	nP..11	C	Required if received in the 0200 message.
034	PAN Extended	LLVAR	nsP..28	C	Required if received in the 0200 message.
035	Track 2 Data	LLVAR	nsP..37	C	Required if received in the 0200 message.
036	Track 3 Data	LLLVAR	nsP..104	C	Required if received in the 0200 message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
037	Retrieval Reference Number		an 12	M	Copied from the 0200 message.
038	Authorization Identification Response		an 6	C	May be used by the authorizer to return an authorization number for accepted transactions.
039	Response Code		an 2	M	If the response code is 30, then Additional Response Data (bit 044) contains the bit number in error.
040	Service Restriction Code		an 3	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
041	Card Acceptor Terminal Identification		an 8	M	Copied from the 0200 message.
042	Card Acceptor Identification Code		an 15	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
043	Card Acceptor Name and Location		an 40	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
044	Additional Response Data	LLVAR	an..25	O	If the response code (bit 039) is 30, then this bit contains the bit number in error.
045	Track 1 Data	LLVAR	ans..76	C	Required if received in the 0200 message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
046	Additional Fees	LLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
047	Additional Data, National	LLVAR	ans..100	C	Sent if available.
048	Merchant/ Bank Name	LLVAR	ans..025	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
049	Currency Code, Transaction		nP 3	M	Copied from the 0200 message.
050	Currency Code, Settlement		nP 3	C	Required if the transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
051	Currency Code, Cardholder Billing		nP 3	C	Required if cardholder and settlement currencies are different.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
054	Additional Amounts	LLVAR	ans..120	O	Returned if additional amounts are received in the 020x message or balances are received from the authorizer.
055	ICC Data	LLVAR	b.. 255	C	Required on EMV transactions.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
058	National Point-of-Service Condition Code	LLVAR	an..030	C	Either this bit or bit 025 must be returned. Note: The attributes for this data element are n..030 for the alternate format.
059	National Point-of-Service Geographic Data	LLVAR	an..017	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
061	Acquirer Transport Data	LLVAR	ans..100	C	Required if present in the 0200 message.
063	FIS Data	LLVAR	ans..050		The following subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if received in the 0200 message.
--	Issuer Network Identification		an 3	O	Sent if the acquirer wants to know which network authorized the transaction.
--	Acquirer Network Identification		an 3	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
--	Processor ID		an 6	O	Sent if the acquirer wants to know which processor authorized the transaction.
--	Auth Timeout		an 2	O	If this subelement is present, it contains zeroes.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Open Account Relationship Data		an 15	O	Sent when supporting Open Account Relationship (OAR) requests.
--	Processing Flags		an 5	C	<p>Required when supporting externally settled transactions, also required when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. See the document titled <i>Externally Settled Transactions</i> for more information.</p> <p>Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.</p>
067	Extended Payment Code		nP 2	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
098	Payee		ans 25	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
100	Receiving Institution ID Code	LLVAR	nP..11	C	Required if received in the 0200 message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
102	Account ID 1	LLVAR	ans..28	O	
103	Account ID 2	LLVAR	ans..28	O	
104	Transaction Description	LLLVAR	ans..100	O	May be returned by the issuer if received in the request and they want the data element returned to them in reversals for late or unsolicited responses.
105	Large Data 1	LLLVAR	ans..255	O	
106	Large Data 2	LLLVAR	ans..255	O	
107	Large Data 3	LLLVAR	ans..255	O	
108	Large Data 4	LLLVAR	ans..255	O	
109	Sender Data	LLLVAR	ans..255	O	
110	Receiver Data	LLLVAR	ans..255	O	
111	Additional Data, Private Acquirer	LLLVAR	ans..255	O	For EBT transactions, sent if available.
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	Sent if available and you are using FIS-Defined private data elements. Refer to “FIS Private Use Data Elements and Subelements” on page 549 .
114	Authorizing Agent Country Code	LLLVAR	an..003	C	Sent if the Acquiring Institution’s Country Code (bit 019) is not the same as the Issuing Institution’s Country Code.
120	Account Qualifiers	LLLVAR	an..006	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
122	Sponsor Bank ID	LLLVAR	an..011	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
123	AVS/Check Auth Data	LLLVAR	ans..050	C	Required if the issuer returns the address verification result.
124	Tag Data, Acquirer	LLLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
125	Tag Data, Issuer	LLLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
126	Issuer Trace Data	LLLVAR	ans..100	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
127	Acquirer Trace Data	LLLVAR	ans..100	O	This data element is required only if it is requested by the acquirer.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0220/0221 Financial Transaction Advice

Description

The Connex™ System generates the 0220 Financial Transaction Advice message in response to a Store-and-Forward Stand-In authorization, or an acquirer generates it in response to a forced post generated by one of its endpoints. In both cases, the 0220 message is sent to the issuer. The issuer must accept and process the 0220/0221 message.

Generated by

Connex System or acquirer

Expected Response

0230 Financial Transaction Advice Response from the issuer

Message Structure

Following is the structure of the 0220/0221 Financial Transaction Advice message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0220 for initial advice; 0221 for repeat advice.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	C	Required if data elements specified in the Secondary Bit Map (bits 065 to 128) are used.
002	Primary Account Number	LLVAR	nP..19	C	Required if PAN manually entered. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
003	Processing Code		nP 6	M	Valid codes are listed in “Data Element Code Tables” on page 578.
004	Amount, Transaction		nP 12	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
005	Amount, Settlement		nP 12	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
006	Amount, Cardholder Billing		nP 12	C	Required if cardholder and settlement currencies are different.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
008	Amount, Cardholder Billing Fee		nP 8	O	Can be sent if using cooperative authorization, and AP is performing service fees. This data element is required only if it is requested by the issuer.
009	Conversion Rate, Settlement		nP 8	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
010	Conversion Rate, Cardholder Billing		nP 8	C	Required if cardholder and settlement currencies are different.
011	System Trace Audit Number		nP 6	M	
012	Time, Local Transaction	hhmmss	nP 6	M	
013	Date, Local Transaction	MMDD	nP 4	M	
014	Date, Expiration	YYMM	nP 4	C	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
015	Date, Settlement	MMDD	nP 4	M	
016	Date, Conversion	MMDD	nP 4	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
017	Date, Capture	MMDD	nP 4	O	This data element is required only if it is requested by the issuer.
018	Merchant Type		nP 4	C	Required for transactions from a point-of-sale device.
019	Acquiring Institution Country Code		nP 3	C	Sent if Acquiring Institution's Country Code is not the same as the Issuing Institution's Country Code.
020	PAN Extended Country Code		nP 3	C	Required if PAN Extended (bit 034) is sent.
021	Forwarding Institution Country Code		nP 3	C	Required if different from Acquiring Institution Country Code (bit 019).
022	Point-of-Service Entry Mode		nP 3	C	<p>Required for transactions from:</p> <ul style="list-style-type: none"> • A point-of-sale device • An ATM acquirer participating in a CVV program, or • A chip-related ATM transaction <p>Valid codes are listed in "Point-of-Service Entry Mode (bit 022)" on page 612.</p>

Bit No.	Data Element Name	Format	Attributes	Status	Notes
023	Card Sequence Number		nP 3	O	May be used to send a card sequence (plastic) number if Track 2 (035) is not sent.
025	Point-of-Service Condition Code		nP 2	C	Although either this bit or bit 058 is required, FIS prefers that you use bit 058 in place of this bit for all transactions. Valid codes are listed in “Point-of-Service Condition Codes (bit 025)” on page 614
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
029	Amount, Settlement Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different and the Amount, Transaction Fee is present.
030	Amount, Transaction Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. This data element is required only if it is requested by the issuer.
031	Amount, Settlement Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different. This data element is required only if it is requested by the issuer.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
032	Acquiring Institution Identification Code	LLVAR	nP..11	M	
033	Forwarding Institution Identification Code	LLVAR	nP..11	C	Required if different from Acquiring Institution Identification Code (bit 032).
034	PAN Extended	LLVAR	nsP..28	C	Required if PAN Extended is manually entered. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
035	Track 2 Data	LLVAR	nsP..37	O	0220 stand-in transactions may contain DE035.
036	Track 3 Data	LLLVAR	nsP..104	C	Required if Track 3 was machine read. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
037	Retrieval Reference Number		an 12	M	In a pre-authorized request, this must be the same value as in pre-authorization.
038	Authorization Identification Response		an 6	C	Sent if available.
039	Response Code		an 2	M	
040	Service Restriction Code		an 3	O	May be used to send service code if Track 1 (bit 045), Track 2 (bit 035), or Track 3 (bit 036) is not sent and the data element is requested by the issuer. This data element is required only if it is requested by the issuer.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
041	Card Acceptor Terminal Identification		an 8	M	
042	Card Acceptor Identification Code		an 15	O	This data element is required only if it is requested by the issuer.
043	Card Acceptor Name and Location		an 40	M	
045	Track 1 Data	LLVAR	ans..76	O	0220 stand-in transactions may contain DE045.
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
047	Additional Data, National	LLLVAR	ans..100	C	Sent if available.
048	Merchant/Bank Name	LLLVAR	ans..025	C	Sent if available.
049	Currency Code, Transaction		nP 3	M	
050	Currency Code, Settlement		nP 3	C	Required if the transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
051	Currency Code, Cardholder Billing		nP 3	C	Required if cardholder and settlement currencies are different.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
054	Additional Amounts	LLLVAR	ans..120	O	Sent if transaction-related amounts or balances are present.
055	ICC Data	LLLVAR	b.. 255	C	Required on EMV transactions.
058	National Point-of-Service Condition Code	LLLVAR	an..030	C	Although either this bit or bit 025 is required, FIS prefers that you use this bit for all transactions. Valid codes are listed in “National POS Condition Code (bit 058)” on page 627 . Note: The attributes for this data element are n..030 for the alternate format.
059	National Point-of-Service Geographic Data	LLLVAR	an..017	O	May be required to qualify for lower fees from VISA® or MasterCard®. This data element is required only if it is requested by the issuer.
060	Advice/ Reversal Reason Code	LLLVAR	an..006	C	Required if available.
--	Byte Map		an 2	C	
--	Advice Reason		an 2	C	
061	Acquirer Transport Data	LLLVAR	ans..100	O	This data is echoed to the acquirer in the response to their request, but it is not forwarded to the issuer.
063	FIS Data	LLLVAR	ans..050		The following subelements are defined in the FIS message standard.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if multiple pseudo terminals are required.
--	Issuer Network Identification		an 3	C	Required for direct routing.
--	Acquirer Network Identification		an 3	O	Sent if the issuer wants to know which network acquired the transaction.
--	Processor ID		an 6	O	Sent if the issuer wants to know which processor acquired the transaction.
--	Auth Timeout		an 2	O	If this subelement is present, it contains zeroes.
--	Open Account Relationship Data		an 15	O	Sent when supporting Open Account Relationship (OAR) requests.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Processing Flags		an 5	C	<p>Required when supporting externally settled transactions, also required when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. See the document titled <i>Externally Settled Transactions</i> for more information.</p> <p>Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.</p>
067	Extended Payment Code		nP 2	O	
090	Original Data Elements		nP 42	C	<p>Outbound from the Connex™ System, the original message type, system trace audit number, and local date and time are sent if available. Remaining subelements are zero-filled.</p> <p>Inbound to the Connex System, this data element is not supported.</p>
098	Payee		ans 25	C	Sent if available and if this is a payment transaction.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
100	Receiving Institution ID Code	LLVAR	nP..11	C	Sent if routing is based on this data element instead of the PAN.
102	Account ID 1	LLVAR	ans..28	C	May be required in outbound messages if the processor looks up account numbers for the issuer.
103	Account ID 2	LLVAR	ans..28	C	May be required in outbound messages if the processor looks up account numbers for the issuer, and the transaction is a transfer.
104	Transaction Description	LLLVAR	ans..100	C	Sent if available.
105	Large Data 1	LLLVAR	ans..255	O	
106	Large Data 2	LLLVAR	ans..255	O	
107	Large Data 3	LLLVAR	ans..255	O	
108	Large Data 4	LLLVAR	ans..255	O	
109	Sender Data	LLLVAR	ans..255	O	
110	Receiver Data	LLLVAR	ans..255	O	
111	Additional Data, Private Acquirer	LLLVAR	ans..255	O	For EBT transactions, sent if available.
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	This data element is required only if it is requested by the issuer.
120	Account Qualifiers	LLLVAR	an..006	O	This data element is required only if it is requested by the issuer.
122	Sponsor Bank ID	LLLVAR	an..011	O	This data element is required only if it is requested by the issuer.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
123	AVS/Check Auth Data	LLVAR	ans..050	C	This data element is required when doing address verification.
124	Tag Data, Acquirer	LLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
125	Tag Data, Issuer	LLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
126	Issuer Trace Data	LLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
127	Acquirer Trace Data	LLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0230 Financial Transaction Advice Response

Description

The 0230 Financial Transaction Advice Response message acknowledges that the Connex™ System or an issuer received the 0220/0221 financial transaction advice message. This message ensures that critical 022x messages have been received.

The use of a 0230 message is optional for an endpoint to indicate the receipt of a 0220/0221 Financial Transaction Advice. If a 0230 message is not desired, a protocol acknowledgment is the only verification that a 0220/0221 message was properly delivered.

Generated by

Connex System or issuer

Expected Response

None

Message Structure

Following is the structure of the 0230 Financial Transaction Advice Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0230.
--	Bit Map, Primary		b 64	M	
003	Processing Code		nP 6	M	Valid codes are listed in "Data Element Code Tables" on page 578.
004	Amount, Transaction		nP 12	M	
005	Amount, Settlement		nP 12	C	Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop® system which uses CCS.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
009	Conversion Rate, Settlement		nP 8	O	Returned if received in the 022x message.
011	System Trace Audit Number		nP 6	M	Copied from the 022x message.
012	Time, Local Transaction	hhmmss	nP 6	M	Copied from the 022x message.
013	Date, Local Transaction	MMDD	nP 4	M	Copied from the 022x message.
015	Settlement Date	MMDD	nP 4	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if received in the 022x message.
029	Amount, Settlement Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if the transaction and settlement currencies are different and the Amount, Transaction Fee is present.
037	Retrieval Reference Number		an 12	M	Copied from the 022x message.
038	Authorization Identification Response		an 6	O	Copied from the 022x message.
039	Response Code		an 2	M	Can be 00 or 30.
044	Additional Response Data	LLVAR	an..25	O	If the response code (bit 039) is 30, then this bit contains the bit number in error. May contain statement print information.
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
049	Currency Code, Transaction		nP 3	M	Copied from the 022x message.
050	Currency Code, Settlement		nP 3	C	Returned if received in the 022x message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
055	ICC Data	LLLVAR	b.. 255	C	Required on EMV transactions.
058	National Point-Of-Service Condition Code	LLLVAR	an..030	O	Copied from the 022x message. Note: The attributes for this data element are n..030 for the alternate format.
061	Acquirer Transport Data	LLLVAR	ans..100	C	Required if present in the 022x message.
063	FIS Data	LLLVAR	ans..050		The next two subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Pseudo Terminal		an 6	C	Required if present in the 022x message.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0300 Acquirer File Update Request (PI Negative)

Description

The 0300 Acquirer File Update Request message contains instructions to add, change, or delete a record on a specified file.

Generated by

Connex™ System or acquirer

Expected Response

0310 Acquirer File Update Response

Message Structure

Following is the structure of the 0300 Acquirer File Update Request message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0300.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
002	Primary Account Number	LLVAR	nP..19	C	Either this data element or 034 is required if bit 101 = PI-NEGATIVE.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	
014	Date, Expiration	YYMM	nP 4	F	Used if record is automatically deleted from the negative file at some future date.
023	Card Sequence Number		nP 3	O	Used if plastic numbers are supported by the issuer.
034	PAN Extended	LLVAR	nsP..28	C	Either this data element or 002 is required if bit 101 = PI-NEGATIVE.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
039	Response Code		an 2	O	Indicates the response code used by the processor when a transaction is denied. This field is required for adds and updates only.
044	Additional Response Data	LLVAR	an..25	F	Used if the acquirer wants the processor to provide additional information with a denial.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
061	Acquirer Transport Data	LLLVAR	ans..100	O	This data is echoed in the response. The length of this data element must be 40 or less.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
091	File Update Code		an 1	M	Supports the following codes: <ul style="list-style-type: none"> • Add (1) • Update (2) • Delete (3)
096	Message Security Code		b 64	M	8-byte character password assigned by the processor.
101	File Name	LLVAR	ans..17	M	PI-NEGATIVE

Bit No.	Data Element Name	Format	Attributes	Status	Notes
111	Additional Data, Private Acquirer	LLLVAR	FIS: ans..255 ISO: ans..999	O	<p>FIS defines this data element as Additional Data, Private Acquirer, used for the Online file maintenance. The layout for this is as follows: The filename is 8 in length, followed by Purge/Expiry Date in YYYYMMDD format and Region codes for a length of 14.</p> <p>For Mastercard The valid filenames are: MCC102 MCC103 The supported Region codes are: 1 A B C D E.</p> <p>For Visa The valid filenames are: E3 E4 D.CH.EXP The supported Region codes are: 0 A B C D E F Y Z.</p>
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	<p>This data element indicates the institution ID (IID) code of the institution that issued the card being maintained. Sent if available.</p>
128	Message Authentication Code		b 64	C	<p>This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.</p>

0302 Card Issuer File Update Request (PI Negative)

Description

The 0302 Card Issuer File Update Request message contains instructions to add, change, or delete a record on a specified file.

Generated by

Connex™ System or issuer

Expected Response

0312 Card Issuer File Update Response

Message Structure

Following is the structure of the 0302 Card Issuer File Update Request message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0302.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
002	Primary Account Number	LLVAR	nP..19	C	Either this data element or 034 is required if bit 101 = PI-NEGATIVE.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	
014	Date, Expiration	YYMM	nP 4	F	Used if record is automatically deleted from the negative file at some future date.
023	Card Sequence Number		nP 3	O	Used if plastic numbers are supported by the issuer.
034	PAN Extended	LLVAR	nsP..28	C	Either this data element or 002 is required if bit 101 = PI-NEGATIVE.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
039	Response Code		an 2	O	Indicates the response code used by the processor when a transaction is denied. This field is required for adds and updates only.
044	Additional Response Data	LLVAR	an..25	F	Used if the issuer wants the processor to provide additional information with a denial.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
062	Issuer Transport Data	LLVAR	ans..100	O	This data is echoed in the response. The length of this data element must be 40 or less.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
091	File Update Code		an 1	M	Supports the following codes: <ul style="list-style-type: none"> • Add (1) • Update (2) • Delete (3) • Inquiry (5)
096	Message Security Code		b 64	M	8-byte character password assigned by the processor.
101	File Name	LLVAR	ans..17	M	PI-NEGATIVE

Bit No.	Data Element Name	Format	Attributes	Status	Notes
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	This data element indicates the institution ID (IID) code of the institution that issued the card being maintained. Sent if available.
121	Additional Data, Private Issuer	LLLVAR	FIS: ans..255 ISO: ans..999	O	<p>FIS defines this data element as Additional Data, Private Issuer, used for Online file maintenance.</p> <p>The layout for this is as follows:</p> <p>The filename is 8 in length, followed by Purge/Expiry Date in YYYYMMDD format and Region codes for a length of 14.</p> <p>For Mastercard</p> <p>The valid filenames are: MCC102 MCC103</p> <p>The supported Region codes are: 1 A B C D E.</p> <p>For Visa</p> <p>The valid filenames are: E3 E4 D.CH.EXP</p> <p>The supported Region codes are: 0 A B C D E F Y Z</p>
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0310 Acquirer File Update Response (PI Negative)

Description

The 0310 Acquirer File Update Response message is sent to respond to the 0300 Acquirer File Update Request message.

Generated by

Connex™ System or issuer

Expected Response

None

Message Structure

Following is the structure of the 0310 Acquirer File Update Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0310.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
002	Primary Account Number	LLVAR	nP..19	C	Required if received in the 0300 message.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	Copied from the 0300 message.
014	Date, Expiration	YYMM	nP 4	F	Required only in responses to inquiries when an expiration date is in the negative file.
023	Card Sequence Number		nP 3	C	Required if the data element is present in the 0300 message.
034	PAN Extended	LLVAR	nsP..28	C	Required if received in the 0300 message.
039	Response Code		an 2	M	Indicates the result of the file update request.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
044	Additional Response Data	LLVAR	an..25	C	Required only in responses to inquiries when the data is available from the negative file. This data element will contain the reason on the negative file.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
061	Acquirer Transport Data	LLLVAR	ans..100	C	Required if present in the 0300 message.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
091	File Update Code		an 1	M	Copied from the 0300 message.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0312 Card Issuer File Update Response (PI Negative)

Description

The 0312 Card Issuer File Update Response message is sent to respond to the 0302 Card Issuer File Update Request message.

Generated by

Connex™ System or acquirer

Expected Response

None

Message Structure

Following is the structure of the 0312 Card Issuer File Update Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0312.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
002	Primary Account Number	LLVAR	nP..19	C	Required if received in the 0302 message.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	Copied from the 0302 message.
014	Date, Expiration	YYMM	nP 4	F	Required only in responses to inquiries when an expiration date is in the negative file.
023	Card Sequence Number		nP 3	C	Required if the data element is present in the 0302 message.
034	PAN Extended	LLVAR	nsP..28	C	Required if received in the 0302 message.
039	Response Code		an 2	M	Indicates the result of the file update request.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
044	Additional Response Data	LLVAR	an..25	C	Required only in responses to inquiries when the data is available from the negative file. This data element will contain the reason on the negative file.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
062	Issuer Transport Data	LLLVAR	ans..100	C	Required if present in the 0302 message.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
091	File Update Code		an 1	M	Copied from the 0302 message.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0382 Card Issuer File Update Request (AP Files)

Description

The 0382 Card Issuer File Update Request message contains instructions to add, change, or delete a record on the AP files.

Generated by

Connex™ System or issuer

Expected Response

0392 Card Issuer File Update Response

Message Structure

Following is the structure of the 0382 Card Issuer File Update Request message.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
--	Message Type		nP 4	M	Always 0382.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
062	Issuer Transport Data	LLLVAR	ans..100	O	This data is echoed in the response. The length must be 26 or less.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
091	File Update Code		an 1	M	Supports the following codes: <ul style="list-style-type: none"> • Add (1) • Update (2) • Delete (3)
096	Message Security Code		b 64	M	8-byte character password assigned by the processor.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
101	File Name	LLVAR	ans..17	M	Values are: <ul style="list-style-type: none"> • CHnn for cardholder file maintenance • ADnn for account detail file maintenance (nn = the segment ID being maintained)
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	M	Institution ID (IID) code of the institution that issued the card being maintained.

Bit No.	Data Element Name	Format	Attri-butes	Sta-tus	Notes
121	Additional Data, Private Issuer	LLLVAR	FIS: ans..255 ISO: ans..999	O	<p>FIS defines this data element as Additional Data, Private Issuer, used for Online file maintenance. The layout for this is as follows: The filename is 8 in length, followed by Purge/Expiry Date in YYYYMMDD format and Region codes for a length of 14.</p> <p><u>For Mastercard</u> The valid filenames are: MCC102 MCC103 The supported Region codes are: 1 A B C D E.</p> <p><u>For Visa</u> The valid filenames are: E3 E4 D.CH.EXP The supported Region codes are: 0 A B C D E F Y Z.</p>
124	Info, Text	LLLVAR	ans..255	M	Cardholder or account file maintenance data. See “Section 5. Data Element Definitions” for layout information.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0392 Card Issuer File Update Response (AP Files)

Description

The 0392 Card Issuer File Update Response message is sent to respond to the 0382 Card Issuer File Update Request message.

Generated by

Connex™ System or acquirer

Expected Response

None

Message Structure

Following is the structure of the 0392 Card Issuer File Update Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0392.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	Copied from the 0382 message.
039	Response Code		an 2	M	Indicates the result of the file maintenance request.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
062	Issuer Transport Data	LLLVAR	ans..100	C	Required if present in the 0382 message. The length must be 26 or less.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
091	File Update Code		an 1	M	Copied from the 0382 message.
101	File Name	LLVAR	ans..17	M	Copied from the 0382 message.
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	M	Institution ID (IID) code of the institution that issued the card being maintained.
124	Info, Text	LLLVAR	ans..255	M	Cardholder or account file maintenance data. See "Section 5. Data Element Definitions" for layout information.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0420/0421 Acquirer Reversal Advice

Description

A 0420 Acquirer Reversal Advice message reverses (partially or wholly) an earlier authorization or transaction.

Generated by

Connex™ System or acquirer

Expected Response

0430 Acquirer Reversal Advice

Message Structure

Following is the structure of the 0420/0421 Acquirer Reversal Advice message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0420 initially; 0421 if repeated.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
002	Primary Account Number	LLVAR	nP..19	C	Required if present in the 02xx or 01xx message.
003	Processing Code		nP 6	M	Copied from the 02xx or 01xx message.
004	Amount, Transaction		nP 12	M	Copied from the 02xx or 01xx message.
005	Amount, Settlement		nP 12	C	Required if present in the 02xx or 01xx request message.
006	Amount, Cardholder Billing		nP 12	C	Required if present in the 02xx or 01xx request message.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
008	Amount, Cardholder Billing Fee		nP 8	O	Copied from the 02xx or 01xx message. This data element is present only if it is requested by the issuer.
009	Conversion Rate, Settlement		nP 8	C	Required if present in the 02xx or 01xx request message.
010	Conversion Rate, Cardholder Billing		nP 8	C	Required if present in the 02xx or 01xx request message.
011	System Trace Audit Number		nP 6	M	Copied from the 02xx or 01xx message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
012	Time, Local Transaction	hhmmss	nP 6	M	Copied from the 02xx or 01xx message.
013	Date, Local Transaction	MMDD	nP 4	M	Copied from the 02xx or 01xx message.
014	Date, Expiration	YYMM	nP 4	C	Required if present in the 02xx or 01xx message. Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.
015	Date, Settlement	MMDD	nP 4	M	
016	Date, Conversion	MMDD	nP 4	C	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.
018	Merchant Type		nP 4	O	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.
019	Acquiring Institution Country Code		nP 3	C	Sent if Acquiring Institution's Country Code is not the same as the Issuing Institution's Country Code.
020	PAN Extended Country Code		nP 3	C	Required if PAN Extended (bit 034) is sent.
021	Forwarding Institution Country Code		nP 3	C	Required if different from Acquiring Institution Country Code (bit 019).

Bit No.	Data Element Name	Format	Attributes	Status	Notes
022	Point-of-Service Entry Mode		nP 3	C	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.
023	Card Sequence Number		nP 3	O	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.
025	Point-of-Service Condition Code		nP 2	C	Although either this bit or bit 058 is required, FIS prefers that you use bit 058 in place of this bit for all transactions. Valid codes are listed in “Point-of-Service Condition Codes (bit 025)” on page 614
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if present in the 01xx or 02xx message. Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
029	Amount, Settlement Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if present in the 01xx or 02xx message. Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.
030	Amount, Transaction Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. This data element is required only if it is requested by the issuer.
031	Amount, Settlement Processing Fee		x + n 8	O	x = C (credit) or D (debit) amount. This data element is required only if it is requested by the issuer.
032	Acquiring Institution Identification Code	LLVAR	nP..11	M	Copied from the 02xx or 01xx message.
033	Forwarding Institution Identification Code	LLVAR	nP..11	C	Required if different from Acquiring Institution Identification Code (bit 032).
034	PAN Extended	LLVAR	nsP..28	C	Required if present in the 02xx or 01xx message.
036	Track 3 Data	LLLVAR	nsP..104	C	Optional if the 02xx or 01xx is stripe read (POS entry mode 02/90/91). Otherwise required if present in the 02xx or 01xx message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
037	Retrieval Reference Number		an 12	M	Copied from the 02xx or 01xx message.
038	Authorization Identification Response		an 6	C	Copied from the 0210 or 0110 message, if available.
039	Response Code		an 2	M	Copied from the 0110 or 0210 message.
040	Service Restriction Code		an 3	O	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response. This data element is required only if it is requested by the issuer.
041	Card Acceptor Terminal Identification		an 8	M	Copied from the 02xx or 01xx message.
042	Card Acceptor Identification Code		an 15	O	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response. This data element is required only if it is requested by the issuer.
043	Card Acceptor Name and Location		an 40	C	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
047	Additional Data, National	LLLVAR	ans..100	C	Sent if available.
048	Merchant/Bank Name	LLLVAR	ans..025	C	Sent if available.
049	Currency Code, Transaction		nP 3	M	Copied from the 02xx or 01xx message.
050	Currency Code, Settlement		nP 3	C	Required if present in the 02xx or 01xx message.
051	Currency Code, Cardholder Billing		nP 3	C	Required if present in the 02xx or 01xx message.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
054	Additional Amounts	LLLVAR	ans..120	O	This data element is sent if transaction-related amounts are present. It is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.
055	ICC Data	LLLVAR	b.. 255	C	Required on EMV transactions.
056	Replacement Additional Fees	LLLVAR	ans..88	C	Required if partial dispense and bit 046 was present in the original request.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
057	Authorization Life Cycle	LLVAR	an..003	C	Required if present in the 01xx message.
058	National Point-of-Service Condition Code	LLVAR	an..030	C	Although either this bit or bit 025 is required, FIS prefers that you use this bit for all transactions. Valid codes are listed in “National POS Condition Code (bit 058)” on page 627 . Note: The attributes for this data element are n..030 for the alternate format.
059	National Point-of-Service Geographic Data	LLVAR	an..017	O	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response. This data element is required only if it is requested by the issuer.
060	Advice/Reversal Reason Code	LLVAR	an..006	C	Required if available.
--	Byte Map		an 2	C	Required to indicate the presence of subelements.
--	Reversal Reason		an 2	C	Required if available.
--	Advice Reason		an 2	C	Required if available.
061	Acquirer Transport Data	LLVAR	ans..100	C	This data is echoed in the response, but it is only sent by FIS if the host is sending totals or the data element is requested by the issuer.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
063	FIS Data	LLVAR	ans..050		The following subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.
--	Issuer Network Identification		an 3	C	Required from the 02xx or 01xx message.
--	Acquirer Network Identification		an 3	C	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.
--	Processor ID		an 6	C	Required from the 02xx or 01xx message.
--	Auth Timeout		an 2	O	If this subelement is present, it contains zeroes.
--	Open Account Relationship Data		an 15	O	Sent when supporting an Open Account Relationship (OAR) request.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Processing Flags		an 5	C	<p>Required when supporting externally settled transactions, also required when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. See the document titled <i>Externally Settled Transactions</i> for more information.</p> <p>Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.</p>
067	Extended Payment Code		nP 2	O	<p>Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response.</p>

Bit No.	Data Element Name	Format	Attributes	Status	Notes
090	Original Data Elements		nP 42	M	Original message type required on inbound messages to the Connex™ System; remaining subelements are zero-filled. Outbound from the Connex System, the original message type is sent. Original system trace audit number and local date and time are sent if available. Note: These values will usually match those in elements 011, 012, and 013.
095	Replacement Amounts		an 42	C	Required if partial dispense.
098	Payee		ans 25	C	Sent if available and if this transaction is a payment or payment return transaction.
100	Receiving Institution ID Code	LLVAR	nP..11	C	Sent if routing is based on this data element instead of the PAN.
102	Account ID 1	LLVAR	ans..28	C	Copied from the 02xx or 01xx message, if available.
103	Account ID 2	LLVAR	ans..28	C	Copied from the 02xx or 01xx message, if available.
104	Transaction Description	LLLVAR	ans..100	C	Sent if available.
105	Large Data 1	LLLVAR	ans..255	C	Sent if available. For detailed information, see “105 Large Private Data 1” on page 365 .

Bit No.	Data Element Name	Format	Attributes	Status	Notes
106	Large Data 2	LLLVAR	ans..255	C	Sent if available. For detailed information, see “106 Large Private Data 2” on page 371 .
107	Large Data 3	LLLVAR	ans..255	C	Sent if available. For detailed information, see “107 Large Private Data 3” on page 372 .
108	Large Data 4	LLLVAR	ans..255	C	Sent if available. For detailed information, see “108 Large Private Data 4” on page 373 .
109	Sender Data	LLLVAR	ans..255	O	
111	Additional Data, Private Acquirer	LLLVAR	ans..255	O	For EBT transactions, sent if available.
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	Copied from the 020x or 010x message. This data element is required only if it is requested by the issuer.
120	Account Qualifiers	LLLVAR	an..006	O	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response. This data element is required only if it is requested by the issuer.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
122	Sponsor Bank ID	LLLVAR	an..011	O	Is not sent to the issuer in reversals unless the acquirer supplied it, or for late or unsolicited responses unless the issuer included this data element in their response. This data element is required only if it is requested by the issuer.
123	AVS/Check Auth Data	LLLVAR	ans..050	C	Sent if present in the 01xx or 02xx message.
124	Tag Data, Acquirer	LLLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
125	Tag Data, Issuer	LLLVAR	ans..255	O	This data element is sent if tagged data is available in TLV format.
126	Issuer Trace Data	LLLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
127	Acquirer Trace Data	LLLVAR	ans..100	O	This data element is required only if it is requested by the issuer.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0430 Acquirer Reversal Response

Description

The 0430 Acquirer Reversal Response message acknowledges that the Connex™ System or an issuer received the 0420 or 0421 Acquirer Reversal Advice message.

The use of a 0430 is optional for a 0420/0421 message.

Generated by

Connex System or issuer

Expected Response

None

Message Structure

Following is the structure of the 0430 Acquirer Reversal Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0430.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
003	Processing Code		nP 6	M	
004	Amount, Transaction		nP 12	M	
005	Amount, Settlement		nP 12	C	Required if the transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop® system which uses CCS.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
009	Conversion Rate, Settlement		nP 8	O	Returned if received in the 042x message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
011	System Trace Audit Number		nP 6	M	Copied from the 042x message.
012	Time, Local Transaction	hhmmss	nP 6	M	Copied from the 042x message.
013	Date, Local Transaction	MMDD	nP 4	M	Copied from the 042x message.
015	Date, Settlement	MMDD	nP 4	M	
028	Amount, Transaction Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if received in the 04xx message.
029	Amount, Settlement Fee		x + n 8	C	x = C (credit) or D (debit) amount. Required if transaction and settlement currencies are different and the Amount, Transaction Fee is present.
037	Retrieval Reference Number		an 12	M	Copied from the 042x message.
038	Authorization Identification Response		an 6	O	Copied from the 042x message.
039	Response Code		an 2	M	Can be 00 or 30.
044	Additional Response Data	LLVAR	an..25	O	If the response code (bit 039) is 30, then this bit contains the bit number in error. May contain statement print information.
046	Additional Fees	LLLVAR	ans..88	C	Required when the defined fee is present. The fee may be a surcharge, rebate, or transaction fee.
049	Currency Code, Transaction		nP 3	M	Copied from the 042x message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
050	Currency Code, Settlement		nP 3	C	Returned if received in the 042x message.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
055	ICC Data	LLLVAR	b..255	C	Required on EMV transactions.
056	Replacement Additional Fees	LLLVAR	ans..88	C	Required if present in the 042x message.
058	National Point-Of-Service Condition Code	LLLVAR	an..030	O	Copied from the 042x message. Note: The attributes for this data element are n..030 for the alternate format.
061	Acquirer Transport Data	LLLVAR	ans..100	C	Required if present in the 042x message.
063	FIS Data	LLLVAR	ans..050		The next two subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if present in the 042x message.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
090	Original Data Elements		nP 42	M	Copied from the 042x message.
095	Replacement Amounts		an 42	C	Required if present in the 042x message.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0520/0521 Acquirer Reconciliation Advice (No Money Movement)

Description

The 0520/0521 Acquirer Reconciliation Advice message is sent for settlement purposes to advise the issuer of the totals (number and amount) since the last 0520 Acquirer Reconciliation Advice message was sent.

Generated by

Connex™ System or acquirer when controlling totals

Expected Response

0530 Acquirer Reconciliation Advice Response

Message Structure

Following is the structure of the 0520/0521 Acquirer Reconciliation Advice message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0520 initially; 0521 if repeated.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	
015	Settlement Date	MMDD	nP 4	M	Settlement date for totals being transmitted.
050	Currency Code, Settlement		nP 3	M	
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
074	Credits, Number		nP 10	M	
075	Credits, Reversal Number		nP 10	M	
076	Debits, Number		nP 10	M	
077	Debits, Reversal Number		nP 10	M	
078	Transfer, Number		nP 10	M	
079	Transfer, Reversal Number		nP 10	M	
080	Inquiries, Number		nP 10	M	
081	Authorizations, Number		nP 10	M	
082	Credits, Processing Fee Amount		nP 12	F	
083	Credits, Transaction Fee Amount		nP 12	C	Required when surcharge fees or rebates are present.
084	Debits, Processing Fee Amount		nP 12	F	
085	Debits, Transaction Fee Amount		nP 12	C	Required when surcharge fees or rebates are present.
086	Credits, Amount		nP 16	M	
087	Credits, Reversal Amount		nP 16	M	
088	Debits, Amount		nP 16	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
089	Debits, Reversal Amount		nP 16	M	
097	Amount, Net Settlement		x + n 16	M	x = C (credit) or D (debit) amount.
099	Settlement Institution Identification Code	LLVAR	nP..11	M	
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0522/0523 Issuer Reconciliation Advice (No Money Movement)

Description

The 0522/0523 Card Issuer Reconciliation Advice message is sent for settlement purposes to advise the acquirer of the totals (number and amount) since the last 0522 Card Issuer Reconciliation Advice message was sent.

Generated by

Connex™ System or issuer when controlling totals

Expected Response

0532 Card Issuer Reconciliation Advice Response

Message Structure

Following is the structure of the 0522/0523 Issuer Reconciliation Advice message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0522 initially; 0523 if repeated.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	
015	Settlement Date	MMDD	nP 4	M	Settlement date for totals being transmitted.
050	Currency Code, Settlement		nP 3	M	
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
074	Credits, Number		nP 10	M	
075	Credits, Reversal Number		nP 10	M	
076	Debits, Number		nP 10	M	
077	Debits, Reversal Number		nP 10	M	
078	Transfer, Number		nP 10	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
079	Transfer, Reversal Number		nP 10	M	
080	Inquiries, Number		nP 10	M	
081	Authorizations, Number		nP 10	M	
082	Credits, Processing Fee Amount		nP 12	F	
083	Credits, Transaction Fee Amount		nP 12	C	Required when surcharge fees or rebates are present.
084	Debits, Processing Fee Amount		nP 12	F	
085	Debits, Transaction Fee Amount		nP 12	C	Required when surcharge fees or rebates are present.
086	Credits, Amount		nP 16	M	
087	Credits, Reversal Amount		nP 16	M	
088	Debits, Amount		nP 16	M	
089	Debits, Reversal Amount		nP 16	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
097	Amount, Net Settlement		x + n 16	M	x = C (credit) or D (debit) amount.
099	Settlement Institution Identification Code	LLVAR	nP..11	M	
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0530 Acquirer Reconciliation Response

Description

The 0530 Acquirer Reconciliation Advice Response message may be sent in response to a 0520 Acquirer Reconciliation Advice message, and is the mandatory response to a 0521 Acquirer Reconciliation Advice repeat message.

Generated by

Connex™ System or issuer

Expected Response

None

Message Structure

Following is the structure of the 0530 Acquirer Reconciliation Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0530.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	Copied from the 050x message.
015	Settlement Date	MMDD	nP 4	M	Copied from the 050x message.
050	Currency Code, Settlement		nP 3	M	Copied from the 050x message.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
066	Settlement Code		nP 1	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
097	Amount, Net Settlement		x + n 16	M	x = C (credit) or D (debit) amount. Copied from the 050x message.
099	Settlement Institution Identification Code	LLVAR	nP..11	M	Copied from the 050x message.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0532 Card Issuer Reconciliation Response

Description

The 0532 Card Issuer Reconciliation Advice Response message may be sent in response to a 0522 Card Issuer Reconciliation Advice message, and is the mandatory response to a 0523 Card Issuer Reconciliation Advice repeat message.

Generated by

Connex™ System or acquirer

Expected Response

None

Message Structure

Following is the structure of the 0532 Card Issuer Reconciliation Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0532.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	Copied from the 050x message.
015	Settlement Date	MMDD	nP 4	M	Copied from the 050x message.
050	Currency Code, Settlement		nP 3	M	Copied from the 050x message.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
064	Message Authentication Code		b 64	C	This data element is required when MACing messages and no data element from 065-191 is present in the message.
066	Settlement Code		nP 1	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
097	Amount, Net Settlement		x + n 16	M	x = C (credit) or D (debit) amount. Copied from the 050x message.
099	Settlement Institution Identification Code	LLVAR	nP..11	M	Copied from the 050x message.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0600/0601 Administrative Risk Message

Description

A 0600/0601 Administrative Risk message is an optional Administrative message that can be sent between two endpoints or between an endpoint and the Connex™ System.

NOTE:

A value of **601** in data element 070 indicates that the 0600 message is an Administrative Risk Message.

Generated by

Acquirer or issuer.

Expected Response

0610 Administrative Risk Response by the receiver of the 0600/0601 message

Message Structure

Following is the structure of the 0600/0601 Administrative Risk message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0600 initially; 0601 if repeated.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
002	Primary Account Number	LLVAR	nP..19	M	
004	Amount, Transaction		nP 12	M	
006	Amount, Card Billing		nP 12	C	This data element is present in this message if it was present in the original authorization message that caused the administrative risk message.
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
010	Conversion Rate, Cardholder Billing		nP 8	C	This data element is present in this message if it was present in the original authorization message that caused the administrative risk message.
011	System Trace Audit Number		nP 6	M	
018	Merchant Type		nP 4	M	
041	Card Acceptor Terminal ID		an 8	M	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
042	Card Acceptor ID Code		an 15	C	This data element is present in this message if it was present in the original authorization message that caused the administrative risk message.
043	Card Acceptor Name and Location		an 40	C	This data element is present in this message if it was present in the original authorization message that caused the administrative risk message.
049	Currency Code, Transaction		nP 3	M	
051	Currency Code, Cardholder Billing		nP 3	C	This data element is present in this message if it was present in the original authorization message that caused the administrative risk message.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
063	FIS Data	LLLVAR	ans..050		
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	
--	Issuer Network Identification		an 3	C	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
070	Network Management Information Code		nP 3	M	Value is 601.
111	Additional Data, Private Acquirer	LLLVAR	ans..255	C	
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0600/0601 Electronic Mail Request Message

Description

A 0600/0601 Electronic Mail Request message is an optional Administrative message that can be sent between two endpoints or between an endpoint and the Connex™ System. The message is used for processor to processor and institution to institution mail.

NOTE:

A value of **800** in data element 070 indicates that the 0600 message is an Electronic Mail Request Message.

Generated by

Acquirer or issuer.

Expected Response

0610 Electronic Mail Response by the receiver of the 0600/0601 message

Message Structure

Following is the structure of the 0600/0601 Electronic Mail Request message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0600 initially; 0601 if repeated.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
070	Network Management Information Code		nP 3	M	Value is 800.
124	Info, Text	LLLVAR	ans..255	M	
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0600/0601 Administrative Request

Description

A 0600/0601 Administrative Request message is an optional Administrative message that can be sent between two endpoints or between an endpoint and the Connex™ System. The message is used for processor to processor and institution to institution mail.

NOTE:

A value of **810**, **811**, **812**, **821**, or **822** in data element 070 indicates that the 0600 message is an Administrative Request Message.

Generated by

Acquirer or issuer.

Expected Response

0610 Administrative Response by the receiver of the 0600/0601 message

Message Structure

Following is the structure of the 0600/0601 Administrative Request message

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0600 initially; 0601 if repeated.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
002	Primary Account Number	LLVAR	nP..19	C	
004	Amount, Transaction		nP 12	C	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	
012	Time, Local Transaction	hhmmss	nP 6	C	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
013	Date, Local Transaction	MMDD	nP 4	C	
014	Date, Expiration	YYMM	nP 4	C	
015	Date, Settlement	MMDD	nP 4	C	
018	Merchant Type		nP 4	C	
019	Acquiring Institution Country Code		nP 3	C	Sent if Acquiring Institution's Country Code is not the same as the Issuing Institution's Country Code.
020	PAN Extended Country Code		nP 3	C	
032	Acquiring Institution Identification Code	LLVAR	nP..11	C	
033	Forwarding Institution ID Code	LLVAR	nP..11	C	
037	Retrieval Reference Number		an 12	C	Sent if present.
038	Authorization Identification Response		an 6	C	
041	Card Acceptor Terminal ID		an 8	C	
042	Card Acceptor ID Code		an 15	C	Required when data element 070 equals 810, 811, 812, 821, or 822.
043	Card Acceptor Name and Location		an 40	C	
049	Currency Code, Transaction		nP 3	C	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
054	Additional Amounts	LLLVAR	ans..120	C	Sent if transaction-related amounts or balances are present.
059	National Point-of-Service Geographic Data	LLLVAR	an..017	C	This data element is required only if it is requested by the issuer.
063	FIS Data	LLLVAR	ans..050		The following subelements are defined in the FIS message standard. Required only when data element 070 equals 810, 811, 812, 821, or 822.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Issuer Network Identification		an 3	C	Sent to identify the initiator when the initiator is an issuer (when data element 070 equals 810, 811, or 812).
--	Acquirer Network Identification		an 3	C	Sent to identify the initiator when the initiator is an acquirer (when data element 070 equals 821 or 822).
070	Network Management Information Code		nP 3	M	This data element equals 810, 811, 812, 821, or 822. Valid codes are listed in "Network Management Information Codes (bit 070)" on page 636.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
071	Message Number		nP 4	C	Required when data element 070 equals 810, 811, 812, 821, or 822 (for example, x of data element 072).
072	Message Number Last		nP 4	C	Required when data element 070 equals 810, 811, 812, 821, or 822 (for example, data element 071 of x total messages).
090	Original Data Elements		nP 42	C	Outbound from the Connex™ System, the original message type, system trace audit number, and local date and time are sent if available. Remaining subelements are zero-filled. Inbound to the Connex System, this data element is not supported.
100	Receiving Institution ID	LLVAR	nP..11	M	
102	Account ID 1	LLVAR	ans..28	C	
104	Transaction Description	LLLVAR	ans...100	C	Required when data element 070 equals 810 and specific customer selection criteria is required.
105	Large Private Data 1	LLLVAR	ans..255	C	Required when data element 070 equals 810, 811, 812, 821, or 822.
106	Large Private Data 2	LLLVAR	ans..255	C	
107	Large Private Data 3	LLLVAR	ans..255	C	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
108	Large Private Data 4	LLLVAR	ans..255	C	
111	Additional Data, Private Acquirer	LLLVAR	ans..255	C	
121	Additional Data, Private Issuer	LLLVAR	ans..255	C	This data element is sent if available and you are using FIS-Defined private data elements. Refer to “FIS Private Use Data Elements and Subelements” on page 549.
124	Info, Text	LLLVAR	ans..255	O	
126	Issuer Trace Data	LLLVAR	ans..100	C	This data element is sent if available and you are using FIS-Defined private data elements. Refer to “FIS Private Use Data Elements and Subelements” on page 549.
127	Acquirer Trace Data	LLLVAR	ans..100	C	This data element is required only if it is requested by the acquirer.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0610 Administrative Risk Response

Description

A 0610 Administrative Risk Response message is sent in response to a 0600 Administrative Risk or 0601 Administrative Risk repeat message.

Generated by

Receiver to originator of the 0600/0601 Administrative Risk message

Expected Response

None

Message Structure

Following is the structure of the 0610 Administrative Risk Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0610.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	Copied from the 060x message.
039	Response Code		an 2	M	Must be 00 or 31.
070	Network Management Information Code		nP 3	M	Value is 601.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0610 Electronic Mail Response

Description

A 0610 Electronic Mail Response message is sent in response to a 0600 Electronic Mail Request or 0601 Electronic Mail Request repeat message.

Generated by

Receiver to originator of the 0600/0601 Electronic Mail message

Expected Response

None

Message Structure

Following is the structure of the 0610 Electronic Mail Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0610.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	Copied from the 060x message.
039	Response Code		an 2	M	Must be 00 or 31.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
070	Network Management Information Code		nP 3	M	Value is 800.
124	Info, Text	LLLVAR	ans..255	O	Cardholder or account file maintenance data. See “Section 5. Data Element Definitions” for layout information.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0610 Administrative Request Response

Description

A 0610 Administrative Request Response message is sent in response to a 0600 Administrative Request or 0601 Administrative Request repeat message.

Generated by

Receiver to originator of the 0600/0601 Administrative Request message

Expected Response

None

Message Structure

Following is the structure of the 0610 Administrative Request Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0610.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	Copied from the 060x message.
039	Response Code		an 2	M	Must be 00 or 31.
044	Additional Response Data	LLVAR	an..25	C	

Bit No.	Data Element Name	Format	Attributes	Status	Notes
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
070	Network Management Information Code		nP 3	M	Copied from the 060x message.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

0620 Administrative Advice

Description

The 0620 Administrative Advice message is used to notify the message originator that an unrecognized message was received, such as an error in parsing a bit map or a mandatory data element is not present.

Generated by

Acquirer or issuer

Expected Response

None

Message Structure

Following is the structure of the 0620 Administrative Advice message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0620.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
070	Network Management Information Code		nP 3	M	Must be 900.
124	Info, Text	LLVAR	ans..255	M	

0800 Network Management Request

Description

The 0800 Network Management Request message is used by any two communicating endpoints to coordinate system or network events or tasks, and to communicate network status conditions. For example, the request can contain sign on, sign off, key change, cutoff, or handshake information.

The recipient of a 0800 Network Management Request message must reply with a 0810 Network Management Response message within a specified time interval.

Generated by

Connex™ System or endpoint (acquirer or issuer)

Expected Response

0810 Network Management Response

Message Structure

Following is the structure of the 0800 Network Management Request message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0800.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and data element 070 equals 101, 161, 171, 180, 181, or 191.
070	Network Management Information Code		nP 3	M	
096	Message Security Code		b 64	C	Processor-assigned password. Required when the value of bit 070 is 001, 002, 061, 071, 072, 101, 161, or 171.
125	Network Management Information	LLLVAR	ans..999	C	Required when the value of bit 070 is 005, 101, 161, 171, 281, or 282.

0810 Network Management Response

Description

A 0810 Network Management Response message is sent in response to a 0800 Network Management Request message.

Generated by

Connex™ System or endpoint (acquirer or issuer)

Expected Response

None

Message Structure

Following is the structure of the 0810 Network Management Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 0810.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	Copied from the 0800 message.
039	Response Code		an 2	M	
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
070	Network Management Information Code		nP 3	M	Copied from the 0800 message.

0820 Network Management Request (Protocol Acknowledgment)

Description

The 0820 Network Management Request (Protocol Acknowledgment) message verifies that the communications link is active between the Connex™ System and the endpoint.

The Connex System sends only one of the two Network Management Request messages (0800 or 0820) to the acquirer or issuer. The Connex System accepts either request message; however, the 0800 Network Management Request message is the preferred message because it requires an application-level response.

Network Management Request messages are not sent by the Connex System when the endpoint's application is logged off.

Generated by

Connex System or endpoint (acquirer or issuer)

Expected Response

None

Message Structure

Following is the structure of the 0820 Protocol Acknowledgment message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Value 0820.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
070	Network Management Information Code		nP 3	M	
096	Message Security Code		b 64	C	Processor-assigned password. Required when the value of bit 070 is 001, 002, 061, 062, 071, 072, 101, 161, or 171.
125	Network Management Information	LLLVAR	ans..999	C	Required when the value of bit 070 is 005, 101, 161, 171, 281, or 282.

9110 Open Account Relationship Authorization Response

Description

The Connex™ System or the issuer generates the 9110 Open Account Relationship Authorization Response message in response to a 0100 multiple message request. The same structure is used for both accepted and denied transactions.

The acquirer receives this message and processes or denies the multiple account request based on information in the 0100 message. An approval initiates the updating of settlement or reconciliation controls between the acquirer and card issuer.

Generated by

Connex System or issuer

Expected Response

None

Message Structure

Following is the structure of the 9110 Open Account Relationship Authorization Response message.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
--	Message Type		nP 4	M	Always 9110.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
002	Primary Account Number	LLVAR	nP..19	C	Required if received in the 0100 message.
003	Processing Code		nP 6	M	Normally copied from the 0100 message. Bytes 3-4 and 5-6 may be changed from an unspecified account type (00) to a specified account type. Valid codes are listed in "Data Element Code Tables" on page 578.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
007	Transmission Date and Time	MMDDhhmmss	nP 10	M	
011	System Trace Audit Number		nP 6	M	Copied from the 0100 message.
012	Time, Local Transaction	hhmmss	nP 6	M	Copied from the 0100 message.
013	Date, Local Transaction	MMDD	nP 4	M	Copied from the 0100 message.
032	Acquiring Institution Identification Code	LLVAR	nP..11	M	Copied from the 0100 message.
033	Forwarding Institution Identification Code	LLVAR	nP..11	C	Required if received in the 0100 message.
034	PAN Extended	LLVAR	nsP..28	C	Required if received in the 0100 message.
035	Track 2 Data	LLVAR	nsP..37	C	Required if received in the 0100 message.
036	Track 3 Data	LLLVAR	nsP..104	C	Required if received in the 0100 message.
037	Retrieval Reference Number		an 12	M	Copied from the 0100 message.
039	Response Code		an 2	M	
041	Card Acceptor Terminal Identification		an 8	M	Copied from the 0100 message.
042	Card Acceptor Identification Code		an 15	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
045	Track 1 Data	LLVAR	ans..76	C	Required if received in the 0100 message.
047	Additional Data, National	LLLVAR	ans..100	C	Sent if available.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
061	Acquirer Transport Data	LLLVAR	ans..100	C	Required if received in the 0100 message.
063	FIS Data	LLLVAR	ans..050		The following subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if received in the 0100 message.
--	Issuer Network Identification		an 3	O	Sent if the acquirer wants to know which network authorized the transaction.
--	Acquirer Network Identification		an 3	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
--	Processor ID		an 6	O	Sent if the acquirer wants to know which processor authorized the transaction.
--	Auth Timeout		an 2	O	If this subelement is present, it contains zeroes.
--	Open Account Relationship Data		an 15	M	Sent when supporting Open Account Relationship (OAR) requests.

Bit No.	Data Element Name	Format	Attributes	Status	Notes
102	Account ID 1	LLVAR	ans..28	O	
103	Account ID 2	LLVAR	ans..28	O	
104	Transaction Description	LLLVAR	ans..100	O	May be returned by the issuer if received in the request and they want the data element returned to them in reversals for late or unsolicited responses.
105	Large Private Data 1		ans..255	M	Used to return account selection data.
106	Large Private Data 2		ans..255	O	Required when data returned exceeds data contained in data element 105.
107	Large Private Data 3		ans..255	O	Required when data returned exceeds data contained in data element 106.
108	Large Private Data 4		ans..255	O	Required when data returned exceeds data contained in data element 107.
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	Sent if available and you are using FIS-Defined private data elements. Refer to “FIS Private Use Data Elements and Subelements” on page 549 .

Bit No.	Data Element Name	Format	Attributes	Status	Notes
114	Authorizing Agent Country Code	LLLVAR	an..003	C	Sent if the Acquiring Institution's Country Code (bit 019) is not the same as the Issuing Institution's Country Code.
120	Account Qualifiers	LLLVAR	an..006	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

9210 Open Account Relationship Financial Transaction Response

Description

The Connex™ System or the issuer generates the 9210 Open Account Relationship Financial Transaction Response message in response to a 0200 multiple message request. The same structure is used for both accepted and denied transactions.

The acquirer receives this message and processes or denies the multiple account request based on information in the 0200 message. An approval initiates the updating of settlement or reconciliation controls between the acquirer and card issuer.

Generated by

Connex System or issuer

Expected Response

None

Message Structure

Following is the structure of the 9210 Open Account Relationship Financial Transaction Response message.

Bit No.	Data Element Name	Format	Attri-butes	Status	Notes
--	Message Type		nP 4	M	Always 9210.
--	Bit Map, Primary		b 64	M	
001	Bit Map, Secondary		b 64	M	
002	Primary Account Number	LLVAR	nP..19	C	Required if received in the 0200 message.
003	Processing Code		nP 6	M	Normally copied from the 0200 message. Bytes 3-4 and 5-6 may be changed from an unspecified account type (00) to a specified account type. Valid codes are listed in "Data Element Code Tables" on page 578.

Bit No.	Data Element Name	Format	Attri-butes	Status	Notes
007	Transmission Date and Time	MMDDhhmm mss	nP 10	M	Copied from the 0200 message.
011	System Trace Audit Number		nP 6	M	Copied from the 0200 message.
012	Time, Local Transaction	hhmmss	nP 6	M	Copied from the 0200 message.
013	Date, Local Transaction	MMDD	nP 4	M	Copied from the 0200 message.
032	Acquiring Institution Identification Code	LLVAR	nP..11	M	Copied from the 0200 message.
033	Forwarding Institution Identification Code	LLVAR	nP..11	C	Required if received in the 0200 message.
034	PAN Extended	LLVAR	nsP..28	C	Required if received in the 0200 message.
035	Track 2 Data	LLVAR	nsP..37	C	Required if received in the 0200 message.
036	Track 3 Data	LLLVAR	nsP..104	C	Required if received in the 0200 message.
037	Retrieval Reference Number		an 12	M	Copied from the 0200 message.
039	Response Code		an 2	M	
041	Card Acceptor Terminal Identification		an 8	M	Copied from the 0200 message.
042	Card Acceptor Identification Code		an 15	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.

Bit No.	Data Element Name	Format	Attri-butes	Status	Notes
045	Track 1 Data	LLVAR	ans..76	C	Required if received in the 0200 message.
047	Additional Data, National	LLLVAR	ans..100	C	Sent if available.
053	Security Related Control Information		nP 16	C	Required if using dual active encryption keys and message authentication (MACing) is being performed.
061	Acquirer Transport Data	LLLVAR	ans..100	C	Required if received in the 0200 message.
063	FIS Data	LLLVAR	ans..050		The following subelements are defined in the FIS message standard.
--	Byte Map		an 2	C	Required to indicate the presence of the subelements. Byte Map must be the first subelement.
--	Pseudo Terminal		an 6	C	Required if received in the 0200 message.
--	Issuer Network Identification		an 3	O	Sent if the acquirer wants to know which network authorized the transaction.
--	Acquirer Network Identification		an 3	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
--	Processor ID		an 6	O	Sent if the acquirer wants to know which processor authorized the transaction.
--	Auth Timeout		an 2	O	If this subelement is present, it contains zeroes.
--	Open Account Relationship Data		an 15	M	Sent when supporting Open Account Relationship (OAR) requests.

Bit No.	Data Element Name	Format	Attri-butes	Status	Notes
102	Account ID 1	LLVAR	ans..28	O	
103	Account ID 2	LLVAR	ans..28	O	
104	Transaction Description	LLLVAR	ans..100	O	May be returned by the issuer if received in the request and they want the data element returned to them in reversals for late or unsolicited responses.
105	Large Private Data 1		ans..255	M	Used to return account selection data.
106	Large Private Data 2		ans..255	O	Required when data returned exceeds data contained in data element 105.
107	Large Private Data 3		ans..255	O	Required when data returned exceeds data contained in data element 106.
108	Large Private Data 4		ans..255	O	Required when data returned exceeds data contained in data element 107.
113	Authorizing Agent Institution ID Code	LLLVAR	n..011	O	Sent if available and you are using FIS-Defined private data elements. Refer to “FIS Private Use Data Elements and Subelements” on page 549.

Bit No.	Data Element Name	Format	Attri-butes	Status	Notes
114	Authorizing Agent Country Code	LLLVAR	an..003	C	Sent if the Acquiring Institution's Country Code (bit 019) is not the same as the Issuing Institution's Country Code.
120	Account Qualifiers	LLLVAR	an..006	O	May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.
128	Message Authentication Code		b 64	C	This data element is required when MACing messages and at least one of the data elements from 065-127 is present in the message and no data elements from 129-191 are present in the message.

5

Data Element Definitions

This section provides detail for each ISO data element referenced in “Section 4. Message Structure.” With the exception of the first two elements (Message Type and Primary Bit Map), the data element definitions are listed in order by bit number. The following information is included for each data element.

Format

The format of the data element is provided, where applicable. Following is a legend for the abbreviations used for data format.

Notation	Description
MM	Month
DD	Day
YY	Year
hh	Hour
mm	Minute
SS	Second
LL	Length of variable data element that follows, from 01-99. If the packing option is <i>not</i> set, the variable length subelement is two numeric characters. Otherwise, the variable length subelement is 1-byte binary.
LLL	The FIS-defined length of the variable data element that follows, from 001-255 for standard variable length fields and 001-999 for variable length fields that are set for expanded length support. If the packing option is not set, the variable length sub element is three numeric characters. Otherwise, the variable length sub element is 2-bytes binary for variable length fields that are set for expanded length support, 1-byte binary otherwise.
VAR	Variable length data element.

Attributes

The data element attributes are included in abbreviated form for the following:

- The FIS implementation of the ISO standard
- ISO standard representation

The “Legend for Attributes Abbreviations” explains the abbreviations that are used throughout the section.

Description

The ISO definition of the data element is provided.

Data Edit

Editing performed on the data element; the information the element should contain.

Status

The FIS data element requirements for the applicable message types.

EMV Tags

For your convenience, the EMV attribute and tag has been identified if an ICC system-related data element has a corresponding EMV assignment.

NOTE: Not all fields have a corresponding EMV assignment.

For EMV tag definitions, see the Europay-MasterCard-Visa (EMV) 2000 specifications.

Legend for Attributes Abbreviations

Notation	Explanation
a	Alphabetic characters only.
n	Numeric digits only.
nP	Numeric data element that is capable of being packed, based on the database setting. The data element contains numeric digits in unsigned packed format (4-bit BCD) when the numeric packing option is set. The number indicates the number of digits the data element contains. Note: When the numeric packing option is set, all lengths are 1-byte binary. Odd-length packed numerics have a leading zero to ensure data elements begin and end on byte boundaries.
s	Special characters.
an	Alphabetic and numeric characters only.
as	Alphabetic and special characters.
ns	Numeric digits and special characters
NsP	Numeric special packed.
ans	Alphabetic, numeric, and special characters.
3	Fixed length of three characters.
..17	Variable length up to a maximum of 17 characters. All variable length fields will also contain two or three positions at the beginning of the field to identify the number of positions following to the end of that field.
x	Indicates a positive or negative amount. For example, x + n 16 in amount, net settlement means prefix C or D and 16 digits of amount, net settlement. C indicates a positive amount (credit). D indicates a negative amount (debit). Note: For financial transactions, the value of the amount (credit or debit) is given from the cardholder's perspective.
b	Binary representation of data. If packing option is not set, contains hexadecimal characters.
bcd	The data element contains numeric digits in unsigned packed format (4-bit BCD) whether the numeric packing option is on or off. If a bcd field is variable length, the length follows the standard rules for length, controlled with the Pack Numeric option.

Message Type

Attributes:	FIS: nP 4 ISO: n 4
Description:	Identifies the type of message being interchanged. Each message must begin with the message type indicator.
Data Edit:	Valid ISO Message ID.
Status:	Required for all message types.

Bit Map, Primary

Attributes:	FIS: b 8 bytes (packing maps) or FIS: 16 hex bytes (packing maps option not set) ISO: b 64
Description:	A series of 64 bits used to identify the presence (denoted by 1) or absence (denoted by 0) of data elements 001 through 064. The Primary Bit Map must follow the message type indicator of each message.
Data Edit:	Must include minimum bit map required by ISO and Installation, depending upon the message type indicator of each message.
Status:	Required for all message types.

001 Bit Map, Secondary

Attributes:	FIS: b 8 bytes (packing maps) or FIS: 16 hex bytes (packing maps option not set) ISO: b 64
Description:	A series of 64 bits used to identify the presence (denoted by 1) or absence (denoted by 0) of data elements 065 through 127.
Data Edit:	Must include minimum bit map required by ISO and Installation, depending upon the message ID.
Status:	Conditional on the presence of one or more data elements from 065 to 127.

002 Primary Account Number (PAN)

Format:	LLVAR
Attributes:	FIS: nP..19 ISO: n..19
Description:	A series of digits used to identify a customer account or relationship.
Data Edit:	Numeric. Required if PAN entry mode indicates manual entry.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Conditional. Required if PAN is manually entered. One of these data elements is required: 002, 034, 035, 036, 045, or 100. Note: DE002 is conditional for 0220 stand-in transactions.
0220, 0420	Required on 0420 reversals and 0220 pre-authorization completions transactions. Note: Issuers: As of Oct. 12, 2007 DE035 and DE045 will no longer be sent to Issuers on 0420 reversals and 0220 pre-authorized completions transactions. (DE35 and DE45 will continue to be passed on 0220 stand-in transactions if they were present in the request message.) Acquirers: As of April 4, 2008 DE035 and D45 will no longer be accepted on 0420 reversals and 0220 pre-authorization completions transactions.
0110, 0210, 9110, 9210	Conditional. Required if received in the request message.
0300, 0302, 0310, 0312	Conditional. Either data element 002 or 034 is required if bit 101 equals PI-NEGATIVE.
0600	Conditional. Required when Network Management Information Code (bit 070) equals 601, 810, 811, 812, 821, or 822. See MasterBanking Program for their on-line specification details.

003 Processing Code

Attributes:	FIS: nP 6 ISO: n 6
Description:	A series of digits used to describe the effect of a transaction on the customer account and identify the accounts affected. Refer to Data Element Code Tables for a list of valid processing codes.
Data Edit:	Matching table entry.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0130, 0200, 0210, 0220, 0230, 0420, 0430, 9110, 9210	Required.

004 Amount, Transaction

Attributes:	FIS: nP 12 ISO: n 12
Description:	Funds requested by the cardholder in the local currency of the acquirer or source location of the transaction, exclusive of transaction fee amount.
Data Edit:	Must be numeric, no greater than 999999999999. This amount must remain unchanged throughout the life of the transaction except in case of partially approved transactions, where this field will have the approved amount by issuer. Note: This field will still be unchanged for certain pre-authorized partially approved transactions.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0130, 0200, 0210, 0220, 0230, 0420, 0430	Required.
0600 Administrative Risk	Required if Network Management Information Code (bit 070) equals 601.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

005 Amount, Settlement

Attributes:	FIS: nP 12 ISO: n 12
Description:	Funds to be transferred between the acquirer and issuer. This amount equals the transaction amount in the currency of settlement. Note: FIS provides optional capability to perform currency resolution with the Currency Conversion System (CCS). For more information, see the <i>Currency Conversion System (CCS) User Manual</i> .
Data Edit:	Must be numeric, no greater than 999999999999.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0130, 0200, 0210, 0220, 0230, 0420, 0430	Conditional. Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.

006 Amount, Cardholder Billing

Attributes: FIS: nP 12
ISO n 12

Description: FIS Standard definition

The amount billed to the cardholder in the currency of the cardholder account, exclusive of cardholder billing fees.

Notes:

- When the amounts in Amount, Settlement (bit 005) and bit 006 are equal and the related currency codes are equal, the standard FIS ISO 8583 PI code suppresses the passing of bit 006 and the associated Card Bill Conversion rate to the issuer.
- FIS provides optional capability to perform currency resolution with the Currency Conversion System (CCS). For more information, see the *Currency Conversion System (CCS) User Manual*.

Optional definition

Optionally, the outbound message can contain a bundled cardholder billing amount. This will contain the billing transaction and fee types 15 and 71 (present in bit 046). These are fees passed by network links, for example MasterCard® or Visa®. This option is set in the Connex™ Environmental Database on the PI configuration record, CNFG040.

Data Edit: Must be numeric, no greater than 999999999999.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Conditional. Required if settlement and cardholder currencies are different.
0600	Conditional. Will be present if Network Management Information Code (bit 070) equals 601, and this element was contained in the original authorization message that caused this alert.

007 Transmission Date and Time

Format:	MMDDhhmmss
Attributes:	FIS: nP 10 ISO: n 10
Description:	The date and time the message entered into the data interchange system, expressed in Greenwich Mean Time (GMT).
Notes:	<ul style="list-style-type: none"> The time is set by the initiator of the message. For Administrative messages with Network Management Information Code (bit 070) equal to 601, this is the date and time of the transaction referenced in this alert.
Data Edit:	Must be valid date (MMDD) and time (hhmmss).
Status:	Required in all messages.

008 Amount, Cardholder Billing Fee

Attributes:	FIS: nP 8 ISO: n 8
Description:	The fee to be billed to the cardholder by the card issuing institution in the same currency as the cardholder billing amount.
Data Edit:	Must be numeric, no greater than 99999999.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Optional. Present in financial requests outbound if AP is calculating service fees.
0420	Optional (if available).
0110, 0210	Optional. Present in financial responses if the card issuing institution is billing the cardholder for this transaction.

009 Conversion Rate, Settlement

Attributes:	<p>FIS: nP 8 ISO: n 8 This data element is in the format ABBBBBBB, where: A = the decimal position from the right B = the actual conversion factor</p>
Description:	<p>The factor used in the conversion from the transaction to settlement amount. The transaction amount is multiplied by the settlement conversion rate to determine the settlement amount. Note: FIS provides optional capability to perform currency resolution with the Currency Conversion System (CCS). For more information, see the <i>Currency Conversion System (CCS) User Manual</i>.</p>
Data Edit:	Numeric. Required if settlement amount is present and different from transaction amount.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Conditional. Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.
0130, 0230, 0430	Optional.

010 Conversion Rate, Cardholder Billing

Attributes:	<p>FIS: nP 8 ISO: n 8 This data element is in the format ABBBBBBB, where: A = the decimal position from the right B = the actual conversion factor</p>
Description:	<p>The factor used in the conversion from the transaction to cardholder billing amount. The transaction amount is multiplied by the cardholder billing conversion rate to determine the cardholder billing amount.</p> <p>Note: FIS provides optional capability to perform currency resolution with the Currency Conversion System (CCS). For more information, see the <i>Currency Conversion System (CCS) User Manual</i>.</p>
Data Edit:	Numeric. Required if cardholder amount is present and different from settlement amount.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Conditional. Required if settlement and cardholder billing currencies are different.
0600	Conditional. Will be present if Network Management Information Code (bit 070) equals 601, and this element was contained in the original authorization message that caused this alert.

011 System Trace Audit Number

Attributes:	FIS: nP 6 ISO: n 6
Description:	A number assigned by the message initiator to uniquely identify a transaction. The trace number remains unchanged for all messages throughout the life of the transaction. For example, 0200 → 0210 → 0420 → 0430 all must have the same trace number.
Data Edit:	Numeric.
Status:	Required in all messages. Must remain unchanged throughout the life of the transaction.

012 Time, Local Transaction

Format:	hhmmss
Attributes:	FIS: nP 6 ISO: n 6
Description:	The local time at which the transaction takes place at the point of the card acceptor location. This time must remain unchanged throughout the life of the transaction. For example, 0200 → 0210 → 0420 → 0430 all must have the same local transaction time.
Data Edit:	Valid time (hhmmss).
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0130, 0200, 0220, 0230, 0420, 0430, 9110, 9210	Required. Must remain unchanged throughout the life of the transaction.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

013 Date, Local Transaction

Format:	MMDD
Attributes:	FIS: nP 4 ISO: n 4
Description:	The local month and day on which the transaction takes place at the card acceptor location. This date must remain the same throughout the life of the transaction. For example, 0200 → 0210 → 0420 → 0430 all must have the same local transaction date.
Data Edit:	Valid date (MMDD).
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0130, 0200, 0220, 0230, 0420, 0430, 9110, 9210	Required. Must remain unchanged throughout the life of the transaction.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

014 Date, Expiration

Format:	YYMM
Attributes:	FIS: nP 4 ISO: n 4
Description:	The year and month after which the card expires.
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	<p>Conditional. Required if PAN manually entered then DE014 will not be present on 0420 reversals and 0220 pre-authorization completions transactions for transactions that were originally processed with track data, DE035 or DE045.</p> <p>Note:</p> <p>Issuers: As of Oct. 12, 2007 0420 reversals and 0220 pre-authorization completions transactions, DE035 and DE045 will no longer be sent to Issuers.</p> <p>Acquirers: As of April 4, 2008 0420 reversals and 0220 pre-authorization completions transactions, DE035 and D45 will no longer be accepted.</p>
0110, 0210	Optional. Required if you want to receive this data element in a reversal for a late or unsolicited response.
0300, 0302, 0310, 0312	Future use. Date to expire this record from the negative file.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

NOTE: Acquirers need to take EMV tag 5F24 and populate in DE14.

015 Date, Settlement

Format:	MMDD
Attributes:	FIS: nP 4 ISO: n 4
Description:	<p>The month and day funds are transferred between the acquirer and issuer or any intermediate network facility. Depending on the message, this data element may contain the following information:</p> <ul style="list-style-type: none"> • Inbound requests: This data element may contain the acquirer's settlement date for the transaction. • Inbound responses: This data element may contain the issuer's settlement date for the transaction. • Outbound requests or responses: This date is taken from the internal calendar record. • Totals messages: This data element contains the date of the settlement totals. <p>Note: FIS does not guarantee 100% synchronization with Settlement end-of-day due to cutoff and suspense times.</p>
Data Edit:	Valid date (MMDD).
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0130, 0200, 0210, 0220, 0230, 0420, 0430, 0520, 0522, 0530, 0532	Required.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

016 Date, Conversion

Format:	MMDD
Attributes:	FIS: nP 4 ISO: n 4
Description:	The month and day the conversion rate is effective to convert the transaction amount from the original to settlement currencies. Note: FIS provides optional capability to perform currency resolution with the Currency Conversion System (CCS). For more information, see the <i>Currency Conversion System (CCS) User Manual</i> .
Data Edit:	Valid date (MMDD). Required if a conversion rate is present.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Conditional. Required if transaction and settlement currencies are different, unless the host has a currency-slave relationship to the Connex on HP NonStop system which uses CCS.

017 Date, Capture

Format:	MMDD
Attributes:	FIS: nP 4 ISO: n 4
Description:	The month and day the transaction date was processed by the acquirer.
Data Edit:	Valid date (MMDD).
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Optional.

018 Merchant Type

Attributes:	FIS: nP 4 ISO: n 4
Description:	The classification of the merchant's type of business product or service.
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Conditional. Required in financial request messages if from a point-of-sale device.
0110, 0210	Optional. Required in responses if you want to receive this data element in a reversal for a late or unsolicited response.
0420	Optional (if available).
0600 Administrative Risk	Required if Network Management Information Code (bit 070) equals 601.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

019 Acquiring Institution Country Code

Attributes:	FIS: nP 3 ISO: n 3
Description:	The code of the country where the acquiring institution is located. (See ISO 3166.)
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Conditional. Sent whenever the Issuing Institution's Country Code is not the same as the Acquiring Institution's Country Code.
0110, 0210	Conditional. Required if you want to receive this data element in a reversal for a late or unsolicited response.
0420	Conditional (if available).
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

020 Primary Account Number (PAN) Extended Country Code

Attributes:	FIS: nP 3 ISO: n 3
Description:	The code of the country where the issuer institution is located. (See ISO 3166.)
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Conditional. Required if PAN Extended (bit 034) is sent.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

021 Forwarding Institution Country Code

Attributes:	FIS: nP 3 ISO: n 3
Description:	The code of the country where the forwarding institution is located. (See ISO 3166.)
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	Conditional. Required if the acquiring institution country code is different from the forwarding institution country code.
0110, 0210	Conditional. Required if received in the 0100 or 0200 message.

022 Point-of-Service Entry Mode

Attributes:	FIS: nP 3 ISO: n 3
Description:	Two numerics to indicate the method by which the primary account number was entered into the system and one numeric to indicate PIN entry capabilities. Refer to “Point-of-Service Entry Mode (bit 022)” on page 612 for a list of PAN entry mode (positions 1 & 2) and PIN entry mode (position 3) values.
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Conditional. Required if the transaction was entered at one of the following: <ul style="list-style-type: none"> • A point-of-service device • An ATM acquirer participating in a CVV program • A chip-related ATM transaction
0220, 0420	Conditional Note: Issuers: As of Oct. 12, 2007 0420 reversals and 0220 pre-authorized completions that originally contained DE035 or DE045 will have the PAN entry mode will set to "00". Acquirers: As of April 4, 2008 0420 reversals and 0220 pre-authorized completions that originally contained DE035 or DE045 and a PAN entry mode will require the pan entry mode will set to "00". If the original message contained DE035 or DE045 and no PAN entry mode set DE22 to "000". For scenarios where the acquirer processor does stand-in authorization and sends a 0120/0220 advice, DE22 should reflect the actual PAN entry mode and will not be set to "00" unspecified. Note: Since DE35 in cardless cash access transaction is a fabricated track, PAN Entry mode (DE22) will not be set to "00" for Cardless cash access transaction (DE22=83) on 0420 reversals and 0220 pre-authorized completions.
0110, 0210	Optional. Required if you want to receive the data element in a reversal for a late or unsolicited response.

023 Card Sequence Number

Attributes:	FIS: nP 3 ISO: n 3
Description:	A number distinguishing between separate cards with the same primary account number or primary account number extended. (See ISO 4909.)
Data Edit:	None.
Status:	Refer to the following charts for the FIS and EBT Transaction data element requirements.

FIS Requirements

Message Types	Status Information
0100, 0120, 0200, 0220	Conditional. Required if cards have member/plastic numbers and Track 2 (DE035) is not sent.
0220, 0420	Conditional Note: Issuers: As of Oct. 12, 2007 0420 reversals and 0220 pre-authorized completions that are created from a transaction that originally contained DE035 or DE045 will not have card sequence number sent in the message. Acquirers: As of April 4, 2008 0420 reversals and 0220 pre-authorized completions that are created from a transaction that originally contained DE035 or DE045 will not have to send in card sequence number sent in the message.
0110, 0210	Optional. Required if you want to receive this data element in a reversal for a late or unsolicited response.
0300, 0302, 0310, 0312	Conditional. Required if cards have plastic numbers.

EBT Transaction Requirements

Message Types	Status Information
0200, 0220	Conditional. Required if cards have plastic numbers and Track 2 (bit 035) is not sent.
0210	Optional. Required if you want to receive this data element in a reversal for a late or unsolicited response.
0420	Conditional. Required if cards have plastic numbers and Track 2 (bit 035) is not sent.

Integrated Circuit Card Requirements

Message Types	Status Information
0100, 0200	Conditional. This data element is included in chip card transactions with Visa® and MasterCard®. See the Visa and MasterCard specifications for additional details.
0110, 0120, 0210, 0220	Optional. This data element is passed through unaltered when received.

NOTE:

Acquirers need to take EMV tag 5F34 and populate in DE23. If 5F34 is not present in the card, DE23 should not be sent in the request message on chip transactions.

024 Network International Identifier

Attributes:	FIS: nP 3 ISO: n 3
Description:	Identifies a single international network of card issuers. Note: This data element is being removed by the ISO committee.
Status:	Not used.

025 Point-of-Service Condition Code

Attributes:	FIS: nP 2 ISO: n 2
Description:	An identification of the condition under which the transaction takes place at the point-of-service. Refer to “Point-of-Service Condition Codes (bit 025)” on page 614 for a list of valid point-of-service condition codes. Note: FIS prefers the use of bit 058 in place of this data element.
Data Edit:	Numeric. Either bit 025 or 058 is required.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Conditional. Either data element 025 or 058 is required. The value received from the acquirer may change to indicate CVV results. Note: The pre-authorized debit indication of 06 takes precedence.

026 Point-of-Service PIN Capture Code

Attributes:	FIS: nP 2 ISO: n 2
Description:	A code indicating the technique and/or maximum number of PIN characters accepted by the point-of-service device used to construct the PIN data.
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0200	Optional.

027 Authorization Identification Response Length

Attributes:	FIS: nP 1 ISO: n 1
Description:	The maximum length of authorization response which the acquirer can accommodate. The issuer or agent is expected to limit the response length. Note: The authorization code is truncated in the response if the issuer or agent does not limit the length.
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0200	Optional.

028 Amount, Transaction Fee

Attributes:	FIS: x + n 8 ISO: x + n 8
Description:	<p>The fee charged (for example, by the acquirer) for transaction activity in the currency of the transaction amount. The fee may be a surcharge, rebate, or transaction fee.</p> <p>This amount must be the same value in the response as in the request. The value is a debit for a fee and a credit for a rebate. (The debit or credit reflects the cardholder's perspective.)</p> <p>Notes:</p> <ul style="list-style-type: none"> FIS only calculates on-line fees for surcharging. See the description for data element "046 Additional Fees (FIS Defined)" on page 309.
Data Edit:	<p>Must be numeric. x must be 0, C, or D.</p> <p>C = Credit amount</p> <p>D or 0 = Debit amount</p>
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	<p>Conditional. Required when the defined fee is present. Following is additional detail you need to know.</p> <ul style="list-style-type: none"> The value is a debit for a fee and a credit for a rebate. The sign indicator is reversed to indicate the reversal of a fee. FIS does not calculate on-line fees, except for surcharges.
0110, 0130, 0210, 0230, 0430	<p>Conditional. Required if the Amount, Transaction Fee is received in the request message. The response value must be the same as the value in the request.</p>

029 Amount, Settlement Fee

Attributes:	FIS: x + n 8 ISO: x + n 8
Description:	The fee transferred between the acquirer and the issuer equal to the transaction fee amount in the currency of the settlement amount. This amount must be the same value in the response as in the request. The value is a debit for a fee and a credit for a rebate (The debit or credit reflects the cardholder's perspective). Notes <ul style="list-style-type: none"> FIS does not perform currency conversion and only calculates on-line fees for surcharging. See the description for data element "046 Additional Fees (FIS Defined)" on page 309.
Data Edit:	Must be numeric. x must be 0, C, or D. C = Credit amount D or 0 = Debit amount This data element is required if transaction fee amount (028) and settlement amount (005) are present.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	Conditional. Required when a surcharge or a rebate is present and the transaction and settlement currencies are different. Following is additional detail you need to know. <ul style="list-style-type: none"> The value is a debit for a fee and a credit for a rebate. The sign indicator is reversed to indicate the reversal of a fee. FIS does not calculate on-line fees. FIS does not perform currency conversion.
0110, 0130, 0210, 0230, 0430	Conditional. Required if the Amount, Transaction Fee is received in the request message. The value in the response must be the same as the value in the request.

030 Amount, Transaction Processing Fee

Attributes:	FIS: x + n 8 ISO: x + n 8
Description:	The fee charged (for example, by the acquirer, issuer or intermediate network facility) for the handling and routing of messages in the currency of the transaction amount (The debit or credit reflects the cardholder's perspective). Note: FIS does not calculate on-line fees.
Data Edit:	Must be numeric. x must be 0, C, or D. C = Credit amount D or 0 = Debit amount
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Optional. May be sent if performing on-line processing fees in financial requests and responses.

031 Amount, Settlement Processing Fee

Attributes:	FIS: x + n 8 ISO: x + n 8
Description:	The fee charged by the acquirer, issuer or intermediate network facility for the handling and routing of messages in the currency of the settlement amount. (The debit or credit reflects the cardholder's perspective.) Note: FIS does not calculate on-line fees and does not perform currency conversion.
Data Edit:	Must be numeric. x must be 0, C, or D. C = Credit amount D or 0 = Debit amount Required if transaction processing fee amount (030) and settlement amount (005) are present.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Optional. Required if bit 030 is present, and the currency of the transaction amount and settlement amount are different.

032 Acquirer Institution Identification Code

Format:	LLVAR
Attributes:	<p>FIS: nP..11 ISO: n..11</p> <p>This code is normally an institution identification code (IID) in the format 1NNNNNNNNC, where: NNNNNNNN = the institution ID code C = a check digit</p> <p>Healthcare: nP..6 On Healthcare transactions, Acquirer ID, as defined by SIGIS, must be numeric for length of 6.</p>
Description:	A code identifying the acquiring institution (for example, merchant bank) or its agent. This can be any uniquely identifying number agreed upon by the network.
Data Edit:	Numeric. If the element begins with a 1 , it must be an institution identification code with a valid check digit.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420, 9110, 9210	Required.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

033 Forwarding Institution Identification Code

Format:	LLVAR
Attributes:	FIS: nP..11 ISO: n..11
Description:	If not the same institution as specified in the acquiring institution identification code, the identity of the institution forwarding a request or advice message in an interchange system.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	Conditional. Required if the acquiring institution and the forwarding institution are different.
0110, 0210, 9110, 9210	Conditional. Required if received in the 0100 or 0200 message.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

034 Primary Account Number (PAN), Extended

Format:	LLVAR
Attributes:	FIS: nsP..28 ISO: ns..28
Description:	This data element is used only when the primary account number begins with 59 and is used to identify a customer account or relationship.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	Conditional. Required if PAN is manually entered. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
0110, 0210, 9110, 9210	Conditional. Required if received in the request message.
0300, 0302, 0310, 0312	Conditional. Either data element 002 or 034 is required if bit 101 equals PI-NEGATIVE.

035 Track 2 Data

Format:	LLVAR
Attributes:	FIS: nsP..37 ISO: LLVAR ns..37
Description:	The information encoded on Track 2 of the magnetic stripe as defined in ISO 7813, excluding beginning and end sentinels and LRC characters as defined therein.
Data Edit:	Valid ISO Track 2 required. Not allowed if manual entry.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Conditional. Required if card is machine read. Either Track 1(DE045) or Track 2 is required. Note: 0220 stand-in transactions may contain DE035.
0220, 0420	0220 pre-authorized completions and 0420 reversals will be eliminating support of DE035. Note: Issuers: As of Oct. 12, 2007 DE035 will no longer be sent to Issuers. Acquirers: As of April 4, 2008 DE035 will no longer be accepted. A 0230 or 0430 response message will be generated with a reject code for a formatting error.
0110, 0210, 9110, 9210	Conditional. Required if received in request.

036 Track 3 Data

Format:	LLLVAR
Attributes:	FIS: nsP..104 ISO: ns..104
Description:	The information encoded on Track 3 of the magnetic stripe as defined in ISO 4909, excluding beginning and end sentinels and LRC characters as defined therein.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	Conditional. Required if Track 3 is machine read; cannot be present if the PAN is entered manually. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
0110, 0210, 9110, 9210	Conditional. Required if received in request.

037 Retrieval Reference Number

Attributes:	FIS: an 12 ISO: an 12 This data element can contain up to 12 alphanumeric characters. The recommended format for this data element is shown below.
--------------------	--

Position	Data
1-4	Julian date (YDDD) This date is made up of the least significant digit of the year followed by the 3-digit day of the year. For example, January 1, 2001 = 1001.
5-12	Actual terminal sequence number

Description:	<p>A document reference supplied by the system retaining the original source document and used to assist in locating that document or a copy of the document. The value of this data element must remain unchanged throughout the life of the transaction.</p> <p>As the messages flow from 0200 → 0210 → 0420 → 0430, all must have the same retrieval reference number. In a pre-authorized purchase, this data element must contain the same value as the original pre-authorization. That is, pre-authorization 0100 → 0110, pre-authorized purchase 0200/0220 → 0210/0230 all must have the same retrieval reference number.</p>
Data Edit:	Alphanumeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0130, 0200, 0210, 0220, 0230, 0420, 0430, 9110, 9210	Required.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

038 Authorization Identification Response

Attributes:	<p>FIS: an 6</p> <p>ISO: an 6</p>
Description:	The response identification assigned by the authorizing institution.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0200	Conditional. May be used to supply the issuer with an authorization number for EBT transactions.
0110, 0210	Conditional. May be used by the authorizer to return an authorization number for accepted transactions.
0120, 0220, 0420	Conditional. Sent if available.
0130, 0230, 0430	Optional.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

039 Response Code

Attributes:	FIS: an 2 ISO: an 2
Description:	A code that defines the disposition of a message. When the response code is 30, then Additional Response Data (bit 044) contains the bit number in error. Refer to “Response Codes (bit 039)” on page 616 for a list of valid response codes.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0110, 0120, 0130, 0210, 0220, 0230, 0310, 0312, 0392, 0430, 0530, 0532, 0610, 0810, 9110, 9210	Required.
0300, 0302	Optional. Required on adds and inquiries.
0420	Required. This must be the value from the original request.

040 Service Restriction Code

Attributes:	FIS: an 3 ISO: an 3
Description:	An identification of geographic/service availability.
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0110, 0120, 0200, 0220	Optional.
0110, 0210	Optional. Required in responses if you want to receive this data element in a reversal for a late or unsolicited response.
0420	Optional (if available).

041 Card Acceptor Terminal Identification

Attributes:	FIS: an 8 ISO: an 8
Description:	A unique code identifying a terminal at the card acceptor location.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420, 9110, 9210	Required.
0600 Administrative Risk	Required if Network Management Information Code (bit 070) equals 601, and this element was contained in the original authorization message that caused this alert.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

042 Card Acceptor Identification Code

Attributes:	FIS: an 15 ISO: an 15
Description:	<p>A code identifying the card acceptor that defines the point of the transaction in both local and interchange environments.</p> <p>On Healthcare transactions from a 90% rule merchant, this is a Merchant Store Identifier, as defined by SIGIS, numeric value of 1 to 15 and can include dashes.</p> <p>On Transit Benefit transactions, this is the Merchant Identifier for the transit vendor.</p>
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Optional. Required on Healthcare and Transit Benefit transactions.
0110, 0210, 9110, 9210	Optional. Required if you want to receive this data element in a reversal for a late or unsolicited response.

Message Types	Status Information
0420	Optional (if available).
0600 Administrative Risk	Conditional if Network Management Information Code (bit 070) equals 601, and this element was contained in the original authorization message that caused this alert.
0600 Administrative Request	Conditional when Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822. See MasterBanking Program for their online specification details.

043 Card Acceptor Name/Loc

Attributes: FIS: an 40
ISO: an 40
The breakdown of this 40-character data element is according to the specifications of the ANSI X9.2-1988 standard. The card acceptor name/location must be subdivided into the following divisions.

Position	Data
1-23	address
24-36	city
37-38	state
39-40	country

Description: The name and location of the card acceptor which defines the point-of-service in both a local and interchange environment. In the home banking environment, the name and location applies to the consumer.

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120	Optional.
0200, 0220	Required.
0110, 0210	Optional. Required if reversals for late response require this data element.
0420	Required, if available.
0600 Administrative Request	Conditional. Will be present if Network Management Information Code (bit 070) equals 601, and this element was contained in the original authorization message that caused this alert.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

044 Additional Response Data

Format: LLVAR

Attributes:

FIS: an..25

ISO: an..25

Additional response data is subdivided as follows:

- For an edit error with response code of 30, then positions 1-3 are the bit number in error.
- For authorizations and financial responses, positions 1-10 are the phone number, and positions 11-25 are additional response data.
- For authorizations and financial decline responses of Stop Payment Services, position 1 will contain the stop payment reason value.

The following are the valid values:

- V - Card account closed or fraud.
- W - Cardholder canceled recurring payment.
- X - Cancel specific payment.
- Y - New account information available.

- For statement print responses, position 1 may be a **Y** indicating this is the last message in the series, an **N** indicating additional data for the request is available, or a **C** indicating that additional data for the request is available, but will only be sent if the consumer requests more data. Positions 2-3 are set to **00** if the host has preformatted the data returned in bit 121, and **01** if the acquirer will format the statement receipt data in bit 121.

Other valid values are:

201	Reversal cannot be matched to original transaction.
235	Processor value on the pseudo-terminal record in the data base is invalid for processor.
236	Invalid pseudo-terminal (value not found in data base).

Description: Other data (for example, a telephone number) required in response to an authorization or transaction request.

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0110, 0130, 0210, 0230, 0430, 0610	Optional.
0310, 0312	Conditional.
0300, 0302	Future version.
0610 Administrative Response	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

045 Track 1 Data

Format:	LLVAR
Attributes:	FIS: ans..76 ISO: ans..76
Description:	The information encoded on Track 1 of the magnetic stripe as defined in ISO 7813, including field separators, but excluding beginning and ending sentinels and LRC characters as defined therein.
Data Edit:	Valid ISO Track 1 required. Not allowed if manual entry.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Conditional. Required if card is machine read. Either Track 1 or Track 2 (DE035) is required. Note: 0220 stand-in transactions may contain DE045.
0110, 0130, 0210, 0230, 0430, 9110, 9210	Conditional. Is returned in the response if received in the request.
0220, 0420	0220 pre-authorized completions and 0420 reversals will be eliminating support of DE045. Note: Issuers: As of Oct. 12, 2007 DE045 will no longer be sent to Issuers. Acquirers: As of April 4, 2008 DE045 will no longer be accepted. A 0230 or 0430 response message will be generated with a reject code for a formatting error.

046 Additional Fees (FIS Defined)

Format:	LLLVAR
Attributes:	FIS: ans..88 ISO: ans..999 The data element breakdown, occurring four times, is as follows:

Position	Data Content/Attributes	Notes
1-2	Fee Type (n 2)	<p>Values are:</p> <p>00 Transaction fee Note: The first amount is in the transaction currency and the second amount is in the settled currency.</p> <p>15 Multiple Currency Conversion Rate (MasterCard MCCR) Note: The first amount is in the cardholder bill currency and the second amount is in the settled currency.</p> <p>70 Surcharge Note: The first amount is in the transaction currency and the second amount is in the settled currency.</p> <p>71 Optional Issuer Fee (Visa OIF) Note: The first amount is in the cardholder bill currency and the second amount is 0 because it does not apply to the settlement amount.</p> <p>72 Foreign Exchange Fee Note: The first amount is in the transaction currency and the second amount is in the settled currency. This is a memo fee.</p> <p>73 Overdraft Fee Note: The first amount is in the cardholder bill currency and the second amount is 0 because it does not apply to the settlement amount.</p>
3	Settle/Memo Indicator (n 1)	<p>Values are:</p> <p>1 If a <i>surcharge</i> is indicated, then the settle indicator is set to a value of 1. This causes the funds to be settled.</p> <p>0 If a <i>transaction fee</i> is indicated (the fee type is 00, 15, 71, 72 or 73), then the settle indicator is not set, indicated by a value of 0. This prevents funds from settling to the cardholder twice.</p>
4	Decimalization Indicator (n 1)	Value is 0 ; reserved for future use.
5-13	Fee Amount (x + n 8)	
14-22	Settle Fee Amount (x + n 8)	

- Description:** Information on up to four fees in addition to the fees defined in data elements 028 (Amount, Transaction Fee) and 029 (Amount, Settlement Fee).
In this specific link, if data element 028 is defined to be used for surcharge amounts only, then this field must not contain a surcharge. Likewise, if data element 028 is defined as a transaction fee, then this field must not contain a transaction fee.
Note: FIS does not calculate on-line fees.
- Data Edit:** Must be numeric. x must be 0, C, or D.
C = Credit amount
D or 0 = Debit amount
- Status:** Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	Conditional. Required when the defined fee is present. Following is additional detail you need to know. <ul style="list-style-type: none"> The value is a debit for a fee and a credit for a rebate. The sign indicator is reversed to indicate the reversal of a fee.
0110, 0130, 0210, 0230, 0430	Conditional. Required if the Additional Fees is received in the request message. The response value must be the same as the value in the request.

047 Additional Data, National

- Format:** LLLVAR
- Attributes:** FIS: ans..999
ISO: ans..999
- Description:** Reserved for national organizations to define data unique to country applications. See the following definitions used by MasterCard® and Visa®.
Note:
Expanded length (999 bytes) of data in DE 47 is supported by setting **Suprt Expanded Len: Y - DE 47** flag in CEDIOPT.

Pulse Discover Debit ProtectBuy 3D Secure 2.0

ProtectBuy 3D Secure data received from Pulse Discover Debit in DE 047 is passed to Pulse Discover Debit Issuers in FIS ISO DE 047. Please refer to the Pulse Discover Debit Specification for layout of ProtectBuy 3D Secure 2.0 data. When FIS passes this data to Issuer, FIS populates 4 bytes of data length indicator instead of 2 bytes received from Pulse. Please refer to following examples for the difference in the data length indicator.

ProtectBuy 3D Secure 2.0 data from Pulse Discover Debit in DE 047 =
 3D\44CA380202003100141234567891234567101234567800

ProtectBuy 3D Secure 2.0 data passed to FIS ISO Issuers in DE 047 =
 3D\0044CA380202003100141234567891234567101234567800 (data length indicator pre-fixed with 00)

NOTE: FIS does not validate 3D Secure data for Discover Debit transactions.

American Express® SafeKey

Sub-Element Name/Contents	Data Length	AMEX Bit No.
Data Identifier. Value: *3D*\ for Amex SafeKey 3-D Secure transactions.	5ans	NA
Data Length. Identifies the length of the variable data that follows.	4n	NA
Data Identifier. Value: <ul style="list-style-type: none"> ASK - Amex SafeKey 3-D Secure transactions 	3an	NA
Electronic Commerce Indicator (ECI) for SafeKey. Values: <ul style="list-style-type: none"> 05 - Authenticated with AEVV 06 - Attempted with AEVV 07 - Not Authenticated 	2an	61.1
AEVV - American Express® Verification Value	4an	61.2
Data Length. Identifies the length of the data in the AEVV subtag.	2n	NA
The American Express® Verification Value (AEVV)	20 bytes if packed; 40 hex bytes if not packed	61.3

Sub-Element Name/Contents	Data Length	AMEX Bit No.
XID - American Express® SafeKey Transaction ID	3an	61.4
Data Length. Identifies the length of the data in the XID subtag.	2n	NA
The American Express® SafeKey Transaction ID Value	20 bytes if packed; 40 hex bytes if not packed	61.5

American Express® Payment Token

Sub-Element Name/Contents	Data Length	AMEX Bit No.
Data Identifier. Value: *3D*\ for Amex SafeKey 3-D Secure transactions.	5ans	NA
Data Length. Identifies the length of the variable data that follows.	4n	NA
Data Identifier. Value: <ul style="list-style-type: none"> TKN - AMEX Payment Token transactions. 	3an	NA
Electronic Commerce Indicator (ECI) for Payment Token. Values: <ul style="list-style-type: none"> 20 - Payment Token data present 	2an	61.1
TDBA - Token Data Block A ID	4an	61.2
Data Length. Identifies the length of the data in the TDBA subtag.	2n	NA
Token Data Block A containing bytes 1-20 of the cryptographic value.	20 bytes if packed; 40 hex bytes if not packed	61.3
DBB - Token Data Block B ID	3an	61.4
Data Length. Identifies the length of the data in the DBB subtag.	2n	NA
Token Data Block B containing bytes 21-40 of the cryptographic value.	20 bytes if packed; 40 hex bytes if not packed	61.5

MasterCard® SecureCode™ for AAV and UCAF

Sub-Element Name/Contents		Data Length	MasterCard Bit No.
Data Identifier. Value is *3D*\ for 3-D Secure transactions		5	
Data Length. Identifies the length of the variable data that follows. The value may be a maximum of 0046 .		4	
Security Level Indicator subtag. The identifier for this subtag is SL , which indicates that MasterCard electronic commerce indicators (i.e., security level and UCAF Collection indicators) are present.		2	
Length. Identifies the length of the data in the SL subtag. The value is a maximum of 04 .		2	
Security Level Indicator. Includes the Security Level Indicator value in position 1 and the Cardholder Authentication value in position 2.		2	<ul style="list-style-type: none"> 48, sub-element 42, positions 1-2 in 0100 or 0200 PDS 0052 in 0220 advice
UCAF Collection Indicator. Possible Values are:		1	<ul style="list-style-type: none"> 48, sub-element 42, position 3 in 0100 or 0200 PDS 0052 in 0220 advice
0	- UCAF data collection is not supported by the merchant.		
1	- UCAF data collection is supported by the merchant, UCAF data should be present.		
2	- UCAF data collection is supported by the merchant, and UCAF data must be present (Secure Code).		
3	- UCAF data collection is supported by the merchant, and UCAF data must be present (Static AAV).		
4	- Reserved for future use		
5	- Issuer Risk based decisioning		
6	- Merchant Risk based decisioning		

Sub-Element Name/Contents			Data Length	MasterCard Bit No.
7	-	Partial shipment or recurring payment (DE 48, Sub element 43 not required). Liability will depend on the original UCAF values provided and matching with the initial transaction.		
Program Protocol			1	48, sub-element 66.1 in 0100 or 0200.
Universal Cardholder Authentication Fields (UCAF) subtag. The identifier for the subtag is CA .			2	
Length. Identifies the length of the data in the CA subtag.			2	
Format. Identifies MasterCard® SecureCode™ as the format. The values are:			2	
M3	-	To identify MC secure code for AAV.		
M4	-	To identify MC Secure code for static AAV when UCAF collection indicator value is 3.		
Universal Cardholder Authentication Fields (UCAF). * The data length varies, depending on MasterCard's definition of sub-element 43. For more information, see MasterCard's <i>Customer Interface Specification</i> .			28 or 32*	48, sub-element 43 in 0100 or 0200.

MasterCard® Example 1

This example shows both the Accountholder Authentication Value (AAV) and the Universal Cardholder Authentication Fields.

```
03 tag      pic x(05) Value "*3D*\".
03 length   pic x(04) Value "0042".
03 subtag   pic x(02) Value "SL".
03 length   pic x(02) Value "04".
03 sli      pic x(02) Value "12".
03 ucafi    pic x(01) Value "2".
03 ppl      pic x(01) Value "1".
03 subtag   pic x(02) Value "CA".
03 length   pic x(02) Value "30".
03 format   pic x(02) Value "M3".
03 UCAF     pic x(32) Value "jHyn+7YFi1EUAREAAAAvNUe6Hv8=".
```

"*3D*\0042SL041221CA30M3jHyn+7YFi1EUAREAAAAvNUe6Hv8="

MasterCard® Example 2

This example shows the Accountholder Authentication Value (AAV) only.

```
03 tag      pic x(05) Value "*3D*\".
03 length   pic x(04) Value "0008".
03 subtag   pic x(02) Value "SL".
03 length   pic x(02) Value "04".
03 sli      pic x(02) Value "12".
03 ucafi    pic x(01) Value "2".
03 ppl      pic x(01) Value "1".
```

"*3D*\0008SL041221"

MasterCard Digital Payment Data

Sub-Element Name/Contents	Data Length	MasterCard Bit No.
Data Identifier. Value is *MD* for Digital Payment transactions.	5	
Data Length. Identifies the length of the variable data that follows. The value may be a maximum of 0208.	4	
Digital Payment Cryptogram Sub-tag. The identifier for this sub-tag is 001.	3	
Length. Identifies the length of data in 001 sub-tag. The value is a maximum of 028.	3	

Sub-Element Name/Contents	Data Length	MasterCard Bit No.
Digital Payment Cryptogram Value.	28	104, SE 001 - Digital Payment Cryptogram
Estimated Amount Sub-tag. The identifier for this sub-tag is 002.	3	
Length. Identifies the length of the data in the 002 sub-tag. The value is a maximum of 012.	3	
Estimated Amount Value	12	104, SE 002 - Estimated Amount
Remote Commerce Acceptor Identifier Sub-tag. The identifier for this sub-tag is 003.	3	
Length. Identifies the length of the data in the 003 sub-tag. The value is a maximum of 150.	3	
Remote Commerce Acceptor Identifier Value	150 (Maximum 150 bytes, variable). This data is Base64 encoded.	104, SE 003 - Remote Commerce Acceptor Identifier

NOTE:

Sub-tag ID and Sub-tag length in *MD*\ tag occupies 3 bytes unlike Sub-tag ID and Sub-tag length in *3D*\ tag which occupy two bytes.

MasterCard Digital Payment Example

This example shows Digital Payment Data Fields

```

03 tag      pic x (05) Value *MD*\
03 length   pic x (04) Value 0208
03 subtag   pic x (03) Value 001
03 length   pic x (03) Value 028
03 data      pic x (28) Value AAAAAAAAAAAAAAAAAAAAAAAAAA
03 subtag   pic x (03) Value 002
03 length   pic x (03) Value 012
03 data      pic x (12) Value 000000001200
03 subtag   pic x (03) Value 002
03 length   pic x (03) Value 150
03 data      pic x (150) Value BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
                                BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
                                BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB

```

Visa® 3-D Secure

Sub-Element Name/Contents	Data Length	Visa Bit No.
Data Identifier. Value is *3D* for Visa 3-D Secure transactions.	5	
Data Length. Identifies the length of the variable data that follows.	4	
CAVV subtag. The identifier for the CAVV subtag is CA . The CA subtag may be present in the message without the XI subtag being present in the message.	2	
Length. Identifies the length of the data in the CA subtag.	2	
Format. The value V3 identifies the Visa 3-D Secure format.	2	
CAVV. This field contains a portion of the actual data used to perform the authentication.	40	126.9
Transaction ID subtag. The identifier for the Transaction ID subtag is XI .	2	
Length. Identifies the length of the data in the XI subtag.	2	
XID. This field contains a portion of the actual data used to perform the authentication.	<ul style="list-style-type: none"> 20 bytes if packed 40 hex bytes if not packed 	126.8

Visa® 3D-Secure Example

03	tag	pic x (05)	Value	*3D*\
03	length	pic x (04)	Value	0090
03	subtag	pic x (02)	Value	XI
03	length	pic x (02)	Value	40
03	CAVV	pic x (40)	Value	AA
03	subtag	pic x (02)	Value	CA
03	length	pic x (02)	Value	42
03	format	pic x (02)	Value	V3
03	CAVV	pic x (40)	Value	BB

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420, 9110, 9210	Conditional. If present, this data is passed untouched from the acquirer to the issuer.

048 Institution/Merchant Name/Consumer Name (FIS-Defined)

Format: LLLVAR

Attributes: FIS: ans..025
ISO: ans..999

Description: This data element is reserved by ISO for private data unique to private institutions.
FIS defines this data element as *Institution/Merchant Name/Consumer*, the name of the financial institution that owns the ATM, or name of the merchant where the POS terminal is located, or the name of the consumer for home banking.

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	Conditional. If this data element is present in the inbound request, it will be forwarded in the outbound request.
0110, 0210	Optional. Required if needed in reversal for late or unsolicited response.

049 Currency Code, Transaction

Attributes:	FIS: nP 3 ISO: n 3
Description:	The local currency of the acquirer or source location of the transaction. Currency used in transaction amount and transaction fee amount.
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0130, 0200, 0210, 0220, 0230, 0420, 0430	Required.
0600 Administrative Risk	Required if Network Management Information Code (bit 070) equals 601.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

050 Currency Code, Settlement

Attributes:	FIS: nP 3 ISO: n 3
Description:	A code defining the currency of the settlement amount and the settlement fee amount. Note: FIS provides optional capability to perform currency resolution with the Currency Conversion System (CCS). For more information, see the <i>Currency Conversion System (CCS) User Manual</i> .
Data Edit:	Numeric. Required if settlement amount is included in the message.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0130, 0200, 0210, 0220, 0230, 0420, 0430	Conditional. Required if settlement amount is included in the message.
0520, 0522, 0530, 0532	Required.

051 Currency Code, Cardholder Billing

Attributes:	FIS: nP 3 ISO: n 3
Description:	A code defining the currency of the cardholder billing amount and the cardholder billing fee amount. Note: FIS provides optional capability to perform currency resolution with the Currency Conversion System (CCS). For more information, see the <i>Currency Conversion System (CCS) User Manual</i> .
Data Edit:	Numeric. Required if cardholder billing amount is included in the message.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Conditional. Required if cardholder billing amount is included in the message.
0600 Administrative Risk	Conditional. Will be present if Network Management Information Code (bit 070) equals 601, and this element was contained in the original authorization message that caused this alert.

052 Personal Identification Number (PIN) Data

Attributes:	FIS: b 8 bytes (if using numeric packing option) or FIS: 16 hex bytes (if not using numeric packing option) ISO: b 64
Description:	A number assigned to a cardholder intended to uniquely identify that cardholder at the point-of-service. The use of the PIN is subject to a bilateral agreement. Note: If using clear PINs with the packing option, the 16-digit PIN field is left-justified and padded with hex "F" on the right side prior to packing the field.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0200	Conditional. Required if the card issuing institution requires this data element for authorization.

053 Security Related Control Information

Attributes: FIS: nP 16
ISO: n 16

Description: This data element has not been defined by ISO. FIS defines this data element as Security Related Control Information, consisting of data needed to process PINs or perform message authentication (MACing), or both, when using dual active encryption keys. This data element is subdivided as follows:

Data Content/ Attributes	Notes
PIN and MAC key index (nP 2)	<ul style="list-style-type: none"> Values are 00 or 01. Contains only PIN key index when PIN and MAC keys are exchanged in independent messages.
MAC key index (nP 2)	<ul style="list-style-type: none"> Defined for future use. Zero-filled. Contains MAC key index when PIN and MAC keys are exchanged in independent messages.
Future use (nP 12)	<ul style="list-style-type: none"> Zero-filled.

Status: Refer to the following chart for the FIS data element requirements:

Message Types	Status Information
0100 (Auth Request), 0200	Conditional. Required if using dual active encryption keys and either PIN Data (bit 052) is present or message authentication (MACing) is being performed.
0100 (Check Ver), 0110, 0120, 0130, 0210, 0220, 0230, 0300, 0302, 0310, 0312, 0382, 0392, 0420, 0430, 0520, 0522, 0530, 0532, 0600, 0610, 9110, 9210	Conditional. Required if using dual active encryption keys and MACing.

Message Types	Status Information
0800, 0810	Conditional. Required if using dual active encryption keys and performing key exchange functions (if bit 070 equals 101, 161, 171, 180, 181, or 191).

054 Additional Amounts

Format:	LLLVAR
Attributes:	FIS: ans..120 ISO: ans..120 The data element breakdown, occurring six times, is as follows:
Data Edit:	May be alpha numeric or numeric for Positions 1-4. Must be numeric for positions 5-20. The amount must not be greater than 999999999999. x must be 0, C, or D. C or 0 = Credit amount D or 0 = Debit amount

Position	Data
1-2	Account Type (an 2)
3-4	Amount Type (an 2)
5-7	Currency Code (n 3)
8-20	Amount (x + n 12)

Description:

Information on up to six amounts and related account data for which specific data elements are not defined.

Refer to [“Additional Amounts Codes \(bit 054\)” on page 623](#) for a list of valid account types and amount types.

Required: DE54 is required on 0210 replies for ATM Check Deposits (processing code 24xxxx) when cashback is present. Cashback Amount type (40) and Gross Check Amount type (90) must be echoed on replies. Required on 0110/0210 Partial Pre-Authorization replies where response code equals “10” or “T7” Amount Type = 91.

Required: Use 0 or C for Amount Types 40, 41 or 99 for all Message Types. However, FIS does not mandate or edit the use of 0, C or D for these or other Amount Types.

Notice: The use of a “D” (Debit Amount) may cause an adverse affect on the calculation of the interchange if the transaction is reversed, or if the transaction is approved in stand-in for Amount Types 40, 41 and 99.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	<p>Optional. This data element may be used for floor limits, hold amounts, cash back amounts, pre-authorized amounts, or forwarding balances.</p> <p>Required on Healthcare transactions for merchants using Inventory Information Approval System (IIAS) to pass Total Qualified Healthcare amount and optionally including other healthcare sub-total amount types.</p>
0110, 0210	Optional. This data element may be used for returning balances or the authorized amount.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

055 Integrated Chip Card Data

Format: LLLVAR

Attributes: This data element is variable length (LLLVAR) with maximum length of 255 bytes beginning with 3 bytes value that indicates the length of data in DE 55.

Description: The DE55 tag uses different sub-elements according to different types of transaction. Each sub-element is in TLV (Tag-Length-Value) format, where,
T = Tag
L = Length of sub-element value
V = Sub-element value

Example:

Tag = "9A" (Term Tran Date) is 1 byte length represented in hexadecimal.

Tag = "9F36" (Applic Tran Count) is 2 bytes length.

Tag = "9F8007" (Issuer script result) is 3 bytes length.

The length (L) of the sub-element value is 1 byte. The sub-element value is variable length data for the length of sub-element.

NOTE:

FIS passes the chip tag data, as received, from the acquirer network to the issuer processor.

Message Types	Status Information
0100, 0200	Conditional. Required on EMV Transactions.
0120, 0220, 0420	Conditional. Required on EMV transactions if present in the original 0100/0200 message.
0110, 0210	Conditional. Required on EMV Transactions if present in the request.

056 Replacement Additional Fees

Format:	LLLVAR
Attributes:	FIS: ans..88 ISO: ans..999 The data element breakdown, occurring four times, is as follows:
Data Edit:	Numeric except x. x must be 0, C, or D. The maximum amount is 99999999. C = Credit amount D or 0 = Debit amount

Position	Data Content/Attributes	Notes
1-2	Fee Type (n 2)	Values are: 00 Transaction fee Note: The first amount is in the transaction currency and the second amount is in the settled currency. 15 Multiple Currency Conversion Rate (MasterCard MCCR) Note: The first amount is in the cardholder bill currency and the second amount is in the settled currency. 70 Surcharge Note: The first amount is in the transaction currency and the second amount is in the settled currency. 71 Optional Issuer Fee (Visa OIF) Note: The first amount is in the cardholder bill currency and the second amount is 0 because it does not apply to the settlement amount.
3	Settle/Memo Indicator (n 1)	Values are: 1 If a <i>surcharge</i> is indicated, then the settle indicator is set to a value of 1 . This causes the funds to be settled. 0 If a <i>transaction fee</i> is indicated (the fee type is 00, 15, or 71), then the settle indicator is not set, indicated by a value of 0 . This prevents funds from settling to the cardholder twice.

Position	Data Content/Attributes	Notes
4	Decimalization Indicator (n 1)	Value is 0 ; reserved for future use.
5-13	Fee Amount (x + n 8)	
14-22	Settle Fee Amount (x + n 8)	

Description:

Information on up to four fees in addition to the fees defined in data elements 095 (Replacement Amounts).

In this specific link, if data element 028 is defined to be used for surcharge amounts only, then this field must not contain a surcharge. Likewise, if data element 028 is defined as a transaction fee, then this field must not contain a transaction fee.

Data element 095 is used for any replacement fee related to data elements 028 and 029. Data element 056 is used for replacement fees related to data element 046.

Data Edit:

Numeric except x. x must be 0, C, or D. The maximum amount is 9999.

C = Credit amount

D or 0 = Debit amount

Status:

Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0420, 0430	Conditional. Required for partial reversals.

057 Authorization Life Cycle (ANSI-defined)

Format:	LLLVAR
Attributes:	FIS: an..003 ISO: ans..999
Description:	<p>This data element is reserved for definition and use by national standards organizations.</p> <p>The ANSI X9.2-1988 standard defines this data element as the <i>Authorization Life Cycle</i>, a value in calendar days, hours, or minutes that identifies the time period for which an acquirer is requesting guarantee of funds. This data element is subdivided into the following two subelements:</p> <ul style="list-style-type: none"> • Life Cycle Indicator (n 1) indicates the type of time interval in effect for a pre-authorization. Possible values are: <ul style="list-style-type: none"> ○ 1 = Calendar days ○ 2 = Hours ○ 3 = Minutes • Life cycle (n 2) is the time interval in effect for a pre-authorization.
Data Edit:	Numeric, if present. Length must be 003. Life Cycle Indicator must be 1, 2, or 3.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0420	Conditional. Required for pre-authorizations.
0110	Optional. Required if needed in reversal for late or unsolicited response.

058 National Point-Of-Service Condition Code (ANSI-defined)

Format:	LLLVAR
Attributes:	FIS: an..030 ISO: ans..999
Description:	<p>This data element is reserved for definition and use by national standards organizations.</p> <p>The ANSI X9.2-1988 standard defines this data element as the <i>National Point-Of-Service Condition Code</i>, a series of codes intended to identify terminal class, presentation data, and security condition. This data element is subdivided as follows:</p> <ul style="list-style-type: none"> • Terminal Class (an 3) • Presentation Data (an 4) • Security Condition (an 1) • Terminal Type (an 2), advice reason redefined by FIS as terminal type. Data element 060 contains the advice reason. <p>Note: Refer to “National POS Condition Code (bit 058)” on page 627 for a list of valid codes.</p>
Data Edit:	Either bit 025 or 058 is required; numeric if present.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Conditional. Either data element 058 or 025 is required. The value of the security condition may change from the value received from the acquirer to indicate the CVV result.
0130, 0230, 0430	Optional.

058 National Point-Of-Service Condition Code (ANSI-defined) - Alternate Format

NOTE:

The alternate format for this data element is set in the Connex™ Environmental Database. Contact your FIS representative for more information.

Format: LLLVAR

Attributes: FIS: an..030
ISO: ans..999

Description: This data element is reserved for definition and use by national standards organizations.
The ANSI X9.2-1988 standard defines this data element as the *National Point-Of-Service Condition Code*, a series of codes intended to identify terminal class, presentation data, and security condition. This data element is subdivided as follows:

- Terminal Class (an 3)
- Presentation Data (an 4)
- Security Condition (an 1)
- Terminal Type (an 2), advice reason redefined by FIS as terminal type. Data element 060 contains the advice reason.
- Card Data Input Capability (an 1)

Notes:

- Refer to [“National POS Condition Code \(bit 058\)” on page 627](#) for a list of valid codes.
- Positions 12-30 are reserved for future use.

Data Edit: Either bit 025 or 058 is required; numeric if present.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Conditional. Either data element 058 or 025 is required. The value of the security condition may change from the value received from the acquirer to indicate the CVV result.
0130, 0230, 0430	Optional.

059 National Point-Of-Service Geographic Data (ANSI-defined)

Format:	LLLVAR
Attributes:	FIS: an..017 ISO: ans..999
Description:	<p>This data element is reserved for definition and use by national standards organizations.</p> <p>The ANSI X9.2-1988 standard defines this data element as <i>National Point-Of-Service Geographic Data</i>, a series of codes to identify the state, county, postal service code, and country code where the point-of-service device is physically located. This data element is subdivided as follows:</p> <ul style="list-style-type: none"> • State Code (n 2) • County Code (n 3) • Postal Service Code (an 5 or an 9) • Country Code (n 3) <p>If the county code is unavailable, this data element may be zero-filled if later data elements are included. If the country code is included, blank-fill the unused postal code positions.</p>
Data Edit:	Numeric. State, County, and Country Codes must be numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Optional. May be required to qualify for lower fees from Visa® or MasterCard®.
0100, 0200	Mandatory from acquirer or acquirer processor for Cuiance transactions.
0110, 0210	Optional. Required if needed in reversal for late or unsolicited response.
0420	Optional (if available).
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

060 Advice/Reversal Reason Code (FIS-Defined)

Format: LLLVAR

Attributes: FIS: an..006
ISO: ans..999

Description: This data element is reserved for private definition. FIS defines this data element as the following subelements. These subelements identify the reason for a reversal or an advice. The elements included depend on certain criteria:

- For a reversal, the reversal reason is the only data subelement included.
- For a reversal of an advice, then reversal and advice reason (reason for the original advice) data subelements are included.
- For an advice, the advice reason is the only data subelement included.

Subelement Name	Format	Mask Value	Description
Byte Map	an 2	—	To determine the byte map value, add the mask value columns together for the data elements that are present, and convert the total to hexadecimal. For example, if both subelements are present, the byte map value would be C0.
Reversal Reason	an 2	80	The code that identifies why the transaction is reversed. Refer to “Reversal Reason Codes” on page 632 for a list of valid codes.
Advice Reason	an 2	40	The code that identifies why the advice is initiated. Refer to “Advice Reason Codes” on page 634 for a list of valid codes.

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0120 0220 0420	Optional.

061 Acquirer Transport Data (FIS-Defined)

Format:	LLLVAR
Attributes:	FIS: ans..100 ISO: ans..999
Description:	This data element is reserved for private definition. FIS defines this data element as <i>Acquirer Transport Data</i> , free format data of up to 100 bytes that is echoed to the acquirer in the response to their request. This data element is not passed on to the issuer.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0300, 0420	Optional.
0110, 0130, 0210, 0230, 0310, 0430, 9110, 9210	Conditional. Required if received in request.

062 Issuer Transport Data (FIS-Defined)

Format:	LLLVAR
Attributes:	FIS: ans..100 ISO: ans..999
Description:	This data element is reserved for private definition. FIS defines this data element as <i>Issuer Transport Data</i> , free format data of up to 100 bytes that is echoed to the issuer in the response to their request. This data element is not passed only to Pulse acquirer.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0302	Optional. Data length must be 40 or less.
0382	Optional. Data length must be 26 or less.
0312, 0392	Conditional. Required if received from the issuer.

063 FIS Data (FIS-Defined)

Format:	LLLVAR
Attributes:	FIS: ans..050 ISO: ans..999
Description:	This data element is reserved for private definition. FIS defines this data element as <i>FIS Data</i> . Following is the division of the subelements.

Subelement Name	Format	Mask Value	Description
Byte Map	an 2	--	To determine the byte map value, add the mask value columns together for the data elements that are present, and convert the total to hexadecimal. For example, if the first five subelements are present, the byte map value would be F8.
Pseudo- Terminal	an 6	80	The network-assigned terminal ID that allows FIS to group terminals under one ID.
Issuer Network ID	an 3	40	Used for direct routing and telling the acquirer which network authorized the transaction.
Acquirer Network ID	an 3	20	Tells the issuer which network acquired the transaction.
Processor ID	an 6	10	Tells the issuer which processor acquired the transaction (data base value) and tells the acquirer which processor authorized the transaction (data base value). This is not a pass-through data element. If received by the Connex™ System, the data element is ignored.
Auth Timeout	n 2	08	Tells the issuer the amount of time prior to a financial request being timed out. The value is the minimum of either the FINIPC field Auth Timeout or Cardholder Processor Record Transaction Timeout field. The Auth Timeout field can be set by the Intercept Processor based on the Intercept Record Transaction Timeout field.
Open Account Relationship (OAR) Data	an 15	04	Sent when supporting Open Account Relationship requests.
<ul style="list-style-type: none"> OAR Eligible Flag 	an 1		Values are: 0 = Not eligible for OAR reply 1 = Eligible for OAR reply, request incomplete 2 = Eligible for OAR reply, request complete
<ul style="list-style-type: none"> OAR Account Type 1 	an 4		(Optional) The “from” account selected in the OAR request. This data is returned to the host in the request if it is available.

Subelement Name	Format	Mask Value	Description
<ul style="list-style-type: none"> OAR Account Type 2 	an 4		(Optional) The “to” account type selected on the OAR request. This data is returned to the host in the request if it is available.
<ul style="list-style-type: none"> OAR Passes 	an 1		(Optional) Values are: 0 or blank = Initial request 1 = Second request after customer has chosen an account from the list returned in response to the first request. 2 = Third request after customer has chosen the “to” account from the new list.
<ul style="list-style-type: none"> OAR Account Response Information 	an 1		(Optional) Used by the issuer to tell the acquirer that the customer’s request is not possible as requested. Values are: 0 or blank = OK 1 = No from account 2 = No to account
<ul style="list-style-type: none"> Filler 	an 4		Available for future use.
Processing Flags	an 5	02	Sent when supporting externally settled transactions, also when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.
<ul style="list-style-type: none"> Externally Settled 	an 1		Values are: Y indicates the transaction is settled between the acquirer and issuer, usually in a currency other than the settlement currency. Blank - otherwise.
<ul style="list-style-type: none"> Split Transaction Indicator 	an 1		Reserved for future FIS use.

Subelement Name	Format	Mask Value	Description
<ul style="list-style-type: none"> Partial Authorization Terminal Support Indicator 	an 1		Values are: 0 or Blank = Merchant terminal does not support receipt of partial approvals 1 = Merchant terminal supports receipt of partial approvals 2 = Merchant terminal does not support receipt of partial approvals, but want balances returned in the response if the transaction is denied
<ul style="list-style-type: none"> Acquirer OD Flag 	an1		Values are: 1 = Acquirer terminal supports OD protection. This flag gets logged in FINIPC Segment 24, Token ID "75".
<ul style="list-style-type: none"> Issuer OD Flag 	an 1		Values are: 1 = Issuer approved this transaction with OD protection. Issuers will turn this flag on only when acquirer flag is "ON" this flag gets logged in FINIPC Segment 24, Token ID "75".

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Subelement Name	Message Types	Status Information
Pseudo-Terminal	0100, 0110, 0120, 0130, 0200, 0210, 0220, 0230, 0420, 0430, 9110, 9210	Conditional. Required if multiple pseudo-terminals are required.
	0600 Administrative Risk	Conditional. Required if multiple pseudo-terminals are required and Network Management Information Code (bit 070) equals 601.
Issuer Network ID	0100, 0120, 0200, 0220, 0420	Conditional. Required if implementing direct routing.
	0110, 0210, 9110, 9210	Optional.

Subelement Name	Message Types	Status Information
	0600 Admin Risk and Admin Request	Conditional if Network Information Code (bit 070) equals 601, 810, 811, 812, 821, or 822.
Acquirer Network ID	0100, 0120, 0200, 0220, 0420, 0600, 9110, 9210	Optional.
	0600 Administrative Request	Conditional if Network Information Code (bit 070) equals 810, 811, 812, 821, or 822.
Processor ID	0100, 0110, 0120, 0200, 0210, 0220, 0420, 0600, 9110, 9210	Optional.
Auth Timeout	0100, 0110, 0120, 0200, 0210, 0220, 0420, 0600, 9110, 9210	Optional.
Open Account Relationship Data	0100, 0110, 0120, 0200, 0210, 0220, 0420	Optional. Sent when supporting Open Account Relationship (OAR) requests.
	9110, 9210	Required.
Processing Flags	0100, 0110, 0120, 0200, 0210, 0220, 0420	Required when supporting externally settled transactions, also required when the acquirer terminal is capable of supporting partial authorizations or when the acquiring terminal does not support partial authorizations, but want the issuers to return balance amounts so the transaction could be resubmitted with that amount. See the document titled <i>Externally Settled Transactions</i> for more information. Note: When the CEDIOPT option is set ON for the processing flags, all the 5 positions will go outbound to the end-point even when they are blank.

064 Message Authentication Code (MAC)

Attributes:	FIS: b 8 bytes (if using numeric packing option) or FIS: 16 hex bytes (if not using numeric packing option) ISO: b 64
Description:	Used to validate the source and the text of the message between the sender and receiver. FIS performs MACing of the entire message.
Data Edit:	MAC verification occurs. If the verification fails, the message is rejected with a 0620 message.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0130, 0200, 0210, 0220, 0230, 0300, 0302, 0310, 0312, 0382, 0392, 0420, 0430, 0520, 0522, 0530, 0532, 0600, 0610	Conditional. Sent if MACing is performed and no data elements from 065-191 are present in the message.

065 Bit Map, Tertiary

Attributes:	FIS: b 8 bytes (packing maps) or FIS: 16 hex byte (packing maps option not set) ISO: b 64
Description:	A series of 64 bits used to identify the presence (denoted by 1) or absence (denoted by a 0) of data elements 129 through 192.
Status Notes:	Not used.

066 Settlement Code

Attributes:	FIS: nP 1 ISO: n 1 Values are: 1 = In balance 2 = Out of balance 3 = Error
Description:	A code indicating the result of a reconciliation request.
Data Edit:	Must be 1, 2, or 3.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0530, 0532	Required.

067 Extended Payment Code

Attributes:	FIS: nP 2 ISO: n 2
Description:	The number of months that the cardholder prefers to pay for this item if permitted by the issuer.
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Optional.
0110, 0210	Optional. Required if needed in reversal for late or unsolicited response.
0420	Optional (if available).

068 Receiving Institution Country Code

Attributes:	FIS: nP 3 ISO: n 3
Description:	The code of the country where the receiving institution is located.
Status:	Not implemented.

069 Settlement Institution Country Code

Attributes:	FIS: nP 3 ISO: n 3
Description:	The code of the country where the settlement institution is located.
Status:	Not implemented.

070 Network Management Information Code

Attributes:	FIS: nP 3 ISO: n 3
Description:	Used to identify network status. Refer to “Network Management Information Codes (bit 070)” on page 636 for valid values.
Data Edit:	Valid network management code.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0600, 0610, 0620, 0800, 0810, 0820	Required.

071 Message Number

Attributes:	FIS: nP 4 ISO: n 4
Description:	A sequential, cyclic number assigned to a message by the message initiator and used to monitor the integrity and interchange.
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0600 Administrative Request	Conditional. Required to indicate multiple message number.

072 Message Number Last

Attributes:	FIS: nP 4 ISO: n 4
Description:	A sequential, cyclic number assigned to a message by the message initiator and used to monitor the integrity and interchange.
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0600 Administrative Request	Conditional. Required if bit 071 is present.

073 Date, Action

Attributes: FIS: nP 6
ISO: n 6

Description: This data element is intended to contain non-standard dates related to authorization, such as the expiration date of a driver's license or a birth date.

Data Edit: None.

Status: Not implemented.

074 Credits, Number

Attributes: FIS: nP 10
ISO: n 10

Description: The number of credit transactions processed.

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

075 Credits, Reversal Number

Attributes: FIS: nP 10
ISO: n 10

Description: The number of credit reversal transactions processed.

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

076 Debits, Number

Attributes:	FIS: nP 10 ISO: n 10
Description:	The number of debit transactions processed.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

077 Debits, Reversal Number

Attributes:	FIS: nP 10 ISO: n 10
Description:	The number of debit reversal transactions processed.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

078 Transfer, Number

Attributes:	FIS: nP 10 ISO: n 10
Description:	The number of transfer transactions processed.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

079 Transfer, Reversal Number

Attributes:	FIS: nP 10 ISO: n 10
Description:	The number of reversal transfer transactions processed.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

080 Inquiry, Number

Attributes:	FIS: nP 10 ISO: n 10
Description:	The number of inquiry transactions processed.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

081 Authorization, Number

Attributes:	FIS: nP 10 ISO: n 10
Description:	The number of authorization transactions processed.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

082 Credits, Processing Fee Amount

Attributes:	FIS: nP 12 ISO: n 12
Description:	The amount of all processing fees associated with the handling and routing of credit transactions. Note: FIS does not calculate fees on-line.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Conditional. Required when surcharge fees or rebates are present.

083 Credits, Transaction Fee Amount

Attributes:	FIS: nP 12 ISO: n 12
Description:	The amount of all fees resulting from the processing of all credit transactions. Note: FIS does not calculate fees on-line
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Future. ISO fee definition is incomplete for transactions other than debit and credit.

084 Debits, Processing Fee Amount

Attributes:	FIS: nP 12 ISO: n 12
Description:	The amount of all processing fees associated with the handling and routing of debit transactions. Note: FIS does not calculate fees on-line.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Future. ISO fee definition is incomplete for transactions other than debit and credit.

085 Debits, Transaction Fee Amount

Attributes:	FIS: nP 12 ISO: n 12
Description:	The amount of all fees resulting from the processing of all debit transactions. Note: FIS does not calculate fees on-line.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Conditional. Required when surcharge fees or rebates are present.

086 Credits, Amount

Attributes:	FIS: nP 16 ISO: n 16
Description:	The amount of all credit transactions processed, exclusive of any fees.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

087 Credits, Reversal Amount

Attributes:	FIS: nP 16 ISO: n 16
Description:	The amount of all credit reversals processed, exclusive of any fees.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

088 Debits, Amount

Attributes:	FIS: nP 16 ISO: n 16
Description:	The amount of all debit transactions processed, exclusive of any fees.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

089 Debits, Reversal Amount

Attributes:	FIS: nP 16 ISO: n 16
Description:	The amount of all debit reversals processed, exclusive of any fees.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522	Required.

090 Original Data Elements

Attributes:	FIS: nP 42 ISO: n 42
Description:	<p>The data elements contained in the original message, intended to identify a transaction for correction or reversal. These five data elements are in fixed-length format totaling 42 numerics. Absence of data is indicated by zeroes.</p> <ul style="list-style-type: none"> • Original message type (n 4) • Original system trace audit number (n 6) • Original transmission date and time (n 10) <p>Note: FIS uses this field to hold the original local transaction date and time.</p> <ul style="list-style-type: none"> • Original acquiring institution identification code (n 11) • Original forwarding institution identification code (n 11)
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Conditional. Outbound from the Connex™ System, original message type, original system trace audit number, and original local date and time are sent if available. Inbound to the Connex System, element 090 is not supported.
0420, 0430	Required. Inbound to the Connex System, only subelement original message type is implemented by FIS. The rest of the subelements must be zero-filled. Outbound from the Connex System, original message type is sent. Original system trace audit number and original local date and time are sent if available. Note: The trace number, date and time will either be zero-filled because the information was not available or they will match data elements 011, 012, and 013.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

091 File Update Code

Attributes:	FIS: an 1 ISO: an 1
Description:	A code that indicates to the system maintaining the file which procedure to follow. Refer to “File Update Codes (bit 091)” on page 638 for a list of valid values.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0300, 0302, 0310, 0312, 0382, 0392	Required.

092 File Security Code

Attributes	FIS: an 2 ISO: an 2
Description:	A file update security code to indicate that the message originator is authorized to update the file.
Status:	Not used.

093 Response Indicator

Attributes:	FIS: an 5 ISO: an 5
Description:	An indication of the update action taken by the point-of-service.
Status:	Not used.

094 Service Indicator

Attributes:	FIS: an 7 ISO: an 7
Description:	An indication of the type of support service required by the recipient of the file update message. Used for coordination of the file update messages.
Status:	Not used.

095 Replacement Amounts

- Attributes:** FIS: an 42
ISO: an 42
This data element consists of four data elements, which are in fixed-length format totaling 42 characters. Absence of data is indicated by zeros. Following is a breakdown of the data contained in this data element.
- Actual amount, transaction (n 12)
 - Actual amount, settlement (n 12)
 - Actual amount, transaction fee (x + n 8)
 - Actual amount, settlement fee (x + n 8)
- Description:** The new actual amount data elements, necessary to perform a partial reversal on a financial transaction.
- Note:** See the description for data element [“056 Replacement Additional Fees” on page 327](#).
- Data Edit:** Numeric except x. For transaction and settlement, the maximum amount is 999999999999. For fees, the maximum amount is 999999999. x must be 0, C, or D.
C = Credit amount
D or 0 = Debit amount
- Status:** Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0420, 0430	Conditional. Required for partial reversals.

096 Message Security Code

- Attributes:** FIS: an 8
ISO: b 64
- Description:** A verification between a card acceptor and an issuer that a message is authorized to update or modify a special file.
- Data Edit:** None.
- Status:** Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0300, 0302, 0382	Required.
0800, 0820	Conditional. Required when the value of bit 070 is 001, 002, 061, 062, 071, 072, 101, 161, or 171.

097 Amount Net Settlement

Attributes:	FIS: x + n 16 ISO: x + n 16
Description:	The net value of all gross amounts. x must be 0, C, or D, where: C or 0 = Credit amount D = Debit amount
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522, 0530, 0532	Required.

098 Payee

Attributes:	FIS: ans 25 ISO: ans 25
Description:	The third party beneficiary in a payment transaction.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	Conditional. Sent if the transaction is a payment transaction and the data is available.
0110, 0210	Optional. May be returned by the issuer if received in the request and they want this data element returned to them in reversals for late or unsolicited responses.

099 Settlement Institution Identification Code

Format:	LLVAR
Attributes:	FIS: nP..11 ISO: n..11
Description:	A code identifying the settlement institution or its agent.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0520, 0522, 0530, 0532	Required.

100 Receiving Institution Identification Code

Format:	LLVAR
Attributes:	FIS: nP..11 ISO: n..11
Description:	The identity of the institution receiving a request or advice message in an interchange system if it is not the same as identified in the primary account number.
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100 (Check Verification / Guarantee Request)	Required. This data element holds the FIS-assigned ID of the check guarantor.
0100 (Authorization Request), 0120, 0200, 0220, 0420	Conditional. Sent if routing is based on this data element instead of the PAN or PAN extended. One of these data elements is required: 002, 034, 035, 036, 045, or 100.
0110, 0210	Conditional. Required if in the request message.
0600 Administrative Request	Required for institution routing administration/mail messages.

101 File Name

Format: LLVAR

Attributes: FIS: ans..17
ISO: ans..17

Description: The actual or abbreviated name of the file being accessed.

Data Edit: Following are the required data element values for the corresponding message types.

Message Type	Value
0300, 0302	PI-NEGATIVE for cardholder file update
0382	<ul style="list-style-type: none"> • CHnn for cardholder file maintenance • ADnn for account detail file maintenance where nn = the AP file segment ID

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0300, 0302, 0382	Required.

102 Account Identification 1

Format:	LLVAR
Attributes:	FIS: ans..28 ISO: ans..28
Description:	<p>A series of digits used to identify a customer account or relationship. Account identification 1 identifies the account involved for a single account transaction. In the case of transfers, Account Identification 1 identifies the <i>from</i> account in a transaction.</p> <p>Note: For check re-order transactions (at version 1.2 and above), this field should contain the account number to be printed on the checks.</p>
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420, 0600, 9110, 9210	Optional.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

103 Account Identification 2

Format:	LLVAR
Attributes:	FIS: ans..28 ISO: ans..28
Description:	<p>Series of digits used to identify a customer account or relationship. Account identification 2 is primarily used for the <i>to</i> account in a transfer transaction.</p>
Data Edit:	None.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420, 9110, 9210	Optional.

104 Transaction Description

Format:	LLLVAR
Attributes:	FIS: ans..100 ISO: ans..100
Description:	The data element is used to provide information to the issuer about the specific request. Note: Numeric definitions in the following charts are numeric character data, not binary.

Acquiring Ready Link

Pos.	Data Content
1	Indicates the Reimbursement Attribute (Visa field 63.11), with the following value: <ul style="list-style-type: none"> Y = SMS Supermarket Z = SMS General merchant

Interlink

Pos.	Data Content
1	One-byte reimbursement attribute (Visa field 63.11) will be passed in the first position of this field.

Check Deposit Format

Pos.	Data Content
1-8	Indicates that the transaction is a check deposit, with the following value: CHECK

Unknown Deposit Format

Pos.	Data Content
1-8	Indicates that the transaction is an unknown deposit, with the following value: UNKNOWN. Note: Currently, UNKNOWN is applicable only on Pulse ATM Deposit transactions.

Check Inquiry Format

(valid at version 1.2 and above)

Pos.	Data Content
1-8	Indicates that the information inquiry request is a Check Inquiry, with the following value: ITEMCK__
9-14	Check number, right-justified with leading zeros.

Check Re-Order Format

(valid at version 1.2 and above)

Pos.	Data Content
1-8	Indicates that the notification to bank request is a Check Re-Order, with the following value: CHKR_ _ _ _
9-14	Optional starting check number. If the starting check number is not supplied, the field contains zeros.
15-18	Optional check quantity. If the check quantity is not supplied, the field contains zeros.

Selected Consumer Mail Broadcast Format

Pos.	Data Content
1-6	Indicates selection criteria, with the following value: SELECT
7-100	Selection criteria defined by the mail broadcasting system. For MasterBanking Program, this is the broadcast selection criteria.

Door Popper Format

Pos.	Data Content
1-8	Indicates that the information inquiry request is a Door Popper, with the following value: DOOR_ _ _ _

Mail Statement Format

(valid at version 1.2 and above)

Pos.	Data Content
1-8	Indicates that the notification to bank request is a Mail Statement, with the following value: SRQ_ _ _ _ _
9-10	The numeric statement iteration. The current statement is represented by 00 , the previous by 01 , and so on.

Statement Print Format

Pos.	Data Content
1-8	<p>The type of information inquiry request. For statement print transactions, this is one of the following values:</p> <ul style="list-style-type: none"> • FULL_ _ _ _ • MINInns_ <p>Where:</p> <p>nn = Indicates the transactions to print. The values are:</p> <p>Optional ISO transaction type portion of the original processing code (for example, 00 for only purchase transactions, or 01 for withdrawal transactions)</p> <p>CK = Checks.</p> <p>OT = Other.</p> <p>Blank = The statement should not be limited to a particular transaction type.</p>

Pos.	Data Content
	<p>s = Source of the transaction. The values are:</p> <p>P = POS transactions.</p> <p>A = ATM transactions.</p> <p>Blank = The statement should not be limited by source. For example, the statement may include teller transactions.</p>
9-10	The numeric statement iteration. The current statement is represented by 00 , the previous by 01 , and so on.
11-14	The maximum number of line items the host may return.
15-16	The maximum characters for a single description line. This value does not include the count for field separator characters. This value is used for acquirer-formatted statements. Control characters such as carriage returns and graphics are not allowed and are not part of the count.
17-19	The maximum characters for a single print line. This value is used by the host if the host formats the statement print area. No edit is done to ensure the host adheres to this limit.
20-25	Optional. May contain the statement start date requested, in the format YYMMDD.
26-31	Optional. May contain the statement end date requested, in the format YYMMDD.
32-39	The vendor model, used only by issuers that format their own statements.
40-47	The emulation model, used only by issuers that format their own statements.
48-49	The page length, used only by issuers that format their own statements.
50-55	Reserved for future use.
56-59	DEVC (for Connex™ on IBM® use only). This field provides the device characteristics for the issuer to use when they format the statement print data.
60-64	Requested number of pages (for Connex on IBM use only).
65-69	Completed number of pages for partial print (Connex on IBM use only).

Stop Payment Format

(valid at version 1.2 and above)

Pos.	Data Content
1-8	Indicates that the notification to bank request is a Stop Payment, with the following value: STOP_ _ _ _
9-14	Check number, right-justified with leading zeros.

OAR Format

Pos.	Data Content
1-8	Indicates the transaction is multiple account data, with the following value: ACCT_ _ _ _

Status: Refer to the following charts for the FIS and EBT transaction data element requirements.

Cash Deposit Format

(valid at version 1.4 and above)

Pos.	Data Content
1-8	Indicates that the deposit was made in verified cash, with the following value: CASH_ _ _ _

Mixed Deposit Format

Pos.	Data Content
1-8	Indicates that the transaction is a Mixed deposit, with the following value: MIXDEP

Aggregation Format

Pos.	Format	Description
1-4	an4	Aggregation Format Tag Value is AGGR.
5	C	Interlink Aggregation Indicator - used only for STAR Transactions. This flag is used to indicate participation in Interlink through STAR network.
		'N' = Acquirer Processor does not participate in Interlink through STAR.
		'W' = Pre-existing qualified Interlink supermarket (STAR® SE/W only).
		'X' = Pre-existing Interlink merchant (STAR® SE/W only).
		'Y' = Qualified Interlink supermarket (STAR® SE/W only).
		'Z' = Standard Interlink merchant (STAR® SE/W only).
8	C	E-Commerce Aggregation Indicator - indicates E-commerce
		Aggregated Transactions (Used only for STAR).
		'Space or N' = Transaction is not aggregated.
		'Y' = Transaction aggregated.

FIS Requirements

Message Types	Status Information
0100, 0120, 0200, 0220, 0420	Conditional. Sent if the data is present. Required on a 0100 for statement printing, check inquiry, stop payment, check reorder, mail statement, and door popper.
0600 Administrative Request	Conditional when data element 070 equals 810 and specific customer selection criteria is required.
0110, 0210, 9110, 9210	Optional. This data element may be returned by the issuer if received in the request and they want the data element returned to them in reversals for late or unsolicited responses.

EBT Transaction Requirements

Message Types	Status Information
0200, 0220, 0420	Conditional. Required for Benefit Balance Inquiry transactions. Refer to “Data Element Code Tables” on page 578 for the processing code table.

Money Transfer Format

Pos.	Format	Description
1-4	an4	MTXF - Indicates that the transaction is a Money transfer Credit transaction where Money will be immediately available to cardholders (within 30-minutes of authorization). Example - MasterCard MoneySend transaction.

105 Large Private Data 1

Format: LLLVAR

Attributes: FIS: ans..999
ISO: ans..999

Description: This data element is used with data elements 106-108 to return large amounts of data. FIS has defined the usage of these fields for Shared Branch transactions and host OAR functions. In addition, processors may agree to pass whatever data they want in these fields. A tagging system was developed to identify the FIS-Defined usages of these fields. FIS currently supports only a single tag per transaction for large private data. In the future, FIS will support chaining of tagged data in a single transaction.

Reserved Tags

The following tags are reserved for data elements 105-108.

Code	Description
BC	Bulk Deposit or Bulk Check Deposit
DS	Digital Signature
DT	Digital Signature Algorithm (RSA, DSA, or ECDSA)

Code	Description
DV	Digital Signature Format
II	ClickCheck
S1	Shared Branch
S2	Shared Branch
SD	SafeDebit CLOB
AX	AMEX Additional Data

Tagged Format

Tags are assigned to represent and identify the specific information immediately following a tag identifier. The tag ID is 5 positions long, always beginning with an asterisk (*), followed by the 2-character tag ID, followed by another asterisk (*), followed by a backslash (\). For example: ***xx*** where: **xx** is an alphanumeric value that represents the tag.

Tagged Length Indicator

The 4-digit length indicator identifies the length of information immediately following the tag, versus the actual length of the data element. Tagged data can be transported using fields 105, 106, 107, and 108 in combination, and can be as long as the total of all four fields combined. The maximum data length for a single tag is 1011 bytes.

Each field (105, 106, 107, and 108) carries up to 999 bytes of information. However, 9 positions are used with the tag:

- 5 positions are used for the tag ID layout.
- 4 positions are used for the length of the tagged information.

See the following examples of the different variations using a single tag and multiple tags.

Example 1

This example shows a single tag in a single large private data field.

```
105LLL|*T1*\| T1 data (maximum 999 characters) |
```

Example 2

This example shows a single tag over multiple large private data fields.

105LLL	*T1*\	first 250 bytes of data	
106LLL	rest of data (up to 999 bytes)		

Example 3

This example shows multiple tags in a single large private data field.

105LLL	*T1*\	T1 length	T1 data	*T2*\	T2 length	T2 data	
--------	-------	-----------	---------	-------	-----------	---------	--

Example 4

This example shows multiple tags in multiple large private data fields.

105LLL	*T1*\	T1 length	T1 data (more than 999 bytes)		
106LLL	remaining T1 data	*T2*\	T2 length	T2 data	

Shared Branch Transaction Format

See the *Shared Branch Support* manual for the format of Shared Branch transaction data.

9X10 Open Account Relationship (OAR) Format

Following are requirements for OAR response data:

- Delimiters are required between subfields to identify subfields without data. Delimiters for trailing empty subfields are not required.
- The backslash (\) is used to separate subfields.
- An asterisk (*) is used to separate accounts.
- FIS requires that the Account Number sub-element and OAR Select Type sub-element be returned in the response from the host.
- The account data is repeated for each account, up to 10 accounts.

The layout of the account information follows:

NOTE:

Although OAR is FIS-Defined, a tag is not necessary because it has a unique message type. No other usage of large private data is available for the OAR-type messages.

Sub-Element Name/Contents	Length	Status
Account Number.	28 maximum	Required
Field delimiter. Value: \	1	Required
OAR Select Type (service line). For values, see “Account Type” on page 623.	2	Required
Field delimiter. Value: \	1	Optional
Account Type. For example, NOW, SNOW	4 maximum	Optional
Field delimiter. Value: \	1	Required
Account Access. Values are: <ul style="list-style-type: none"> 0 = DB+CR (default) 1 = DB 2 = CR 	1	Optional
Field delimiter. Value: \	1	Required
Account Qualifier.	3 maximum	Optional
Field delimiter. Value: \	1	Required
Account Description.	28 maximum	Optional
Field delimiter. Value: \	1	Required
Balance Data: <ul style="list-style-type: none"> Balance Type (2 bytes). For values, see “Amount Type” on page 624. Currency Code (3 bytes). For example, 840 = U.S. dollars. Balance Amount (13 bytes maximum) 	18	Optional

Example 1

In this example, information is provided for two accounts:

```
246813579\20\NOW\1\Checking 1*1357924\20\NOW\Checking 2*
```

Example 2

In this example, three 16-digit accounts use 20 bytes per account, including delimiters:

```
1234567890123456\20*2345678901234567\20*3456789012345678\20*
```

Status: Refer to the following chart for the FIS data element requirements:

Message Types	Status Information
0110	Optional. This data is sent if available and you are using FIS-Defined private data elements.
0200	Optional. This data element will contain check information in bulk format when bulk check data is sent by the acquirer.
0600 Administrative Request	Conditional when data element 070 equals 810, 811, 812, 821, or 822.
9110, 9210	Required.

Bulk Deposit Format

Field Name	Start	Length	Attribute
Length of data element Value: Variable length up to 999 bytes	1	3	
Eye Catcher/Token Value: *BC*\	4	5	Char
Filler	9	1	
Version #	10	2	Char
Filler	12	2	Char

Field Name	Start	Length	Attribute
Number of checks Value: 01-30 for check deposit or mixed deposit	14	2	Char
Cash Amount Value: Cash amount in mixed deposits or cash deposits. Assumes 2 decimals. Zeros if no cash	16	12	Char
1st Check Data			
Scanned Amount	28	12	Char
Customer Entered Amount	40	12	
MICR Data	52	64	
Quality Indicator	116	1	
Currency Code	117	3	
2nd Check Data			
Scanned Amount	120	12	
Customer Entered Amount	132	12	
MICR Data	144	64	
Quality Indicator	208	1	
Currency Code	209	3	
3rd Check Data	212	92	
4th Check Data	304	92	
5th Check Data	396	92	
6th Check Data	488	92	
7th Check Data	580	92	
8th Check Data	672	92	
9th Check Data	764	92	
10th Check Data	856	92	
11th Check Data	948	55	
Note: The remaining part of the 11th Check Data will be present in DE106.			

106 Large Private Data 2

Format: LLLVAR

Attributes: FIS: ans..999
ISO: ans..999

Description: This data element is used when the amount of data exceeds the data sent in data element 105.

Note: See [“105 Large Private Data 1” on page 365](#) for format information for this data element.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0110	Optional. Required when data returned exceeds the data which fits in data element 105.
0200	Optional. This data element will contain check information in bulk format when bulk check data is sent by the acquirer.
0600 Administrative Request	Conditional when data element 070 equals 810, 811, 812, 821, or 822.
9110, 9210	Optional. Required when data returned exceeds the data which fits in data element 105.

Bulk Deposit Format

Field Name	Start	Length
Length of data element Value: Variable length up to 999 bytes	1	3
Last portion of 11th Check Data	4	37
12th Check Data	41	92
13th Check Data	133	92
14th Check Data	225	92
15th Check Data	317	92
16th Check Data	409	92
17th Check Data	501	92

Field Name	Start	Length
18th Check Data	593	92
19th Check Data	685	92
20th Check Data	777	92
21st Check Data	869	92
22nd Check Data	961	42
Note: The remaining part of the 22nd Check Data will be present in DE107.		

107 Large Private Data 3

Format: LLLVAR

Attributes: FIS: ans..999
ISO: ans..999

Description: This data element is used when the amount of data exceeds the data sent in data elements 105 and 106.

Note: See [“105 Large Private Data 1” on page 365](#) for format information for this data element.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0110	Optional. Required when data returned exceeds the data which fits in data elements 105 and 106.
0200	Optional. This data element will contain check information in bulk format when bulk check data is sent by the acquirer.
0600 Administrative Request	Conditional when data element 070 equals 810, 811, 812, 821, or 822.
9110, 9210	Optional. Required when data returned exceeds the data which fits in data elements 105 and 106.

Bulk Deposit Format

Field Name	Start	Length
Length of data element Value: Variable length up to 999 bytes	1	3
Last portion of 22nd Check Data	4	50
23rd Check Data	54	92
24th Check Data	146	92
25th Check Data	238	92
26th Check Data	330	92
27th Check Data	422	92
28th Check Data	514	92
29th Check Data	606	92
30th Check Data	698	92

108 Large Private Data 4

Format: LLLVAR

Attributes: FIS: ans..999
ISO: ans..999

Description: This data element is used when the amount of data exceeds the data sent in data elements 105-107.

Note: See [“105 Large Private Data 1” on page 365](#) for format information for this data element.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0110	Optional. Required when data returned exceeds the data which fits in data elements 105, 106, and 107.
0200	Optional. This data element will contain check information in bulk format when bulk check data is sent by the acquirer.
0600 Administrative Request	Conditional when data element 070 equals 810, 811, 812, 821, or 822.
9110, 9210	Optional. Required when data returned exceeds the data which fits in data elements 105, 106, and 107.

109 Sender Data

Format: LLLVAR

Attributes: FIS: ans..999
ISO: ans..999

Description: Data element 109 is reserved for representation of Sender Information.

Status: Refer to the following chart for the FIS data element requirements.

Format Type and Field Name	Length/Attributes	Values
Account Number		
• Format Code	2	AN
• Length	2	01-50
• Account Number	an..50	50 maximum
Account Type		
• Format Code	2	AT
• Length	2	02
• Account Number	an..2	00 to 08 Valid values: 00 - Other 01 - RTN + Bank Account 02 - IBAN 03 - Card Account 04 - Email 05 - Phone Number 06 - BAN + BIC 07 - Wallet ID 08 - Social Network ID
Date of Birth		
• Formate Code	2	DB
• Length	2	01-08
• Date of Birth	an..8	8 maximum (MMDDYYYY)
E-mail Address		

Format Type and Field Name	Length/Attributes	Values
• Format Code	2	EM
• Length	2	01-30
• E-mail Address	an..30	30 maximum
Funding Source		
• Format Code	2	SF
• Length	2	02
• Funding Source	an 2	01-06
General Identification		
• Format Code	2	GI
• Length	2	01-50
• General Identification	an..50	50 maximum
Masked PAN		
• Format Code	2	MP
• Length	2	01-19
• Masked PAN	an..19	19 maximum
Mobile Service Provider Name		
• Format Code	2	TP
• Length	2	01-30
• Phone Number	an..30	30 maximum
Optional Message		
• Format Code	2	O2
• Length	2	01-37
• Optional Msg	an..37	37 maximum
Phone Number		
• Format Code	2	TL
• Length	2	01-20
• Phone Number	an..20	20 maximum

Format Type and Field Name	Length/ Attributes	Values
Participation ID		
• Format Code	2	PI
• Length	2	01-30
• Participation ID	an..30	30 maximum
Sender Name		
• Format Code	2	N1
• Length	2	01-41
• Sender Name	an..41	41 maximum
Sender Address		
• Format Code	2	A1
• Length	2	01-50
• Street Address	an..50	50 maximum
• Format Code	2	A3
• Length	2	01-25
• City	an..25	25 maximum
• Format Code	2	A7
• Length	2	01-03
• State/Province	an..3	03 maximum
• Format Code	2	A8
• Length	2	01-03
• Country Code	an..3	03 maximum
• Format Code	2	A4
• Length	2	01-10
• Postal Code	an..10	10 maximum

Format Type and Field Name	Length/ Attributes	Values
Sender Place, Apartment, Suite, Office, etc.		
• Format Code	2	A2
• Length	2	01-09
• Sender Place, Apartment, Suite, Office, etc.	an..09	9 maximum
Sender Country		
• Format Code	2	A5
• Length	2	01-24
• Sender Country in words (not ISO 3 byte form)	an..24	24 maximum
Sender Identification Type		
• Format Code	2	IN
• Length	2	01-02
• Sender Identification Type	an..2	2 maximum
Sender Identification Number		
• Format Code	2	A6
• Length	2	01-25
• Sender Identification Number	ans..25	25 maximum
Sender Identification Country Code		
• Format Code	2	CC
• Length	2	01-03
• Sender Identification Country Code	ans..3	3 maximum
Sender Identification Expiration Date		
• Format Code	2	ED
• Length	2	01-08

Format Type and Field Name	Length/Attributes	Values
<ul style="list-style-type: none"> Sender Identification Expiration Date (Format MMDDYYYY) 	an..8	8 maximum
Sender Nationality		
<ul style="list-style-type: none"> Format Code 	2	NA
<ul style="list-style-type: none"> Length 	2	01-03
<ul style="list-style-type: none"> Sender Nationality (Country Code) 	ans..3	3 maximum
Sender Country of Birth		
<ul style="list-style-type: none"> Format Code 	2	BC
<ul style="list-style-type: none"> Length 	2	01-12
<ul style="list-style-type: none"> Sender Country of Birth 	ans..12	12 maximum
Sender Original Date		
<ul style="list-style-type: none"> Format Code 	2	D1
<ul style="list-style-type: none"> Length 	2	01-06
<ul style="list-style-type: none"> Sender Date 	ans	6 maximum
Sender Name 2 or First Name		
<ul style="list-style-type: none"> Format Code 	2	N2
<ul style="list-style-type: none"> Length 	2	01-24
<ul style="list-style-type: none"> Sender Name 2 or First Name 	an..24	24 maximum
Structured Sender Name - Second Name (Middle Name)		
<ul style="list-style-type: none"> Format Code 	2	N3
<ul style="list-style-type: none"> Length 	2	01-80
<ul style="list-style-type: none"> Structured Sender Name - Second Name (Middle Name) 	an..80	80 maximum
Structured Sender Name		
<ul style="list-style-type: none"> Format Code 	2	N4
<ul style="list-style-type: none"> Length 	2	01-80
<ul style="list-style-type: none"> Structured Sender Name 	an..80	80 maximum

Format Type and Field Name	Length/Attributes	Values
Sender Cell Phone Number Including Country and Area Codes		
• Format Code	2	T1
• Length	2	01-20
• Sender Cell Phone	an..20	20 maximum
Sender Work Phone Number Including Country and Area Codes		
• Format Code	2	T2
• Length	2	01-20
• Sender Work Phone	an..20	20 maximum
Sender Fax Number Including Country and Area Codes		
• Format Code	2	T3
• Length	2	01-20
• Sender Fax Number	an..20	maximum
Sender Pager Number Including Country and Area Codes		
• Format Code	2	T4
• Length	2	01-20
• Sender Pager Number	an..20	maximum
Sender Customer Service Number Including Country and Area Codes		
• Format Code	2	T5
• Length	2	01-20
• Sender Customer Service	an..20	20 maximum
Transaction Description		
• Format Code	2	TD
• Length	2	01-11
• Transaction Description	an..11	11 maximum
Transaction Purpose		
• Format Code	2	PT
• Length	2	02

Format Type and Field Name	Length/ Attributes	Values
• Transaction Purpose	an 2	01-02
Unique Reference Number		
• Format Code	2	R1
• Length	2	01-19
• Ref Number	an..19	19 maximum
URL - WEB Address of Online Merchant		
• Format Code	2	UR
• Length	2	01-99
• Online Merchant Web Address	an..99	99 maximum

NOTE:

- The TP, A1, A3, A4, A7, A8 and DB Tags are used by MasterCard and VISA. The A8 Tag to Visa must be the ISO numeric country code.
- The R1, AN, N1, A1, A3, A7, A8, GI, and SF Tags are used by Visa and NYCE.
- The A2, A5, A6, D1, N2, N3, N4, T1, T2, T3, T4, and T5 Tags are used by Citi.
- The R1 and O2 Tags are used by MasterCard and Pulse.
- The TL Tag is used by MasterCard, Pulse, and Star.
- The N1 Tag is used by MasterCard, Pulse, and Nyce.
- The GI Tag is used by Star and Visa.
- The EM Tag is used by Star.
- The UR, R1, and T2 Tags are used for Internet PIN Debit Transactions.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Optional.

110 Receiver Data

Format: LLLVAR

Attributes: FIS: ans..999
ISO: ans..999

Description: Data element 110 is reserved for representation of Receiver Information.

Status: Refer to the following chart for the FIS data element requirements.

Format Type and Field Name	Length/Attributes	Values
Account Number		
• Format Code	2	AN
• Length	2	01-50
• Account Number	an..50	50 maximum
Account Type		
• Format Code	2	AT
• Length	2	02
• Account Number	an..2	00 to 08 Valid values: 00 - Other 01 - RTN + Bank Account 02 - IBAN 03 - Card Account 04 - Email 05 - Phone Number 06 - BAN + BIC 07 - Wallet ID 08 - Social Network ID
Date of Birth		
• Format Code	2	DB
• Length	2	01-08
• Date of Birth	an..08	08 maximum (MMDDYYYY)
E-mail Address		

Format Type and Field Name	Length/ Attributes	Values
• Format Code	2	EM
• Length	2	01-30
• E-mail Address	an..30	30 maximum
General Identification		
• Format Code	2	GI
• Length	2	01-50
• General Identification	an..50	50 maximum
Mobile Phone Number		
• Format Code	2	TL
• Length	2	01-20
• Phone Number	an..20	20 maximum
Masked PAN		
• Format Code	2	MP
• Length	2	01-19
• Masked PAN	an..19	19 maximum
Mobile Service Provider Name		
• Format Code	2	TP
• Length	2	01-30
• Phone Number	an..30	30 maximum
Optional Message		
• Format Code	2	O2
• Length	2	01-45
• Optional Message	an..45	45 maximum
Receiver Name		
• Format Code	2	N1
• Length	2	01-41
• Phone Number	an..41	41 maximum

Format Type and Field Name	Length/ Attributes	Values
Receiver Address		
• Format Code	2	A1
• Length	2	01-50
• Street Address	an..50	50 maximum
• Format Code	2	A3
• Length	2	01-25
• City	an..25	25 maximum
• Format Code	2	A4
• Length	2	01-10
• Postal Code	an..10	10 maximum
• Format Code	2	A7
• Length	2	01-03
• State/Province	an..3	03 maximum
• Format Code	2	A8
• Length	2	01-03
• Country Code	an..3	03 maximum
Receiver Place, Apartment, Suite, Office, etc.		
• Format Code	2	A2
• Length	2	01-09
• Receiver Place, Apartment, Suite, Office, etc.	an..09	9 maximum
Receiver Country		
• Format Code	2	A5
• Length	2	01-24

Format Type and Field Name	Length/ Attributes	Values
<ul style="list-style-type: none"> Receiver Country in words (not ISO 3 byte form) 	an..24	24 maximum
Receiver Identification Type		
<ul style="list-style-type: none"> Formate Code 	2	IN
<ul style="list-style-type: none"> Length 	2	01-02
<ul style="list-style-type: none"> Receiver Identification Type 	an..2	2 maximum
Receiver Identification Number		
<ul style="list-style-type: none"> Format Code 	2	A6
<ul style="list-style-type: none"> Length 	2	01-25
<ul style="list-style-type: none"> Receiver Identification Number 	ans..25	25 maximum
Receiver Identification Country Code		
<ul style="list-style-type: none"> Formate Code 	2	CC
<ul style="list-style-type: none"> Length 	2	01-03
<ul style="list-style-type: none"> Receiver Identification Country Code 	ans..3	3 maximum
Receiver Identification Expiration Date		
<ul style="list-style-type: none"> Formate Code 	2	ED
<ul style="list-style-type: none"> Length 	2	01-08
<ul style="list-style-type: none"> Receiver Identification Expiration Date 	an..8	8 maximum
Receiver Nationality		
<ul style="list-style-type: none"> Formate Code 	2	NA
<ul style="list-style-type: none"> Length 	2	01-03
<ul style="list-style-type: none"> Receiver Nationality 	ans..3	3 maximum
Receiver Country of Birth		
<ul style="list-style-type: none"> Formate Code 	2	BC
<ul style="list-style-type: none"> Length 	2	01-12
<ul style="list-style-type: none"> Receiver Country of Birth 	ans..12	12 maximum

Format Type and Field Name	Length/Attributes	Values
Receiver Original Date		
• Format Code	2	D1
• Length	2	01-06
• Receiver Date	ans	6 maximum
Receiver Name 2 or First Name		
• Format Code	2	N2
• Length	2	01-24
• Receiver Name 2 or First Name	an..24	24 maximum
Receiver Cell Phone Number Including Country and Area Codes		
• Format Code	2	T1
• Length	2	01-20
• Receiver Cell Phone	an..20	20 maximum
Receiver Work Phone Number Including Country and Area Codes		
• Format Code	2	T2
• Length	2	01-20
• Receiver Work Phone	an..20	20 maximum
Receiver Fax Number Including Country and Area Codes		
• Format Code	2	T3
• Length	2	01-20
• Receiver Fax Number	an..20	maximum
Receiver Pager Number Including Country and Area Codes		
• Format Code	2	T4
• Length	2	01-20
• Receiver Pager Number	an..20	maximum
Receiver Customer Service Number Including Country and Area Codes		
• Format Code	2	T5
• Length	2	01-20

Format Type and Field Name	Length/Attributes	Values
<ul style="list-style-type: none"> Receiver Customer Service 	an..20	20 maximum
Structured Sender Name - Second Name (Middle Name)		
<ul style="list-style-type: none"> Format Code 	2	N3
<ul style="list-style-type: none"> Length 	2	01-80
<ul style="list-style-type: none"> Structured Sender Name - Second Name (Middle Name) 	an..80	80 maximum
Structured Sender Name		
<ul style="list-style-type: none"> Format Code 	2	N4
<ul style="list-style-type: none"> Length 	2	01-80
<ul style="list-style-type: none"> Structured Sender Name 	an..80	80 maximum
Unique Reference Number		
<ul style="list-style-type: none"> Format Code 	2	R1
<ul style="list-style-type: none"> Length 	2	01-19
<ul style="list-style-type: none"> Ref Number 	an..19	19 maximum

NOTE:

- The TP, A1, A3, A4, A7, and A8 Tags are used by MasterCard.
- The R1, AN, N1, A1, A3, A7, A8, GI Tags are used by Visa and NYCE.
- The A2, A5, A6, D1, N2, N3, N4, T1, T2, T3, T4, and T5 Tags are used by Citi.
- The R1 and O2 Tags are used by MasterCard and Pulse.
- The TL Tag is used by MasterCard, Pulse, and Star.
- The N1 Tag is used by MasterCard, Pulse, and Nyce.
- The GI Tag is used by Star and Visa.
- The EM Tag is used by Star.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220	Optional.

111 Additional Data, Private Acquirer (FIS-Defined)

Format: LLLVAR

Attributes: FIS: ans..255
ISO: ans..999

Description: This data element is reserved by ISO for private definition and use. FIS defines this data element as *Additional Data, Private Acquirer*, which contains additional information for Visa® DCS, Visa EVES, Visa DCS CRISSM, Benefits Transfer, MasterCard® CIS, MasterCard IPM and PLUS® format. The layouts for this data follow.

Status

American Express® GCAG Format

Optional data supplied by the ISO Acquirer, forwarded to Amex.

Subelement Name/Contents	Data Length	AMEX Bit No.	FINIPC Bit No.
Data Identifier. Value: AG	2an	NA	NA
Data Length plus the variable data	3n	NA	NA
Data Byte Map. See FINIPC Bit Number	8hex	NA	NA
Additional Data Type present identifier. Values: <ul style="list-style-type: none"> • ITD - Internet Telephone Data • CPD - Card Present Data 	3an	47	1
ITD - Customer Email Length	2n		2
ITD - Customer Email	1-50ans	47.2	
ITD - Customer Hostname Length	2n		3
ITD - Customer Hostname	1-50ans	47.4	
ITD - HTTP Browser Type Length	2n		4
ITD - HTTP Browser Type	1-50ans	47.6	
ITD - Ship-To Country Code - numeric	3an	47.8	5

Subelement Name/Contents	Data Length	AMEX Bit No.	FINIPC Bit No.
ITD - Shipping Method. Valid values: <ul style="list-style-type: none"> • 01 - Same Day • 02 - Overnight / Next Day • 03 - Priority, 2-3 days • 04 - Ground, 4 or more days • 05 - Electronic Delivery • 06 - Ship-to Store 	2an	47.10	6
ITD - Merchant Product SKU length	2n		7
ITD - Merchant Product SKU	15ans	47.12	
ITD - Customer's IP Address- left justified and character space filled	15ans	47.13	8
ITD - Customer's Phone Number used to place the order, last 10 digits of ANI (Automatic Number Identification) - left justified and character space filled	10ans	47.14	9
ITD - Customer ANI Information Identifier Digits II digits indicate call type. For example, cellular (61-63), payphone (27), toll free (24, 25)	2ans	47.15	10
CPD - Goods Sold Data Version. Values: <ul style="list-style-type: none"> • 01 - Version 1 	2n	47.1	11
CPD - Good Sold Product Code. Values: <ul style="list-style-type: none"> • 1000 - Gift Card 	4an	47.3	12

VISA® DCS Format

Subelement Name/Contents	Data Length	Visa Bit No.	FINIPC Bit No.
Data Identifier. Value: VD	2	NA	NA
Data Length plus the variable data.	3	NA	NA
Data Byte Map. See FINIPC Bit Number.	8	NA	NA
Variable Data: (based on byte map)			
Authorization Characteristics Indicator	1	62.1	1
Market-Specific Data Indicator	1	62.4	2
Duration	2	62.5	3
Reserved	1	-	4
Purchase Identifier	26	62.7	5
Check In/Check Out Date	6	62.8	6
No Show Indicator	1	62.9	7
Extra Charges	6	62.10	8
Restricted Ticket Indicator	1	62.13	9
Requested Payment Service	1	62.15	10
Chargeback Rights Indicator	2	62.16	11
Electronic Commerce Goods Indicator	2	62.19	12
Merchant Verification Value (MVV)	10	62.20	13
CAVV Result	1	44.13	14
Risk Score	4	62.21	15
Risk Condition Codes	6	62.22	16
Processing Codes	6	3	17
Terminal Type	1	60.1	18
Additional POS Information	2	60.8	19
Excl Transaction ID Reason Code	1	62.18	20
STIP Reason Code	4	63.4	21

Subelement Name/Contents	Data Length	Visa Bit No.	FINIPC Bit No.
Visa Charge Indicator. Value to indicate the International Service Assessment (ISA). Blank = Fee Not Assessed S = Fee Assessed R = Fee Rebated B = Fee Assessed E = Fee Assessed C = Fee Assessed	1	63.21	22
Latin America Caribbean Optional Issuer International Service Assessment	15	46	23
Consumer Credit Account-Level Product Identification	2	62.23	24
Cardholder ID Method	1	60.9	25
MIS Reason	4	63.3	25
Recurring Pay Ind.	1	126.13	25
Service Indicators (Deferred Bill)	6	126.12	26
Response Code	2	39	27
Payment Type Indicator (DE104/x"57") reserved	1	104	28 reserved for future use
DE48 - Usage 4	38	48	29
Business Application Identifier	2	104 usage 2 hex 57 Tag 01	30
Visa AVS Result Value	1	44.2	31
Byte Map 2	8	N/A	32
Dynamic Currency Conversion Indicator	1	126.19	33
Spend Qualified Indicator	1	62.25	34
VISA Merchant ID	8	126.5	35
Agent Unique ID	5	126.18	36
Additional Authorization Indicators	1	60.10	37
Field 48, Usage 9a - Text Messages	5	48	38

Subelement Name/Contents	Data Length	Visa Bit No.	FINIPC Bit No.
ATM Routing Table Unique Identifier	7	62.27	39
Marketplace ID or Payment Facilitator ID	11	104, usage 2, Dataset ID 56, Tag 01	40
Sub-Merchant ID	15	104, usage 2, Dataset ID 56, Tag 02	41
Foreign Retailer Indicator	3	104 Usage 2, Dataset ID 56, Tag 04	42
CVV/iCVV Results Code	1	44.5	43
Extended STIP Reason Code	1	44.4	44

VISA® EVES Format

Subelement Name/Contents	Data Length	Visa Bit No.	FINIPC Bit No.
Data Identifier. Value: VE	2	NA	NA
Data Length plus the variable data.	3	NA	NA
Data Byte Map. See FINIPC Bit Number.	8	NA	NA
Variable Data: (based on byte map)			
Authorization Characteristics Indicator	1	62.1	1
Market-Specific Data Indicator	1	62.4	2
Duration	2	62.5	3
Reserved	1	-	4
Merchant Verification Value (MVV)	10	62.20	5
CAVV Result	1	44.13	6
Risk Score	4	62.21	7
Risk Condition Codes	6	62.22	8
Consumer Credit Account-Level Product Identification	2	62.23	9
Misc Reason for Down	4	63.3	10
STIP Reason Code	4	63.4	11
Response Code	2	39	12
Business Application Identifier	2	104 usage 2 hex 57 Tag 01	13
Visa AVS Result Value	1	44.2	14
Dynamic Currency Conversion Indicator	1	126.19	15
Terminal Type	1	60.1	16
Spend Qualified Indicator	1	62.25	17
VISA Merchant ID	8	126.5	18
Service Indicators	6	126.12	19
Agent Unique ID	5	126.18	20
POS Environment	1	126.13	21

Subelement Name/Contents	Data Length	Visa Bit No.	FINIPC Bit No.
Additional Authorization Indicators	1	60.10	22
Marketplace ID or Payment Facilitator ID	11	104, usage 2, Dataset ID 56, Tag 01	23
Sub-Merchant ID	15	104, usage 2, Dataset ID 56, Tag 02	24
CVV/iCVV Results Code	1	44.5	25
Extended STIP Reason Code	1	44.4	26

Online File Maintenance Format for Visa® SMS

Subelement Name/Contents	Data Length	Visa Bit No
File Name. Value: E3/E4/E2	8	101
Purge Date. YYYYMMDD format	8	73
Region codes. Value: 0 A B C D E F Y Z	14	127.2

Benefit Transaction Format

Subelement Name/Contents	Data Length
Data Identifier. Value: EB .	2
Data Length. Value: 007 .	3
FNS number. Left-justified, space-filled.	7

Voucher Number Format

Subelement Name/Contents	Data Length
Data Identifier. Value: VN .	2
Data Length. Value: Up to 015 .	3
Voucher Number.	up to 15

MasterCard® CIS Format

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
Data Identifier. Value: MC	2	NA	NA
Data Length plus the variable data.	3	NA	NA
Data Byte Map. See FINIPC Bit Number.	8	NA	NA
Variable Data: (based on byte map)			
Merchant Advice Code	2	48.84	1
Fraud Data. This data contains the following three subfields for a total length of 9:			2
<ul style="list-style-type: none"> • POS Entry Mode 	3	22	
<ul style="list-style-type: none"> • Response Code 	2	39	
<ul style="list-style-type: none"> • POS Data - POS Terminal Attendance • POS Data - POS Cardholder Presence • POS Data - Card-Activated Terminal Level • POS Data - POS Card Data Terminal Input Capability 	1 1 1 1	61.1 61.4 61.10 61.11	
Advice Detail Code	4	60.2	3
Magnetic Stripe Compliance Status Indicator	1	48.88	4
Magnetic Stripe Compliance Error Indicator	1	48.89	5
Postal Code	10	61.14	6
POS Card Presence 0 = Present 1 = Not Present	1	61.5	7
Transaction Type Identifier	3	48.77	8
MC Assigned ID	6	48.32	9
MC Fraud On-Behalf Result	1	48.71.2	10
MC Fraud Score Information	3	48.75.1	11
MC Healthcare IIAS Exemption	1	48.61.3	12
Processor Pseudo ICA	7	48.16	13
Authorization System Advice Date and Time	10	48.15	14

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
Account Data Compromise Event Messaging Service Data Result	1	48.71.2	15
Account Data Compromise Event Messaging Service Data	30	48.39	16
Partial Approval Terminal Support Indicator	1	48.61.1	17
MC Fraud Score Reason Code	2	48.75.2	18
POS Transaction Status Indicator	1	61.7	19
Remote Payments Program Type Identifier	1	48.48.1	20
Payment Initiation Channel Device Type	2	48.23.1	21
UCAF Collection Indicator	1	48.42.1.3	22
Transit Transaction Type Indicator	2	48.64.1	23
Transportation Mode Indicator	2	48.64.2	24
PPOL Identifier	3	48.26.1	25
Final Auth Indicator	1	48.61.5	26
Terminal Compliant Indicator	2	48.65	27
MC On-behalf Service	2	48.71.1	28
MC On-behalf Result 1	1	48.71.2	29
Merchant Fraud Score	4	112.28	30
Payment Facilitator ID	11	48.37.1	31
Secondary Bit Map	8	N/A	32
Sales Organization ID	11	48.37.2	33
Sub Merchant ID	15	48.37.3	34
Authentication Indicator	1	48.17	35
Advice Reason Code	3	60.1	36

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
Token Provisioning Message Type Values: AC = Activation Code Notification TA = Token Authorization TC = Token Complete Notification TE = Token Eligibility TV = Token Event Notification.	2	124.1	37
Merchant Transaction Fraud Scoring Indicator	1	48.61.4	38
Rules Score	3	48.75.3	39
Rule Reason Code 1	2	48.75.4	40
Rule Reason Code 2	2	48.75.5	41
MPOS Acceptance Data	1	48.21.1	42
Additional Terminal Capability Indicator	2	48.21.2	43
MC Service Parameter	1	48.18	44
Merchant Country of Origin	3	48.37.4	45

Online File Maintenance Format for MasterCard® CIS

Subelement Name/Contents	Data Length	MasterCard-CIS Bit No
File Name. Value: MCC102/MCC103	8	101
Purge Date. YYYYMMDD format	8	120
Region codes. Value: 1 A B C D E	14	120

MasterCard® MDS Format

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
Data Identifier. Value: MD	2	NA	NA
Data Length (byte map + variable data)	3	NA	NA
Data Byte Map (See FINIPC Bit No.)	8	NA	NA
Variable Data (Based on Byte Map)			
Tier Merchant ID	6	DE110.1	1

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
Cross Border Transaction Indicator	1	DE126, position 14	2
Y = Qualifies as a cross-border transaction			
N = Does not qualify as a cross-border transaction			
Cross Border Currency Indicator	1	DE126, position 15	2
X = Transaction does not qualify as a cross-border transaction.			
Y = Transaction was submitted in the currency of the country where the merchant is located.			
N = Transaction was not submitted in the currency of the country where the merchant is located.			
ISA Flag 0 = No International Fee 1 = International Fee Debited 2 = International Fee Credited	1	DE 110.4	3
Financial Network Code	2	DE63, subfield 1	4
Card Present	1	DE61, position 5	5
Operating Environment	1	DE61, position 3	6
POS Terminal Attendance Indicator	1	DE61, position 1	7
POS Cardholder Presence Indicator	1	DE61, position 4	8
Cardholder Activated Terminal Level Indicator	1	DE61, position 10	9
POS Card Data Terminal Input Capability Indicator	1	DE61, position 11	10
POS Entry Mode	2	DE22	11
Transaction Type Identifier	3	48.77	12
MC Assigned ID	6	48.32	13
MC Healthcare IIAS Exemption	1	48.61.3	14
POS Transaction Status	1	61.7	15

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
Remote Payments Program Type Identifier	1	48.48.1	16
Payment Initiation Channel Device Type	2	48.23.1	17
Transit Transaction Type Indicator	2	48.64.1	18
Transportation Mode Indicator	2	48.64.2	19
Maestro Pin-less Program Indicator	1	48.81	20
Acquiring Institution Id	11	32	21
Card Acceptor ID	15	42	22
PPOL Data	3	48.26	23
Terminal Compliant Indicator	2	48.65	24
MC On-behalf Service	2	48.71.1	25
MC On-behalf Result 1	1	48.71.2	26
AllPoint Surcharge-Free Alliance Indicator	1	43, subfield 2	27
Merchant Fraud Score	4	112.28	28
Payment Facilitator ID	11	48.37.1	29
Sales Organization ID	11	48.37.2	30
Sub Merchant ID	15	48.37.3	31
Secondary Bit Map	8	NA	32
Authentication Indicator	1	48.17	33
Advice Reason Code	3	60.1	34
Advice Detail Code	4	60.2	35
Assessment Score	3	48.75.1	36
Score Reason Code	2	48.75.2	37
Rules Score	3	48.75.3	38
Rule Reason Code 1	2	48.75.4	39
Rule Reason Code 2	2	48.75.5	40
Airline Ticket Number	15	48.93	41
CVC2 Validation Program Indicator	1	48.94.1	42

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
QPS/Contactless Chargeback Eligibility Indicator	1	48.94.2	43
MPOS Acceptance Data	1	48.21.1	44
Additional Terminal Capability Indicator	2	48.21.2	45
Trace ID	15	48.63	46
Merchant Country of Origin	3	48.37.4	47

MasterCard® IPM Format

NOTE

This format does not apply to the MasterCard 0100 authorization messages.

Subelement Name/Contents	Data Length	MasterCard Bit No.
Data Identifier. Value: MI .	2	NA
Data Length plus the variable data.	3	NA
Processing Code	6	IPM DE 3
POS Condition Code. This data contains the following 12 subfields for a total length of 12.		IPM DE 22
• Card Data Input Capability	1	IPM DE 22-S1
• Cardholder Authentication Capability	1	IPM DE 22-S2
• Card Capture Capability	1	IPM DE 22-S3
• Terminal Operating Environment	1	IPM DE 22-S4
• Cardholder Present Data	1	IPM DE 22-S5
• Card Present Data	1	IPM DE 22-S6
• Card Data Input Mode	1	IPM DE 22-S7
• Cardholder Authentication Method	1	IPM DE 22-S8
• Cardholder Authentication Entity	1	IPM DE 22-S9
• Card Data Output Capability	1	IPM DE 22-S10

Subelement Name/Contents	Data Length	MasterCard Bit No.
<ul style="list-style-type: none"> Terminal Data Output Capability 	1	IPM DE 22-S11
<ul style="list-style-type: none"> PIN Capture Capability 	1	IPM DE 22-S12
Card Acceptor Inquiry Information. This data contains the following three subfields for a total length of 57:		IPM PDS 0170
<ul style="list-style-type: none"> Customer Service Phone Number 	16	IPM PDS 0170-S1
<ul style="list-style-type: none"> Card Acceptor Phone Number 	16	IPM PDS 0170-S2
<ul style="list-style-type: none"> Additional Contact Information 	25	IPM PDS 0170-S3
Card Acceptor Postal Code	10	IPM DE 43-S4
Local Date and Time	12	IPM DE 12
Airline/Railway Ticket Number	15	IPM PDS 0506
Program Registration ID	3	IPM PDS 0043
Interchange Life Cycle	15	IPM PDS 0263
Cross Border Transaction Indicator	1	IPM PDS 0177-S1
<ul style="list-style-type: none"> Y = Qualifies as a cross-border transaction 		
<ul style="list-style-type: none"> N = Does not qualify as a cross-border transaction 		
Cross Border Currency Indicator	1	IPM PDS 0177-S2
<ul style="list-style-type: none"> Blank = Transaction does not qualify as a cross-border transaction. 		
<ul style="list-style-type: none"> Y = Transaction was submitted in the currency of the country where the merchant or ATM is located. 		
<ul style="list-style-type: none"> N = Transaction was not submitted in the currency of the country where the merchant or ATM is located. 		
MasterCard Assigned ID	6	IPM PDS 0176
Payment Transaction Initiator	3	IPM PDS 0192

Subelement Name/Contents	Data Length	MasterCard Bit No.
CVC 2 Validation Program Indicator	1	IPM PDS 0044 subfield 1
QPS/PayPass Chargeback Eligibility Indicator	1	IPM PDS 0044 subfield 2
Remote Payments Program Type Identifier	1	IPM PDS 0194
Payment Initiation Channel Device Type	2	IPM PDS 0198
Transit Transaction Type Indicator	2	IPM PDS 0210, subfield 1
Transportation Mode Indicator	2	IPM PDS 0210, subfield 2
PPOL Identifier	3	IPM PDS 0207
Terminal Compliant Indicator	2	IPM PDS 0211
Payment Facilitator ID	11	PDS208
Sub Merchant ID	15	PDS208
Sales Organization ID	11	PDS209
Authentication Indicator	1	PDS 0072
MPOS Acceptance Data	1	PDS 0018
Transaction Type Indicator	1	PDS 0021
Merchant Country of Origin	3	PDS 0213

AFFN Format

Subelement Name/Contents	Data Length	AFFN Bit No.	FINIPC Bit No.
Data Identifier. Value: AF	2	NA	NA
Data Length (byte map and variable data)	3	NA	NA
Data Byte Map	8	NA	NA
Variable Data based by Byte Map			
Maestro Cross Border Indicator Values: <ul style="list-style-type: none"> N - Does not qualify as a cross border Y - Does qualify as a cross border 	1	62.47	1

FIS ISO Visa® Base II Format - BPVISA

Subelement Name/Contents	Data Length	Visa Bit No.	FINIPC Bit No.
Data Identifier. Value: V2	2	NA	NA
Data Length (byte map + var data).	3	NA	NA
Data Byte Map. See FINIPC Bit Number.	8	NA	NA
Variable Data: (based on byte map)			
Authorization Characteristics Indicator	1	62.1	1
Market-Specific Data Indicator	1	62.4	2
Duration	2	62.5	3
Prestigious Property Indicator	1	62.6	4
Purchase Identifier	26	62.7	5
Check In/Check Out Date	6	62.8	6
No Show Indicator	1	62.9	7
Extra Charges	6	62.10	8
Restricted Ticket Indicator	1	62.13	9
Requested Payment Service	1	62.15	10
Chargeback Rights Indicator	2	62.16	11
Electronic Commerce Goods Indicator	2	62.19	12
Merchant Verification Value (MVV)	10	62.20	13
CAVV Result	1	44.13	14
Risk Score	4	62.21	15
Risk Condition Codes	6	62.22	16
Processing Codes	6	3	17
Terminal Type	1	60.1	18
Additional POS Info	2	60.8	19
Excl Transaction ID Reason Code	1	62.18	20
STIP Reason Code	4	63.4	21
Charge Indicator	1	63.21	22

Subelement Name/Contents	Data Length	Visa Bit No.	FINIPC Bit No.
Product ID	2	62.23	23
Business Application ID	2	104	24
Dynamic Currency Conversion Indicator	1	126.19	25
Fast Funds Indicator	1	TCR 3, pos 16	26
Spend Qualified Indicator	1	TCR 5 Pos 149	27
Agent Unique ID	5	TCR 4 Pos 5-9	28
Acquirers Business ID	8	TCR 0, pos 50 -57	29

Pulse Format

Subelement Name/Contents	Data Length	PULSE Bit No.	FINIPC Bit No.
Data Identifier. Value: PS	2	NA	NA
Data Length plus the variable data	3	NA	NA
Data Byte Map. See FINIPC Bit Number	8	NA	NA
Reference Number	9	DE 111	1
Merchant Trans ID	16	DE 111	2
T&E Indicator + T&E Data T&E Indicator values: <ul style="list-style-type: none"> • AI - Airline Transactions • VR - Vehicle Rental Transactions • LO - Lodging Transactions Note: A 220 completion message may contain either AI or VR or LO.	Min 18 Max 58 (Variable length based on T&E Indicator)	T&E Indicator - DE 111, Position 26 - 27 T&E Data - Variable position, based on T & E Indicator (see below).	3
T&E Indicator = "AI" Airline Transactions			

Subelement Name/Contents	Data Length	PULSE Bit No.	FINIPC Bit No.
Airline Ticket Number	15	DE 111, Positions 28-42	
Airline Passenger Name	25	DE 111, Positions 43-67	
Airline Travel Date - The date of Departure in MMDDYY format	6	DE 111, Positions 68-73	
Airline City Origin	5	DE 111, Positions 74-78	
Airline City Destination	5	DE 111, Positions 79-83	
T&E Indicator = "VR" Vehicle Rental Transactions			
Agreement Number	9	DE 111, Positions 28-36	
Vehicle Return City	18	DE 111, Positions 37-54	
T&E Indicator = "LO" Lodging Transactions			
Arrival Date	6	DE 111, Positions 28-33	
Folio Number	10	DE 111, Positions 34-43	
Transaction Status Indicator Value: I = Incremental Authorization	1	DE 111- Position 10 (010X message), variable position (022X message based on the presence of T&E data).	4

Discover® Credit Format

Subelement Name/Contents	Data Length	Discover Bit No.	FINIPC Bit No.
Data Identifier. Value: DC	2	NA	NA
Data Length plus the variable data	3	NA	NA
Data Byte Map. See FINIPC Bit Number	8	NA	NA
Variable Data: (based on byte map)			
Partial Approval Indicator Refer to Discover's data field 61.2 specifications.	1	61.2	1
POS Transaction Status Indicator Refer to Discover's data field 61.7 specifications.	1	61.7	2
Registered User Indicator <ul style="list-style-type: none"> Y - Registered User N - Not registered User 	1	104 Data Set 60 Tag 01	3
Last Registered User Profile Change Date <ul style="list-style-type: none"> Date when the Cardholder last changed his/her registered/stored profile voluntarily and not due to a Merchant change policy. Date format: DDMMCCYY Conditionally set if Tag 1 - Registered User Indicator is "Y." 	8	104 Data Set 60 Tag 02	4

Discover® Debit Format

Subelement Name/Contents	Data Length	PULSE Bit No.	FINIPC Bit No.
Data Identifier. Value: DD	2	NA	NA
Data Length plus the variable data	3	NA	NA
Data Byte Map. See FINIPC Bit Number	8	NA	NA

Subelement Name/Contents	Data Length	PULSE Bit No.	FINIPC Bit No.
Variable Data: (based on byte map)			
Reference Number	9	DE 111, Positions 1-9	1
Merchant Trans ID	16	DE 11,1 Positions 10-25	2
Airline Transactions When a value of "AI" is present in Pulse's DE 111 positions 26-27	2	DE 111, Positions 26-27	
Airline Ticket Number	15	DE 111, Positions 28-42	3
Airline Passenger Name	25	DE 111, Positions 43-67	4
Airline Travel Date - The date of departure in MMDDYY format.	6	DE 111, Positions 68-73	5
Airline City Origin	5	DE 111, Positions 74-78	6
Airline City Destination	5	DE 111, Positions 79-83	7
Vehicle Rental Transactions When a value of "VR" is present in Pulse's DE 111 positions 26-27	2	DE 111, Positions 26-27	
Agreement Number	9	DE 111, Positions 28-36	8
Vehicle Return City	18	DE 111, Positions 37-54	9

Subelement Name/Contents	Data Length	PULSE Bit No.	FINIPC Bit No.
Lodging Transactions When a value of "LO" is present in Pulse's DE 111 positions 26-27	2	DE 111, Positions 26-27	
Arrival Date	6	DE 111, Positions 28-33	10
Folio Number	10	DE 111, Positions 34-43	11
Transaction Status Indicator Values: <ul style="list-style-type: none"> • R - Recurring • I - Incremental Authorization • P - Partial Shipment • G - Aggregated Transit Transaction Indicator. 	1	DE 111, Position 10 on 010X message, Position 26 on 022X message.	12

STAR Access Format

Subelement Name/Contents	Data Length	Star Bit No.	FINIPC Bit No.
Data Identifier. Value: ST	2	NA	NA
Data Length (byte map and variable data)	3	NA	NA
Data Byte Map.	8	NA	NA
Variable Data based on Byte Map			
Payment Initiation Type	2	DE 58, Position 12-13	1
Cardholder Identification Method	1	DE 58, Position 14	2
Star Verification Value (SVV)	10	DE 104, Position 5-14	3
Market Indicator	1	DE 104, Position 15	4

Subelement Name/Contents	Data Length	Star Bit No.	FINIPC Bit No.
Merchant Aggregation Indicator	1	DE 104, Position 16	5
Transaction Aggregation Indicator	1	DE 104, Position 17	6
Transaction Description	2	DE 104, Position 19 - 20	7
Access Transaction Sequence Number (ATSN)	15	DE 110, Tag AX, bit 1	8
Incremental Auth Indicator	1	DE 110, Tag AX, bit 2	9
Acquirer Reference Number	23	DE 110, Tag AX, bit 8	10
Interchange Program Identifier	3	DE 104, Position 2-4	11
Passenger Transport Ticket Number	15	DE 110, Passenger Transport Data, bit 1	12
SMS/DMS Indicator	3	DE 110, Additional Data - STAR Access, bit 9	13
Merchant Ship Date	8	DE 110, Tag AX bit 4	14
Cardholder Authentication status	1	DE 058: National Point-of-Service Condition Code, position 4: Cardholder Presence, Value 5 or 6	15

MasterCard Gateway Format

Subelement Name/Contents	Data Length	PULSE Bit No.	FINIPC Bit No.
Data Identifier. Value: MG	2	NA	NA
Data Length plus the variable data	3	NA	NA
Data Byte Map. See FINIPC Bit Number	8	NA	NA

Subelement Name/ Contents	Data Length	PULSE Bit No.	FINIPC Bit No.
Variable Data: (based on byte map)			
Banknet Reference Number	9	DE 111, Positions 1-9	1
Airline Transactions When a value of "AI" is present in Pulse's DE 111 positions 10- 11	2	DE 111, Positions 10-11	
Airline Ticket Number	15	DE 111, Positions 12- 26	2
Airline Passenger Name	25	DE 111, Positions 27- 51	3
Airline Travel Date - The date of departure in MMDDYY format.	6	DE 111, Positions 52- 57	4
Airline City Origin	5	DE 111, Positions 58- 62	5
Airline City Destination	5	DE 111, Positions 63- 67	6
Vehicle Rental Transactions When a value of "VR" is present in Pulse's DE 111 positions 10-11	2	DE 111, Positions 10-11	
Vehicle Agreement Number	9	DE 111, Positions 12- 20	7
Vehicle Return City	18	DE 111, Positions 21- 38	8

Subelement Name/ Contents	Data Length	PULSE Bit No.	FINIPC Bit No.
Lodging Transactions When a value of “LO” is present in Pulse’s DE 111 positions 10- 11	2	DE 111, Positions 10-11	
Arrival Date	6	DE 111, Positions 12- 17	9
Folio Number	10	DE 111, Positions 18- 27	10
Cross Border Transaction Indicator	1	DE 111, Position Varies	11
Y =	Qualifies as a cross- border transaction		
N =	Does not qualify as a cross-border transaction		
Cross Border Currency Indicator	1	DE 111, Position Varies	
X =	Transaction does not qualify as a cross-border transaction.		
Y =	Transaction was submitted in the currency of the country where the merchant is located.		
N =	Transaction was not submitted in the currency of the country where the merchant is located.		
Function Code	3	DE 127 Position 1	12

Subelement Name/ Contents	Data Length	PULSE Bit No.	FINIPC Bit No.
Network Reference ID	15	DE 127 Position 4	13
Interchange Rate Qualifier	8	DE 127 Position 25	14
Acquirer Reference Number	23	DE 127 Position 33	15

Shazam Dual Message Transactions Format

NOTE: This format is applicable for Shazam Single message Pinned (ATM & POS) and Shazam Dual message transactions

Subelement Name/ Contents	Data Length	Shazam Bit.No	FINIPC /IMM Bit No	Description
Data Identifier, Value SH	2	NA	NA	
Data Length (Byte map and variable data)	3	NA	NA	
Data Byte Map	8	NA	NA	
Variable Data based on byte map				
Shazam Transaction ID	16	DE 63.18	1	A unique ID assigned by Shazam.
Electronic Commerce Indicator (ECI)	1	DE 123.10	2	ECI provides transaction information for CNP transactions.
Dual Message Authorization Type Indicator	1	DE 123.13	3	Value I indicate Incremental Authorization.
Chargeback Rights Indicator (CRI)	2	DE 123.29	4	CRI is assigned by Shazam. This field will appear only on 0220 messages.

Subelement Name/ Contents	Data Length	Shazam Bit.No	FINIPC /IMM Bit No	Description
Airline Passenger Ticket Number	15	DE 124, AL Tag	5	
Function Code	3	DE 24	6	Function Code value from Shazam.
Originating Switch ID	3	DE 63.1	7	Unique identifier for the switch that originated the transaction.
System Sequence Number	6	DE 63.6	8	The SHAZAM system sequence number assigned by SHAZAM to the transaction.
Original Authorization Sequence Number	6	DE 63.8	9	The SHAZAM system sequence number for the original authorization for the SHAZAMChek completion.

CULIANCE Format

Subelement Name/Contents	Data Length	Culiance Bit.No	FINIPC Bit No
Data Identifier, Value CU	2	NA	NA
Data Length plus the variable data	3	NA	NA
Data Byte Map	8		
Variable Data: (based on byte map)			
Incremental Pre-authorization Flag	1	DE124, IP tag	1
Retrieval Reference Number	9	DE124, IP tag	2

NYCE Format

Subelement Name/Contents	Data Length	NYCE Bit.No	FINIPC Bit No
Data Identifier, Value NY	2	NA	NA
Data Length plus the variable data	3	NA	NA
Data Byte Map	8		
Variable Data: (based on byte map)			
Incremental Pre-authorization Flag	1	DE124, IP tag	1
Retrieval Reference Number	12	DE124, IP tag	2

EPOC Format

NOTE: EP Tag is customer specific, support for EP Tag is controlled using CED configuration.

Subelement Name/Contents	Data Length	EPOC Bit.No	FINIPC Bit No
Data Identifier, Value EP	2	NA	NA
Data Length plus the variable data	3	NA	NA
Data Byte Map. See FINIPC Bit Number.	8	NA	NA
Variable Data: (based on byte map)			
Network International Service Assessment (ISA) Indicator	1	125.11	1
Card Acceptor Business Code	4	26	2
Network Identifier	6	62	3

Status: Refer to the following charts for the FIS and EBT transaction data element requirements.

FIS Requirements

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Optional.
0600 Administrative Risk and Administrative Request	Conditional if Network Management Information Code (bit 070) equals 601, 810, 811, 812, 821, or 822.

EBT Transaction Requirements

Message Types	Status Information
0200, 0220, 0420	Conditional. Sent if the transaction requires an FNS number or the transaction is an electronic voucher clear transaction.
0100, 0110, 0210, 0430	Conditional. Sent if available.

112 Reserved for National Use

Format: LLLVAR

Attributes: FIS: ans..255
ISO: ans..999

Description: This data element is reserved for definition and use by national standards organizations.

Status: Not used.

113 Authorizing Agent Institution ID Code (ANSI-defined)

Format: LLLVAR

Attributes: FIS: n..011
ISO: ans..999
This code is normally an institution identification code (IID) in the format 1NNNNNNNNC, where:
NNNNNNNN = the institution ID code
C = a check digit

Description: This data element is reserved for definition and use by national standards organizations.
The ANSI X9.2-1988 standard defines this data element as the *Authorizing Agent Institution ID Code*, which identifies the institution approving or denying an authorization, financial transaction, or reversal. This code can be any uniquely identifying number agreed upon by the network.
Note: At version 1.2 and above, this data element can be used for the Issuer Institution ID on a check re-order transaction reply (0110).

Data Edit: Numeric. If the element begins with a 1, this data element must be an Institution ID (IID) code with a valid check digit.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0300, 0302, 0420, 9110, 9210	Optional.
0382	Required.

114 Country Code, Authorizing Agent (ANSI-defined)

Format:	LLLVAR
Attributes:	FIS: an..3 ISO: ans..999
Description:	This data element is reserved for definition and use by national standards organizations. The ANSI X9.2-1988 standard defines this data element as <i>Country Code, Authorizing Agent</i> , the code identifying the country where the authorizing agent institution is located as set out in ISO 3166. Note: At version 1.2 and above, this data element can be used for the country code of the issuer institution on a check re-order transaction reply (0110).
Data Edit:	Numeric.
Status:	Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0110, 0210, 9110, 9210	Conditional. Required if the Acquiring Institution's Country Code (bit 019) is not the same as the Authorizing Agent's Country Code.

115 through 119 Reserved for National Use

Format:	LLLVAR
Attributes:	FIS: ans..255 ISO: ans..999
Description:	These data elements are reserved for definition and use by national standards organizations.
Status:	Not used.

120 Account Qualifiers (FIS-Defined)

Format: LLLVAR

Attributes: FIS: an..6
ISO: ans..999

Description: This data element is reserved by ISO for private definition and use. FIS defines this data element as *Account Qualifiers 1 and 2*. The data element identifies the account(s) involved for a transaction, and is made up of the following subelements.

Subelement/ Attributes	Description
Account Qualifier 1 (an 3)	Identifies the account involved for a single account transaction, or in the case of transfers, it identifies the <i>from</i> side of the transaction.
Account Qualifier 2 (an 3)	Used only in the case of transfers; it identifies the <i>to</i> side of the transaction.

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420, 9110, 9210	Optional.

121 Additional Data, Private Issuer (FIS-Defined)

Format: LLLVAR

Attributes: FIS: ans..255
ISO: ans..999

Description: This data element is reserved by ISO for private definition and use. FIS defines this data element as *Additional Data, Private Issuer*, which is additional information from the host. This data includes additional information for MasterCard® CIS and MasterCard® Format for Declined Recurring Payment Transactions in IPM Clearing Messages.

Statement Print

This data element contains statement print line items for statement print. Following are important formatting notes.

- The exact format depends on the implementation of the acquirer's PI or terminal handler.
- The transaction description indicates the format an acquirer can handle.
- The switch does not edit the format in the statement printing response from the issuer.
- The end of this field is the end of the print line.

Refer to the following chart for statement print data element requirements.

Position	Data Content/Format
1-6	The posting date (YYMMDD) of the item.
7	Field delimiter. Value: \ ASCII value:%h5C EBCDIC value:%hE0
8-n	(Character format) Transaction detail amount, a variable-length numeric field in 99999999 format. Notes: The remaining fields are variable length fields, and may contain the transaction description, where n is a maximum of 255. Backslashes contained within the line item description indicate a new line on the receipt. The line item is terminated by two backslashes.
Variable based on data	(Optional) Delimiter that indicates a new line on a receipt. Value: \

Position	Data Content/Format
Variable based on data	(Optional) Transaction description fields, in character format, that indicate the format the acquirer can handle.
Variable based on data	(Optional) Delimiter that indicates a new line on a receipt. Value: \
Variable based on data	(Optional) Transaction description fields, in character format, that indicate the format the acquirer can handle.
Variable based on data	(Required) Delimiter used to end the transaction. Value: \

Example

```
970118\10000\Withdrawal from DDA\400 Deluxe Parkway\Glendale,
WI\970118\500000\Transfer from Savings to Checking\Teller activity -
North Shore Branch\
```

would be formatted as:

```
18JAN Withdrawal from DDA                      $100.00
      400 Deluxe Parkway
      Glendale, WI
18JAN Transfer from Savings to Checking         $5000.00
      Teller Activity - North Shore Branch
```

Check Inquiry

(valid at version 1.2 and above)

In the case of check inquiry, this data element contains the following.

Position	Data Content
1-6	Posting date (yymmdd) of the inquired check item.
7	Field delimiter. Value: \
8-15	The amount of the inquired check item with no commas, periods, or any other symbol. This field is right-justified and zero-filled, in the following format: nnnnnnnn For example, \$16,123.98 would be formatted as 01612398.
16-17	Delimiter used to end the transaction. Value: \

Online File Maintenance Format for Visa® SMS/BASE 1

Subelement Name/Contents	Data Length	Visa Bit No
File Name. Value: E2/E3/E4	8	101
Purge Date. YYYYMMDD format	8	73
Region codes. Value: 0 A B C D E F Y Z	14	127.2

NOTE: Refer to the VISA SMS/BASE I spec for a complete list of valid region codes.

American Express® GCAG Format

Amex specific response data returned to the ISO acquirer as it applies to a specific transaction.

Subelement Name/Contents	Data Length	AMEX Bit No.	FINIPC Bit No.
Data Identifier. Value: AG	2an	NA	NA
Data Length plus the Variable data	3n	NA	NA
Data Byte Map. See FINIPC Bit Number	8hex	NA	NA

Subelement Name/Contents	Data Length	AMEX Bit No.	FINIPC Bit No.
<p>American Express® transactions, Telephone Number and Email Verification Response Code subfields from Amex; 1 byte each:</p> <ul style="list-style-type: none"> • Cardmember Postal Code • Cardmember Street Address • Cardmember First and Last Name • Cardmember Phone Number • Cardmember Email Address <p>Valid response codes for each subfield include:</p> <ul style="list-style-type: none"> • Y = Yes, data matches • N = No, data does not match • ~ = Data not sent. • U = Data unchecked • R = Retry • S = Service not allowed <p>Note: Tilde (~) = space</p>	5an	62	1
<p>American Express® Verification Value (AEVV) Validation Result from Amex. Valid values include:</p> <ul style="list-style-type: none"> • 0 = Reserved for future use • 1 = AEVV Failed - Authentication, Issuer Key • 2 = AEVV Passed - Authentication, Issuer Key • 3 = AEVV Passed - Attempt, Issuer Key • 4 = AEVV Failed - Attempt, Issuer Key • 5 = Reserved for future use • 6 = Reserved for future use • 7 = AEVV Failed - Attempt, Issuer not participating, Network Key • 8 = AEVV Passed - Attempt, Issuer not participating, Network Key 	1an	61	2

Subelement Name/Contents	Data Length	AMEX Bit No.	FINIPC Bit No.
<ul style="list-style-type: none"> 9 = AEVV Failed - Attempt, Participating, Access Control Server (ACS) not available, Network Key A = AEVV Passed - Attempt, Participating, Access Control Server (ACS) not available, Network Key B = Reserved for future use C = Reserved for future use D = Reserved for future use U = AEVV Unchecked 			

Visa® SMS Format

Subelement Name/Contents	Data Length	Visa Bit No.	FINIPC Bit No.
Data Identifier. Value: VD .	2	N/A	N/A
Data Length plus the Variable Data	3	N/A	N/A
Data Byte Map.	8	N/A	N/A
Variable Data (based on byte map).			
Point of Service Entry Mode Code	4	22	1
Terminal Type	1	60.1	2
Terminal Entry Capability	1	60.2	3
Processing Code	6	3	4
Charge Indicator	1	63.21	5
Visa AVS Result Code	1	44.2	6
Spend Qualified Indicator	1	62.25	7

Visa® EVES PI (BASE I) Format

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
Data Identifier. Value: VE	2	NA	NA
Data Length + the variable data	3	NA	NA
Data Byte Map	8	NA	NA
Variable Data (Based on Byte Map)			
Visa AVS Result Code	1	44.2	1
Spend Qualified Indicator	1	62.25	2

MasterCard® CIS Format

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
Data Identifier. Value: MC for MasterCard® CIS.	2	N/A	N/A
Data Length. Includes the byte map plus the variable data.	3	N/A	N/A
Data Byte Map.	8	N/A	N/A
Variable Data (based on byte map).			
Merchant Advice Code. Valid values are: 01 = New account information is available. 02 = Cannot approve at this time. 03 = Do not try again.	2	48.84	1
Magnetic Stripe Compliance Status Indicator	1	48.88	4
Magnetic Stripe Compliance Error Indicator	1	48.89	5
MasterCard Paypass PAN Mapping Indicator subfield 1 (Account Number Indicator)	1	48.33.1	6
MasterCard Paypass PAN Mapping Indicator subfield 2 (Account Number)	19	48.33.2	7
MasterCard Paypass PAN Mapping Indicator subfield 3 (Expiration Date)	4	48.33.3	8

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
Merchant On-Behalf (OB) Service Code	2	48.51.1	9
Merchant On-Behalf (OB) Result Value	1	48.51.2	10
Authentication Indicator	1	48.17	11
Original E-Comm SLI and UCAF Collection Indicator	3	48.42.2	12
Reason for UCAF Collection Indicator Downgrade	1	48.42.3	13

Online File Maintenance Format for MasterCard® CIS

Subelement Name/Contents	Data Length	MasterCard-CIS Bit No
File Name. Value: MCC102/ MCC103	8	101
Purge Date. YYYYMMDD format	8	120
Region Codes. Value: 1 A B C D E	14	120

MasterCard® MDS Format

Subelement Name/Contents	Data Length	MasterCard Bit No.	FINIPC Bit No.
Data Identifier. Value: MD	2	NA	NA
Data Length (byte map + variable data)	3	NA	NA
Data Byte Map (See FINIPC Bit No.)	8	NA	NA
Variable Data (Based on Byte Map)			
Tier Merchant ID	6	DE110.1	1
Cross Border Transaction Indicator	1	DE126, position 14	2
Y = Qualifies as a cross-border transaction			
N = Does not qualify as a cross-border transaction			
Cross Border Currency Indicator	1	DE126, position 15	2

Subelement Name/Contents			Data Length	MasterCard Bit No.	FINIPC Bit No.
X	=	Transaction does not qualify as a cross-border transaction.			
Y	=	Transaction was submitted in the currency of the country where the merchant is located.			
N	=	Transaction was not submitted in the currency of the country where the merchant is located.			
MasterCard Paypass PAN Mapping Indicator subfield 1 (Account Number Indicator)			1	48.33.1	3
MasterCard Paypass PAN Mapping Indicator subfield 2 (Account Number)			19	48.33.2	4
MasterCard Paypass PAN Mapping Indicator subfield 3 (Expiration Date)			4	48.33.3	5
Authentication Indicator			1	48.17	6
Original E-Comm SLI and UCAF Collection Indicator			3	48.42.2	7
Reason for UCAF Collection Indicator Downgrade			1	48.42.3	8
Product ID			3	110.8	9

MasterCard® Format for Declined Recurring Payment Transactions in IPM Clearing Messages

Upon return of the 0110 Authorization Response to the FIS MasterCard PI, the PI checks the MAC field. If a value of **01**, **02**, or **03** is present, pass the value to MasterCard in DE48 sub-element 84.

If an **01**, **02**, or **03** is not present in the MAC field, then pass the default value of **01** which was set in bit 111 when the transaction is a declined recurring payment transaction.

Example:

Where:	MC0108000000001
Data Identifier	MC
Data Length	010
Data Byte Map	80000000
Variable Data:	
MAC	01

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0110	Optional. Required for statement print and check inquiry.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

Shazam Transactions

NOTE:	FIS ISO issuers do not have to return data in FIS ISO DE121 in the response messages. This format is applicable for Shazam Single message Pinned (ATM & POS) and Shazam Dual message transactions.
--------------	--

Subelement Name/Contents	Data Length	Shazam Bit Number	FINIPC/IMM Bit Number
Data Identifier, Value SH	2	NA	NA
Data Length (Byte map and variable data)	3	NA	NA
Data Byte Map	8	NA	NA
Variable Data based on Byte Map			
Shazam Transaction ID	16	DE 63.18	1
Electronic Commerce Indicator (ECI)	1	DE 123.10	2

STAR Access Format

Subelement Name/Contents	Data Length	Shazam Bit Number	FINIPC/IMM Bit Number
Data Identifier, Value ST	2	NA	NA
Data Length (Byte map and variable data)	3	NA	NA
Data Byte Map	8	NA	NA
Variable Data based on Byte Map			
Access Transaction Sequence Number (ATSN)	15	DE 110, Tag AX, bit 1	1
Additional Response Data	1	DE 44	2

122 Sponsor Bank ID (FIS-Defined)

Format: LLLVAR

Attributes: FIS: an..11
ISO: ans..999

Description: This data element is reserved by ISO for private definition and use. FIS defines this data element as *Sponsor Bank ID*, which identifies the institution serving the merchant POS terminal. In the case of Visa®, it is a bank identification number (BIN). In the case of MasterCard®, it is an MCI customer ID.

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Optional.

123 AVS/Check Auth Data/New PIN (FIS-Defined)

Format: LLLVAR

Attributes: FIS: ans..255
ISO: ans..999

Description: This data element is reserved by ISO for private definition and use. FIS defines this data element as *AVS/Check Auth Data/New PIN*, data required for check transactions (check guarantee and check verification), or financial transactions (such as address verification and new PIN transactions).

The check transaction data and financial transaction data are sent in either multiple-tag or single-tag format. The formats included in the following pages are:

- [“Check Transactions, Multiple-Tag Format” on page 430](#)
- [“Check Transactions, Single-Tag Format” on page 432](#)
- [“Financial Transactions, Multiple-Tag Format” on page 433](#)
- [“Financial Transactions, Single-Tag Format” on page 440](#)

Overview of Multiple-Tag Data Format

The ISO subfields have a definite layout. If a field within a tag is present, all defined preceding fields must be present. Adding a trailing field can be dynamic.

The multiple-tagged data is sent in the following format:

TD	AA	AA Length	AA data	BB	BB Length	BB data	CC	CC Length	CC data
----	----	-----------	---------	----	-----------	---------	----	-----------	---------

where:

- TD = Tagged Data format code
- AA = Subformat code 1
- BB = Subformat code 2
- CC = Subformat code 3

Check Transactions, Multiple-Tag Format

The following multiple-tag data formats are supported for check authorization transactions.

NOTE: The single-tag format is not allowed within the multiple-tag format.

Format Type and Field Name	Length/ Attributes	Pos.	Values
Tagged Data	2		TD
ISO Subfield			
MICR Formatted			
• Format Code	2		MF
• Length	2		01-46
• Routing & Transit	n9	01-09	
• Account Number* * The account number is passed through the Processor Interface and is not edited for numerics.	an18	10-27	
• Check Serial Number	an12	28-39	
• Validation Type	an1	40	
• Process Control	an6	41-46	
Driver's License			
• Format Code	2		DR
• Length	2		01-31
• State Code	an2	01-02	
• Driver's License	an28	03-30	
• Validation Type	an1	31	
Plastic Card			
• Format Code	2		PL
• Length	2		01-29

Format Type and Field Name	Length/ Attributes	Pos.	Values
• PAN (plastic card)	an28	01-28	
• Validation Type	an1	29	
MICR Unformatted			
• Format Code	2		MU
• Length	2		01-66
• Validation Type	an1	01	
• MICR Data	an65	02-66	
Social Security Number			
• Format Code	2		SS
• Length	2		01-11
• State Code	an2	01-02	
• Social Security #	an9	03-11	
State ID			
• Format Code	2		SI
• Length	2		01-24
• State Code*	an2	01-02	
• State ID * With FIS Authorization Systems, for military IDs, use a state code of MY.	an22	03-24	
Date of Birth			
• Format Code	2		DB
• Length	2		01-08
• Date of Birth (yyyymmdd)	an8	01-08	
Phone Number			
• Format Code	2		PN
• Length	2		01-10
• Phone Number	an10	01-10	
Zip Code			

Format Type and Field Name	Length/ Attributes	Pos.	Values
• Format Code	2		ZC
• Length	2		01-09
• Zip Code	an9	01-09	
Proprietary ID			
• Format Code	2		PI
• Length	2		01-28
• Proprietary ID	an28	01-28	
Check Number * (Manually Entered)			
• Format Code	2		CN
• Length	2		01-12
• Check Number * For FIS Authorization Systems, if bit 022 equals 900, then CN is required. If bit 022 is not equal to 900, CN is optional.	an12	01-12	

Check Transactions, Single-Tag Format

The following single-tag data formats are supported for check authorization transactions. However, these formats are not used for FIS Authorization Systems.

NOTE: When you are using the single-tag format, only one tag is allowed.

Format Type and Field Name	Length/ Attributes	Pos.	Values
MICR			
• Format Code	2		MR
• State Code	an2	01-02	
• MICR Inst ID	an8	03-10	
• MICR Number	an10	11-20	
• Check Number	an6	21-26	

Format Type and Field Name	Length/Attributes	Pos.	Values
• Zip Code	an9	27-35	
Driver's License			
• Format Code	2		DL
• State Code	an2	01-02	
• Driver's License Number	an22	03-24	
• Check Number	an6	25-30	
• Date of Birth	an6	31-36	
Plastic Card			
• Format Code	2		PC
• State Code	an2	01-02	
• PAN (plastic card)	an19	03-21	
• Check Number	an6	22-27	

Financial Transactions, Multiple-Tag Format

The following multiple-tag data formats are supported for financial transactions.

NOTE: The single-tag format is not allowed within the multiple-tag format.

Format Type and Field Name	Length	Values
Tagged Data	2	TD
ISO Subfield		
AVS Data		Note: The AVS data may be in two formats: <ul style="list-style-type: none"> • Address with optional AVS result • AVS result only
• Format Code	2	AV
• Length	2	01-30
• Data	01-29	
• Result	1	AVS result (see values on page 440)

Format Type and Field Name	Length	Values
----- OR -----		
AVS Result		
• Format Code	2	AR
• Length	2	01
• Result	1	AVS result (see values on page 440)
CVV2 Data		Note: The CVV2 data may be in two formats: <ul style="list-style-type: none"> • CVV2 data with result • CVV2 result only
• Format Code	2	CV
• Length	2	<ul style="list-style-type: none"> • 01 = Presence Indicator sent • 02 = Presence Indicator and Response Type sent • 03-06 = Presence Indicator, Response Type, and Data sent • 07 = Presence Indicator, Response Type, Data, and Result sent
• Presence Indicator	1	<ul style="list-style-type: none"> • 0 = CVV2 not present • 1 = CVV2 present • 2 = CVV2 not legible • 9 = CVV2 not imprinted • blank = Unknown
• Response Type Note: The acquirer may provide this data to indicate the type of data to be returned by the issuer.	1	<ul style="list-style-type: none"> • 0 = Response code only • 1 = Response code and result code • blank = Unknown
• Data	1-4	The actual CVV2 data

Format Type and Field Name	Length	Values
<ul style="list-style-type: none"> Result 	1	<ul style="list-style-type: none"> C = dCVV2 Match D = dCVV2 No match K = dCVV2 Match w/merchant participation L = dCVV2 No match w/merchant participation M = Match N = No match P = Not processed S = Not on card U = No keys, not certified, or both
----- OR -----		
CVV2 Result		
<ul style="list-style-type: none"> Format Code 	2	CR
<ul style="list-style-type: none"> Length 	2	01
<ul style="list-style-type: none"> Result 	1	See values in CVV2 format above.
CAVV Result		
<ul style="list-style-type: none"> Format Code 	2	VR
<ul style="list-style-type: none"> Length 	2	01
<ul style="list-style-type: none"> Result 	1	<ul style="list-style-type: none"> Blank or not present = CAVV not present
		<ul style="list-style-type: none"> 0 = CAVV authentication results invalid
		<ul style="list-style-type: none"> 1 = CAVV failed validation - authentication.
		<ul style="list-style-type: none"> 2 = CAVV passed validation - authentication.
		<ul style="list-style-type: none"> 3 = CAVV passed validation - attempt, CAVV generated by issuer ACS.
		<ul style="list-style-type: none"> 4 = CAVV failed validation - attempt, CAVV generated by issuer ACS.
		<ul style="list-style-type: none"> 5 = Not currently used, reserved for future use.

Format Type and Field Name	Length	Values
		<ul style="list-style-type: none"> 6 = CAVV not validated, issuer not participating in CAVV validation.
		<ul style="list-style-type: none"> 7 = CAVV failed validation - attempt, CAVV generated by Visa® ACS.
		<ul style="list-style-type: none"> 8 = CAVV passed validation - attempt, CAVV generated by Visa® ACS.
		<ul style="list-style-type: none"> 9 = CAVV failed validation - attempt, CAVV generated by Visa® ACS, issuer ACS not available.
		<ul style="list-style-type: none"> A = CAVV passed validation - attempt, CAVV generated by Visa® ACS, issuer ACS not available.
		<ul style="list-style-type: none"> B = CAVV passed validation - information only, no liability shift.
		<ul style="list-style-type: none"> C = CAVV was not validated - attempt.
		<ul style="list-style-type: none"> D = CAVV was not validated - authentication.
		<ul style="list-style-type: none"> E = CAVV was missing.
		<ul style="list-style-type: none"> F = CAVV was not sent.
		<ul style="list-style-type: none"> S = Static AAV - no verification needed.
Track1 Matched Result		
<ul style="list-style-type: none"> Format Code 	2	TN
<ul style="list-style-type: none"> Length 	2	01
<ul style="list-style-type: none"> Result 	1	<ul style="list-style-type: none"> P = Track1 Name Match passed.
		<ul style="list-style-type: none"> F = Track1 Name Match failed.
		<ul style="list-style-type: none"> N = No Track1 data present.
		<ul style="list-style-type: none"> E = Host does not provide Track1 Name.
		<ul style="list-style-type: none"> U = Unable to verify Track1 Name.

Format Type and Field Name	Length	Values
		<ul style="list-style-type: none"> " " = Institution does not participate in Track1 Name Match.
dCVV Result		
• Format Code	2	DC
• Length	2	02
• Result	2	01 = Valid
		02 = Invalid
		03 = Not Validated
ATC Result		
• Format Code	2	AT
• Length	2	02
• Result	2	01 = Valid
		02 = Out of Range
		03 = Seq Duplicate
		04 = Not Validated
ARQC Result		
• Format Code	2	QR
• Length	2	04
• Result	4	<p>These 4 bytes are defined as below:</p> <p>Chip Condition Code (1 byte)</p> <p>0 Not applicable.</p> <p>1 Service code begins with 2 or 6; the valid value 2 does not apply (that is, the last read was not a chip transaction or was a successful chip transaction).</p> <p>2 Service code begins with 2 or 6; last transaction read at the chip-capable terminal failed.</p>

Format Type and Field Name	Length	Values
		Chip Transaction Indicator (1 byte) 0 Not applicable. 1 The acquirer identified the transaction as chip-based transaction.
		Chip Card Authentication Reliability Indicator (1 byte) 0 Not applicable. 1 Acquirer indicates that Card Authentication may not be reliable. 2 Acquirer inactive for Card Authentication. 3 Issuer inactive for Card Authentication.
		Card Authentication Results Code (ARQC) (1 byte) Blank Card Authentication was not performed, or some other situation or problem prevented verification. For example, issuer is not participating in the Card Authentication service, or a system or cryptographic error occurred. 0 ARQC not verified. 1 The Authorization Request Cryptogram (ARQC) was checked but failed verification. 2 The ARQC was checked and passed verification.

Format Type and Field Name	Length	Values
Unformatted MICR		
• Format Code	2	UM
• Length	2	1 - 48
• Result	01- 48	Unformatted MICR data
Note: Passing of this tag is controlled by a special flag in the database.		
New PIN		
• Format Code	2	NP
• Length	2	16
• Result	16	New PIN data (encrypted)
Note: Passing of this tag is controlled by a special flag in the database.		
AVS Extended Data provided by the acquirer		
• Format Code	2an	AE
• Length	3n	001-201
• Data	001-201	
<i>Amex Extended AVS format</i>		
Cardmember Billing Postal Code	9an	Left justified, space filled
Cardmember Billing Address	20an	Left justified, space filled
Cardmember First Name	15an	Left justified, space filled
Cardmember Last Name	30an	Left justified, space filled
Cardmember Billing Phone Number	10an	Left justified, space filled
Ship-To Postal Code	9an	Left justified, space filled
Ship-To Address	50an	Left justified, space filled
Ship-To First Name	15an	Left justified, space filled
Ship-To Last Name	30an	Left justified, space filled
Ship-To Phone Number	10an	Left justified, space filled
Ship-To Country Code	3n	Space fill

Financial Transactions, Single-Tag Format

The following single-tag data formats are supported for financial transactions.

NOTE: When you are using the single-tag format, only one tag is allowed.

Format Type	Length	Pos.	Values
AVS Data			Note: The AVS data may be in two formats: <ul style="list-style-type: none"> Address with optional AVS result AVS result only
• Format Code	2	1-2	AV
• Zip Code	9	3-11	
• Address or 5 digits of address	20	12-31	
• AVS Result	1	32	<ul style="list-style-type: none"> A = Address matches, zip code does not. N = Nothing matches. R = Retry, system unable to process. S = AVS not supported (converted by Visa® to a U before response is sent to the acquirer). U = No data from issuer/Banknet Switch. W = 9-digit zip code matches, but address does not. X = Address and 9-digit zip code match exactly (converted by Visa to a Y before response is sent to the acquirer). Y = Address and 5-digit zip code match. Z = 5-digit zip code matches, but address does not (converted by Visa to a W before response is sent to the acquirer).
----- OR -----			
AVS Result			
• Format Code	2	1-2	AR

Format Type	Length	Pos.	Values
• AVS Result	1	3	AVS result (see values in AVS data format above)
Unformatted MICR			
• Format Code	2	1-2	UM
• Unformatted MICR Data	48	3-50	Note: Passing this data is not currently supported for check authorizations.
New PIN			
• Format Code	2	1-2	NP
• New PIN (encrypted)	16	3-18	
Track1 Matched Result			
• Format Code	2	1-2	TN
• Result	1	5	<ul style="list-style-type: none"> • P = Track1 Name Match passed. • F = Track1 Name Match failed. • N = No Track1 data present. • E = Host does not provide Track1 Name. • U = Unable to verify Track1 Name. • " " = Institution does not participate in Track1 Name Match.
dCVV Result			
• Format Code	2	1-2	DC
• Result	2	3-4	01 = Valid
			02 = Invalid
			03 = Not Validated
ATC Result			
• Format Code	2	1-2	AT
• Result	2	3-4	01 = Valid

Format Type	Length	Pos.	Values
			02 = Out of Range
			03 = Seq Duplicate
			04 = Not Validated
AVS Extended Data provided by the acquirer			
• Format Code	2an		AE
• Length	3n		001-201
• Data	001-201	1-201	
<i>Amex Extended AVS format</i>			
Cardmember Billing Postal Code	9an	1-9	Left justified, space filled
Cardmember Billing Address	20an	10-29	Left justified, space filled
Cardmember First Name	15an	30-44	Left justified, space filled
Cardmember Last Name	30an	45-74	Left justified, space filled
Cardmember Billing Phone Number	10an	75-84	Left justified, space filled
Ship-To Postal Code	9an	85-93	Left justified, space filled
Ship-To Address	50an	94-143	Left justified, space filled
Ship-To First Name	15an	144-158	Left justified, space filled
Ship-To Last Name	30an	159-188	Left justified, space filled
Ship-To Phone Number	10an	189-198	Left justified, space filled
Ship-To Country Code	3n	199-201	Space fill

Format Type	Length	Pos.	Values
ARQC Result			
• Format Code	2	1-2	QR
• Result	4	3-6	<p>These 4 bytes are defined as below:</p> <p>Chip Condition Code (1 byte)</p> <p>0 Not applicable.</p> <p>1 Service code begins with 2 or 6; the valid value 2 does not apply (that is, the last read was not a chip transaction or was a successful chip transaction).</p> <p>2 Service code begins with 2 or 6; last transaction read at the chip-capable terminal failed.</p>
			<p>Chip Transaction Indicator (1 byte)</p> <p>0 Not applicable.</p> <p>1 The acquirer identified the transaction as chip-based transaction.</p>
			<p>Chip Card Authentication Reliability Indicator (1 byte)</p> <p>0 Not applicable.</p> <p>1 Acquirer indicates that Card Authentication may not be reliable.</p> <p>2 Acquirer inactive for Card Authentication.</p> <p>3 Issuer inactive for Card Authentication.</p>

Format Type	Length	Pos.	Values
			Card Authentication Results Code (ARQC) (1 byte) Blank Card Authentication was not performed, or some other situation or problem prevented verification. For example, issuer is not participating in the Card Authentication service, or a system or cryptographic error occurred. 0 ARQC not verified. 1 The Authorization Request Cryptogram (ARQC) was checked but failed verification. 2 The ARQC was checked and passed verification.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0120, 0200, 0220	Required in check verification/guarantee.

Message Types	Status Information
0100, 0120, 0200, 0220	Conditional. Required when doing address verification/CVV2 data. Note: 0220 stand-in transactions can contain CVV2 data for verification, tagged data - format code CV and/or AVS data for verification, tagged data - format code AV. 0220 pre-authorization completions should only contain CVV2 results, tagged data - format code CR and/or AVS results, tagged data - format code AR
0110, 0210	Conditional. Required if the issuer returns the address verification data, CVV2 data, or check verification/guarantee data.
0420	Conditional. Sent if present in the 01xx or 02xx message. Note: To adhere to PCI compliance DE123 should only contain CVV2 results, tagged data - format code CR and/or AVS results, tagged data - format code AR.

124 FIS Tags, Acquirer / Info, Text (FIS-Defined)

Format: LLLVAR

Attributes: FIS: ans..999
ISO: ans..999

Description: FIS defines this data element for use in financial messages to provide additional capability for exchanging data between acquirer hosts. Data passed in these data elements must be tokenized, assuming a TLV format (tag, length, variable length data), for financial messages. FIS defines this data element as *Info, Text*, additional information used for AP file update information in AP file update transactions. It is also used for administrative and network management transactions. (See [“0600/0620 Administrative Message Information” on page 573.](#))

Layout for Financial Messages

DE124 (FIS Tags, Acquirer) is activated to provide acquirers the ability to pass additional information to issuer hosts on financial requests or reversals.

In order to optimize this ISO field for general purpose, this data element consists of tokenized data that conforms to the TLV format (tag-length-variable data). This is enforced via edit-checking upon receipt of this data element.

DE124 supports tagged data in TLV format. This layout will consist of a primary tag and sub tags within the tag. The data received in DE 124 is preceded by a 3-byte length indicator - indicating the overall length of the field which is maximum of 999 bytes.

The sub-elements contained in either ISO data element must conform to the following format:

xyyzzzz

where:

xx	Is a 2-byte arbitrary alpha-numeric tag ID.
yy	Is 2-bytes containing the length of data to follow. Values range from 00 to a maximum of 99.
zzzz	Is the data for length defined in yy.

Following is an example for DE124 (FIS Tags, Acquirer):

Example

023T105xxxxxT210yyyyyyyyyy

In this example, the length of the field is "023". The Tag ID is identified as "T1" has a data length of "05" where the data contains "xxxxx". Tag ID "T2" has a data length of "10" where the data contains 10 bytes with a value of "yyyyyyyyyy".

FIS Tag Identifiers

The following table identifies the current list of tags defined by FIS for use in DE 124:

Tag ID	Purpose
A0, A1, A2	Token Authentication Data
AC	Account Compromise Data.
AS	Ancillary Service Charges
CN	Multi-Clear Count Number.
D1- D7	Token Device Tags
EC	Electronic Commerce Data
FD	Fraud Scoring Information.
FS	Fraud Security Services Data.

Tag ID	Purpose
H1- H5	Healthcare Inquiry Transactions.
HI, HM	Healthcare Data.
ID	Installment Payment Data.
IT	Interchange Tier.
MI	Installment Payment Information.
ND	Network Data.
NI	Network Interchange Data.
OB	Network On Behalf Information.
PD	Program ID.
PI	PIN Indicator.
SI	Directory Server Transaction ID
SN	Multi-Clear Sequence Number.
T1-T6, T8, T9, TA-TM, TO, TP, TQ	Payment Token Tags.
TR- TW	Reserved
TX	Payment Token Tags
U0, U1	Token User Data
VT	VAT Tax Registration Info
W1-W8, WA-WE, WG-WK, WM, WN	Cardholder Wallet Tags.
WL	Watch List Information.

Refer to ["Data Element 124 - Additional Information"](#) and ["Fraud Scoring Information"](#) for more information.

Account Data Compromise Information

A tag **AC - Account Compromise** will be used to identify the account compromise information and will be logged in token as Account Data Compromise.

Tag	Description
AC	Account Data Compromise

The internal logging of account data compromise will conform to the following format:

ACLLxxyyzz....z

where:

AC	Is the 2-byte literal identifying Account Data Compromise.
LL	Is the total length of data.
xx	Is a 2-byte Account Data Product ID (05 = MasterCard).
yy	Length of the data.
zz....z	Is the data.

Example:

AC340530accountdatacompromiseinformatn

Tag	Description
AC	Account Data Compromise
34	Total length
05	Product ID of MasterCard
30	Length of the data
Account data compromise information	MC DE 48.39 for 30 bytes

Ancillary Service Charges

FIS supports Ancillary Fee Code and Ancillary Fee Amount in Financial advice 0220 messages for MCC airline, railways, or travel. FIS supports upto six occurrences.

Tag	Description
AS	Ancillary Service Charges

The internal logging of Ancillary Service Charges will conform to the following format:

ASLLXXXX

where:

AS	Is the 2 byte literal identifying Ancillary Service Charges.
LL	Is the length of the data that follows.
XX	Is the Ancillary Service Charges data.

Example:

```
AS14BG000000001000 (one occurrence)
AS14BG000000001000BF000000002000 (two occurrences)
AS14BG000000001000BF000000002000BG000000003000
BG000000004000BG000000005000BG000000006000 (six occurrences)
```

Multi-Clear Count Number

Multi-Clear Count Number is a number assigned by merchant indicating the total number of advices that are expected as part of the cardholder's single purchase.

Tag	Description
CN	Multi-Clear Count Number

The internal logging of Multi-Clear Count Number will conform to the following format:

CNLLXX

where:

CN	Is the 2 byte literal identifying Multi-Clear Count Number.
LL	Is the length of the data that follows.
XX	Is the Multi-Clear Count Number.

Payment Token Data

The Payment Token is of the following format:

A0LLabcA1LLabcA2LLabcT1LLzzzT2LLyyyT3LLxxxT4LLwwwT5LLvvvT6LLuuuT8LLtt tT9LLsssTALLrrrTBLLqqqTCLLabcTDLLabcTELLabcTFLLabcTGLLabcTHLLabcTILL abcTJLLabcTKLLabcTLLLabcTMLLabcTOLLabcTPLLpppTQLLabcD1LLabcD2LLabc D3LLabcD4LLabcD5LLabcD6LLabcD7LLabcW1LLabcW2LLabcW3LLabcW4LLabcW 5LLabcW6LLabcW7LLabcW8LLabcWALLabcWBLLabcWCLLabcWDLLabcWELLabc WGLLabcWHLLabcWILLabcWJLLabcWKLLabcWMLLabcWNLLabc
--

where:

Tag	Description
Token Authentication Tags	
A0	Is the 2 byte literal identifying Token Authentication Factor A.
LL	Is the length of Token Authentication Factor A.
abc	Is the Token Authentication Factor A. This field contains an authentication factor used by token requestors and merchants to authenticate the cardholder at the time of the transaction.

Tag	Description
A1	Is the 2 byte literal identifying Token Authentication Factor B
LL	Is the length of Token Authentication Factor B.
abc	Is the Token Authentication Factor B. This field contains an authentication factor used by token requestors and merchants to authenticate the cardholder at the time of the transaction.
A2	Is the 2 byte literal identifying Token Authentication Amount.
LL	Is the length of Token Authentication Amount.
abc	Is the Token Authentication Amount. This field contains the payment amount made visible by the token requestor to the consumer at the time of purchase.
Payment Token Tags	
T1	Is the 2 byte literal identifying Token for original PAN.
LL	Is the length of Token for Original PAN.
zzz	Is the Token for Original PAN.
T2	Is the 2 byte literal identifying Token Assurance Level.
LL	Is the length of Token Assurance Level.
yyy	Is the Token Assurance Level. Token Assurance level contains a value indicating the confidence level of the token to PAN/Cardholder relationship
T3	Is the 2 byte literal identifying Token Requestor ID.
LL	Is the length of Token Requestor ID.
xxx	Is the Token Requestor ID. Token Requestor ID is the ID assigned by the Token Service Provider (TSP) to the Token Requestor.
T4	Is the 2 byte literal identifying PAN Information.
LL	Is the length of PAN Information
www	Is the PAN Information. PAN Information can be the Full PAN, PAN range, Last four digits of PAN etc.
T5	Is the 2 byte literal identifying Token Transaction Identifier.
LL	Is the length of Token Transaction Identifier.

Tag	Description
vvv	Is the Token Transaction Identifier. Token Transaction Identifier contains the network from which the token transaction came from. Currently defined values are: <ul style="list-style-type: none"> • MC = MasterCard generated token data • VI = Visa generated token data • PU = Pulse generated token data • NY = NYCE generated token data • ST = STAR generated token data • SZ = Shazam generated Token data. • AF = AFFN generated token data • CU = Culiance generated token data.
T6	Is the 2 byte literal identifying Token Expiration Date.
LL	Is the length of Token Expiration Date.
uuu	Is the Token Expiration Date. Token Expiration Date contains the Expiration date associated with the token.
T8	Is the 2 byte literal identifying PAN Reference Number.
LL	Is the length of PAN Reference Number.
ttt	Is the PAN Reference Number. PAN Reference Number contains a service-allocated unique reference to the Primary Account Number that was tokenized.
T9	Is the 2 byte literal identifying Token Type.
LL	Is the length of Token Type.
sss	Is the Token Type. Token Type contains how the token transaction was initiated. Currently defined values for Token Type are: <ul style="list-style-type: none"> • CF = Card on File • SE = Secure Element • HC = HCE (Host Card Emulation) • WA = Wallet • PA = Pseudo Account
TA	Is the 2 byte literal identifying Token Status.
LL	Is the length of Token Status.
rrr	Is the Token Status. Token status contains the current status of the token. Currently defined values for Token Status are: <ul style="list-style-type: none"> • A = Active for payment • I = Inactive for payment (not yet active) • S = Temporarily suspended for payments • D = Permanently deactivated for payments.

Tag	Description
TB	Is the 2 byte literal identifying Token Lookup Tran ID.
LL	Is the length of Token Lookup Tran ID.
qqq	Is the Token Lookup Tran ID. Token Lookup Tran ID contains a TSP-provided reference from the original de-tokenization process.
Payment Token Tags	
TC	Is the 2 byte literal identifying Token Activation Verification Results.
LL	Is the length of Token Activation Verification Results.
abc	Is the Token Activation Verification Results. Token Activation Verification Results contains one of the following OTP verification result and mobile banking application code values: <ul style="list-style-type: none"> 1 = Successfully verified 2 = Verification code expired 3 = Verification code failed 4 = Verification code missing 5 = Verification code retries exceeded.
TD	Is the 2 byte literal identifying Active Account Management (AAM) Velocity Checking Result.
LL	Is the length of AAM Velocity Checking Result.
abc	Is the AAM Velocity Checking Result. This tag contains one of the following Host Card Emulation (HCE) transaction verification result values: <ul style="list-style-type: none"> 2 = Time-to-live exceeded 3 = Count exceeded 4 = Amount exceeded.
TE	Is the 2 byte literal identifying Elapsed Time to Live.
LL	Is the length of Elapsed Time to Live.
abc	Is the Elapsed Time to Live. This tag will contain the elapsed time in hours since the current LUK was provisioned or replenished on the device.
TF	Is the 2 byte literal identifying Count of Number of Transactions.
LL	Is the length of Count of Number of Transactions.
abc	Is the Count of Number of Transactions. This tag will contain the cumulative count of the transactions for the current LUK.
TG	Is the 2 byte literal identifying Cumulative Transaction Amounts.

Tag	Description
LL	Is the length of Cumulative Transaction Amounts.
abc	Is the Cumulative Transaction Amounts. This tag will contain the cumulative total of transaction amounts in USD for the current LUK.
TH	Is the 2 byte literal identifying Correlation ID.
LL	Is the length of Correlation ID.
abc	Is the Correlation ID. Correlation ID is the identifier assigned by MasterCard to associate related tokenization request/notification messages.
TI	Is the 2 byte literal identifying Number of Active Tokens for the PAN.
LL	Is the length of Number of Active Tokens for the PAN.
abc	Is the Number of Active Tokens for the PAN. This field indicates the number of existing active tokens associated with the primary account number.
TJ	Is the 2 byte literal identifying Tokenization Event Reason Code.
LL	Is the length of Tokenization Event Reason Code.
abc	Is the Tokenization Event Reason Code. This field contains a value that indicates the event reason. Currently defined values are: <ul style="list-style-type: none"> • 00 = Activation code retries exceeded • 01 = Activation code expired • 02 = Activation code entered incorrectly by cardholder • 03 = Replacement primary account number update failure.
TK	Is the 2 byte literal identifying Event Requestor.
LL	Is the length of Event Requestor.
abc	Is the Event Requestor. This field will contain a value indicating the party that requested the event. Currently defined values are: <ul style="list-style-type: none"> • 0 = Wallet Service Provider • 1 = Funding Account issuer • 2 = Cardholder • 3 = Mobile PIN Validation security • 4 = Mobile PIN Change Validation security.
TL	Is the 2 byte literal identifying Token Reference Number.
LL	Is the length of Token Reference Number.
abc	Is the Token Reference Number. Token Reference Number contains a service-allocated unique reference to the token.

Tag	Description
TM	Is the 2 byte literal identifying Network Token Transaction ID.
LL	Is the length of Network Token Transaction ID.
abc	Is the Network Token Transaction ID. Network Token Transaction ID is calculated by networks to identify the transaction. It is to be retained and used to provide the transaction details associated with an original purchase and subsequent reversal messages. It is a 44-byte value for MC BIN ranges and a 64-byte value for Visa BIN ranges.
TO	Is the 2 byte literal identifying Storage Technology.
LL	Is the length of Storage Technology.
abc	Is the Storage Technology with following values: <ul style="list-style-type: none"> • 01 = Device Memory • 02 = Device Memory protected by Trusted Platform Module (TPM) • 03 = Server • 04 = Trusted Execution Environment (TEE) • 05 = Secure Element • 06 = Virtual Execution Environment (VEE).
TP	Is the 2 byte literal identifying Token Service Provider (TSP) Identifier.
LL	Is the length of Token Lookup Service Provider Identifier.
ppp	Is the Token Service Provider Identifier. This field contains information on which network/entity is the TSP. Currently defined values for TSP Identifier are: <ul style="list-style-type: none"> • MC = MasterCard • VI = Visa • ST = STAR • FD = FDC • IS = Issuer • AQ = Acquirer • DP = Discover Debit
TQ	Is the 2 byte literal identifying Network Additional Transaction Analysis data - Transaction Disposition and Test Results
LL	Is the length of Additional Transaction Analysis.
abc	Is the Network Additional Transaction Analysis data - Transaction Disposition and Test Results Currently, this field would contain data from MasterCard DE 48.27 (Example - 0102CI0206SNAOVP)

Tag	Description																		
TR - TW	Reserved - Currently not being used on Connex HP platform. The following tags are reserved as documented below. TR is used to identify Number of Suspended Accounts. TS is used to identify Number of Token Accounts. TT is used to identify Token Sequence Number. TU is used to identify Token Event Indicator. TW is used to identify Number of Provisioning Attempts.																		
TX	Is the 2 byte literal identifying CVM Identified by Cardholder Device.																		
LL	Is the length of CVM Identified by Cardholder Device.																		
abc	<p>Is the CVM Identified by Cardholder Device. Currently, this field would contain data from Visa Field 123, Usage 2 - Verification & Token Data, Tag 05 (Cardholder Verification Method Indicators Identified by Cardholder Device) Examples: When Bit map position 7 is set to 1 in Field 123, Usage 2 - Verification & Token Data, Tag 05, FIS ISO DE124 would have TX tag as TX0207. When Bit map position 5 and position 7 (more than 1 bit is set) in Field 123, Usage 2 -Verification & Token Data, Tag 05, FIS ISO DE124 would have TX tag as TX040507.</p> <table> <tr> <th>FIS ISO DE 124, Tag TX (CVM Identified by Cardholder Device) values</th><th>Visa Field 123, Usage 2 -Verification & Token Data, Tag 05 (CVM Identified by Cardholder Device) bit map position</th></tr> <tr> <td>01</td><td>Position 1, Unknown</td></tr> <tr> <td>02</td><td>Position 2, None</td></tr> <tr> <td>03</td><td>Position 3, Signature</td></tr> <tr> <td>04</td><td>Position 4, Online PIN</td></tr> <tr> <td>05</td><td>Position 5, Passcode</td></tr> <tr> <td>06</td><td>Position 6, Cardholder device code</td></tr> <tr> <td>07</td><td>Position 7, Fingerprint biometric verified by cardholder device</td></tr> <tr> <td>08</td><td>Position 8, Cardholder device pattern</td></tr> </table>	FIS ISO DE 124, Tag TX (CVM Identified by Cardholder Device) values	Visa Field 123, Usage 2 -Verification & Token Data, Tag 05 (CVM Identified by Cardholder Device) bit map position	01	Position 1, Unknown	02	Position 2, None	03	Position 3, Signature	04	Position 4, Online PIN	05	Position 5, Passcode	06	Position 6, Cardholder device code	07	Position 7, Fingerprint biometric verified by cardholder device	08	Position 8, Cardholder device pattern
FIS ISO DE 124, Tag TX (CVM Identified by Cardholder Device) values	Visa Field 123, Usage 2 -Verification & Token Data, Tag 05 (CVM Identified by Cardholder Device) bit map position																		
01	Position 1, Unknown																		
02	Position 2, None																		
03	Position 3, Signature																		
04	Position 4, Online PIN																		
05	Position 5, Passcode																		
06	Position 6, Cardholder device code																		
07	Position 7, Fingerprint biometric verified by cardholder device																		
08	Position 8, Cardholder device pattern																		
TY	Is the 2 byte literal identifying the Token Requestor - Token Service Provider ID.																		

Tag	Description
LL	Is the length of Token Requestor - Token Service Provider ID.
abc	Is the variable length field containing the Token Requestor - Token Service Provider ID data.
Token Device Data	
D1	Is the 2 byte literal identifying Device Type.
LL	Is the length of Device Type.
abc	<p>Is the Device Type. This field indicates the type of device used for Tokenization. Currently defined values for Device Type are:</p> <ul style="list-style-type: none"> • 00 – Unknown • 01 – Mobile Phone • 02 – Tablet • 03 – Watch • 04 – Wrist Band • 05 – Key Fob • 06 – Card • 07 – MNO Wallet • 08 – Mobile Tag • 09 – Mobile Case/Sleeve • 10 – Mobile Phone MNO Fixed SE (car etc) • 11 – Mobile Phone Removable SE • 12 – Mobile Phone Fixed SE Wallet • 13 – Tablet MNO Removable SE • 14 – Tablet MNO Fixed SE • 15 – Tablet Removable SE • 16 – Tablet Fixed SE • 18 – Personal Computer • 19 – Cloud • 20 - Sticker • 21 - Jewelry • 22 - Fashion Accessory • 23 - Garment • 24 - Domestic Appliance • 25 - Vehicle • 26 - Media or Gaming Device • 99 - Other.
D2	Is the 2 byte literal identifying Device Language.
LL	Is the length of Device Language.
abc	Is the Device Language. This field indicates the preferred language selected by the Cardholder.

Tag	Description
D3	Is the 2 byte literal identifying Device Secure Element ID.
LL	Is the length of Device Secure Element ID.
abc	Is the Device Secure Element ID. This field contains the Device ID – currently present only for Visa token transactions.
D4	Is the 2 byte literal identifying Device Number.
LL	Is the length of Device Number.
abc	Is the Device Number. This field contains full or partial mobile phone number.
D5	Is the 2 byte literal identifying Device Name.
LL	Is the length of Device Name.
abc	Is the Device Name. This field contains the name that the consumer has associated to the device with the wallet service provider.
D6	Is the 2 byte literal identifying Device Location.
LL	Is the length of Device Location.
abc	Is the Device Location. This field contains latitude and longitude of the device the consumer is attempting to tokenize a card.
D7	Is the 2 byte literal identifying Device IP Address.
LL	Is the length of Device IP Address.
abc	Is the Device IP Address. This field contains the IP address of the device at the time of the provisioning request.
D8	Is the 2 byte literal identifying Bound Device Index.
LL	Is the length of Bound Device Index.
abc	Is the Bound Device Index. This field contains the index number from the Visa database where the device ID is stored.
DI	Reserved.
Token User Data	
U0	Is the 2 byte literal identifying Wallet ID.
LL	Is the length of Wallet ID.
abc	Is the User Identifier. This field will contain a unique value that identifies the token user. The token user is an entity that initiates the payment request.

Tag	Description
U1	Is the 2 byte literal identifying Token User Application Type.
LL	Is the length of Token User Application Type.
abc	<p>Is the Token User Application Type. This field contains the application type of the token user. The application type has one of the following valid values:</p> <ul style="list-style-type: none"> ○ 00 = Unknown ○ 01 = Web ○ 02 = Mobile web ○ 03 = Mobile application ○ 04 = Marketplace application ○ 05 = Voice application ○ 06 = Biometric application ○ 07- FF = Reserved.
Card Holder Wallet Tags	
W1	Is the 2 byte literal identifying Wallet ID.
LL	Is the length of Wallet ID.
abc	<p>Is the Wallet ID. Wallet ID indicates who the Wallet Provider was for the token transaction. Currently defined values are:</p> <ul style="list-style-type: none"> ● 103 = Apple Pay ● 210 = Google Pay ● 216 = Android Pay ● 217 = Samsung Pay ● 327 = Merchant Tokenization Program.
W2	Is the 2 byte literal identifying Wallet Service Provider Account ID Hash.
LL	Is the length of Wallet Service Provider Account ID Hash.
abc	Is the Wallet Service Provider Account ID Hash. Wallet Service Provider Account ID Hash contains hash of the consumer's account ID with the wallet provider.
W3	Is the 2 byte literal identifying Wallet Service Provider Tokenization Recommendation.
LL	Is the length of Wallet Service Provider Tokenization Recommendation.
abc	<p>Is the Wallet Service Provider Tokenization Recommendation. This field indicates the risk assessment by the Wallet Service Provider. Currently defined values are:</p> <ul style="list-style-type: none"> ● 0 = Decline ● 1 = Approve ● 2 = Require additional authentication.

Tag	Description
W4	Is the 2 byte literal identifying Wallet Service Provider Standard Version.
LL	Is the length of Wallet Service Provider Standard Version.
abc	Is the Wallet Service Provider Standard Version. This field contains the version of standards the wallet service provider is using to determine the suggested tokenization recommendation.
W5	Is the 2 byte literal identifying Wallet Service Provider Device Score.
LL	Is the length of Wallet Service Provider Device Score.
abc	Is the Wallet Service Provider Device Score. This field contains the score assigned by wallet service provider for the device.
W6	Is the 2 byte literal identifying Wallet Service Provider Account Score.
LL	Is the length of Wallet Service Provider Account Score.
abc	Is the Wallet Service Provider Account Score. This field contains the score assigned by wallet service provider for the primary account number.
W7	Is the 2 byte literal identifying Wallet Service Provider Reason Codes.
LL	Is the length of Wallet Service Provider Reason Codes.
abc	Is the Wallet Service Provider Reason Codes. This field contains the code indicating the specific reason the wallet service provider is suggesting the tokenization recommendation.
W8	Is the 2 byte literal identifying PAN Source.
LL	Is the length of PAN Source.
abc	<p>Is the PAN Source. This field identifies the method which the cardholder is attempting to tokenize a primary account number. Currently defined values are:</p> <ul style="list-style-type: none"> • 1 = Card on File • 2 = Card added manually • 3 = Card added via application. • 4 = Token (device-bound) • 5 = Chip dip • 6 = Contactless tap
WA	Is the 2 byte literal identifying Wallet Account Email Address.
LL	Is the length of Wallet Account Email Address.
abc	Is the Wallet Account Email Address. This field contains the e-mail address of the Cardholder as provided in the Wallet Account.

Tag	Description
WB	Is the 2 byte literal identifying Contactless Usage Flag.
LL	Is the length of Contactless Usage Flag.
abc	Is the Contactless Usage Flag. This field contains a value indicating if the token is permitted for use in contactless transactions. Currently defined values are: <ul style="list-style-type: none"> • N = Token cannot do contactless • Y = Token can do contactless.
WC	Is the 2 byte literal identifying Card on File E-Commerce Usage Flag.
LL	Is the length of Card on File E-Commerce Usage Flag.
abc	Is the Card on File E-Commerce Usage Flag. This field contains a value indicating if the token is permitted for use in Card on File E-commerce transactions. Currently defined values are: <ul style="list-style-type: none"> • N = Token cannot do Card on File E-commerce • Y = Token can do Card on File E-commerce.
WD	Is the 2 byte literal identifying Mobile/Digital Wallet E-Commerce Usage Flag.
LL	Is the length of Mobile/Digital Wallet E-Commerce Usage Flag.
abc	Is the Mobile/Digital Wallet E-Commerce Usage Flag. This field contains a value indicating if the token is permitted for use in Mobile/Digital Wallet E-commerce transactions. Currently defined values are: <ul style="list-style-type: none"> • N = Token cannot do Mobile/Digital Wallet E-commerce • Y = Token can do Mobile/Digital Wallet E-commerce.
WE	Is the 2 byte literal identifying Issuer Product Configuration ID.
LL	Is the length of Issuer Product Configuration ID.
abc	Is the Issuer Product Configuration ID. This field contains the unique card art product configuration identifier provided by the issuer associated with the graphical and text card art assets.
WG	Is the 2 byte literal identifying Final Tokenization Decision Flag.
LL	Is the length of Final Tokenization Decision Flag.
abc	Is the Final Tokenization Decision Flag. This field contains the final tokenization decision that was used in the tokenization of the card. Currently defined values are: <ul style="list-style-type: none"> • 1 = Approve • 2 = Approve, requires additional authentication.
WH	Is the 2 byte literal identifying Final Tokenization Decision Indicator.

Tag	Description
LL	Is the length of Final Tokenization Decision Indicator.
abc	Is the Final Tokenization Decision Indicator. This field contains the element of the Service that was responsible for determining the final tokenization decision. Currently defined values are: <ul style="list-style-type: none"> • 1 = Tokenization Eligibility Response • 2 = Tokenization Authorization Response • 3 = Issuer Predefined Tokenization Rules • 4 = Mobile Application.
WI	Is the 2 byte literal identifying Terms and Conditions Identifier.
LL	Is the length of Terms and Conditions Identifier.
abc	Is the Terms and Conditions Identifier. This field contains the identifier associated with the version of terms and conditions accepted by the consumer. In case of card on file - T&C is between consumer and merchant.
WJ	Is the 2 byte literal identifying Terms and Conditions Date/Time.
LL	Is the length of Terms and Conditions Date/Time.
abc	Is the Terms and Conditions Date/Time. This field contains the date and time that the consumer accepted the terms and conditions of the Service. <div> NOTE: The Date/Time format will be YYMMDDHHMM. </div>
WK	Is the 2 byte literal identifying Number of Activation Attempts.
LL	Is the length of Number of Activation Attempts.
abc	Is the Number of Activation Attempts. This field contains the number of activation code entry attempts by the cardholder when an Activation Code was entered.
WM	Is the 2 byte literal identifying Payment Application Instance ID.
LL	Is the length of Payment Application Instance ID.
abc	Is the Payment Application Instance ID. This field contains the identifier associated with the payment application instance ID on a device.
WN	Is the 2 byte literal identifying Cardholder Name.
LL	Is the length of Cardholder Name.

Tag	Description
abc	Is the Cardholder Name. This field contains the name of the Cardholder.
WO	Reserved.
WQ	Reserved.

Strong Customer Authentication Data Tag

Tag	Type
EC	Strong Customer Authentication Data Tag

The internal logging of Strong Customer Authentication Data is as follows:

```
ECLLXXYYZZZZZ
```

where:

EC	Is the 2-byte tag identifying Strong Customer Authentication Data.
LL	Is the length of data that follows.
XX	Is the 2-byte sub-tag ID: <ul style="list-style-type: none"> 04 = Visa Electronic Commerce Data. 05 = MasterCard Strong Customer Authentication Data tag.
YY	Is the tag data length that follows: When sub-tag id = 04 length of data would vary from 07 to 37. When sub-tag id = 05, length of data would be 04.
ZZZZZ	when subtag = 04, Visa Electronic Commerce Data

Tag	Description	Value	Length	Corresponding Visa Field 34
1	Secure Remote Commerce	0 = Not a Visa digital commerce 1 = Visa digital commerce	1	Dataset ID 56, Tag DF21
2	Trusted Merchant Exemption Indicator	0 = Trusted merchant exemption does not apply to the transaction 1 = Transaction exempt from SCA as it originated at a merchant trusted by the cardholder	1	Dataset ID 4A, Tag 84
3	Low Value Exemption Indicator	0 = Low value exemption does not apply to the transaction 1 = Transaction exempt from SCA as the merchant/acquirer has determined it to be a low value payment	1	Dataset ID 4A, Tag 87
4	Secure Corporate Payment (SCP) Indicator	0 = SCA exemption does not apply to the transaction 1 = Transaction exempt from SCA as the merchant/acquirer has determined it as a secure corporate payment	1	Dataset ID 4A, Tag 88
5	Transaction Risk Analysis (TRA) Exemption Indicator	0 = TRA exemption does not apply to the transaction 1 = Transaction exempt from SCA as the merchant/acquirer has determined it to be low risk in accordance with the criteria defined by PSD2/RTS	1	Dataset ID 4A, Tag 89
6	Delegated Authentication Indicator	0 = Delegated authentication does not apply to the transaction 1 = Issuer has delegated SCA	1	Dataset ID 4A, Tag 8A
7	Initiating Party Indicator	1 - Merchant initiated	1	Dataset ID 02, Tag 80
8	3-D Secure Protocol Version Number	1.x.x = 3DS 1.x.x 2.1.x = EMV 3DS 2.1.x 2.2.x = EMV 3DS 2.2.x 2.3.x = EMV 3DS 2.3.x UNKNOWN = Unknown 3DS protocol version number	8	Dataset ID 01, Tag 86
16	TRA Score	Values are from 01 to 99	2	Dataset ID 4A, Tag C0
18	Reasons for Not Honoring Exemptions	Identifies the reason codes for not honoring exemptions and contains a series of up to 20 four-character reason codes.	20 (First 5 occurrences)	Dataset ID 4A, Tag 8C

Position	Description	Value	Corresponding MasterCard Field
3	Single Tap Identifier	<ul style="list-style-type: none"> 1 - Merchant capable of single tap processing. 	DE 48.SE22.SF2
4	Response to PIN Request	<ul style="list-style-type: none"> 1 - Transaction contains an intentionally-duplicated (replayed) ATC value 	DE 48.SE22.SF3

Example:

When DE 48.SE22.SF1 and DE 48.SE22.SF2 are present, EC Tag will have EC080504031b (where b is blanks)

When DE 48.SE22.SF1, DE 48.SE22.SF2 and DE 48.SE22.SF3 are present, EC Tag will have EC0805040311

NOTE: EC Tag will contain either sub-tag 04 or sub-tag 05 - not both.

Fraud Scoring Information

FIS has reserved tag “FD” as the primary tag ID for use in passing all fraud score-related data. Consistent with the all tags passed via DE124, the length following tag “FD” can have a maximum value of 99.

Tag “FD” will provide scoring data for fraud products such as Fraud Navigator, Falcon, Prism, Visa, MasterCard, etc. Score related data from multiple sources, when present, will be passed in tag "FD". The tag will consist of two-character sub-tags that will distinguish each block of score data from another:

Sub tags currently defined:

Fraud Product Identifier	Description
00	Fraud Navigator
01	Falcon
02	Visa
03	Prism
04	Visa DPS
05	MasterCard
06	Analytics (Fair Isaac)

Fraud Product Identifier	Description
07	STAR
08	NYCE
09	Pulse
10	Fraudsight

The sub-elements will conform to the following format:

xyyzzzz

where:

xx	Is a 2-byte Fraud Product ID.
yy	Is 2-bytes containing the length of data to follow.
zzzz	Is the data for length defined in yy.

DE Examples:

Example 1:

013FD090105xxxxx

Example 2:

027FD230105xxxxx0210yyyyyyyyyy

Example 3:

036FD230105xxxxx0210yyyyyyyyyyT105zzzzzy

In the first example, the length of the ISO field is "013". The Tag ID is identified as "FD" has a data length of "09" where the data contains subtag "01" (Falcon Score Data) for a length of "05 and the data contains a value of "xxxxx".

In the second example, the length of the ISO field is "027". The Tag ID is identified as "FD" has a data length of "23" where the data contains subtags "01" (Falcon Score Data), a length of "05, data contains a value of "xxxxx" followed by subtag "02" (Visa Score Data), a length of "10", data contains a value of "yyyyyyyyyy".

The third example identifies a case where the ISO data element could contain one or more tag ID's (in this case, "T1") not related to fraud score data but included in the field.

The internal logging of score data will conform to the following format:

FDLLxxyyzzzz

where:

FD	Is the 2-byte literal identifying Fraud Score Data.												
LL	Is the length of data that follows.												
xx	Is a 2-byte Fraud Product ID (05 = MasterCard).												
yy	Is 2-bytes containing the length of data to follow.												
zzzz	<p>when xx = 05, zzzz will contain data in the following format:</p> <table> <tr> <th>Position</th><th>Corresponding MC Field</th></tr> <tr> <td>1 - 3</td><td>MC DE 48.75.1 (Fraud Score)</td></tr> <tr> <td>4 - 5</td><td>MC DE 48.75.2 (Score Reason Code)</td></tr> <tr> <td>6 - 8</td><td>MC DE 48.75.3 (Rules Score)</td></tr> <tr> <td>9 - 10</td><td>MC DE 48.75.4 (Rules Reason Code 1)</td></tr> <tr> <td>11 - 12</td><td>MC DE 48.75.5 (Rules Reason Code 2)</td></tr> </table>	Position	Corresponding MC Field	1 - 3	MC DE 48.75.1 (Fraud Score)	4 - 5	MC DE 48.75.2 (Score Reason Code)	6 - 8	MC DE 48.75.3 (Rules Score)	9 - 10	MC DE 48.75.4 (Rules Reason Code 1)	11 - 12	MC DE 48.75.5 (Rules Reason Code 2)
Position	Corresponding MC Field												
1 - 3	MC DE 48.75.1 (Fraud Score)												
4 - 5	MC DE 48.75.2 (Score Reason Code)												
6 - 8	MC DE 48.75.3 (Rules Score)												
9 - 10	MC DE 48.75.4 (Rules Reason Code 1)												
11 - 12	MC DE 48.75.5 (Rules Reason Code 2)												

Fraud Security Services Data

The Fraud Security Services additional Data from MasterCard DE 48.56 will be passed as noted below in ISO DE 124.

Tag	Type
FS	Fraud Security Services Data

The internal logging of score data will conform to the following format:

FSLxxyyzzzz

where:

FS	Is the 2-byte literal identifying Fraud Security Services Data.	
LL	Is the length of data that follows.	
xx	Is the 2-byte Fraud Product ID (05 = MasterCard).	
yy	Is the 2-byte length of data that follows.	
zzzz	when xx = 05, zzzz will contain data in the following format:	
	Position	Corresponding MC Field
	1 - 12	MC DE 48.56 (Security Services Additional Data for Issuers). When there is no data or data is less than 12 bytes, it should be filled with spaces.
	13 - 27	MC DE48.49 (Time Validation Information) for 15 bytes.
	28 - 29	MC DE 48.52 (Transaction Integrity Class) or IPM PDS 0017 for 2 bytes

Healthcare Data

The healthcare data tags are used to identify merchants healthcare transaction data in relation to IIAS use, certification status, and assigned merchant ID and will be passed as noted below in ISO DE124.

Tag	Description
HI	IIAS Flag - Indicates whether the merchant utilized an Inventory Information Approval System (IIAS) and the merchant's certification status.
HM	SIGIS certified merchant ID assigned by each card network.

The internal logging of the healthcare tags will conform to the following format:

```
HI01XHMLLYYYYYYYYYY
```

where:

Tag	Description
HI	Is the 2 byte Tag ID
01	Is the tag data length
X	Is an indicator for IIAS validation. Valid Values include: <ul style="list-style-type: none"> 0 - Merchant did not perform IIAS validation 1 - Merchant did verify against IIAS and is certified 2 - Merchant is exempt from using IIAS 4 - Transaction submitted as IIAS but unable to validate merchant's certification status
HM	Is the 2 byte Tag ID
LL	Is the length of the merchant ID
YYYYYYYYY Y	Is the certified merchant ID

Healthcare Inquiry Transactions

The ISO subfields ID 01 (Healthcare Provide ID) and 02 (Service Type Code) are present in the request messages for DE124. The subelement IDs H1-H5 are used to differentiate each subelement containing the subfield ID 01 and 02. There can be more than one subelement ID.

The multiple-tagged data is sent in the following format:

LLL 3 bytes	ID	ID Length	AA	AA Length	AA Data	BB	BB Length	BB Data
-------------	----	-----------	----	-----------	---------	----	-----------	---------

where:

- LLL 3 bytes = Total Data Element Length
- ID = Subelement ID (H1 to H5)
- AA = Subfield ID 01
- BB = Subfield ID 02

Interchange Tier

The tag **IT - Interchange Tier** is used to identify institutions with \$10Billion or more assets and those institutions with assets less than \$10Billion.

Tag	Description
IT	Interchange Tier

The internal logging of interchange tier data will conform to the following format:

ITLLxx

where:

IT	Is the 2 byte Tag ID.
LL	Is the 2 byte Tag data length.
xx	<p>Is the Tiered Interchange value. Valid values are:</p> <ul style="list-style-type: none"> • _0 = Non-Premier Issuer (Unregulated) • _1 = Regulated Non-Premier Issuer w/o Fraud-prevention adjustment • _2 = Regulated Non-Premier Issuer w/Fraud-prevention adjustment • NR = Not Regulated • P_ = Premier Issuer (Unregulated) • R_ = Regulated Premier Issuer w/Fraud-prevention adjustment • R1 = Regulated without Fraud • RF = Regulated with Fraud • S_ = Regulated Premier Issuer w/o Fraud-prevention adjustment • X_ = Gateway BIN, no classification <p>Note: The underscore identifies a space.</p>

Installment Payment Information

The Installment Payment Information from MasterCard DE 112 is internally split and logged under two different tags in the following format:

Tag	Description
MI	Installment Payment Information
ID	Installment Options Data

The overall internal logging of Installment Payment Information will conform to the following format:

MILLxxIDNNyy

where:

Tag	Description
MI	Is the 2 byte literal identifying Installment Payment.
LL	Is the 2 byte length of Data.
xx	Is the data for LL length.

Tag	Description
ID	Is the 2 byte literal identifying Installment Options.
NN	Is the 2 byte length of Data.
yy	Is the data for NN length.

NOTE: There could be single or multiple or no occurrence of the ID tag. Refer to the detailed tag layouts as shown below.

Detailed Layout of MI Tag for Online 0100/0120/0420 Messages

Tag	Description	Corresponding MC Field
MI	Is the 2 byte literal identifying Installment Payment.	
LL	Is the 2 byte length of Data.	
	Is the 6 byte Promotion Code.	DE 48, sub element 95 = HGMINS or MCINST
The following is the field layout when PROMO CODE = "HGMINS"		
	Is the 2 byte Installment Type.	DE112 – Sub element 009, position 1 - 2
	Is the 2 byte Number of Installments.	DE112 – Sub element 009, position 3 - 4
	Is the 5 byte Interest Rate.	DE112 – Sub element 009, position 5 - 9
	Is the 12 byte First Installment Amount.	DE112 – Sub element 009, position 10 - 21
	Is the 12 byte Second Installment Amount.	DE112 – Sub element 009, position 22 - 33
	Is the 20 byte Domestic Card Acceptor Tax ID.	DE112 – Sub element 020
The following is the possible field layout when PROMO CODE = "MCINST"		
	Is the 2 byte Installment Type.	DE112 – Sub element 021, position 1 - 2
	Is the 1 byte Payment Options.	DE112 – Sub element 021, position 3
	Is the 2 byte min number of Installments.	DE112 – Sub element 023, position 1 - 2
	Is the 2 byte max number of Installments.	DE112 – Sub element 023, position 3 - 4
	Is the 5 byte Interest Rate.	DE112 – Sub element 023, position 5 - 9

Detailed Layout of MI Tag for Online 0100/0120/0420 Messages

Tag	Description	Corresponding MC Field
	Is the 12 byte Installment Fee.	DE112 – Sub element 023, position 10 - 21
	Is the 5 byte Annual Percentage Rate.	DE112 – Sub element 023, position 22 - 26
	Is the 12 byte Total Amount Due.	DE112 – Sub element 023, position 27 - 38

NOTE:

MI tag has fixed layout. Subfields not containing values will be populated with spaces when they are followed by subfields that contain values. If one or more subfields at the end of the tag do not contain a value, the subfield(s) will not be present and the total length of tag will be reduced by the subfield length.

Detailed Layout of ID Tag for Online 0100/0120/0420 Messages

Tag	Description	Corresponding MC Field
ID	Is the 2 byte literal identifying Installment Payment Data.	
LL	Is the 2 byte length of Data.	Length = 60
	Is the 2 byte Number of Installments.	Subelement 022, Subfield 1 - Number of Installments
	Is the 5 byte Interest Rate.	Subelement 022, Subfield 2 - Interest Rate
	Is the 12 byte Installment Fee.	Subelement 022, Subfield 3 - Installment Fee
	Is the 5 byte Annual Percentage Rate.	Subelement 022, Subfield 4 - Annual Percentage Rate
	Is the 12 byte First Installment Amount.	Subelement 022, Subfield 5 - First Installment amount
	Is the 12 byte Second Installment Amount.	Subelement 022, Subfield 6 - Subsequent Installment amount
	Is the 12 byte Total Amount Due.	Subelement 022, Subfield 7 - Total Amount Due

Detailed Layout of MI Tag for Batch 0220 Messages

Tag	Description	Corresponding MC Field
	5 byte Annual Percentage Rate.	PDS 0181 - Annual Percentage Rate, position 54 - 58
	12 byte Installment Fee.	PDS 0181 - Installment Fee, position 59 - 70
The following is the possible field layout when PROMO CODE = "MCINST"		
	2 byte Installment Type.	PDS 0181 - Installment Type, position 1 - 2.

NOTE:

MI tag has fixed layout. Subfields not containing values will be populated with spaces when they are followed by subfields that contain values. If one or more subfields at the end of the tag do not contain a value, the subfield(s) will not be present and the total length of tag will be reduced by the subfield length.

Detailed Layout of ID Tag for Batch 0220 Messages

Tag	Description	Corresponding MC Field
ID	Is the 2 byte literal identifying Installment Payment Data.	
LL	Is the 2 byte length of Data.	Length = 48 (Variable, Max 48)
	2 byte Number of Installments.	PDS 0181 - Number of Installments, position 1 - 2
	5 byte Interest Rate.	PDS 0181 - Interest Rate, position 3 - 7
	12 byte Installment Fee.	PDS 0181 - Installment Fee, position 8 - 19
	5 byte Annual Percentage Rate.	PDS 0181 - Annual Percentage Rate, position 20 - 24
	12 byte First Installment Amount.	PDS 0181 - First Installment Amount, position 25 - 36
	12 byte Second Installment Amount.	PDS 0181 - Subsequent Installment Amount, position 37 - 48

NOTE:

ID tag has fixed layout. Subfields not containing values will be populated with spaces when they are followed by subfields that contain values. If one or more subfields at the end of the tag do not contain a value, the subfield(s) will not be present and the total length of tag will be reduced by the subfield length.

Example 1:

When one instance of Installment Options Data is present,

```
MI08MCINST20ID48060051000000000150000505000000010000000000007500
```

NOTE:

MasterCard Installment Payment transactions are currently supported only for MasterCard Dual messages and not for Maestro Single messages.

Special Issuer Interchange Flag Information

The special issuer interchange flag information that STAR and PULSE pass is mapped to ISO issuers in the following format:

NILLxxyyzz

where:

NI	Is the 2 byte Tag ID.
LL	Is the 2 byte Tag data length.
xx	Is the 2 byte sub tag for issuer interchange.
yy	Is the 2 bytes containing length of the data to follow
zz	Is the data for yy length.

Example 1:

Data from STAR DE 125: SI01A = data in FIS ISO 124: 009NI05ST01A

Tag	Description
009	Field length
NI	Is the 2-byte Tag ID
05	Is the 2-byte Tag data length
ST	Is the 2-byte sub tag for issuer interchange (STAR)
01	Is the 2-byte containing length of the data to follow
A	Is the data.

Example 2:

Data from STAR DE 125: SI02A9 = data in FIS ISO 124: 010NI06ST02A9

Tag	Description
010	Field length
NI	Is the 2-byte Tag ID
06	Is the 2-byte Tag data length

Tag	Description
ST	Is the 2-byte sub tag for issuer interchange (STAR)
02	Is the 2-byte containing length of the data to follow
A9	Is the data.

Example 3:

Data from PULSE DE 124: NI24PS32TR08ABCDEFGHID16BP01CAT10101RF02 = data in FIS ISO 124: 038NI24PS32TR08ABCDEFGHID16BP01CAT10101RF02

Tag	Description
038	Field length
NI	Is the 2-byte Tag ID
24	Is the 2-byte Tag data length
PS	Is the 2-byte sub tag for issuer interchange (PULSE)
32	Is the 2-byte containing length of the data to follow
TR08ABCDEFGHID16BP01 CAT10101RF02	Is the data.

Network Data Information

The Network Data tag is used to pass general Regional Network Information to ISO issuers.

ACCEL

NDnnACLLBlxx<data>TRyy<data>ARzz<data>TNnn<data>Elxx<data>

where:

ND	Is the 2 byte literal identifying Network Data.
LL	Is the length of the data that follows.
AC	Is the sub-tag for ACCEL network.
LL	Is the length of the data in the AC sub-tag.
BI	Is the BAI data from ACCEL;
xx	Is the length of data that follows BI sub-tag.

PP	Is the BAI data from ACCEL.
TR	Is the transaction ID.
yy	Is the length of data that follows TR sub-tag.
<xxxxxxxxx xxxxxx>	Transaction ID from ACCEL.
AR	Is the sub-tag for ACCEL ARN.
zz	Is the length of the ARN data.
<data>	Is the ARN data.
TN	Is the sub-tag for ACCEL Airline Ticket Number.
nn	Is the length of Airline Ticket Number data.
<data>	Is the ACCEL Airline Ticket Number.
EI	Is the sub-tag for ACCEL Electronic Commerce Indicator.
aa	Is the length of the Electronic Commerce Indicator data.
<data>	Is the ACCEL Electronic Commerce Indicator.

Example:

ND81AC77BI02PPTR15123456789012345AR2312345678901234567890123TN1500121734
4139415EI0201

Tag	Description
ND	Is the 2 byte Tag ID.
81	Is the 2 byte Tag data Length.
AC	Is the 2 byte sub-tag for ACCEL network.
77	Is the 2 byte containing length of the data to follow.
BI	Is the BAI data from ACCEL.
02	Is the length of data that follows BI sub-tag.
PP	Is the BAI data from ACCEL.
TR	Is the transaction ID.
15	Is the length of data that follows TR sub-tag.
12345678 9012345	Transaction ID from ACCEL.

Tag	Description
AR	Is the ARN tag.
23	Is the length of the ARN data.
12345678 90123456 7890123	Is the ARN data.
TN	Is the TN tag.
15	Is the length of the TN tag data.
00121734 4139415	Is the TN data.
EI	Is the EI tag.
02	Is the length of EI data.
01	Is the EI data.

SHAZAM

NDnnSZLLxx

where:

ND	Is the 2-byte literal identifying Network Data.
nn	Is the length of the data that follows.
SZ	Is the sub-tag for Shazam network.
LL	Is the length of the data in the SZ sub-tag.
xx	Is the BAI data from Shazam.

Example:

ND06SZ02MD

[illegible]

Tag	Description
ND	Is the 2 byte Tag ID.
nn	Is the 2 byte Tag data Length.
PS	Is the 2 byte subtag for Network Data.
nn	Is the 2 bytes containing length of the data to follow.
TR	Is the 2 byte Tag ID.
nn	Is the 2 byte tag length.
zzzzzzzzzz zzzzzzzz	Is the TR tag data for zz length (Transaction ID).
FC	Is the 2 byte Tag ID for Function Code.
zz	Is the 2 byte Tag Length.
xxx	Is the FC Tag Data for zz length.
NR	Is the 2 byte Tag ID for Network Reference ID.
zz	Is the 2 byte Tag Length.
xxxxxxxxxx xxxxxx	Is the NR Tag Data for zz length.

STAR

NDnnSTLLBIxx<data>Elxx<data>

where:

ND	Is the 2 byte literal identifying Network Data.
nn	Is the length of the data that follows.
ST	Is the sub-tag for STAR network.
LL	Is the length of the data in the ST subtag
BI	Is the sub-tag for BAI data from STAR.
xx	Is the length of data that follows Business Identifier (BI) sub-tag.
<data>	Is the BAI data from STAR.

EI	Is the 2 byte Tag ID for STAR Electronic Commerce Indicator.
xx	Is the length of the Electronic Commerce Indicator data.
<data>	Is the STAR Electronic Commerce Indicator.

Example:

ND15ST11BI02PPEI012

Tag	Description
ND	Is the 2 byte literal identifying Network Data.
15	Is the length of the data that follows.
ST	Is the 2 byte sub-tag for Network Data.
11	Is the 2 bytes containing length of the data to follow.
BI	Is the 2 byte Tag ID.
02	Is the 2 byte tag length.
PP	Is the BAI data from STAR.
EI	Is the 2 byte TAG ID for Electronic Commerce Indicator.
01	Is the 2 byte Tag length.
0/1/2	Is the STAR Electronic Commerce Indicator.

Network On Behalf Information

The On Behalf tag is used to pass the network on behalf of results to ISO issuers.

Tag	Type
OB	Network On Behalf Service

The internal logging of On Behalf data will conform to the following format:

OBLxxyyzz

where:

OB	Is the 2-byte literal identifying On Behalf tag.	
LL	Is the 2-byte length of data that follows.	
xx	Is the 2-byte format code (05 = MasterCard).	
yy	Is the 2-byte length of data that follows.	
zz	when xx = 05, zzzz will contain data in the following format:	
	Position	Corresponding MC Field
	1-2	Issuer OBO service, MC DE48.71.1
	3-4	Is the length of data
	5	Is the Issuer OBO result code, MC DE48.71.2

NOTE There could be either single or multiple instances of result values.

Example:

When one instance of result is present,

OB0905055001U

When multiple instances of result are present,

OB1405105001U5101I

FIS Program ID

The tag PD - FIS Program ID is a generic ID used to categorize transactions.

Tag	Description
PD	FIS ProgramID

The internal logging of FIS Program ID will conform to the following format:

PD02xx

where:

Tag	Description
PD	Is the 2 byte Tag ID
02	Is the 2 byte Tag data length
xx	Is FIS Program Indicator Value <ul style="list-style-type: none"> 01 = PAVD Transactions 02 = PPE Transactions 03 = DCC Transactions

Example:

PD0201

FIS PIN Indicator

The tag PI - FIS PIN Indicator is used to identify whether a PIN was present in a transaction or not. It is logged as tagged data in existing token 44 of segment 24 in FINIPC.

Tag	Description
PI	FIS PIN Indicator

The format of the PI tag is as follows:

PI01y

where:

Tag	Description
PI	Is the 2 byte Tag ID
01	Is the tag data length
y	Is the FIS PIN Indicator having the following values: 0 = PIN not present 1 = PIN present b = unknown (b denotes a space)

Directory Server Transaction ID(MC)/Session ID(VISA)

This tag will be used to pass the Directory Server Transaction ID generated by the EMV 3DS MasterCard Directory Server or Session ID generated by payment service provider in Visa transactions.

Tag	Description
SI	Directory Server Transaction ID/Session ID

The internal logging of Directory Server Transaction ID/Session ID will conform to the following format:

SILLXX

where:

SI	Is the 2 byte literal identifying Directory Server Transaction ID tag.
LL	Is the length of the data that follows.
XX	Is the Directory Server Transaction ID data (MC DE48.66.2) or Session ID data (Visa DE 34, Dataset ID 56, Tag 81).

Multi-Clear Sequence Number

Multi-Clear Sequence Number is a number assigned by merchant to identify the advice message out of the total expected advice messages.

Tag	Description
SN	Multi-Clear Sequence Number

The internal logging of Multi-Clear Sequence Number will conform to the following format:

SNLLXX

where:

SN	Is the 2 byte literal identifying Multi-Clear Sequence Number.
LL	Is the length of the data that follows.
XX	Is the Multi-Clear Sequence Number.

Payment Account Reference Number (PAR)

The payment account reference value will be assigned by Networks and will link transactions to the underlying primary account number (PAN) associated with the payment credential presented to a merchant/acquirer.

The internal logging of the Payment Account Reference Number will conform to the following format:

```
PRnnDDDD
```

where:

Tag	Description
PR	Is the 2 byte literal identifying Payment Account Reference Number.
nn	Is the 2 byte length of Data.
DDDD	Is the Payment Account Reference Number for variable length.

Example:

```
PR321234567890payment acct ref no
```

The Tag ID is identified as “PR” has a data length of “32” followed by the payment account reference number.

VAT Tax Registration Info

The Tax Registration Info tag will be used to receive and pass Merchant and Customer VAT Registration Numbers.

Tag	Description
VT	Is the VAT Tax Registration Info

The internal logging of the VAT Tax Registration Info will conform to the following format:

```
VTLLXXYYZZZZZZZZZZ
```

where

Tag	Description
VT	Is the 2-byte Tag ID
LL	Is the tag data length that follows
XX	Tax Registration Number <ul style="list-style-type: none"> 05 - Merchant VAT Registration/Single Business Reference Number 06 - Customer VAT Registration Number
YY	Is the length of sub-tag 05 or 06
ZZZZZZZZZZ	Appropriate Tax Identifier value followed by Merchant VAT Registration/Single Business Reference Number or Customer VAT Registration Number. This value corresponds to Visa Field 104, Dataset ID 63 - Tag 05 and Tag 06. Maximum length of this data would be 20 bytes.

Example

```
VT230519CNPJ123456789012345
```

Data Element 124 - Additional Information

DE 124 tag IDs are defined as alpha numeric, for a length of 2-bytes.

Alpha-numeric character set consists of the following:

```
0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ
```

A valid tag ID that can be passed in DE 124 consists of any alpha-numeric character, paired with another. Examples:

```
A0, 3D, S9, 9Z, 24, ZZ
```

FIS has reserved all tag ID's beginning with an alpha-character, A thru Z, for internal purposes. Tag ID's beginning with a numeric value, 0 thru 9, have been reserved for customer use. Customer's may use an alpha or numeric value in the second position of the tag ID.

Watch List Information

The Watch List information from Visa DE 48.37 and MasterCard DE48.67 will be passed as noted below in ISO DE 124.

Tag	Type
WL	Watch List message

The internal logging of Watch List data will conform to the following format:

WLLLxxxxxxxx

where:

WL	Is the 2-byte literal identifying Watch List Data.
LL	Is the length of data that follows.
xx	Is a 7 or 8 byte Watch List Data from Visa DE usage 37 or a 3-byte watch list score from MasterCard.

Fraud/Score Data

0382 AP File Update Information

CAUTION:

Any errors that occur while your institution is performing online host maintenance display on the Network Monitoring System and wait for operator action. FIS recommends that you use AP Batch Maintenance or online screen maintenance to perform ongoing maintenance to the Authorization Processor files. For complete instructions, see Chapter 3 “Using Batch Maintenance” of the *AP Technical Reference Manual for Processing Customers*.

The 0382 AP File Update message can maintain two files: Cardholder and Account Detail. Each file consists of one or more record segments. The 0382 message adds, deletes, or updates one of the following Cardholder or Account Detail Record segments:

Segment ID	Segment Description
Cardholder Record	
01	Card Information
02	Track 2 Information
03	Account Information
04	Override Limit Information
06	Hold List Information
08	Name Information
09	Override Limit Information with Expiration Date (Cardholder Segment 09)
97	Override Limits Information*
98	Member Details Information*
99	Card Basic Information*
Account Detail Record	
01	Account Detail
02	Overdraft Information
03	Account Hold Information
99	Account Detail*

NOTE:

These segments are only supported for inbound requests coming from a host computer. The Connex on HP NonStop system does not currently support the generation and delivery of such AP maintenance requests to the host computer for these segments.

Refer to "Appendix A" for the following **Cardholder Record** information:

- [Card Information \(Cardholder Segment 01\)](#)
- [Track 2 Information \(Cardholder Segment 02\)](#)
- [Account Information \(Cardholder Segment 03\)](#)
- [Override Limit Information \(Cardholder Segment 04\)](#)
- [Hold List Information \(Cardholder Segment 06\)](#)
- [Name Information \(Cardholder Segment 08\)](#)
- [Override Limit Information with Expiration Date \(Cardholder Segment 09\)](#)
- [Override Limits \(Cardholder Segment 97\)](#)
- [Member Detail \(Cardholder Segment 98\)](#)

- [Card Basic \(Cardholder Segment 99\).](#)

Refer to "Appendix A" for the following **Account Detail Record** information:

- [Account Detail \(Account Detail Segment 01\)](#)
- [Overdraft Information \(Account Detail Segment 02\)](#)
- [Account Hold Information \(Account Detail Segment 03\)](#)
- [Account Detail \(Account Detail Segment 99\)](#)
- [0600/0620 Administrative Message Information.](#)

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100 / 0101 / 0110 (Authorization Request / Response)	Optional.
0120 / 0121 (Authorization Advice)	Optional.
0200 / 0201 / 0210 (Financial Transaction Request / Response)	Optional.
0220 / 0221 (Financial Transaction Advice)	Optional.
0420 / 0421 (Acquirer Reversal Advice)	Optional.
0382, 0392, 0620	Required.
0600 Electronic Mail Request	Required when data element 070 equals 800.
0600 Administrative Request	Optional when data element 070 equals 810, 811, 812, 821, or 822.
0610 Electronic Mail Response	Optional when data element 070 equals 800.

125 FIS Tags, Issuer/Network Management Information (FIS-Defined)

Format:	LLLVAR
Attributes:	FIS: ans..999 ISO: ans..999
Description:	FIS defines this DE for use in financial messages to provide additional capability for exchanging data between issuer hosts. Data passed in these data elements must be tokenized, assuming a TLV format (tag, length, variable length data), for financial messages. This data element is reserved by ISO for private definition and use. FIS also uses this data element for network management information.

Layout for Network Management Messages

DE 125 (FIS Tags, Issuer) is created to provide issuers the ability to pass additional information to acquirers on financial replies.

In order to optimize this ISO field for general purpose, this data element consists of tokenized data that conforms to the TLV format (tag-length-variable data). This is enforced via edit-checking upon receipt of this data element.

DE125 supports tagged data in TLV format. This layout will consist of a primary tag and sub tags within the tag. The data received in DE 125 is preceded by a 3-byte length indicator - indicating the overall length of the field which is maximum of 999 bytes

It is followed by the tagged sub-elements and each sub-element must conform to the following format:

XXYYZZZZ, where:

XX	Is a 2-byte alpha-numeric tag ID.
YY	Is 2-bytes containing the length of data to follow. Values range from 00 to a maximum of 99.
ZZZZ	Is the data for length defined in YY.

The following is an example for DE125 (FIS Tags, Issuer):

Example:

```
LLLXXYYZZZZXXYYZZZZZZZZZZ
023T105AAAAAT210BBBBBBBBBB
```

In this example, the overall length (LLL) of the field is "023".

The 2-byte Tag ID (XX) is "T1" has a 2-byte data length (YY) of "05" where the data (Zs) is "AAAAA".

Tag ID (XX) "T2" has a data length (YY) of "10" where the data (Zs) contains 10 bytes with a value of "BBBBBBBBBB".

FIS Tag Identifiers

The following table identifies the list of tags defined by FIS for use in DE 125:

Tag ID	Purpose
EC	Electronic Commerce Data.
F1	Falcon Credit Data - Part 1.
F2	Falcon Credit Data - Part 2.
FS	Fraud Security Services Data.
FD	Fraud Scoring Data.
HI-H5	Healthcare Inquiry Transactions.
ID	Installment Payment Data.
IT	Interchange Tier.
KP	Pin Key.
KM	Mac Key.
MI	Installment Payment Information.
NI	Network Interchange Data.
ND	Network Data Information.
OB	Network On Behalf Information.
RI	ATM Routing Table Unique ID.
SI	Directory Server Transaction ID.

Tag ID	Purpose
T1-T6,T8, T9,TA,TB,TE,TL, TM, TP	Payment Token Tags.
WE	Cardholder Wallet Tag
WL	Watch List Data.

Refer to ["Data Elements Additional Information"](#) for more information.

Electronic Commerce Data

Tag ID	Purpose
EC	Electronic Commerce Data

The internal logging of Electronic Commerce Data Tag is as follows:

EC**LL****XX****YY****ZZZZZ**, where:

EC	Is the 2-byte tag identifying Strong Customer Authentication Data.
LL	Is the length of data that follows.
XX	Is the 2-byte sub-tag ID: <ul style="list-style-type: none"> 04 = Visa Electronic Commerce Data.
YY	Is the tag data length that follows: <ul style="list-style-type: none"> When sub-tag id = 04, length of data would vary from 01 to 21.
ZZZZZ	When subtag is 04, Visa Electronic Commerce Data.

Tag	Description	Value	Length	CORRESPONDING VISA FIELD 34
1	Trusted Merchant Exemption Indicator	<ul style="list-style-type: none"> 0 = Trusted merchant exemption does not apply to the transaction 1 = Transaction exempt from SCA as it originated at a merchant trusted by the cardholder 	1	Dataset ID 4A, Tag 84
2	Reasons for Not Honoring Exemptions	Identifies the reason codes for not honoring exemptions and contains a series of up to 20 four character reason codes.	20 (First 5 occurrences)	Dataset ID 4A, Tag 8C

Falcon Credit Data (Tag ID's "F1" and "F2")

Specific to this implementation was a requirement to support receipt of risk-protection data for international credit models utilizing the Connex on HP NonStop interface to Falcon - a neural net fraud detection system. This data is specific to credit transactions (01xx Authorizations) and is received from issuers on authorization replies in DE 125 via the FIS ISO PI.

Falcon requires a total of 165 bytes of data. The format and content of this data is detailed later in this section. Because the data in each sub-element passed in DE 125 is restricted to a maximum data length of 99 bytes each, Falcon Credit Data is received in two separate tags reserved by FIS specifically for this purpose:

Tag ID	Purpose
F1	Falcon Credit Data - Part 1
F2	Falcon Credit Data - Part 2

The FIS ISO PI performs edit checking on DE 125 to the extent of ensuring the data received conforms to TLV format. The PI does not perform edit checking on the contents of data received in *any* tag. Issuers must ensure sending of all appropriate information as required by Falcon.

Refer to Appendix A ["Falcon Credit Data - Layout"](#) for more information.

Data Elements Additional Information

DE 125 tag IDs are defined as alpha numeric, for a length of 2-bytes.

Alpha-numeric character set consists of the following:

0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ

A valid tag ID that can be passed in DE 125 consists of any alpha-numeric character, paired with another. Examples:

A0, 3D, S9, 9Z, 24, ZZ

FIS has reserved all tag ID's beginning with an alpha-character, A thru Z, for internal purposes. Tag ID's beginning with a numeric value, 0 thru 9, have been reserved for customer use. Customer's may use an alpha or numeric value in the second position of the tag ID.

Fraud Scoring Data

FIS has reserved tag "FD" as the primary tag ID for use in passing all fraud score-related data. Consistent with the all tags passed via DE125, the length following tag "FD" can have a maximum value of 99.

Tag "FD" will provide scoring data for fraud products such as Fraud Navigator, Falcon, Prism, Visa, MasterCard, etc. Score related data from multiple sources, when present, will be passed in tag "FD". The tag will consist of two-character sub-tags that will distinguish each block of score data from another:

Subtags currently defined:

Fraud Product Identifier	Description
00	Fraud Navigator
01	Falcon
02	Visa
03	Prism
04	Visa DPS
05	MasterCard
06	Analytics (Fair Isaac)
07	STAR
08	NYCE

The sub-elements will conform to the following format:

xyyzzzz, where:

xx	Is a 2-byte Fraud Product ID.
yy	Is 2-bytes containing the length of data to follow.
zzzz	Is the data for length defined in yy.

DE Examples:

Example 1:

013FD090105xxxxx

Example 2:

027FD230105xxxxx0210yyyyyyyyyy

Example 3:

036FD230105xxxxx0210yyyyyyyyyyT105zzzzzy

In the first example, the length of the ISO field is "013". The Tag ID is identified as "FD" has a data length of "09" where the data contains subtag "01" (Falcon Score Data) for a length of "05" and the data contains a value of "xxxxx".

In the second example, the length of the ISO field is "027". The Tag ID is identified as "FD" has a data length of "23" where the data contains subtags "01" (Falcon Score Data), a length of "05", data contains a value of "xxxxx" followed by subtag "02" (Visa Score Data), a length of "10", data contains a value of "yyyyyyyyyy".

The third example identifies a case where the ISO data element could contain one or more tag ID's (in this case, "T1") not related to fraud score data but included in the field.

The internal logging of score data will conform to the following format:

FDLLxyyzzzz

where:

FD	Is the 2-byte literal identifying Fraud Score Data.												
LL	Is the length of data that follows.												
xx	Is a 2-byte Fraud Product ID (05 = MasterCard).												
yy	Is 2-bytes containing the length of data to follow.												
zzzz	when xx = 05, zzzz will contain data in the following format: <table border="1"> <thead> <tr> <th>Position</th><th>Corresponding MC Field</th></tr> </thead> <tbody> <tr> <td>1 - 3</td><td>MC DE 48.55.1 (Merchant Fraud Score)</td></tr> <tr> <td>4 - 5</td><td>MC DE 48.55.2 (Merchant Score Reason Code)</td></tr> <tr> <td>6 - 8</td><td>MC DE 48.55.3 (Reserved for Future Use)</td></tr> <tr> <td>9 - 10</td><td>MC DE 48.55.4 (Reserved for Future Use)</td></tr> <tr> <td>11 - 12</td><td>MC DE 48.55.5 (Reserved for Future Use)</td></tr> </tbody> </table>	Position	Corresponding MC Field	1 - 3	MC DE 48.55.1 (Merchant Fraud Score)	4 - 5	MC DE 48.55.2 (Merchant Score Reason Code)	6 - 8	MC DE 48.55.3 (Reserved for Future Use)	9 - 10	MC DE 48.55.4 (Reserved for Future Use)	11 - 12	MC DE 48.55.5 (Reserved for Future Use)
Position	Corresponding MC Field												
1 - 3	MC DE 48.55.1 (Merchant Fraud Score)												
4 - 5	MC DE 48.55.2 (Merchant Score Reason Code)												
6 - 8	MC DE 48.55.3 (Reserved for Future Use)												
9 - 10	MC DE 48.55.4 (Reserved for Future Use)												
11 - 12	MC DE 48.55.5 (Reserved for Future Use)												

Fraud Security Services Information

The Fraud Security Services additional Data from MasterCard DE 48.56 will be passed as noted below in ISO DE 125.

Tag	Type
FS	Fraud Security Services Data

The internal logging of score data will conform to the following format:

FSLxxyyzzzz

where:

FS	Is the 2-byte literal identifying Fraud Security Services Data.
LL	Is the 2-byte length of data that follows.
xx	Is the 2-byte Fraud Product ID (05 = MasterCard).
yy	Is the 2-byte containing the length of data to follow.

zzzz	when xx = 05, zzzz will contain data in the following format:	
	Position	Corresponding MC Field
	1 - 12	MC DE 48.57 (Security Services Additional Data for Acquirers). When there is no data or data is less than 12 bytes, it should be filled with spaces.
	13 - 27	Spaces
	28 - 29	MC DE 48.52 (Transaction Integrity Class) or IPM PDS 0017 for 2 bytes

Healthcare Inquiry Transactions

The ISO subfields ID 03 (Payer ID/ Carrier ID) and 04 (Approval or Reject Reason Code) are present in the response messages for DE125. The subelement IDs H1-H5 are used to differentiate each subelement containing the subfield ID 03 and 04. There can be more than one subelement ID.

The multiple-tagged data is sent in the following format:

LLL 3 bytes	ID	ID Length	AA	AA Length	AA Data	BB	BB Length	BB Data
-------------	----	-----------	----	-----------	---------	----	-----------	---------

where:

- LLL 3 bytes = Total Data Element Length
- ID = Subelement ID (H1 to H5)
- AA = Subfield ID 03
- BB = Subfield ID 04.

Refer to Appendix A ["Network Management Information"](#) for more information.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100 / 0101 / 0110 (Authorization Request / Response)	Optional.
0120 / 0121 (Authorization Advice)	Optional.
0200 / 0201 / 0210 (Financial Transaction Request / Response)	Optional.
0220 / 0221 (Financial Transaction Advice)	Optional.
0420 / 0421 (Acquirer Reversal Advice)	Optional.
0800, 0820	Required in 0800 and 0820 messages with Network Management Code (bit 070) of 005, 101, 161, 171, 281, and 282.

Interchange Tier

The tag **IT (Interchange Tier)** is used to identify institutions with \$10Billion or more assets and those institutions with assets less than \$10Billion.

Tag	Description
IT	Interchange Tier

The internal logging of interchange tier data will conform to the following format:

ITLLxx

where:

IT	Is the 2 byte Tag ID.
LL	Is the 2 byte Tag data length.
xx	<p>Is the Tiered Interchange value. Valid values are: Valid values are:</p> <ul style="list-style-type: none"> • _0 = Non-Premier Issuer (Unregulated) • _1 = Regulated Non-Premier Issuer w/o Fraud-prevention adjustment • _2 = Regulated Non-Premier Issuer w/Fraud-prevention adjustment • NR = Not Regulated • P_ = Premier Issuer (Unregulated) • R_ = Regulated Premier Issuer w/Fraud-prevention adjustment • R1 = Regulated without Fraud • RF = Regulated with Fraud • S_ = Regulated Premier Issuer w/o Fraud-prevention adjustment • X_ = Gateway BIN, no classification <p>Note: The underscore identifies a space.</p>

ANSI Key Block Information

The Key block is defined using the ANSI X9 TR-31 standard. See the ANSI standard for any definitions and values that may be used in the ANSI Key block.

The tag will consist of the Tag ID and will include sub tags for the Key block data and check digits. The subtag has a length of 3-digits.

The primary tag identifier is used to identify the ANSI Key Blocks.

Tag ID	Purpose
KP	Pin Key
KM	Mac Key

The following sub tag identifier is used to identify the type of data.

Tag ID	Purpose
01	Key Data
02	Check Digits

The Internal logging of the key block will conform to the following format:

IDLLLXZZ

ID	Is the 2-byte tag ID identifying the key block
LLL	Is the 3-byte length of data that follows.
XX	Data for length defined in LLL.

Subtag 01 is defined as shown below:



Subtag 02

Subtag 02 will contain the check digits for the Key Block Key

Example of PIN Key

In the above example, the length of the ISO field is "107". The Tag ID is identified as KP (Pin Key) has a length of "102" where the data contains the subtag "01" (Key Block) for a length of "088" and the data contains a value of
"XXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX" followed by subtag "02" (Check Digits)
a length of "04", data contains "YYYY".

Example of 2 Pin Key and Mac Key

```
211KP10201088XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX02004YYYYKM102
01088XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX02004YYYY
```

In the above example, the length of the ISO field is "211". The Tag ID is identified as KM (MAC Key) has a length of "102" where the data contains the subtag "01" (Key Block) for a length of "088" and the data contains a value of "XXX" followed by subtag "02" (Check Digits) a length of "04", data contains "YYYY".

The ANSI X9 TR-31 standard is published by the Accredited Standards Committee X9, Incorporated.

Installment Payment Information

The Installment Payment Information from MasterCard DE 112 is internally split and logged under two different tags in the following format:

Tag	Description
MI	Installment Payment Information
ID	Installment Options Data

The overall internal logging of Installment Payment Information will conform to the following format:

```
MILLxxIDNNyy
```

where:

Tag	Description
MI	Is the 2 byte literal identifying Installment Payment.
LL	Is the 2 byte length of Data.
xx	Is the data for LL length.
ID	Is the 2 byte literal identifying Installment Options.
NN	Is the 2 byte length of Data.
yy	Is the data for NN length.

NOTE:

There could be single or multiple or no occurrence of the ID tag. Refer to the [Detailed Layout of MI Tag](#) and [Detailed Layout of ID Tag](#).

Detailed Layout of MI Tag

Tag	Description	Corresponding MC Field
MI	Is the 2 byte literal identifying Installment Payment.	
LL	Is the 2 byte length of Data.	
	Is the 6 byte Promotion Code.	DE 48, sub element 95 = MCINST
The following is the possible field layout when PROMO CODE = "MCINST"		
	Is the 2 byte Installment Type.	DE112 – Sub element 021, position 1 - 2
	Is the 1 byte Payment Options.	DE112 – Sub element 021, position 3
	Is the 2 byte min number of Installments.	DE112 – Sub element 023, position 1 - 2
	Is the 2 byte max number of Installments.	DE112 – Sub element 023, position 3 - 4
	Is the 5 byte Interest Rate.	DE112 – Sub element 023, position 5 - 9
	Is the 12 byte Installment Fee.	DE112 – Sub element 023, position 10 - 21
	Is the 5 byte Annual Percentage Rate.	DE112 – Sub element 023, position 22 - 26
	Is the 12 byte Total Amount Due.	DE112 – Sub element 023, position 27 - 38

NOTE:

MI tag has fixed layout. Subfields not containing values will be populated with spaces when they are followed by subfields that contain values. If one or more subfields at the end of the tag do not contain a value, the subfield(s) will not be present and the total length of tag will be reduced by the subfield length.

Detailed Layout of ID Tag

Tag	Description	Corresponding MC Field
ID	Is the 2 byte literal identifying Installment Payment Data.	
LL	Is the 2 byte length of Data.	Length = 60
	2 byte Number of Installments.	Subelement 022, Subfield 1 - Number of Installments

NI	Is the 2 byte Tag ID.
LL	Is the 2 byte Tag data length.
xx	Is the 2 byte sub tag for issuer interchange.
yy	Is the 2 bytes containing length of the data to follow
zz	Is the data for yy length.

Example 1:

Data from STAR DE 125: SI01A = data in FIS ISO 125: 009NI05ST01A

Tag	Description
009	Field length
NI	Is the 2 byte Tag ID
05	Is the 2 byte Tag data length
ST	Is the 2 byte sub tag for issuer interchange (STAR)
01	Is the 2 byte containing length of the data to follow
A	Is the data.

Example 2:

Data from STAR DE 125: SI02A9 = data in FIS ISO 125: 010NI06ST02A9

Tag	Description
010	Field length
NI	Is the 2 byte Tag ID
06	Is the 2 byte Tag data length
ST	Is the 2 byte sub tag for issuer interchange (STAR)
02	Is the 2 byte containing length of the data to follow
A9	Is the data.

Example 3:

Data from NYCE DE 124: SI01A9 = 009NQ05II01P = data in FIS ISO 125: 009NI05NY01P

Tag	Description
009	Field length
NI	Is the 2 byte Tag ID
05	Is the 2 byte Tag data length
NY	Is the 2 byte sub tag for issuer interchange (NYCE)
01	Is the 2 byte containing length of the data to follow
P	Is the data (this means the Issuer is a Premier Issuer).

Example 4:

Data from ACCEL in DE 62: xxxxxx = data in FIS ISO 125:014NI10AC06xxxxxx.
Where, xxxxxx is the Network ID value from ACCEL.
Data from ACCEL in DE 125.7: xxx = data in FIS ISO 125:011NI07AC03xxx.
Where, xxx is the Interchange Fee Indicator from ACCEL.

Tag	Description
014	Field length.
NI	Is the 2 byte Tag ID.
10 or 07	Is the 2 byte Tag data length.
AC	Is the 2 byte sub tag for issuer interchange (ACCEL).
06 or 03	Is the 2 byte containing length of the data to follow.
XXXXXX or XXX	Is the data. <ul style="list-style-type: none"> When length is 06, data contains Network Identifier (62). When length is 03, data contains Interchange Fee Indicator (125.7).

Example 5:

Data from PULSE DE 124: NI24PS32TR08ABCDEFGHID16BP01CAT10101RF02 = data
in FIS ISO 124: 038NI24PS32TR08ABCDEFGHID16BP01CAT10101RF02

Tag	Description
038	Field length
NI	Is the 2-byte Tag ID
24	Is the 2-byte Tag data length

NDxxPSwwTR<zz><xxxxxxxxxxxxxxxxxx>FC<zz><xxx>NR<zz><xxxxxxxxxxxxxxxxxx>

ND	Is the 2 byte Tag ID.z
xx	Is the 2 byte Tag data Length.
PS	Is the 2 byte subtag for Network Data.
ww	Is the 2 bytes containing length of the data to follow.
TR	Is the 2 byte Tag ID.
<zz>	Is the 2 byte tag length.
<xxxxxxxxxx xxxxxxxx>	Is the TR tag data for zz length (Transaction ID).
FC	Is the 2 byte Tag ID for Function Code.
<zz>	Is the 2 byte Tag Length.
<xxx>	Is the FC Tag Data for zz length.
NR	Is the 2 byte Tag ID for Network Reference ID.
<zz>	Is the 2 byte Tag Length.
<xxxxxxxxxx xxxxxxxx>	Is the NR Tag Data for zz length.

[illegible]

Tag	Description
ND	Is the 2 byte Tag ID
nn	Is the 2 byte Tag data Length.
PS	Is the 2 byte subtag for Network Data.
nn	Is the 2 bytes containing length of the data to follow.
TR	Is the 2 byte Tag ID.
nn	Is the 2 byte tag length.
zzzzzzzzzz zzzzzzzz	Is the TR tag data for zz length (Transaction ID).
FC	Is the 2 byte Tag ID for Function Code.
zz	Is the 2 byte Tag Length.
xxx	Is the FC Tag Data for zz length.
NR	Is the 2 byte Tag ID for Network Reference ID.
zz	Is the 2 byte Tag Length.
xxxxxxxxxx xxxxxx	Is the NR Tag Data for zz length.

Network On Behalf Information

The On Behalf tag is used to pass the network on behalf of results to ISO acquirers.

Tag	Type
OB	Network On Behalf Service

The internal logging of On Behalf data will conform to the following format:

OBLxxyyzz

where:

OB	Is the 2-byte literal identifying On Behalf tag.
LL	Is the 2-byte length of data that follows.
xx	Is the 2-byte format code (05 = MasterCard).

yy	Is the 2-byte length of data that follows.	
zz	when xx = 05, zzzz will contain data in the following format	
	Position	Corresponding MC Field
	1-2	Merchant OBO service, MC DE48.51.1
	3-4	Is the length of data
	5	Is the Merchant OBO result code, MC DE48.51.2

NOTE There could be either single or multiple instances of result values.

Example:

When one instance of result is present,

OB0905055401X

When multiple instances of result are present,

OB1405105401X5301X

Payment Account Reference Number (PAR)

The payment account reference value will be assigned by Networks and will link transactions to the underlying primary account number (PAN) associated with the payment credential presented to a merchant/acquirer.

The internal logging of the Payment Account Reference Number will conform to the following format:

PRnnDDDD

where:

Tag	Description
PR	Is the 2 byte literal identifying Payment Account Reference Number.
nn	Is the 2 byte length of Data.
DDDD	Is the Payment Account Reference Number for variable length.

Example:

PR321234567890payment acct ref no

The Tag ID is identified as “PR” has a data length of “32” followed by the payment account reference number.

ATM Routing Table Unique ID

The ATM Routing Table Unique ID tag will be used to send or log BIN file ID (version number).

Tag	Description
RI	ATM Routing Table Unique ID

RILLXXYYZZZZZZZZZZ

Tag	Description
RI	Is the 2-byte Tag ID.
LL	Is the tag data length that follows.
XX	Is the 2-byte sub-tag ID 04 - Visa ATM Routing Table Unique ID
YY	Is the length of sub-tag 04.
<u>ZZZZZZZZZZ</u> Z	When sub-tab is 04, this field will contain 7 byte Visa ATM Routing Table Unique ID which corresponds to Visa Field 62.27.

Example

RI1104071234567

Directory Server Transaction ID

This tag will be used to pass the Directory Server Transaction ID generated by the EMV 3DS MasterCard Directory Server.

Tag	Description
SI	Directory Server Transaction ID

The internal logging of Directory Server Transaction ID will conform to the following format:

SILLXX

where:

SI	Is the 2 byte literal identifying Directory Server Transaction ID tag.
LL	Is the length of the data that follows.
XX	Is the Directory Server Transaction ID data (MC DE48.66.2).

Payment Token Data

The Payment Token is of the following format:

T1LLzzzT2LLyyyT3LLxxT4LLwwwT5LLvvvT6LLuuuT8LLtttT9LLsssTALLrrrTBLLqqq
TELLabcTLLLabcTMLLabcTPLpppWELLabc

where:

Tag	Description
T1	Is the 2 byte literal identifying Token for original PAN.
LL	Is the length of Token for Original PAN.
zzz	Is the Token for Original PAN.
T2	Is the 2 byte literal identifying Token Assurance Level.
LL	Is the length of Token Assurance Level.
yyy	Is the Token Assurance Level. Token Assurance level contains a value indicating the confidence level of the token to PAN/Cardholder relationship

Tag	Description
T3	Is the 2 byte literal identifying Token Requestor ID.
LL	Is the length of Token Requestor ID.
xxx	Is the Token Requestor ID. Token Requestor ID is the ID assigned by the Token Service Provider (TSP) to the Token Requestor.
T4	Is the 2 byte literal identifying PAN Information.
LL	Is the length of PAN Information
www	Is the PAN Information. PAN Information can be the Full PAN, PAN range, Last four digits of PAN etc.
T5	Is the 2 byte literal identifying Token Transaction Identifier.
LL	Is the length of Token Transaction Identifier.
vvv	Is the Token Transaction Identifier. Token Transaction Identifier contains the network from which the token transaction came from. Currently defined values are: <ul style="list-style-type: none"> • MC= MasterCard generated token data • VI = Visa generated token data • PU = Pulse generated token data • NY = NYCE generated token data • ST = STAR generated token data.
T6	Is the 2 byte literal identifying Token Expiration Date.
LL	Is the length of Token Expiration Date.
uuu	Is the Token Expiration Date. Token Expiration Date contains the Expiration date associated with the token.
T8	Is the 2 byte literal identifying PAN Reference Number.
LL	Is the length of PAN Reference Number.
ttt	Is the PAN Reference Number. PAN Reference Number contains a service-allocated unique reference to the Primary Account Number that was tokenized.
T9	Is the 2 byte literal identifying Token Type.
LL	Is the length of Token Type.
sss	Is the Token Type. Token Type contains how the token transaction was initiated. Currently defined values for Token Type are: <ul style="list-style-type: none"> • CF = Card on File • SE = Secure Element • HC = HCE (Host Card Emulation).

Tag	Description
TA	Is the 2 byte literal identifying Token Status.
LL	Is the length of Token Status.
rrr	Is the Token Status. Token status contains the current status of the token. Currently defined values for Token Status are: <ul style="list-style-type: none"> • A = Active for payment • I = Inactive for payment (not yet active) • S = Temporarily suspended for payments • D = Permanently deactivated for payments.
TB	Is the 2 byte literal identifying Token Lookup Tran ID.
LL	Is the length of Token Lookup Tran ID.
qqq	Is the Token Lookup Tran ID. Token Lookup Tran ID contains a TSP-provided reference from the original de-tokenization process.
Payment Token Tags	
TE	Is the 2 byte literal identifying Elapsed Time to Live.
LL	Is the length of Elapsed Time to Live.
abc	Is the Elapsed Time to Live. This tag will contain the elapsed time in hours since the current LUK was provisioned or replenished on the device.
TL	Is the 2 byte literal identifying Token Reference Number.
LL	Is the length of Token Reference Number.
abc	Is the Token Reference Number. Token Reference Number contains a service-allocated unique reference to the token.
TM	Is the 2 byte literal identifying Network Token Transaction ID.
LL	Is the length of Network Token Transaction ID.
abc	Is the Network Token Transaction ID. Network Token Transaction ID is calculated by networks to identify the transaction. It is to be retained and used to provide the transaction details associated with an original purchase and subsequent reversal messages. It is a 44-byte value for MC BIN ranges and a 64-byte value for Visa BIN ranges.
TP	Is the 2 byte literal identifying Token Service Provider (TSP) Identifier.
LL	Is the length of Token Lookup Service Provider Identifier.

Tag	Description
ppp	Is the Token Service Provider Identifier. This field contains information on which network/entity is the TSP. Currently defined values for TSP Identifier are: <ul style="list-style-type: none"> • MC = MasterCard • VI = Visa • ST = STAR • FD = FDC • IS = Issuer • AQ = Acquirer • WA = Wallet • PA = Pseudo Account
Card Holder Wallet Tags	
WE	Is the 2 byte literal identifying Issuer Product Configuration ID.
LL	Is the length of Issuer Product Configuration ID.
abc	Is the Issuer Product Configuration ID. This field contains the unique card art product configuration identifier provided by the issuer associated with the graphical and text card art assets.

Watch List Information

The Watch List information from Visa DE 48.37 and MasterCard DE48.67 will be passed as noted below in ISO DE 124.

Tag	Type
WL	Watch List message

The internal logging of Watch List data will conform to the following format:

WLLLxxxxxxxx

where:

WL	Is the 2-byte literal identifying Watch List Data.
LL	Is the length of data that follows.
xx	Is a 7 or 8 byte Watch List Data from Visa DE usage 37 or a 3-byte watch list score from MasterCard.

126 Issuer Trace Data (FIS-Defined)

Format: LLLVAR

Attributes: FIS: ans..100
ISO: ans..999

Description: This data element is reserved by ISO for private definition and use. FIS defines this data element as *Issuer Trace Data*. Used to return the issuer's trace data that is stored in the FINIPC field issuer-trace-ID, this data element allows information that is stored by the PI communicating to the issuer to be returned to the acquirer. In a multiple-message environment, this data element is used to transport data in the FINIPC field ref-data-issr. This data consists of the following:

Position	Content
1	Format. This is usually 0 to indicate format undefined.
2-100	Information. This data is used by the issuer to determine where it left off to continue the next portion of the transaction. This information must be returned to the issuer in continuation requests.

American Express® GCAG Format

Data returned by Amex in a response message to an ISO acquired transaction.

Subelement Name/Contents	Length	AMEX Bit No.
Format Code. Value: M	1AN	NA
Transaction Identifier (TID) assigned by Amex on the response	15AN	31

AMEX® Format

Subelement Name	Length	AMEX Bit No.
Format Code. Value: X	1	
Trace Number	6	11

Subelement Name	Length	AMEX Bit No.
Institution ID	11	32
Card Acceptor ID	15	42
Issuer Reference Data	48	31

EPOC Format

Subelement Name/ Contents	Data Length	Notes	EPOC Bit No.
Format Code			
Message Type	4		
Trace Number	6		11
Date and Time, Local Transaction	12		12
Acquirer Institution ID	13	A value of "11" followed by 11 bytes of acquirer institution ID	32

AMEX® GNS Format

Subelement Name	Length	AMEX Bit No.
Format Code. Value: Y	1	
Transaction Identifier	15	31

MasterCard® CIS Format

Subelement Name/Contents	Data Length	MasterCard Bit No.
Format Code. Value: 6 .	1	
Systems Trace Number	6	11
Transmission Date and Time (MMDDhhmmss)	10	7
Settlement Date (MMDD)	4	15
Banknet Network Data	12	63
• Financial Network Code	3	63.1

Subelement Name/Contents	Data Length	MasterCard Bit No.
• Banknet Reference Number	9	63.2
Merchant Type	4	18
Trace ID	15	48s63

MasterCard® MDS Format

Subelement Name/Contents	Data Length	MasterCard Bit No.
Format Code. Value: A		
System Trace Number	6	11
Transaction Date-Time	10	7
Settlement Date	4	15
Network Reference Number	9	63.3
Banknet Reference Number	9	63.4
Acquirer Reference Number	23	63.5
Receiving Institution ID	11	100

Visa DCS Format

Subelement Name	Length	Notes	Visa Field No.
Format Code. Value: 4	1		
System Trace Audit Number	6		11
Acquirer's Institution Identification Code	11		32
Retrieval Reference Number	12		37
Authorization Characteristics Indicator	1		62.1
PS2000 Transaction Identifier/ Gateway Transaction Identifier	15	Byte 50 indicates Visa or MC	62.2 or 62.17
Multiple Clearing Sequence Number	2		62.11

Subelement Name	Length	Notes	Visa Field No.
Multiple Clearing Sequence Count	2		62.12
Transaction identifier	1	Visa or MC Indicator("V" or "M")	62.2
Special Condition Indicator	1		60.4
Fee Program Indicator	3		63.19
Chargeback Reduction/BASE II Flags	7		63.6
Response Source/Reason Code	1		44.1
Original Response Code	2		44.11
Product ID	2		62.23
Reimbursement Attribute	1		63.11
Network ID	4		63.1
Validation Code	4		62.3
Last four digits of PAN	4		44.15
Account Status	1	R, N or blank where, R-regulated N-Non-regulated	62.26
Mail/Phone/Electronic Commerce and Payment Indicator	2		60.8

VISA® EVES Format

Subelement Name	Length	Notes	VISA Bit No.
Format Code. Value: 4	1		
System Trace Audit Number	6		11
Acquirer's Institution Identification Code	11		32
Retrieval Reference Number	12		37
Authorization Characteristics Indicator	1		62.1

Subelement Name	Length	Notes	VISA Bit No.
PS2000 Transaction Identifier	15		62.2
Special Condition Indicator	1	May be blank	60.4
Response Source/Reason Code	1		44.1
Original Response Code	2		44.11
Product ID	2		62.23
Fee Program Indicator	3		63.19
Reimbursement Attribute	1	May be blank	63.11
Network ID	4		63.1
Validation Code	4		62.3
Last four digits of PAN	4		44.15
Account Status	1	R, N or blank where, R-regulated N-Non-regulated	62.26

Discover® Credit Format

Subelement Name	Length	Discover Bit No.
Format Code. Value: S	1	NA
Network Reference ID	15	48 pos. 11-25
Transaction Data Condition Code	2	124 pos. 1-2
Field 55 Removal Indicator	1	124 pos. 5

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Optional.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

127 Acquirer Trace Data (FIS-Defined)

Format: LLLVAR

Attributes: FIS: ans..100
ISO: ans..999

Description: This data element is reserved by ISO for private definition and use. FIS defines this data element as *Acquirer Trace Data* and it is used to send acquirer data. This allows network information to be passed from an acquirer processor to an issuer processor.

NOTE: Typically, this field contains trace data in the format provided by an acquiring network (e.g. NYCE, STAR). When FIS re-formats network data, however, it is presented to the issuer processor according to the specific formats described later in this subsection, in the layout given below.

Position	Data
1	A one-byte indicator which is intended to identify the network that presented the transaction to FIS.
2-100	This field contains the network trace data.

American Express® GCAG Format

Optional data provided by the ISO acquirer to further qualify Amex transactions.

Subelement Name/Contents	Data Length	AMEX Bit No.
Format Code. Value: M	1AN	NA
Delivery Mode. Use Amex Defined DF22.4 values.	1AN	22.4

Subelement Name/Contents	Data Length	AMEX Bit No.
Amex specific POS Cardholder Presence Indicator. (optional). Allows distinction between Standing Authorization and Recurring Billing transactions.	1AN	22.5
Original Transaction Identifier (OTID) assigned by Amex from initial authorization response.	15AN	60.7

Visa® Format

Subelement Name	Length	Notes	Visa Field No.
Format Code. Value: 4	1		
System Trace Audit Number	6		11
Acquirer's Institution Identification Code	11		32
Retrieval Reference Number	12		37
Authorization Characteristics Indicator	1		62.1
PS2000 Transaction Identifier	15		62.2
Multiple Clearing Sequence Number	2	May be blank	62.11
Multiple Clearing Sequence Count	2	May be blank	62.12
Merchant Volume Indicator	2	May be blank	63.18
Special Condition Indicator	1	May be blank	60.4
POS Entry Mode	4		22
Point of Service Condition Code	2		25
Terminal Entry Capability	1	May be blank	60.2
Chargeback Reduction/Base II flags	7		63.6
Acquirer Business/Member ID	8		63.8
Fee Program Indicator	3		63.19
Market Indicator	1		62.4
Response Source/Reason Code	1		44.1
Original Transaction Identifier	15		125

VISA® EVES Format

Subelement Name	Length	Notes	VISA Bit No.
Format Code. Value: 4	1		
System Trace Audit Number	6		11
Acquirer's Institution Identification Code	11		32
Retrieval Reference Number	12		37
Authorization Characteristics Indicator	1		62.1
PS2000 Transaction Identifier	15		62.2
Special Condition Indicator	1	May be blank	60.4
Undefined	27	May be blank	
Fee Program Indicator	3		63.19
Response source/Reason code	1		44.1
Original Transaction Identifier	15		125

Visa® Base II Format

Subelement Name	Length	Notes	VISA Bit No.
Format Code. Value: V	1		
System Trace Audit Number	6		11
Acquirer's Institution Identification Code	11		32
Retrieval Reference Number	12		37
Authorization Characteristics Indicator	1		62.1
PS2000 Transaction Identifier	15		62.2
Multiple Clearing Sequence Number	2		62.11
Multiple Clearing Sequence Count	2		62.12
Terminal Entry Capability	1		60.4
POS Entry Mode	2		22

Subelement Name	Length	Notes	VISA Bit No.
Card Holder ID Method	1		
Conversion Date	4		TCR 1, position 118-121
Reserved	2		
Account Selection	1		
Fee Program Indicator	3		63.19
Additional Data Indicator	1		63.17
Central Processing Code	4		7
Mail/Phone/Electronic Commerce and Payment Indicator	1		
Rate Table ID	5		TCR 1, position 8-12
Persistence FX Applied Indicator	1		TCR 1, position 80

MasterCard® IPM Format

NOTE:

MasterCard® data elements referenced below pertain to their *IPM Clearing Formats* publication.

Subelement Name/Contents	Data Length	MasterCard Bit No.
Format Code. Value: 5 .	1	NA
Acquirer Reference Number	23	IPM DE 31
• Mixed Use	1	
• Acquirer BIN	6	
• Julian Date	4	
• Acquirer Sequence	11	
• Check Digit	1	
Terminal Type (or CAT level)	3	IPM PDS 0023
Acquirer Institution ID	11	IPM DE 32
Transaction Life Cycle	16	IPM DE 63
• Life Cycle Support Indicator	1	

Subelement Name/Contents	Data Length	MasterCard Bit No.
• Trace ID (Banknet Reference Number/Date)	15	
Business Activity	10	IPM PDS 0158
• Acceptance Brand ID	3	IPM PDS 0158-S1
• Business Service Level Code	1	IPM PDS 0158-S2
• Business Service ID Code	6	IPM PDS 0158-S3
Settlement Indicator	1	IPM PDS 0165
Interchange Rate Designator	2	IPM PDS 0158-S4
Business Date (YYMMDD format)	6	IPM PDS 0158-S5
Product Identifier	3	IPM PDS 002
Business Cycle	2	IPM PDS 0158-S6
Settlement Date	6	IPM PDS 0159-S8
MasterCard® Rate Indicator	1	IPM PDS 0158-S13
Settlement Service Level Code	1	IPM PDS 0159-S3
Currency Conversion Date	6	IPM PDS 0015-S1
Currency Conversion Indicator	1	IPM PDS 0015-S2

MasterCard® CIS Format

NOTE: For additional information and values for the MasterCard® fields referenced below, see MasterCard's *Customer Interface Specifications*.

Subelement Name/Contents	Data Length	MasterCard Bit No.
Format Code. Value: 6 .	1	NA
Systems Trace Audit Number	6	11
Transmission Date and Time (MMDDhhmmss)	10	7
Settlement Date (MMDD)	4	15
MasterCard Banknet Data	9	63
• Financial Network Code	3	63.1

Subelement Name/Contents	Data Length	MasterCard Bit No.
• Banknet Reference Number	6	63.2
Transaction Category Code	1	48, position 1
Trace ID	15	48s63

MasterCard® MDS Format

Subelement Name/Contents	Data Length	MasterCard Bit No.
Format Code. Value: A	1	NA
System Trace Number	6	11
Transaction Date-Time	10	7
Settlement Date	4	15
Transaction Category Code	1	48, position 1
Currency Precision	1	48.70
Network Reference Number	9	63.3
Banknet Reference Number	9	63.4
Acquirer Reference Number	23	63.5
Receiving Institution Id	11	100
Original Switch Serial No.	9	48.59
Trace ID of Authorization Advice	13	48.69

Discover® Credit Format

Subelement Name	Length	Notes	Discover Bit No.
Format Code. Value: S	1		NA
ATM Network ID	4	Discover Assigned	48 pos. 7-10
Original Network Reference ID	15	Discover Assigned NRID	48 pos. 11-25(or) 106 DS 64 Tag 01
Original Transaction Amount	12		106 DS 64 Tag 02

Discover® Debit Format

Subelement Name/Contents	Data Length	PULSE Bit No.
Format Code. Value: D	1	NA
Discover Function code	3	DE 127, Position 1-3
Discover assigned Network Reference ID	15	DE 127, Positions 4-18
Interchange Rate Qualifier	8	DE 127, Positions 25-32
Acquirer Reference Number	23	DE 127, Positions 33-55
Discover assigned Original Network Reference ID (Present only in a 0100 - Incremental Authorization message)	15	DE 127, Positions 19-33 (on a Pulse Discover Debit 0100 - Incremental authorization message)

Data Edit: None.

Status: Refer to the following chart for the FIS data element requirements.

Message Types	Status Information
0100, 0110, 0120, 0200, 0210, 0220, 0420	Optional.
0600 Administrative Request	Conditional if Network Management Information Code (bit 070) equals 810, 811, 812, 821, or 822.

6

Testing and Certification

The purpose of testing and certification is twofold.

- To ensure that the acquirer or issuer is able to communicate with the Connex™ System using all message flows.
- To verify that the information in the Connex System Environmental Data Base for this endpoint is correct.

Testing and certification takes place on a test version of the productive system. Productive lines (or dial-in facilities) can be transferred to this test system. FIS can provide line diagnostics and data scope traces for tracking data and troubleshooting problems, if requested.

Areas of Responsibility

Certification Services Staff

The certification services staff coordinates testing schedules. During each certification test session, a testing analyst activates the test system and provides consulting services as required. After the test, the testing analyst generates an Audit Trail of the message flows and provides feedback of the test results. They also provide reports by request to the network's Operations and Technical Committee.

Network Office

The network's executive director works with the testing analyst to develop recommended test scripts for its endpoints. The network also defines the test plan or criteria used for certification.

Endpoint Responsibilities

Following are the responsibilities of the endpoint.

- The system technical staff or the network provides a package of data base forms to be completed by each endpoint. This information is needed for internal system files and definitions of each acquirer or issuer link. These forms are described in the *Processing Forms Manual*.
- Each issuer must create a stress file tape containing the financial transactions that represent its cardholders at foreign terminals. This tape is forwarded to the certification services staff at least one week before testing begins. Guidelines for creating the stress file tape are included in this section.
- Each acquirer must generate test cards that represent each of the network-supported Track 2 formats.

Test Session

The endpoint's data center is responsible for scheduling test time with the certification services staff. FIS recommends scheduling a minimum of one week in advance of the desired time. Refer to the guidelines for testing provided by your network. The time required to activate the test system is included in the scheduled time. (For example, a two hour test allows the endpoint about one hour and forty-five minutes of actual processing time.)

The test system is available during normal business hours. Special arrangements can be made to schedule certification sessions outside normal business hours. Such arrangements must be made no less than one week in advance. Testing is subject to the availability of the system hardware and certification services staff.

Common Testing Procedures

The technical staff activates the test system at the start of the endpoint's scheduled time. The endpoint's contact calls the certification services analyst to establish communications. A member of your staff must be in contact with the certification services analyst during the test.

A test script is followed during the session. Individual acquirer and issuer test scripts are distributed by the network office. The certification services analyst performs activities that help meet the objectives of the test. This may include sending system commands, obtaining data scope traces, or initiating stress file runs. If a problem is identified during testing, the certification services analyst tries to correct it. However, due to the scope of testing problems and possible interference with other scheduled testing, the session may be terminated and rescheduled for another day.

A test session lasts the entire scheduled time, unless the certification services analyst specifies otherwise. When the test is completed, the endpoint logs off the test system and the certification services analyst terminates the session.

Test Results

After the test session is completed, the certification services analyst generates an Audit Trail of activity and analyzes the results.

At the endpoint's request, Settlement Reports might be generated reflecting the test activity. The reports are transmitted to the endpoint through an RJE workstation.

The certification services analyst responsible for testing maintains close communication with your staff throughout certification testing.

Testing Progress

The certification services analyst monitors the ongoing results of testing. This list allows the certification services analyst to track current testing status for each network endpoint. The list can also be used by the acquirer or issuer as a checkpoint tool in analyzing test progress.

Standard Financial Message Stress File Format

Message Structure

The current structure for producing a stress file used for testing a standard FIS ISO 8583 financial message is listed on the following pages. Follow these guidelines:

- Use a fixed record length of 1674 bytes.
- Fill in data elements with ASCII character data.
- Blank-fill unused data elements.

NOTE:

Data element requirements are determined by the message type. For specific data element requirements, see [“Message Structure” on page 109](#).

Bit No.	Data Element Name	Char. Length	Notes
--	Message Type	4	
--	Bit Map, Primary	8	Blank-fill. The stress tool creates the primary bit map.
001	Bit Map, Secondary	8	Blank-fill. The stress tool creates the secondary bit map if needed.
002	Primary Account Number		

Bit No.	Data Element Name	Char. Length	Notes
--	Length	2	Blank-fill length indicator.
--	Data	19	
003	Processing Code	6	
004	Amount, Transaction	12	
005	Amount, Settlement	12	
006	Amount, Cardholder Billing	12	
007	Transmission Date and Time	10	Blank-fill. The stress tool calculates this value.
008	Amount, Cardholder Billing Fee	8	
009	Conversion Rate, Settlement	8	
010	Conversion Rate, Cardholder Billing	8	
011	Systems Trace Audit Number	6	Blank-fill. The stress tool calculates this value.
012	Time, Local Transaction	6	Blank-fill. The stress tool calculates this value.
013	Date, Local Transaction	4	Blank-fill. The stress tool calculates this value.
014	Date, Expiration	4	Format: YYMM.
015	Date, Settlement	4	Blank-fill. The stress tool calculates this value.
016	Date, Conversion	4	Format: MMDD.
017	Date, Capture	4	Format: MMDD.
018	Merchant Type	4	
019	Acquiring Institution Country Code	3	
020	PAN Extended Country Code	3	

Bit No.	Data Element Name	Char. Length	Notes
021	Forwarding Institution Country Code	3	
022	Point-of-Service Entry Mode	3	
023	Card Sequence Number	3	
025	Point-of-Service Condition Code	2	
026	Point-of-Service PIN Capture Code	2	
027	Authorization Identification Response Length	1	
028	Amount, Transaction Fee	9	x + n 8; x = C (credit) or D (debit) amount.
029	Amount, Settlement Fee	9	x + n 8; x = C (credit) or D (debit) amount.
030	Amount, Transaction Processing Fee	9	x + n 8; x = C (credit) or D (debit) amount.
031	Amount, Settlement Processing Fee	9	x + n 8; x = C (credit) or D (debit) amount.
032	Acquiring Institution Identification Code		When a card-issuing processor supplies the stress file on tape, this data element may be blank-filled.
--	Length	2	Blank-fill length indicator.
--	Data	11	
033	Forwarding Institution Identification Code		
--	Length	2	Blank-fill length indicator.
--	Data	11	
034	PAN Extended		
--	Length	2	Blank-fill length indicator.
--	Data	28	

Bit No.	Data Element Name	Char. Length	Notes
035	Track 2 Data		
--	Length	2	Blank-fill length indicator.
--	Data	37	
036	Track 3 Data		
--	Length	3	Blank-fill length indicator.
--	Data	104	
037	Retrieval Reference Number	12	Blank-fill. The stress tool calculates this value.
038	Authorization Identification Response	6	
039	Response Code	2	
040	Service Restriction Code	3	
041	Card Acceptor Terminal Identification	8	When a card-issuing processor supplies the stress file on tape, this data element may be blank-filled.
042	Card Acceptor Identification Code	15	When a card-issuing processor supplies the stress file on tape, this data element may be blank-filled.
043	Card Acceptor Name and Location	40	When a card-issuing processor supplies the stress file on tape, this data element may be blank-filled.
044	Additional Response Data		
--	Length	2	Blank-fill length indicator.
--	Data	25	
045	Track 1 Data		
--	Length	2	Blank-fill length indicator.
--	Data	76	
047	Additional Data, National		
--	Length	3	Blank-fill length indicator.

Bit No.	Data Element Name	Char. Length	Notes
--	Data	100	
048	Merchant/Bank Name		
--	Length	3	Blank-fill length indicator.
--	Data	25	
049	Currency Code, Transaction	3	
050	Currency Code, Settlement	3	
051	Currency Code, Cardholder Billing	3	
052	PIN Data	16	
054	Additional Amounts		
--	Length	3	Blank-fill length indicator.
--	Data	120	
057	Authorization Life Cycle		
--	Length	3	Blank-fill length indicator.
--	Data	3	
058	National Point-of-Service Condition Code		
--	Length	3	Blank-fill length indicator.
--	Data	11	
059	National Point-of-Service Geographic Data		
--	Length	3	Blank-fill length indicator.
--	Data	17	
060	Advice/Reversal Reason Code		
--	Length	3	Blank-fill length indicator.
--	Byte Map	2	Blank-fill byte map. The stress tool creates this value.

Bit No.	Data Element Name	Char. Length	Notes
--	Reversal Reason	2	
--	Advice Reason	2	
061	Acquirer Transport Data		
--	Length	3	Blank-fill length indicator.
--	Data	100	Blank-fill data.
063	FIS Data		
--	Length	3	Blank-fill length indicator.
--	Byte Map	2	Blank-fill byte map. The stress tool creates this value.
--	Pseudo Terminal	6	
--	Issuer Network Identification	3	
--	Acquirer Network Identification	3	
--	Processor ID	6	
--	Auth Timeout	2	
--	Filler	28	Blank-fill Filler.
067	Extended Payment Code	2	
090	Original Data Elements	42	
095	Replacement Amounts	42	
098	Payee	25	
100	Receiving Institution ID		
--	Length	2	Blank-fill length indicator.
--	Data	11	
102	Account ID 1		
--	Length	2	Blank-fill length indicator.
--	Data	28	
103	Account ID 2		

Bit No.	Data Element Name	Char. Length	Notes
--	Length	2	Blank-fill length indicator.
--	Data	28	
104	Transaction Description		
--	Length	3	Blank-fill length indicator.
--	Data	100	
113	Authorizing Agent Institution ID Code		
--	Length	3	Blank-fill length indicator.
--	Data	11	
114	Authorizing Agent Country Code		
--	Length	3	Blank-fill length indicator.
--	Data	3	
120	Account Qualifiers		
--	Length	3	Blank-fill length indicator.
--	Data	6	
122	Sponsor Bank ID		
--	Length	3	Blank-fill length indicator.
--	Data	11	
123	AVS/Check Auth Data		
--	Length	3	Blank-fill length indicator.
--	Data	50	
126	Issuer Trace Data		
--	Length	3	Blank-fill length indicator.
--	Data	100	Blank-fill data.
127	Acquirer Trace Data		
--	Length	3	Blank-fill length indicator and data.
--	Data	100	Blank-fill data.



If you have questions about any of these specifications, contact the certification services analyst for clarification.

Certification

Certification consists of a series of activities that certify to the network's executive director that an acquirer and/or issuer is capable of processing all system messages in a timely and accurate manner.

Acquirers

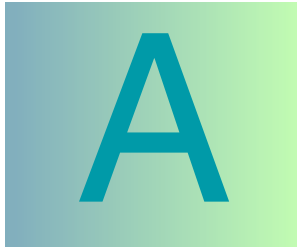
An acquirer must perform the following activities to be certified.

- Communicate with the system using the correct telecommunications protocol.
- Generate and/or accept Administrative messages.
- Originate foreign transactions at any terminal and submit to the system the appropriate Financial Transaction Request messages for the transaction set supported by the network.
- Complete the financial transaction at the terminal as instructed by the Financial Transaction reply message.
- Generate Transaction Reversal messages.

Issuers

An issuer must perform the following activities to be certified.

- Communicate with the system using the correct telecommunications protocol.
- Generate and/or accept Administrative messages.
- Optionally generate and/or accept Negative File messages if using the option for Store-and-Forward processing.
- Respond to Financial Transaction Requests with the appropriate Transaction Reply for the transaction set supported by the network.
- Accept Transaction Reversal messages from the system.
- Successfully process the stress file according to the network's specifications.
- Optionally generate and/or accept AP File Maintenance messages.
- Optionally generate and/or accept Totals messages.



Reference Tables

Data Elements in ISO Bit-Number Sequence

Bit Map Position	Data Element Name
001	Bit Map, Secondary
002	Primary Account Number (PAN)
003	Processing Code
004	Amount, Transaction
005	Amount, Settlement
006	Amount, Cardholder Billing
007	Transmission Date and Time
008	Amount, Cardholder Billing Fee
009	Conversion Rate, Settlement
010	Conversion Rate, Cardholder Billing
011	System Trace Audit Number
012	Time, Local Transaction
013	Date, Local Transaction
014	Date, Expiration
015	Date, Settlement
016	Date, Conversion
017	Date, Capture
018	Merchant Type
019	Acquiring Institution Country Code

Bit Map Position	Data Element Name
020	Primary Account Number (PAN) Extended Country Code
021	Forwarding Institution Country Code
022	Point-of-Service Entry Mode
023	Card Sequence Number
024	Network International Identifier
025	Point-of-Service Condition Code
026	Point-of-Service PIN Capture Code
027	Authorization Identification Response Length
028	Amount, Transaction Fee
029	Amount, Settlement Fee
030	Amount, Transaction Processing Fee
031	Amount, Settlement Processing Fee
032	Acquirer Institution Identification Code
033	Forwarding Institution Identification Code
034	Primary Account Number (PAN), Extended
035	Track 2 Data
036	Track 3 Data
037	Retrieval Reference Number
038	Authorization Identification Response
039	Response Code
040	Service Restriction Code
041	Card Acceptor Terminal Identification
042	Card Acceptor Identification Code
043	Card Acceptor Name/Loc
044	Additional Response Data
045	Track 1 Data
046	Additional Fees (FIS-Defined)
047	Addition Data, National

Bit Map Position	Data Element Name
048	Institution/Merchant Name (FIS-Defined)
049	Currency Code, Transaction
050	Currency Code, Settlement
051	Currency Code, Cardholder Billing
052	Personal Identification Number (PIN) Data
053	Security Related Control Information
054	Additional Amounts
055	ICC Data (FIS-Defined)
056	Replacement Additional Fees (FIS-Defined)
057	Authorization Life Cycle (ANSI-defined)
058	National Point-Of-Service Condition Code (ANSI-defined)
059	National Point-Of-Service Geographic Data (ANSI-defined)
060	Advice/Reversal Reason Codes (FIS-Defined)
061	Acquirer Transport Data (FIS-Defined)
062	Issuer Transport Data (FIS-Defined)
063	FIS Data (FIS-Defined)
064	Message Authentication Code (MAC)
065	Bit Map, Extended
066	Settlement Code
067	Extended Payment Code
068	Receiving Institution Country Code
069	Settlement Institution Country Code
070	Network Management Information Code
071	Message Number
072	Message Number Last
073	Date, Action
074	Credits, Number
075	Credits, Reversal Number

Bit Map Position	Data Element Name
076	Debits, Number
077	Debits, Reversal Number
078	Transfer, Number
079	Transfer, Reversal Number
080	Inquiry, Number
081	Authorization, Number
082	Credits, Processing Fee Amount
083	Credits, Transaction Fee Amount
084	Debits, Processing Fee Amount
085	Debits, Transaction Fee Amount
086	Credits, Amount
087	Credits, Reversal Amount
088	Debits, Amount
089	Debits, Reversal Amount
090	Original Data Elements
091	File Update Code
092	File Security Code
093	Response Indicator
094	Service Indicator
095	Replacement Amounts
096	Message Security Code
097	Amount Net Settlement
098	Payee
099	Settlement Institution Identification Code
100	Receiving Institution Identification Code
101	File Name
102	Account Identification 1
103	Account Identification 2

Bit Map Position	Data Element Name
104	Transaction Description
105	Large Private Data 1
106	Large Private Data 2
107	Large Private Data 3
108	Large Private Data 4
109 through 110	Reserved for ISO Use
111	Additional Data, Private Acquirer (FIS-Defined)
112	Reserved for National Use
113	Authorizing Agent Institution ID Code (ANSI-defined)
114	Country Code, Authorizing Agent (ANSI-defined)
115 through 119	Reserved for National Use
120	Account Qualifiers (FIS-Defined)
121	Additional Data, Private Issuer (FIS-Defined)
122	Sponsor Bank ID (FIS-Defined)
123	AVS/Check Auth Data (FIS-Defined)
124	Info, Text (FIS-Defined)
125	Network Management Information (FIS-Defined)
126	Issuer Trace Data (FIS-Defined)
127	Acquirer Trace Data (FIS-Defined)
128	Message Authentication Code (MAC)

Data Elements in Alphabetic Sequence

Data Element Name	Bit Map Position
Account Identification 1	102
Account Identification 2	103
Account Qualifiers (FIS-Defined)	120
Acquirer Institution Identification Code	032

Data Element Name	Bit Map Position
Acquirer Network ID	063
Acquirer Trace Data (FIS-Defined)	127
Acquirer Transport Data (FIS-Defined)	061
Acquiring Institution Country Code	019
Additional Amounts	054
Additional Fees (FIS-Defined)	046
Additional Data, National	047
Additional Data, Private Acquirer (FIS-Defined)	111
Additional Data, Private Issuer (FIS-Defined)	121
ICC Data (FIS-Defined)	055
Additional Response Data	044
Advice Reason	060
Advice/Reversal Reason Codes (FIS-Defined)	060
Amount, Cardholder Billing Fee	008
Amount, Cardholder Billing	006
Amount, Net Settlement	097
Amount, Settlement Fee	029
Amount, Settlement	005
Amount, Settlement Processing Fee	031
Amount, Transaction Fee	028
Amount, Transaction	004
Amount, Transaction Processing Fee	030
Auth Timeout	063
Authorization Identification Response Length	027
Authorization Identification Response	038
Authorization Life Cycle (ANSI-defined)	057
Authorization, Number	081
Authorizing Agent Institution ID Code (ANSI-defined)	113

Data Element Name	Bit Map Position
AVS/Check Auth Data (FIS-Defined)	123
Bit Map, Extended	065
Bit Map, Secondary	001
Card Acceptor Identification Code	042
Card Acceptor Name/Loc	043
Card Acceptor Terminal Identification	041
Card Sequence Number	023
Conversion Rate, Cardholder Billing	010
Conversion Rate, Settlement	009
Country Code, Authorizing Agent (ANSI-defined)	114
Credits, Amount	086
Credits, Number	074
Credits, Processing Fee Amount	082
Credits, Reversal Amount	087
Credits, Reversal Number	075
Credits, Transaction Fee Amount	083
Currency Code, Cardholder Billing	051
Currency Code, Settlement	050
Currency Code, Transaction	049
Date, Action	073
Date, Capture	017
Date, Conversion	016
Date, Expiration	014
Date, Local Transaction	013
Date, Settlement	015
Debits, Amount	088
Debits, Number	076
Debits, Processing Fee Amount	084

Data Element Name	Bit Map Position
Debits, Reversal Amount	089
Debits, Reversal Number	077
Debits, Transaction Fee Amount	085
FIS Data (FIS-Defined)	063
Extended Payment Code	067
File Name	101
File Security Code	092
File Update Code	091
Forwarding Institution Country Code	021
Forwarding Institution Identification Code	033
Info, Text (FIS-Defined)	124
Inquiry, Number	080
Institution/Merchant Name (FIS-Defined)	048
Issuer Network ID	063
Issuer Trace Data (FIS-Defined)	126
Issuer Transport Data (FIS-Defined)	062
Large Private Data 1	105
Large Private Data 2	106
Large Private Data 3	107
Large Private Data 4	108
Merchant Type	018
Message Authentication Code (MAC)	064
Message Authentication Code (MAC)	128
Message Number Last	072
Message Number	071
Message Security Code	096
National Point-Of-Service Condition Code (ANSI-defined)	058
National Point-Of-Service Geographic Data (ANSI-defined)	059

Data Element Name	Bit Map Position
Network International Identifier	024
Network Management Information (FIS-Defined)	125
Network Management Information Code	070
Original Data Elements	090
Payee	098
Personal Identification Number (PIN) Data	052
Point-of-Service Condition Code	025
Point-of-Service Entry Mode	022
Point-of-Service PIN Capture Code	026
Primary Account Number (PAN) Extended Country Code	020
Primary Account Number (PAN)	002
Primary Account Number (PAN), Extended	034
Processing Code	003
Processor ID	063
Pseudo-Terminal	063
Receiving Institution Country Code	068
Receiving Institution Identification Code	100
Replacement Additional Fees (FIS-Defined)	056
Replacement Amounts	095
Reserved for ISO Use	109 through 110
Reserved for National Use	112, 115 through 119
Reserved for Private Use	121
Response Code	039
Response Indicator	093
Retrieval Reference Number	037
Reversal Reason	060
Security Related Control Information	053
Service Indicator	094

Data Element Name	Bit Map Position
Service Restriction Code	040
Settlement Code	066
Settlement Institution Country Code	069
Settlement Institution Identification Code	099
Sponsor Bank ID (FIS-Defined)	122
System Trace Audit Number	011
Time, Local Transaction	012
Track 1 Data	045
Track 2 Data	035
Track 3 Data	036
Transaction Description	104
Transfer, Number	078
Transfer, Reversal Number	079
Transmission Date and Time	007

FIS Private Use Data Elements and Subelements

Following is a list of FIS private use data elements.

Bit No.	FIS Element Name	FIS Format	FIS Attributes	Description
043	Card Acceptor Location		an 40	<p>Following is the breakdown of the FIS Reg E data element.</p> <ul style="list-style-type: none"> • Address (1-23) • City (24-36) • State (37-38) • Country (39-40)
044	Additional Response Data	LLVAR	an..25	<p>Following is the breakdown of the FIS data element.</p> <ul style="list-style-type: none"> • Field number in error (1-3) • Referral phone number (1-10) • Additional response data (11-25)

Bit No.	FIS Element Name	FIS Format	FIS Attributes	Description
				<p>Following is the breakdown of the data for statement printing.</p> <ul style="list-style-type: none"> Last message in series Y(es), or N(o) (1) Format of print receipt data in data element 121 (2-3)
				<p>Values are:</p> <p>00 host has preformatted</p> <p>01 acquirer will format</p>
046	Additional Fees	LLLVAR	ans..88	<p>Used when there are applicable fees other than the fees designated in data elements 028 and 029. Following is the breakdown of this data element.</p> <ul style="list-style-type: none"> Fee Type (1-2) Settle/Memo Indicator (3) Decimalization Indicator (for future use) (4) Fee Amount (x + n 8) (5-13) Settl Fee Amt (x + n 8) (14-22)
048	Institution/ Merchant Name	LLLVAR	ans..025	Name of acquiring institution or merchant.
053	Security Related Control Information		nP 16	<p>Data needed to process PINs and perform message authentication, or MACing. Following is the breakdown of this data element.</p> <ul style="list-style-type: none"> PIN and MAC key index (nP 2) MAC key index (nP 2) Future use (nP 12)
055	ICC Data	LLLVAR	b.. 255	Used on EMV transactions to pass EMV tags.

Bit No.	FIS Element Name	FIS Format	FIS Attributes	Description
056	Replacement Additional Fees	LLVAR	ans..88	Replacement fees as applicable to fees in data element 055 in the original request. Following is the breakdown of this data element. <ul style="list-style-type: none"> • Fee Type (1-2) • Settle/Memo Indicator (3) • Decimalization Indicator (for future use) (4) • Fee Amount (x + n 8) (5-13) • Settl Fee Amt (x + n 8) (14-22)
057	Authorization Life Cycle	LLVAR	an..003	Definition from ANSI X9.2-1988. Authorization hold time for pre-authorizations.
058	National POS Condition Code	LLVAR	an..030	Definition from ANSI X9.2-1988. Following is the breakdown of this data element. <ul style="list-style-type: none"> • Terminal class (1-3) • Present type (4-7) • Security condition (8) • Terminal type (9-10) • Card data input capability (11)
059	National POS Geographic Data	LLVAR	n..017	Definition from ANSI X9.2-1988. Following is the breakdown of this data element. <ul style="list-style-type: none"> • Terminal state code (1-2) • Terminal county code (3-5) • Terminal zip code (6-14) • Terminal country code (15-17)
060	Advice/Reversal Reason	LLVAR	an..006	Reason for advice and/or reversal. Following is the breakdown of this data element. <ul style="list-style-type: none"> • Byte map (2) • Reversal reason (2) • Advice reason (2)

Bit No.	FIS Element Name	FIS Format	FIS Attributes	Description
063	FIS Data	LLLVAR	ans..050	<p>Following is the breakdown of the FIS data.</p> <ul style="list-style-type: none"> • Byte map (2) • Pseudo terminal (6) • Issuer network ID (3) • Acquirer network ID (3) • From proc/acqr member (6) • Auth timeout (2) • OAR data (15) • Processing flags (5)
090	Original Data Elements		n 42	<p>Following is the breakdown of this data element.</p> <ul style="list-style-type: none"> • Original message type (4) • Original system audit trace number (6) • Original local transaction date and time (10) • Original acquiring institution (11) • Original forwarding institution (11) <p>Inbound to the Connex™ System, only original message type is supported. Outbound from the Connex System, the original message type is sent. Original system audit trace number and local date and time are sent if available. Note that the trace number, date and time will either be zero-filled because the information was not available or they will match data elements 011, 012, and 013.</p>
100	Receiving Institution ID	LLLVAR	n..011	ID of the check authorizer.
105	Large Private Data 1	LLLVAR	ans..255	Used to transmit large amounts of data.

Bit No.	FIS Element Name	FIS Format	FIS Attributes	Description
106	Large Private Data 2	LLLVAR	ans..255	Used to transmit large amounts of data when amount of data exceeds data element 105.
107	Large Private Data 3	LLLVAR	ans..255	Used to transmit large amounts of data when amount of data exceeds data element 106.
108	Large Private Data 4	LLLVAR	ans..255	Used to transmit large amounts of data when amount of data exceeds data element 107.
111	Additional Data, Private Acquirer	LLLVAR	ans..255	Contains VISA® DCS, VISA® EVES, and VISA® DCS CRIS SM data.
113	Authorizing Agent Institution ID	LLLVAR	n..011	Institution ID of the authorizer, usually an Institution ID code (FRDABA).
114	Authorizing Agent Country Code	LLLVAR	an..003	Country Code of the authorizer.
120	Account Qualifiers	LLLVAR	an..006	Account type qualifiers. Following is the breakdown of this data element. <ul style="list-style-type: none"> • The only account for a single account transaction, or, in the case of a transfer, the from account (1-3) • In the case of a transfer, the to account (4-6)
121	Additional Data, Private Issuer	LLLVAR	ans..255	In a multiple-message environment, this data element contains information from the host. On a statement print transaction, this data element contains the statement print data. On a check inquiry transaction, this data element contains the posting date and amount.

Bit No.	FIS Element Name	FIS Format	FIS Attributes	Description
122	Sponsor Bank ID	LLLVAR	an..011	Acquirer bank ID for nationals. For example, VISA® BIN and MasterCard® customer ID.
123	AVS/Check Auth Data	LLLVAR	ans..050	Information needed for address verification or check authorizations.
124	Info, Text	LLLVAR	ans..255	Free text or formatted data elements based on network management code.
125	Network Management Information	LLLVAR	ans..056	Network Management Information based on network management code.
126	Issuer Trace Data	LLLVAR	ans..100	Issuer Trace Data returned to the acquirer. In a multiple-message environment continuation message, the acquirer returns the 32 characters received from the issuer in the last 0110 response. This is used by the issuer as a place marker.
127	Acquirer Trace Data	LLLVAR	ans..100	Acquirer Trace Data sent to the issuer.

Cardholder Records

In each of the fields being maintained, enter the appropriated value. If a field is not being maintained, it must remain blank. To clear a previously maintained field, enter a value of all asterisks (“*”) into the field.

Card Information (Cardholder Segment 01)

Data Content	Attributes	Description/Status
Primary Account Number	an 19	Account number encoded on Track 2 of the access card. (Required)
Plastic Number	an 5	Member number or plastic number from Track 2 Discretionary Data. (Optional)
Card Issuer Institution ID	an 10	Identification Code of the institution that issued the card. (Required)
Status	an 2	Code indicating the status of a cardholder's card. (Optional)
Card Access	an 16	Indicates the cardholder's ability to perform a type of transaction. Each type of card access is one byte long. Note: <u>At least one</u> card access is required for all Add records. Values for each card access: Y = Add card access N = Delete card access
• Withdrawals	an 1	Optional
• Deposits	an 1	Optional
• Inquiries	an 1	Optional
• Payments To	an 1	Optional
• Payments From	an 1	Optional
• Transfers To	an 1	Optional
• Transfers From	an 1	Optional
• Purchases	an 1	Optional
• Third Party Payment	an 1	Optional
• Future Access Types	an 7	Field is for future use. (Optional)

Data Content	Attributes	Description/Status
PIN-Fail-Reset	an 1	Indicates whether to reset the PIN fail count to prevent the account from being blocked when the value exceeds the limit. Values: Y = Reset PIN fail count to zero. Blank = No change (Required)
Limit Group ID	an 6	Limit group for this cardholder. (Required)
Fee Group	an 6	Fees to be charged to the cardholder. Note: Leave this field blank. (Optional)
Card Activation	an 1	Values: _ = Default; card is active Y = Card is active N = Card is not active (Required)

NOTE:

A Delete record deletes all the cardholder segments for the specified card.

Track 2 Information (Cardholder Segment 02)

Data Content	Attributes	Description/Status
Primary Account Number	an 19	Account number encoded on Track 2 of the access card. (Required)
Plastic Number	an 5	Member number or plastic number from Track 2 Discretionary Data. (Optional)

Data Content	Attributes	Description/Status
PIN Authentication Flag	an 2	Determines where the PIN offset resides. Values are: 00 = AP holds the offset 01 = AP does not hold offset 99 = PIN offset flagged change Note: This field is required if you are adding this segment. Enter a value for this field whether you use the PIN-AUTH-VALUE or not. (Conditional)
PIN Authentication Value	an 16	Value used for PIN checking. (Conditional)
Track 2 Date	an 4	Card's expiration date or the issued date in YYMM format. (Optional)

Account Information (Cardholder Segment 03)

Data Content	Attributes	Description/Status
Primary Account Number	an 19	Account number encoded on Track 2 of the access card. (Required)
Plastic Number	an 5	Member number or plastic number from Track 2 Discretionary Data. (Required)
Account Institution ID	an 10	Identification Code of the institution where the account is located. (Required)
Account Type	an 4	Institution-assigned identifier that corresponds to the institution's host. For example, SNOW might correspond to the institution's Super-Now accounts. (Required)
Account Number	an 28	Number assigned to this account by the institution. (Required)
Account Qualifier #1	an 3	User-defined qualifier assigned by the system technical staff. (Optional)

Data Content	Attributes	Description/Status
Open Account Relationship (OAR) Select Type	an 3	Value used to select accounts for the OAR display. Values: DDA = Checking SAV = Savings CRD = Credit OTH = Other (Required for an Add record)
Account Description	an 20	Description of the account. For example, VACATION FUND is used for OAR purposes to help the cardholder identify their accounts. (Required)
Account Access	an 16	Indicates the cardholder's ability to perform a type of transaction. Each type of account access (listed below) is one byte long. Note: <u>At least one</u> account access is required for an Add record. Values for each account access: Y = Add account access N = Delete account access
• Withdrawals	an 1	Required
• Deposits	an 1	Required
• Inquiries	an 1	Required
• Payments To	an 1	Required
• Payments From	an 1	Required
• Transfers To	an 1	Required
• Transfers From	an 1	Required
• Purchases	an 1	Required
• Third Party Payment	an 1	Required

Data Content	Attributes	Description/Status
<ul style="list-style-type: none"> Future Access Types 	an 7	Field is for future use. (Optional)
Primary Account Indicator	an 1	Values: Y = Primary N = Not Primary (Required)
Funding Account Indicator	an 1	Values: Y = Funding N = Not Funding (Required)

Override Limit Information (Cardholder Segment 04)

Data Content	Attributes	Description/Status
Primary Account Number	an 19	Account number encoded on Track 2 of the access card. (Required)
Plastic Number	an 5	Member number or plastic number from Track 2 Discretionary Data. (Required)
Limit Type	an 6	Limit being used, such as deposit, withdrawal, or transfer. (Required)
Limit Amount	an 10	Overrides the cardholder's limit group amount. (Required)
Limit Uses	an 5	Overrides the cardholder's uses limit. (Optional)
Increment Amount	an 10	Override increment amount to be used for this limit. (Required for Add)
Minimum Amount	an 10	Override minimum amount. (Optional)
Percent Deposit Available	an 3	Percentage of deposits available for withdrawal. (Optional)

Hold List Information (Cardholder Segment 06)

The fields may vary based on the type of hold. See the AP Technical Reference manual for details.

NOTE: Only Delete records are supported.

Data Content	Attributes	Description/Status
Primary Account Number	an 19	Account number encoded on Track 2 of the access card. (Required)
Plastic Number	an 5	Member number or plastic number from Track 2 Discretionary Data. (Required)
Match Data	an 36	Identifies the transaction that caused the limit hold. The Match Data is composed of the following five fields. (Required)
<ul style="list-style-type: none"> Primary Account Number 	an 12	Used to match the hold with the settled transaction. Value = The last 12 non-blank characters of the PAN. Note: You cannot update this key field. (Required)
<ul style="list-style-type: none"> Terminal Reference Number 	an 15	The first 8 digits of the transaction's terminal reference number used as an ID for the party accepting the card and presenting transaction data to an acquirer. Note: You cannot update this key field. (Required)
<ul style="list-style-type: none"> Pre-Auth. Indicator 	an 1	Match the hold with the settled transaction. Values: P = Purchase pre-authorization V = Visa Check™ M = MasterMoney™ Note: You cannot update this key field. (Required)
<ul style="list-style-type: none"> Terminal Day 	an 2	See the AP Technical Reference manual.
<ul style="list-style-type: none"> Auth. Number 	an 6	Authorization number of the transaction that caused the hold. (Required)
<ul style="list-style-type: none"> Filler 	an 8	Value: 8 spaces (Required)

Data Content	Attributes	Description/Status
Limit ID	an 6	Identifies the limit being used. (Required)
Expiration Time Indicator	an 1	Values: Y = Reset the Expiration Time. N = Do not reset Expiration Time. (Required)
Filler	an 1	Value: 1 space (Required)

Name Information (Cardholder Segment 08)

Data Content	Attributes	Description/Status
Primary Account Number	an 19	Account number encoded on Track 2 of the access card. (Required)
Plastic Number	an 5	Member number or plastic number from Track 2 Discretionary Data. (Required)
Greeting Name	an 20	Name displayed on the administrative terminal inquiry. (Required)

Override Limit Information with Expiration Date (Cardholder Segment 09)

Data Content	Attributes	Description/Status
Primary Account Number	an 19	Account number encoded on Track 2 of the access card. (Required)
Plastic Number	an 5	Member number or plastic number from Track 2 Discretionary Data. (Required)
Limit Group ID	an 6	Override Limit group for this cardholder. (Required)
Begin Timestamp	an 8	Date when Override Limit group ID begins to take effect (Format: YYYYMMDD)
End Timestamp	an 8	Date when the Override Limit group ID Expires (Format: YYYYMMDD)

NOTE:

1. An Override Limit Information (Cardholder Segment 04) segment is required to add an Override Limit Information with Expiration Date (Cardholder Segment 09).
2. Deletion of an Override Limit Information (Cardholder Segment 04) segment will delete the Override Limit Information with Expiration Date (Cardholder Segment 09) segment, if present.
3. Deletion of Override Limit Information with Expiration Date (Cardholder Segment 09) alone is allowed. This action will NOT delete the Override Limit Information (Cardholder Segment 04) segment.

Override Limits (Cardholder Segment 97)

CH97 contains override limit information. This segment should be used if it is desired to override specific limits for a cardholder that has been pre-defined at the BIN/FI level. Up to 5 different limits can be specified in a single CH97 message. If additional overrides are required, then an additional CH97 segment must be submitted.

Data Content	Attributes	Description/Status
Custom modifier	an 2	Default 00
PAN	an 19	Card number. Left-justified and space-filled.
Plastic Number	an 5	Not allowed for VisaCheck™/Debit MasterCard®.
Limit Type	an 6	0 = ATM online 1 = ATM offline 2 = POS online 3 = POS offline 4 = Aggregate online 5 = Aggregate offline Mapping required
Limit Amount	an 10	Limit amount
Limit Minimum	an 10	Default to 0
Limit Uses	an 5	Default 99999
Limit Increment	an 10	Default to .01
Limit Deposit Percent	an 3	Default to 100

Data Content	Attributes	Description/Status
Limit Type	an 6	0 = ATM online 1 = ATM offline 2 = POS online 3 = POS offline 4 = Aggregate online 5 = Aggregate offline Mapping required
Limit Amount	an 10	Limit amount
Limit Minimum	an 10	Default to 0
Limit Uses	an 5	Default 99999
Limit Increment	an 10	Default to .01
Limit Deposit Percent	an 3	Default to 100
Limit Type	an 6	0 = ATM online 1 = ATM offline 2 = POS online 3 = POS offline 4 = Aggregate online 5 = Aggregate offline Mapping required
Limit Amount	an 10	Limit amount
Limit Minimum	an 10	Default to 0
Limit Uses	an 5	Default 99999
Limit Increment	an 10	Default to .01
Limit Deposit Percent	an 3	Default to 100
Limit Type	an 6	0 = ATM online 1 = ATM offline 2 = POS online 3 = POS offline 4 = Aggregate online 5 = Aggregate offline Mapping required
Limit Amount	an 10	Limit amount
Limit Minimum	an 10	Default to 0
Limit Uses	an 5	Default 99999

Data Content	Attributes	Description/Status
Limit Increment	an 10	Default to .01
Limit Deposit Percent	an 3	Default to 100
Limit Type	an 6	0 = ATM online 1 = ATM offline 2 = POS online 3 = POS offline 4 = Aggregate online 5 = Aggregate offline Mapping required
Limit Amount	an 10	Limit amount
Limit Minimum	an 10	Default 0
Limit Uses	an 5	Default 99999
Limit Increment	an 10	Default to .01
Limit Deposit Percent	an 3	Default to 100
Filler	an 6	
Total Length	255	

Member Detail (Cardholder Segment 98)

CH98 contains member detail. It should be used for maintenance if more than one member is tied to a card or additional demographic information and CIMS information needs to be submitted for a card. This segment does not contain any information relevant to processing a financial transaction.

Data Content	Attributes	Description/Status
Custom modifier	an 2	Default 00
PAN	an 19	Card number. Left-justified and space-filled.
Plastic Number	an 5	Not allowed for VisaCheck™/Debit MasterCard®.
Member Number	n 2	Mapping required.
Address2	an 30	
Date of Birth	an 8	
Home Phone	an 10	

Data Content	Attributes	Description/Status
Work Phone	an 10	
Social Security Number	an 9	
Mother's Maiden Name	an 17	
User Defined Validation	an 25	Driver's license.
Embossing Name		Non-primary's name.
• Last Name	a 17	Last Name of Embossing Name.
• First Name	a 12	First Name of Embossing Name.
• Middle Init	a 1	Middle Initial of Embossing Name.
Comments	an 30	
VRU Counter	an 1	
Previous Track 2 Date	an 4	
Previous Card Act.	an 1	Default to N
Activation Method	an 1	
Activation Date	an 8	
Card Order Type	an 1	FIS CIMS only
Card Order Status	an 1	FIS CIMS only
Issue Reason	an 1	FIS CIMS only
Replacement Ind.	an 1	FIS CIMS only
Photo ID	an 1	FIS CIMS only
Card Collection	an 3	FIS CIMS only
Order Status Date	an 8	FIS CIMS only
First Order Date	an 8	FIS CIMS only

Data Content	Attributes	Description/Status
Last Issued Date	an 8	FIS CIMS only
Filler	an 11	
Total Length	255	

Card Basic (Cardholder Segment 99)

CH99 is the base card segment. It contains all the data required to add a new card onto the AP system and begin processing transactions for the funding account. It also contains sufficient information to order a card from CIMS, if the system is configured for the FI.

Data Content	Attributes	Description/Status
Custom modifier	an 2	Default 00
PAN	an 19	Card number. Left-justified and space-filled.
Plastic Number	an 5	For Class A cards.
Member Number	n 2	Note: FIS receives one member for Class X cards.
Issuing-FI-ID	an 10	Routing and Transit number.
Address 1	an 30	Primary address line 1. All upper case and no special characters. Left-justified and space-filled.
City	a 19	Primary city. Left-justified and space-filled.
State	a 2	Primary state. Left-justified and space-filled.
Zip Code	an 9	Primary zip code. Left-justified and space-filled.
Card Status	an 2	<i>Values need to mapped to FIS codes</i> Blank = OK Status AK = Capture Hot Card NK = No Capture Hot Card
Card Condition Code	an 1	1 = Capture 0 = No Capture
Embossing Name		Last Name/First M. Title A slash represents the delimiter between last name and first name.
• Last Name	a 17	Last Name of Embossing Name

Data Content	Attributes	Description/Status
• First Name	a 12	First Name of Embossing Name
• Middle Init	a 1	Middle Initial of Embossing Name
Expiration Date	n 4	The date card expires in YYMM format.
Card Activation	an 1	Default to Y .
Limit Group ID	an 6	Use default limit group.
PIN offset	an 4	4-byte number
Filler	an 12	Could be used for PINs longer than 4 digits.
PIN fail count reset	an 1	Default to N .
PIN auth flag	an 2	Set to 00 if PIN offset is present.
Card Accesses	an 9	Default to 1 's, possible mapping required.
Replacement Ind.	an 1	FIS CIMS only
Card Issue Reason	an 1	FIS CIMS only
Auto Reissue	an 1	FIS CIMS only
Card Order Type	an 1	FIS CIMS only
Account Type - Funding Account	an 4	Values need to be mapped to FIS codes DDA = Checking Account (default) SAV = Savings Account CRD = Line of Credit OTH = Other Account
Account Number - Funding Account	an 28	Account number tied to card. Left-justified and blank filled.
Account Status - Funding Account	an 2	Values need to be mapped to FIS codes.
Account Description - Funding Account	an 20	This is a free-form entry to describe the account.
Account OAR type - Funding Account	an 3	Mapping required.
Account Qualifier - Funding Account	an 3	
Available Balance - Funding Account	an 10	

Data Content	Attributes	Description/Status
Ledger Balance - Funding Account	an 10	
Account Primary Ind - Funding Account	an 1	Default to Y.
Total	255	

Account Detail Records

In each of the fields being maintained, enter the appropriated value. If a field is not being maintained, it must remain blank. To clear a previously maintained field, enter a value of all asterisks (“*”) into the field.

Account Detail (Account Detail Segment 01)

Data Content	Attributes	Description/Status
Account Institution ID	an 10	Identification Code of the institution where the account is located. (Required)
Account Type	an 4	Institution-assigned identifier that corresponds to the institution's host. For example, SNOW might correspond to the institution's Super-Now accounts. (Required)
Account Number	an 28	Number assigned to this account by the institution. (Required)
Ledger Balance	an 10	Amount used to store the ledger balance for an account. (Optional)
Available Balance	an 10	Amount available for an account. (Optional)
Credit Line Amount	an 10	Credit line amount associated with an account. (Optional)
Account Status	an 2	Code indicating the status of an account. (Optional)

Data Content	Attributes	Description/Status
Account Access	an 16	Indicates the cardholder's ability to perform a type of transaction. Each type of card access is one byte long. Note: <u>At least one</u> account access is required for all Add records. Values for each card access: Y = Add card access N = Delete card access
• Withdrawals	an 1	(Required)
• Deposits	an 1	(Required)
• Inquiries	an 1	(Required)
• Payments To	an 1	(Required)
• Payments From	an 1	(Required)
• Transfers To	an 1	(Required)
• Transfers From	an 1	(Required)
• Purchases	an 1	(Required)
• Third Party Payment	an 1	(Required)
• Future Access Types	an 7	Field is for future use. (Required)
Overdraft Amount	an 10	Amount the account is allowed to overdraw before going to an overdraft account or rejecting the transaction. (Optional)

NOTE:

A Delete record deletes the entire Account Detail Record.

Overdraft Information (Account Detail Segment 02)

Data Content	Attributes	Description/Status
Account Institution ID	an 10	Identification Code of the institution where the account is located. (Required for an Add record)
Account Type	an 4	Institution-assigned identifier that corresponds to the institution's host. For example, SNOW might correspond to the institution's Super-Now accounts. (Required for an Add record)
Account Number	an 28	Number assigned to this account by the institution. (Required for an Add record)
Overdraft Institution ID	an 10	Identification Code of the institution where the overdraft account resides. (Required)
Account Type	an 4	Type of overdraft account assigned by the institution to correspond to the host's files. (Required)
Account Number	an 28	Account number of the overdraft account. (Required)

Account Hold Information (Account Detail Segment 03)

The fields may vary based on the type of hold. See the AP Technical Reference manual for details.

Data Content	Attributes	Description/Status
Account Institution ID	an 10	This key field is the routing and transit number of the institution issuing the card. Identifies the account holding the financial institution. Value: 1NNNNNNNNC Note: You cannot update this key field.(Required)
Account Type	an 4	Institution-assigned identifier that corresponds to the institution's host. For example, SNOW might correspond to the institution's Super-Now accounts. This number must match the ACCT-TYPE in Account Information segment (Cardholder Segment 03). (Required)
Account Number	an 28	This identifier is the cardholder's account number, and it must match the ACCT-NO field in Account Information segment (Cardholder Segment 03). For a credit union, this is the base account number with the account number suffix. Note: You cannot update this key field. (Required)
Primary Account Number	an 12	Last 12 non-blank characters of the PAN. Matches the hold with the settled transaction. (Required)
Card Acceptor ID	an 15	The first 8 digits of the transaction's terminal reference number used as an ID for the party accepting the card and presenting transaction data to an acquirer. Note: You cannot update this key field. (Required)
Pre-Auth. Indicator	an 1	Match the hold with the settled transaction. Values: P = Purchase pre-authorization V = Visa Check™ M = MasterMoney™ Note: You cannot update this key field. (Required)
Terminal Day	an 2	If your PREAUTH-INDICATOR is V or M, enter the number for the month's day. Values = 01, 02, ..., 31 Note: You cannot update this key field. (Required)
Authorization Number	an 6	The FINIPC's authorization number of the transaction that caused the hold. Match the hold with the settled transaction. (Optional)

NOTE:

The only Hold List transaction available through online maintenance is a Delete record. This transaction automatically expires the Hold List occurrence identified by the Match Data fields.

Account Detail (Account Detail Segment 99)

AD99 contains account detail information. This segment can be used to add a standalone account (that is, not tied to a card) or to add additional accounts to a cardholder beyond the funding account. There should be one AD99 segment submitted for each account. If no PAN is specified in the message, it is assumed that the maintenance is for the standalone account only.

Data Content	Attributes	Description/Status
Custom modifier	an 2	Default to 00 .
PAN	an 19	Card number. Left-justified and space-filled.
Plastic Number	an 5	Not allowed for VisaCheck™/Debit MasterCard®.
Issuing-FI-ID	an 10	Routing and Transit number.
Account Type	an 4	Values need to be mapped to FIS codes. DDA = Checking Account (default) SAV = Savings Account CRD = Line of Credit OTH = Other Account
Account Number	an 28	Account number tied to card. Left-justified and blank-filled.
Account Status	an 2	Values need to be mapped to FIS codes.
Account Description	an 20	This is a free-form entry to describe the account.
Account OAR type	an 3	Mapping required.
Account Qualifier	an 3	
Available Balance	an 10	
Ledger Balance	an 10	
Account Primary Ind	an 1	Default to N .
Account Funding Ind	an 1	Default to N .
Credit Line	an 10	

Data Content	Attributes	Description/Status
Account Accesses	an 9	Default to 1's.
Overdraft Amount	an 10	
Overdraft Acct Number	an 28	
Overdraft FI Number	an 10	Default to Issuing FI-ID.
Overdraft Account Type	an 4	
Filler	an 66	
Total Length	255	

0600/0620 Administrative Message Information

Msg Type	Network Code	Data Length	Data Content
0600	800	01-206	01-06 Character source name 07-12 Character destination name (The field is set to all blanks when it is received by the final destination.) 13-206 Processor to processor mail * Message must be displayable.
	801	01-255	ANA-generated messages. (Not implemented.)
0620	900	01-255	First 255 bytes of message in error.

Falcon Credit Data - Layout

The FIS ISO PI does not impose any restrictions on the order in which either tag is received, however, if the presence of either tag, F1 or F2, is detected, edits are in place to ensure both have been presented. Upon receipt of both tags, the PI will strip off the tag ID's and corresponding 2-byte lengths before logging. Because F2 data is simply merged at the end of F1 data before logging, there is no restriction on how the Falcon data is split between the two tags. Therefore, up to 99 bytes (or less) can be passed in tag F1 where the remainder is then passed in F2.

The Falcon Credit Data is logged in the FINIPC Segment 24, Token ID “43” (Falcon Credit Data).

The layout of Falcon Credit Data to be received in DE 125 has been defined as follows (again, this is not enforced by the ISO PI):

Position	Data Type	Description
1-9	AN9	Postal Code
10-17	N8	Acct Open Date
18-25	N8	Pan Issue Date
26	AN1	Card Issue Type: I = New Card, R = Regular/System Renewal, F = Replacements
27-34	N8	Card Expire Date
35-44	AN10	Available Credit
45-54	AN10	Credit Limit
55-62	N8	Birth date
63-72	AN10	User Data/last Billing Chg of Address
73-86	AN14	Inst ID (10) + Switch ID (Last 4)
87	N1	Card Delinquency Cycle (Default is Zero)
88-100	AN13	Delinquent Amt
101-113	AN13	Cash Balance
114-126	AN13	Merchant Balance
127-129	AN3	Card Status
130-137	N8	Card Status Date Chg
138-140	AN3	Acct Status
141-148	N8	Acct Status Date Chg
149	AN1	Gender M/F: Male/Female
150-162	AN13	Tran Conversion Rate
163-165	N3	Billing Address Country Code.

The FIS ISO PI imposes no restriction to receiving this data either in a 0110 or 0210 message.

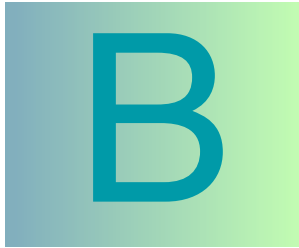
Network Management Information

NOTE: FIS supports double-length triple DES.

Network Code	Data Length	Data Content
005	01-50	Text message to Connex™ operator. All characters in the message must be displayable.
101	<u>PIN Encryption Key Only</u> for Both Issuer Working Key and Acquirer Working Key	
	Single DES: 20	<ul style="list-style-type: none"> 16-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted)
	Triple DES: 36	<ul style="list-style-type: none"> 32-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted)
101	PIN Encryption Key for Both Issuer Working Key and Acquirer Working Key <u>with MACing</u>	
	Single DES: 40	<ul style="list-style-type: none"> 16-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted) 16-character MAC key (for both issuer and acquirer) 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the MAC key being transmitted)

Network Code	Data Length	Data Content
	Triple DES: 56	<ul style="list-style-type: none"> 32-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted) 16-character MAC key (for both issuer and acquirer) 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the MAC key being transmitted)
161	<u>PIN Encryption Key Only</u> for an Issuer Working Key	
	Single DES: 20	<ul style="list-style-type: none"> 16-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted)
	Triple DES: 36	<ul style="list-style-type: none"> 32-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted)
161	PIN Encryption Key for an Issuer Working Key <u>with MACing</u>	
	Single DES: 40	<ul style="list-style-type: none"> 16-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted) 16-character MAC key (from issuer) 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the MAC key being transmitted)
	Triple DES: 56	<ul style="list-style-type: none"> 32-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted) 16-character MAC key (for both issuer and acquirer) 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the MAC key being transmitted)
171	<u>PIN Encryption Key Only</u> for an Acquirer Working Key	

Network Code	Data Length	Data Content
	Single DES: 20	<ul style="list-style-type: none"> 16-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted)
	Triple DES: 36	<ul style="list-style-type: none"> 32-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted)
171	PIN Encryption Key for an Acquirer Working Key <u>with MACing</u>	
	Single DES: 40	<ul style="list-style-type: none"> 16-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted) 16-character MAC key (from acquirer) 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the MAC key being transmitted)
	Triple DES: 56	<ul style="list-style-type: none"> 32-character PIN encryption key 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the key being transmitted) 16-character MAC key (from acquirer) 4-character check digits (first 4 bytes of the result of encrypting 16 zeros with the MAC key being transmitted)
281	23-30	<ul style="list-style-type: none"> 6-character pseudo-terminal ID 15-character real terminal ID or ALL 2-character settlement type (96-99) 7-character amount (used with settlement type 97-98)
282	2	2-character settlement type (00-09)



Data Element Code Tables

ISO and Connex on HP NonStop Transaction Types

The ISO Transaction Type in the following table is the first two digits of the ISO Processing Code.

Debits

ISO Transaction Type	Description
00	Goods and service
01	Cash
02	Adjustment (Unsupported)
03	Check guarantee
04	Check verification
05	Eurocheck (Unsupported)
06	Traveler check
07	Letter of credit (Unsupported)
08	Giro (Unsupported)
09	Goods and services with cash disbursement
10	Non-cash financial for funding
11	Quasi-Cash and scrip
13	Funds withdrawal for electronic purse

ISO Transaction Type	Description
17	Cash check
18	Deferred goods and services (Connex on HP NonStop-assigned private value)
19	Deferred goods and services with cash disbursement (Connex on HP NonStop-assigned private value)

Credits

ISO Transaction Type	Description
20	Returns
21	Deposits/Deposit payments
22	Adjustment (Unsupported)
23	Check deposit guarantee (Unsupported)
24	Check deposit
25	Envelopeless Cash Deposit
28	Payment return
29	Commercial deposit (Connex on HP NonStop-assigned private value)

Inquiry Services

ISO Transaction Type	Description
30	Available funds inquiry
31	Balance inquiry
33	Account verification
39	Generic balance inquiry (Connex on HP NonStop-assigned private value)

Transfer/Transfer Payment Services

ISO Transaction Type	Description
40	Cardholder accounts transfer

Payment Services

ISO Transaction Type	Description
50	Payment to another party
54	Payment debit (P2P)
55	Payment from third party
56	Payment credit (P2P)
58	Payment from account to credit/loan
59	Payment enclosed (Connex on HP NonStop-assigned private value)

Private Use

ISO Transaction Type	Description
90	PIN change (Connex on HP NonStop-assigned private value)
91	Information inquiry (Connex on HP NonStop-assigned private value)
92	Notification to bank (Connex on HP NonStop-assigned private value)
93	ID Verification
94	Child care benefit
96	Cash benefit
98	Food stamp benefit

Processing Codes (bit 003), Authorization Messages

You need to be aware of the following factor when you use the processing code tables.

- Pre-Authorization is indicated by the presence of data element 057.

01xx Purchase of Goods and Services Authorization

ISO Processing Code	Account Description
000000	From default unspecified
000800	Using a financial instrument (cash/check)
000900	From default other
001000	From default savings
001900	From other savings
002000	From default checking
002900	From other checking
003000	From default credit facility
003900	From other credit facility
004000	From default universal
004900	From other universal
005000	From default investment
005900	From other investment
009600	From cash benefit
009800	From food stamp benefit

01xx Cash Withdrawal Authorization

ISO Processing Code	Account Description
010000	From default unspecified
010900	From default other
011000	From default savings
011900	From other savings
012000	From default checking
012900	From other checking
013000	From default credit facility
013900	From other credit facility
014000	From default universal
014900	From other universal
015000	From default investment
015900	From other investment
019600	From cash benefit
019800	From food stamp benefit

01xx Check Guarantee

ISO Processing Code	Account Description
030000	Check guarantee

01xx Check Verification

ISO Processing Code	Account Description
040000	Check verification
040010	ACH credit to default savings
040020	ACH credit to default checking
040030	ACH credit to default credit facility
040800	Check verification with conversion

01xx Traveler Check Purchase Authorization

ISO Processing Code	Account Description
060000	From default unspecified
060800	Using a financial instrument (cash/check)
060900	From default other
061000	From default savings
061900	From other savings
062000	From default checking
062900	From other checking
063000	From default credit facility
063900	From other credit facility
064000	From default universal
064900	From other universal
065000	From default investment
065900	From other investment

01xx Non-Cash Financial for Funding Authorization

ISO Processing Code	Account Description
100000	From default unspecified
101000	From default savings
102000	From default checking

01xx Quasi-Cash and Scrip Purchase Authorization

ISO Processing Code	Account Description
110000	From default unspecified
110800	Using a financial instrument (cash/check)
110900	From default other
111000	From default savings

ISO Processing Code	Account Description
111900	From other savings
112000	From default checking
112900	From other checking
113000	From default credit facility
113900	From other credit facility
114000	From default universal
114900	From other universal
115000	From default investment
115900	From other investment

01xx Funds Withdrawal for Electronic Purse

ISO Processing Code	Account Description
130060	From default unspecified to electronic purse card account
130067	From default unspecified to purchase electronic card
131060	From default savings to electronic purse card account
131067	From default savings to purchase electronic card
132060	From default checking to electronic purse card account
132067	From default checking to purchase electronic card
133060	From default credit to electronic purse card account
133067	From default credit to purchase electronic card
134060	From default universal to electronic purse card account
134067	From default universal to purchase electronic card

01xx Check Cashing

ISO Processing Code	Account Description
170000	From default unspecified

01xx Deferred Purchase of Goods and Services

ISO Processing Code	Account Description
180000	From default unspecified
180900	From default other
181000	From default savings
181900	From other savings
182000	From default checking
182900	From other checking
184000	From default universal
184900	From other universal
185000	From default investment
185900	From other investment

01xx Purchase Return Authorization

ISO Processing Code	Account Description
200000	To default unspecified
200008	Using a financial instrument (cash/check)
200009	To default other
200010	To default savings
200019	To other savings
200020	To default checking
200029	To other checking
200030	To default credit facility
200039	To other credit facility
200040	To default universal
200049	To other universal

ISO Processing Code	Account Description
200050	To default investment
200059	To other investment
200098	To food stamp benefit

NOTE: 01XX Purchase Return Authorizations with processing codes 200000, 200010, 200020, 200030, 200040 may contain data element 057 (life cycle data).

01xx Deposit Memo

ISO Processing Code	Account Description
210000	To default unspecified
210009	To default other
210010	To default savings
210019	To other savings
210020	To default checking
210029	To other checking
210030	To default credit facility
210039	To other credit facility
210040	To default universal
210049	To other universal
210050	To default investment
210059	To other investment
210090	To default loan
210091	To mortgage loan
210092	To installment loan
210099	To other loan

01xx Commercial Deposit Memo

ISO Processing Code	Account Description
290020	To default checking

01xx Account Verification

ISO Processing Code	Account Description
330000	From default unspecified
330900	From default other
331000	From default savings
332000	From default checking
333000	From default credit facility

01xx Payment Authorization

ISO Processing Code	Account Description
500000	Payment to another party from default unspecified
500800	Payment to another party using a financial instrument (cash/check)
500900	Payment to another party from default other
501000	Payment to another party from default savings
501900	Payment to another party from other savings
502000	Payment to another party from default checking
502900	Payment to another party from other checking
503000	Payment to another party from default credit facility
503900	Payment to another party from other credit facility
504000	Payment to another party from default universal
504900	Payment to another party from other universal
505000	Payment to another party from default investment
505900	Payment to another party from other investment

01xx Payment from Third Party

ISO Processing Code	Account Description
550000	To default unspecified
550009	To default other
550010	To default savings
550020	To default checking
550030	To default credit facility

01xx Payment Enclosed Memo

ISO Processing Code	Account Description
590000	From default unspecified
590800	Using a financial instrument (cash/check)
590900	From default other
591000	From default savings
591900	From other savings
592000	From default checking
592900	From other checking
593000	From default credit facility
593900	From other credit facility
594000	From default universal
594900	From other universal
595000	From default investment
595900	From other investment

01xx Prepaid Load/Activation

ISO Processing Code	Account Description
700000	Load of prepaid/Stored value card
720000	Activation of prepaid/Stored value card

01xx PIN Change

ISO Processing Code	Account Description
900000	PIN Change

01xx Information Inquiry

ISO Processing Code	Account Description
910000	Information inquiry (statement print or door popper)
910900	Information inquiry from default other (statement print)
911000	Information inquiry from default savings (statement print)
912000	Information inquiry from default checking (statement print or check inquiry)
913000	Information inquiry from default credit facility (statement print)
914000	Information inquiry from universal (statement print)
915000	Information inquiry from investment (statement print)
919000	Information inquiry from loan (statement print)
919100	Information inquiry from mortgage loan (statement print)
919200	Information inquiry from installment loan (statement print)
919700	Information inquiry from all accounts (statement print)
919900	Information inquiry from other loan (statement print)

01xx Notification to Bank

ISO Processing Code	Account Description
920000	Notification to bank (enclosed or mail statement)
920900	Notification to bank about default other (mail statement)
921000	Notification to bank about default savings (mail statement)

ISO Processing Code	Account Description
922000	Notification to bank about default checking (mail statement, stop payment, check re-order)
923000	Notification to bank about default credit facility (mail statement)
929700	Notification to bank about all accounts (mail statement)

01xx ID Verification

ISO Processing Code	Account Description
930800	ID Verification

01xx Payment Credit (P2P)

ISO Processing Code	Account Description
560000	To default unspecified
560009	To default other
560010	To default savings
560020	To default checking
560030	To default credit facility

Processing Codes (bit 003), Financial Transaction Messages

02xx Purchase of Goods and Services

ISO Processing Code	Account Description
000000	From default unspecified
000900	From default other
001000	From default savings
001900	From other savings

ISO Processing Code	Account Description
002000	From default checking
002900	From other checking
003000	From default credit facility
003900	From other credit facility
004000	From default universal
004900	From other universal
005000	From default investment
005900	From other investment
009400	From child care benefit
009500	From WIC benefit
009600	From cash benefit
009800	From food stamp benefit

02xx Cash Withdrawal

ISO Processing Code	Account Description
010000	From default unspecified
010900	From default other
011000	From default savings
011900	From other savings
012000	From default checking
012900	From other checking
013000	From default credit facility
013900	From other credit facility
014000	From default universal
014900	From other universal

ISO Processing Code	Account Description
015000	From default investment
015900	From other investment
019600	From cash benefit

02xx Check Verification

ISO Processing Code	Account Description
030000	Electronic check guarantee/conversion

02xx Electronic Check Verification/Conversion

ISO Processing Code	Account Description
040000	Check verification/conversion
040006	Check return (consumer posted online, not via ACH)
040010	ACH credit to default savings
040020	ACH credit to default checking
040030	ACH credit to default credit facility
040500	Check conversion with verification (including funds verification, posted to consumer via offline/ACH)
040600	Check debit (consumer posted online, not via ACH)
040700	Check conversion without verification

02xx Traveler Check Purchase

ISO Processing Code	Account Description
060000	From default unspecified
060900	From default other
061000	From default savings
061900	From other savings
062000	From default checking

ISO Processing Code	Account Description
062900	From other checking
063000	From default credit facility
063900	From other credit facility
064000	From default universal
064900	From other universal
065000	From default investment
065900	From other investment

02xx Purchase of Goods and Services with Cash Disbursement

NOTE:

FIS ISO 8583 acquirer processors send an '00', instead of an '09', in the first two positions of the Processing Code in the 02xx message, along with any required cash amount data. For further detail about cash amount, see the DE54 (Additional Amounts) [“Description:” on page 325](#). FIS ISO 8583 issuer processors should be prepared to receive an '09' in the first two positions as indicated in the table which follows:

ISO Processing Code	Account Description
090000	From default unspecified
090900	From default other
091000	From default savings
091900	From other savings
092000	From default checking
092900	From other checking
093000	From default credit facility
093900	From other credit facility
094000	From default universal
094900	From other universal
095000	From default investment
095900	From other investment

ISO Processing Code	Account Description
099600	From cash benefit
009400	From child care benefit
009500	From WIC benefit
009800	From food stamp benefit

02xx Non-Cash Financial for Funding

ISO Processing Code	Account Description
100000	From default unspecified
101000	From default savings
102000	From default checking

02xx Quasi-Cash and Scrip

ISO Processing Code	Account Description
110000	From default unspecified
110900	From default other
111000	From default savings
111900	From other savings
112000	From default checking
112900	From other checking
113000	From default credit facility
113900	From other credit facility
114000	From default universal
114900	From other universal
115000	From default investment
115900	From other investment

02xx Funds Withdrawal for Electronic Purse

ISO Processing Code	Account Description
130060	From default unspecified to electronic purse card account
130067	From default unspecified to purchase electronic card
131060	From default savings to electronic purse card account
131067	From default savings to purchase electronic card
132060	From default checking to electronic purse card account
132067	From default checking to purchase electronic card
133060	From default credit to electronic purse card account
133067	From default credit to purchase electronic card
134060	From default universal to electronic purse card account
134067	From default universal to purchase electronic card

02xx Purchase Return

ISO Processing Code	Account Description
200000	To default unspecified
200009	To default other
200010	To default savings
200019	To other savings
200020	To default checking
200029	To other checking
200030	To default credit facility
200039	To other credit facility
200040	To default universal
200049	To other universal
200050	To default investment
200059	To other investment
200098	To food stamp benefit

02xx Deposit

ISO Processing Code	Account Description
210000	To default unspecified
210009	To default other
210010	To default savings
210019	To other savings
210020	To default checking
210029	To other checking
210030	To default credit facility
210039	To other credit facility
210040	To default universal
210049	To other universal
210050	To default investment
210059	To other investment
210090	To default loan
210091	To mortgage loan
210092	To installment loan
210099	To other loan

02xx Check Deposit

ISO Processing Code	Account Description
240000	To default unspecified
240009	To default other
240010	To default savings
240020	To default checking
240030	To default credit facility

02xx Envelopeless Cash Deposit

ISO Processing Code	Account Description
250000	Cash deposit to FND (Default)
250009	Cash deposit to other
250010	Cash deposit to savings
250020	Cash deposit to checking
250030	Cash deposit (Payment) to credit
250031	Cash deposit/payment to credit line
250091	Cash deposit/payment to mortgage loan
250092	Cash deposit/payment to IL

02xx Payment Returns

ISO Processing Code	Account Description
280000	To default unspecified
280009	To default other
280010	To default savings
280020	To default checking
280030	To default credit facility
280040	To default universal
280050	To default investment

02xx Commercial Deposit

ISO Processing Code	Account Description
290020	To default checking

02xx Available Funds Inquiry

ISO Processing Code	Account Description
300000	From default unspecified
300900	From default other
301000	From default savings
301900	From other savings
302000	From default checking
302900	From other checking
303000	From default credit facility
303900	From other credit facility
304000	From default universal
304900	From other universal
305000	From default investment
305900	From other investment

02xx Balance Inquiry

ISO Processing Code	Account Description
310000	From default unspecified
310900	From default other
311000	From default savings
311900	From other savings
312000	From default checking
312900	From other checking
313000	From default credit facility
313900	From other credit facility
314000	From default universal
314900	From other universal
315000	From default investment

ISO Processing Code	Account Description
315900	From other investment
319000	From default loan
319100	From mortgage loan
319200	From installment loan
319600	From cash benefit
319800	From food stamp benefit
319900	From other loan

02xx Generic Balance Inquiry

ISO Processing Code	Account Description
390000	Generic balance inquiry

02xx Transfer/Transfer Payment Services

ISO Processing Code	Account Description
400000	Transfer from default unspecified to default unspecified
400009	Transfer from default unspecified to default other
400010	Transfer from default unspecified to default savings
400019	Transfer from default unspecified to other savings
400020	Transfer from default unspecified to default checking
400029	Transfer from default unspecified to other checking
400030	Transfer from default unspecified to default credit facility
400039	Transfer from default unspecified to other credit facility
400040	Transfer from default unspecified to default universal
400049	Transfer from default unspecified to other universal
400050	Transfer from default unspecified to default investment
400059	Transfer from default unspecified to other investment
400090	Transfer from default unspecified to default loan

ISO Processing Code	Account Description
400091	Transfer from default unspecified to mortgage loan
400092	Transfer from default unspecified to installment loan
400099	Transfer from default unspecified to other loan
400900	Transfer from default other to default unspecified
400909	Transfer from default other to default other
400910	Transfer from default other to default savings
400919	Transfer from default other to other savings
400920	Transfer from default other to default checking
400929	Transfer from default other to other checking
400930	Transfer from default other to default credit facility
400939	Transfer from default other to other credit facility
400940	Transfer from default other to default universal
400949	Transfer from default other to other universal
400950	Transfer from default other to default investment
400959	Transfer from default other to other investment
400990	Transfer from default other to default loan
400991	Transfer from default other to mortgage loan
400992	Transfer from default other to installment loan
400999	Transfer from default other to other loan
401000	Transfer from default savings to default unspecified
401009	Transfer from default savings to default other
401010	Transfer from default savings to default savings
401019	Transfer from default savings to other savings
401020	Transfer from default savings to default checking
401029	Transfer from default savings to other checking
401030	Transfer from default savings to default credit facility
401039	Transfer from default savings to other credit facility
401040	Transfer from default savings to default universal

ISO Processing Code	Account Description
400909	Transfer from default other to default other
400910	Transfer from default other to default savings
400919	Transfer from default other to other savings
400920	Transfer from default other to default checking
400929	Transfer from default other to other checking
400930	Transfer from default other to default credit facility
400939	Transfer from default other to other credit facility
400940	Transfer from default other to default universal
400949	Transfer from default other to other universal
400950	Transfer from default other to default investment
400959	Transfer from default other to other investment
400990	Transfer from default other to default loan
400991	Transfer from default other to mortgage loan
400992	Transfer from default other to installment loan
400999	Transfer from default other to other loan
401000	Transfer from default savings to default unspecified
401009	Transfer from default savings to default other
401010	Transfer from default savings to default savings
401019	Transfer from default savings to other savings
401020	Transfer from default savings to default checking
401029	Transfer from default savings to other checking
401030	Transfer from default savings to default credit facility
401039	Transfer from default savings to other credit facility
401040	Transfer from default savings to default universal

ISO Processing Code	Account Description
401091	Transfer from default savings to mortgage loan
401092	Transfer from default savings to installment loan
401099	Transfer from default savings to other loan
401900	Transfer from other savings to default unspecified
401909	Transfer from other savings to default other
401910	Transfer from other savings to default savings
401919	Transfer from other savings to other savings
401920	Transfer from other savings to default checking
401929	Transfer from other savings to other checking
401930	Transfer from other savings to default credit facility
401939	Transfer from other savings to other credit facility
401940	Transfer from other savings to default universal
401949	Transfer from other savings to other universal
401950	Transfer from other savings to default investment
401959	Transfer from other savings to other investment
401990	Transfer from other savings to default loan
401991	Transfer from other savings to mortgage loan
401992	Transfer from other savings to installment loan
401999	Transfer from other savings to other loan
402009	Transfer from default checking to default other
402010	Transfer from default checking to default savings
402019	Transfer from default checking to other savings
402020	Transfer from default checking to default checking
402029	Transfer from default checking to other checking
402030	Transfer from default checking to default credit facility
402039	Transfer from default checking to other credit facility
402040	Transfer from default checking to default universal
402049	Transfer from default checking to other universal

ISO Processing Code	Account Description
402050	Transfer from default checking to default investment
402059	Transfer from default checking to other investment
402090	Transfer from default checking to default loan
402091	Transfer from default checking to mortgage loan
402092	Transfer from default checking to installment loan
402099	Transfer from default checking to other loan
402900	Transfer from other checking to default unspecified
402909	Transfer from other checking to default other
402910	Transfer from other checking to default savings
402919	Transfer from other checking to other savings
402920	Transfer from other checking to default checking
402929	Transfer from other checking to other checking
402930	Transfer from other checking to default credit facility
402939	Transfer from other checking to other credit facility
402940	Transfer from other checking to default universal
402949	Transfer from other checking to other universal
402950	Transfer from other checking to default investment
402959	Transfer from other checking to other investment
402990	Transfer from other checking to default loan
402991	Transfer from other checking to mortgage loan
402992	Transfer from other checking to installment loan
402999	Transfer from other checking to other loan
403000	Transfer from default credit facility to default unspecified
403009	Transfer from default credit facility to default other
403010	Transfer from default credit facility to default savings
403019	Transfer from default credit facility to other savings
403020	Transfer from default credit facility to default checking
403029	Transfer from default credit facility to other checking

ISO Processing Code	Account Description
403030	Transfer from default credit facility to default credit facility
403039	Transfer from default credit facility to other credit facility
403040	Transfer from default credit facility to default universal
403049	Transfer from default credit facility to other universal
403050	Transfer from default credit facility to default investment
403059	Transfer from default credit facility to other investment
403090	Transfer from default credit facility to default loan
403091	Transfer from default credit facility to mortgage loan
403092	Transfer from default credit facility to installment loan
403099	Transfer from default credit facility to other loan
403900	Transfer from other credit facility to default unspecified
403909	Transfer from other credit facility to default other
403910	Transfer from other credit facility to default savings
403919	Transfer from other credit facility to other savings
403920	Transfer from other credit facility to default checking
403929	Transfer from other credit facility to other checking
403930	Transfer from other credit facility to default credit facility
403939	Transfer from other credit facility to other credit facility
403940	Transfer from other credit facility to default universal
403949	Transfer from other credit facility to other universal
403950	Transfer from other credit facility to default investment
403959	Transfer from other credit facility to other investment
403990	Transfer from other credit facility to default loan
403991	Transfer from other credit facility to mortgage loan
403992	Transfer from other credit facility to installment loan
403999	Transfer from other credit facility to other loan
404000	Transfer from default universal to default unspecified
404009	Transfer from default universal to default other

ISO Processing Code	Account Description
404010	Transfer from default universal to default savings
404019	Transfer from default universal to other savings
404020	Transfer from default universal to default checking
404029	Transfer from default universal to other checking
404030	Transfer from default universal to default credit facility
404039	Transfer from default universal to other credit facility
404040	Transfer from default universal to default universal
404049	Transfer from default universal to other universal
404050	Transfer from default universal to default investment
404059	Transfer from default universal to other investment
404090	Transfer from default universal to default loan
404091	Transfer from default universal to mortgage loan
404092	Transfer from default universal to installment loan
404099	Transfer from default universal to other loan
404900	Transfer from other universal to default unspecified
404909	Transfer from other universal to default other
404910	Transfer from other universal to default savings
404919	Transfer from other universal to other savings
404920	Transfer from other universal to default checking
404929	Transfer from other universal to other checking
404930	Transfer from other universal to default credit facility
404939	Transfer from other universal to other credit facility
404940	Transfer from other universal to default universal
404949	Transfer from other universal to other universal
404950	Transfer from other universal to default investment
404959	Transfer from other universal to other investment
404990	Transfer from other universal to default loan
404991	Transfer from other universal to mortgage loan

ISO Processing Code	Account Description
404992	Transfer from other universal to installment loan
404999	Transfer from other universal to other loan
405000	Transfer from default investment to default unspecified
405009	Transfer from default investment to default other
405010	Transfer from default investment to default savings
405019	Transfer from default investment to other savings
405020	Transfer from default investment to default checking
405029	Transfer from default investment to other checking
405030	Transfer from default investment to default credit facility
405039	Transfer from default investment to other credit facility
405040	Transfer from default investment to default universal
405049	Transfer from default investment to other universal
405050	Transfer from default investment to default investment
405059	Transfer from default investment to other investment
405090	Transfer from default investment to default loan
405091	Transfer from default investment to mortgage loan
405092	Transfer from default investment to installment loan
405099	Transfer from default investment to other loan
405900	Transfer from other investment to default unspecified
405909	Transfer from other investment to default other
405910	Transfer from other investment to default savings
405919	Transfer from other investment to other savings
405920	Transfer from other investment to default checking
405929	Transfer from other investment to other checking
405930	Transfer from other investment to default credit facility
405939	Transfer from other investment to other credit facility
405940	Transfer from other investment to default universal
405949	Transfer from other investment to other universal

ISO Processing Code	Account Description
405950	Transfer from other investment to default investment
405959	Transfer from other investment to other investment
405990	Transfer from other investment to default loan
405991	Transfer from other investment to mortgage loan
405992	Transfer from other investment to installment loan
405999	Transfer from other investment to other loan

02xx Payments

ISO Processing Code	Account Description
500000	Payment to another party from default unspecified
500800	Payment to another party using a financial instrument (cash/check)
500900	Payment to another party from default other
501000	Payment to another party from default savings
501900	Payment to another party from other savings
502000	Payment to another party from default checking
502900	Payment to another party from other checking
503000	Payment to another party from default credit facility
503900	Payment to another party from other credit facility
504000	Payment to another party from default universal
504900	Payment to another party from other universal
505000	Payment to another party from default investment
505900	Payment to another party from other investment

02xx Payment Debit (P2P)

ISO Processing Code	Account Description
540000	From default unspecified
540900	From default other
541000	From default savings
542000	From default checking
543000	From default credit facility

02xx Payment from Third Party

ISO Processing Code	Account Description
550000	To default unspecified
550009	To default other
550010	To default savings
550020	To default checking
550030	To default credit facility

02xx Payment Credit (P2P)

ISO Processing Code	Account Description
560000	To default unspecified
560009	To default other
560010	To default savings
560020	To default checking
560030	To default credit facility

02xx Payment from Account to Credit/Loan

ISO Processing Code	Account Description
580030	Payment from default unspecified to default credit facility
580039	Payment from default unspecified to other credit facility
580090	Payment from default unspecified to default loan
580091	Payment from default unspecified to mortgage loan
580092	Payment from default unspecified to installment loan
580099	Payment from default unspecified to other loan
580930	Payment from default other to default credit facility
580939	Payment from default other to other credit facility
580990	Payment from default other to default loan
580991	Payment from default other to mortgage loan
580992	Payment from default other to installment loan
580999	Payment from default other to other loan
581030	Payment from default savings to default credit facility
581039	Payment from default savings to other credit facility
581090	Payment from default savings to default loan
581091	Payment from default savings to mortgage loan
581092	Payment from default savings to installment loan
581099	Payment from default savings to other loan
581930	Payment from other savings to default credit facility
581939	Payment from other savings to other credit facility
581990	Payment from other savings to default loan
581991	Payment from other savings to mortgage loan
581992	Payment from other savings to installment loan
581999	Payment from other savings to other loan
582030	Payment from default checking to default credit facility
582039	Payment from default checking to other credit facility

ISO Processing Code	Account Description
582090	Payment from default checking to default loan
582091	Payment from default checking to mortgage loan
582092	Payment from default checking to installment loan
582099	Payment from default checking to other loan
582930	Payment from other checking to default credit facility
582939	Payment from other checking to other credit facility
582990	Payment from other checking to default loan
582991	Payment from other checking to mortgage loan
582992	Payment from other checking to installment loan
582999	Payment from other checking to other loan
583030	Payment from default credit facility to default credit facility
583039	Payment from default credit facility to other credit facility
583090	Payment from default credit facility to default loan
583091	Payment from default credit facility to mortgage loan
583092	Payment from default credit facility to installment loan
583099	Payment from default credit facility to other loan
583930	Payment from other credit facility to default credit facility
583939	Payment from other credit facility to other credit facility
583990	Payment from other credit facility to default loan
583991	Payment from other credit facility to mortgage loan
583992	Payment from other credit facility to installment loan
583999	Payment from other credit facility to other loan
584030	Payment from default universal to default credit facility
584039	Payment from default universal to other credit facility
584090	Payment from default universal to default loan
584091	Payment from default universal to mortgage loan
584092	Payment from default universal to installment loan

ISO Processing Code	Account Description
584099	Payment from default universal to other loan
584930	Payment from other universal to default credit facility
584939	Payment from other universal to other credit facility
584990	Payment from other universal to default loan
584991	Payment from other universal to mortgage loan
584992	Payment from other universal to installment loan
584999	Payment from other universal to other loan
585030	Payment from default investment to default credit facility
585039	Payment from default investment to other credit facility
585090	Payment from default investment to default loan
585091	Payment from default investment to mortgage loan
585092	Payment from default investment to installment loan
585099	Payment from default investment to other loan
585930	Payment from other investment to default credit facility
585939	Payment from other investment to other credit facility
585990	Payment from other investment to default loan
585991	Payment from other investment to mortgage loan
585992	Payment from other investment to installment loan
585999	Payment from other investment to other loan

02xx Payment Enclosed

ISO Processing Code	Account Description
590000	Payment enclosed from default unspecified
590800	Payment enclosed using a financial instrument (cash/check)
590900	Payment enclosed from default other
591000	Payment enclosed from default savings
591900	Payment enclosed from other savings

ISO Processing Code	Account Description
592000	Payment enclosed from default checking
592900	Payment enclosed from other checking
593000	Payment enclosed from default credit facility
593900	Payment enclosed from other credit facility
594000	Payment enclosed from default universal
594900	Payment enclosed from other universal
595000	Payment enclosed from default investment
595900	Payment enclosed from other investment

02xx Prepaid Load/Activation

ISO Processing Code	Account Description
700000	Load of prepaid/Stored value card
720000	Activation of prepaid/Stored value card

Point-of-Service Entry Mode (bit 022)

PAN Entry Mode Codes

ISO Code Positions 1-2	Description
00	Unspecified
01	Manual
02	Magnetic stripe
03	Bar code or QR code
04	OCR
05	Integrated circuit card
06	Manual (key-entered)
07	Contactless via Chip rules

ISO Code Positions 1-2	Description
08	Reserved for ISO use
09	PAN entry via electronic commerce, including remote chip
10-60	Reserved for ISO use
61-78	Reserved for national use
79	Chip card or chip-capable terminal was unable to process the transaction using the data on the chip or magnetic stripe, the PAN was entered manually, or the Acquirer is not certified to process the value 80.
80	Chip card or chip-capable terminal was unable to process the transaction using the data on the chip, the PAN was entered via magnetic stripe. The full track data was read from the data encoded on the card and transmitted within the authorization request on Track-2 Data (data element 35 a) or Track-1 Data (data element 45) without alteration or truncation.
81	From file
82	PAN Auto Entry via Server (issuer, acquirer, or third party vendor system).
83	Secure cardless entry
84-89	Reserved for private use
90	Full magnetic stripe read (optionally supported)
91	Contactless via magnetic stripe rules
92-94	Reserved for private use
95	Integrated circuit card, CVV data may be unreliable
96-99	Reserved for private use

PIN Entry Mode Codes

ISO Code Position 3	Description
0	Unspecified
1	PIN entry capability
2	No PIN entry capability

ISO Code Position 3	Description
3-5	Reserved for ISO use
6	PIN pad inoperative
7	Reserved for national use
8	Reserved for private use
9	PIN verified by terminal device

Point-of-Service Condition Codes (bit 025)

ISO Code	Description
00	Normal presentment
01	Customer not present
02	Unattended terminal able to retain card
03	Merchant suspicious
04	Electronic card register interface
05	Customer present, card not present
06	Pre-Authorized request
07	Telephone device request
08	Mail and/or telephone order
09	Security alert
10	Customer identity verified
11	Suspected fraud
12	Security reasons
15	Customer terminal (home terminal)
16	Administration terminal
27	Unattended terminal unable to retain card
28-39	Reserved for ISO use
40	Customer not present, standing order/recurring payment

ISO Code	Description
41-50	Reserved for national use
51	Reserved for private use
52	CVV verified and valid
53	CVV verified and invalid
54	Nonsecure/Security unknown electronic commerce transaction
55	Secure electronic transaction with cardholder certificate
56	Secure electronic transaction without cardholder certificate
57	Channel-encrypted electronic commerce transaction
58	Secure electronic transaction containing a digital signature
59	Deferred billing
60	Internet PIN debit transaction
61-99	Reserved for private use

Response Codes (bit 039)

The FIS ISO 8583 PI requires that the response code mappings be defined in the data base. Although there is no default response code table, FIS recommends the use of the following response code mappings.

ISO Code	Response Description
00	Approved or completed successfully
01	Refer to card issuer
02	Refer to card issuers special conditions
03	Invalid merchant
04	Pick-up
05	Do not honor
06	Error
07	Pick-up card, special conditions
08	Honor with identification
09	Request in progress
10	Approved for partial amount
11	Approved (VIP)
12	Invalid transaction
13	Invalid amount
14	Invalid card number (no such number)
15	No such issuer
16	Approved, update track 3
17	Customer cancellation, reversal (unsupported)
18	Customer dispute, chargeback (future)
19	Re-enter transaction
20	Invalid response
21	No action taken, reversal (unsupported)
22	Suspected malfunction, reversal (unsupported)
23	Unacceptable transaction fee

ISO Code	Response Description
24	File update not supported by receiver (only in 03xx)
25	Unable to locate record on file (only in 03xx)
26	Duplicate file update record, no action (only in 03xx)
27	File update field edit error (only in 03xx)
28	File update record locked out (only in 03xx)
29	File update not successful, contact acquirer (only in 03xx)
30	Format error (may also be a reversal)
31	Bank not supported by switch
32	Completed partially, reversal (unsupported)
33	Expired card, pick-up
34	Suspected fraud, pick-up
35	Card acceptor contact acquirer, pick-up
36	Restricted card, pick-up
37	Card acceptor call acquirer security, pick-up
38	Allowable PIN tries exceeded, pick-up
39	No credit account
40	Requested function not supported
41	Lost card, pick-up
42	No universal account
43	Stolen card, pick-up
44	No investment account
45	Reserved for ISO use
46	Reserved for ISO use
47	Reserved for ISO use
48	Reserved for ISO use
49	Reserved for ISO use
50	Reserved for ISO use
51	Insufficient funds

ISO Code	Response Description
52	No checking account
53	No savings account
54	Expired card
55	Incorrect PIN
56	No card record
57	Transaction not permitted to cardholder
58	Transaction not permitted to terminal (may also be a chargeback)
59	Suspected fraud
60	Card acceptor contact acquirer
61	Exceeds withdrawal amount limit
62	Restricted card
63	Security violation (may also be a chargeback)
64	Original amount incorrect, reversal (unsupported)
65	Exceeds withdrawal frequency limit
66	Card acceptor call acquirer security
67	Hard capture, pick-up
68	Response received too late, reversal (unsupported)
69	Reserved for ISO
70	Reserved for ISO
71	Reserved for ISO
72	Reserved for ISO
73	Reserved for ISO
74	Reserved for ISO
75	Allowable number of PIN tries exceeded
76	Key synchronization error (FIS)
77	Reserved for private use
78	Customer not eligible for POS (Star SM)
79	Invalid digital signature

ISO Code	Response Description
80	Stale dated transaction (Star SM)
81	Issuer requested standin
82	Count exceeds limit (VISA ^{Net})
83	Reserved for private use
84	Time limit for pre-authorization reached (VISA ^{Net})
85	Reserved for private use
86	Cannot verify PIN (VISA ^{Net})
87	Check already posted
88	Information not on file
89	Card verification value (CVV) verification failed (no pickup)
90	Cutoff is in progress
91	Issuer or switch is inoperative
92	Financial institution or intermediate network unknown for routing
93	Transaction cannot be completed, violation of law
94	Duplication transaction
95	Reconcile error
96	System malfunction
97	Reserved for national use
98	Reserved for national use
99	Reserved for national use
0Z-9Z	Reserved for ISO use
C2-MZ	Reserved for national use (X9.2)
N0	Authorization life cycle unacceptable
N1	Authorization life cycle expired
N2	Non-receipt of requested item (future)
N3	Non-receipt of requested item, illegible copy (future)
N4	Transaction exceeds floor limit (future)
N5	Declined authorization (future)

ISO Code	Response Description
N6	Non-matching account numbers (future)
N7	Error in addition (future)
N8	Altered amount (future)
N9	Incorrect account number (future)
P0	Missing signature (future)
P1	Slip without card imprint (future)
P2	Imprinting of multiple slips (future)
P3	Canceled pre-authorization transaction (future)
P4	Delinquent settlement (future)
P5	Currency conversion error (future)
P6	Credit posted as a debit (sale) (future)
P7	Claim or defense (future)
P8	Non-receipt of goods (future)
P9	Defective merchandise (future)
R0	Fraudulent transaction prior to embossed valid date (future)
R1	Credit not received (future)
R2	Allowable PAN entries warning -- approved
R3	Approved with overdraft protection
R4	Bad CVV3
S0	Check not acceptable for cash
S1	Check not acceptable
S2	Check deposit limit exceeded
S3	Cash back limit exceeded
S4	Check amount does not match courtesy amount
S5	PIN not selected
S6	PIN already selected
S7	Unmatched voucher information
S8	Allowable PAN entries exceeded -- denial

ISO Code	Response Description
S9	Expiration date mismatch
SA	Inactive card
SB	Expiration date mismatch (card pickup)
SC	Item suspected for stop pay
SD	Account closed
SE	Ineligible account
SF	Item submitted more than two times
SG	No account on file - absolute
SH	Unable to locate
SI	General denial
SJ	Item settled via ACH
SK	Cross-reference card not found
SL	Category limit exceeded
SM	Transaction limit exceeded
SN	Daily limit exceeded
SO	Monthly limit exceeded
SP	Invalid secret code
SQ	PIN key sync error
SR	Bad CVV2
SS	Stop payment order
ST	Revocation of authorization order
SV	Stop reoccurring payments
T3	Lost card (no pickup)
T4	Closed account
T5	Dormant account
T6	Special conditions (no pick-up)
T7	Purchase only approval for purchase with cash back transaction.
T9	Insufficient funds for fees

ISO Code	Response Description
TA	ARQC validation failed for chip card
TB	Unsafe PIN
TC	Additional customer authentication required
TD	PIN Required for Additional Security
U0-ZZ	Reserved for private use

Additional Amounts Codes (bit 054)

Account Type

This code is found in positions 1 and 2 of each amount.

ISO Code	Description
00	Funding (Default) account
09	Other
10	Savings account
20	Checking account
30	Credit account
39	Other credit facility
40	Universal account
50	Investment account
60	Reserved for ISO use
70	Reserved for ISO use
80	Reserved for national use
91	Mortgage
92	Installment loan
94	Child care benefit
96	Cash benefit
97	Unknown
98	Food stamp benefit

Amount Type

This code is found in positions 3 and 4 of each amount.

ISO Code	Description
00	Unknown
01	Account ledger balance
02	Account available balance
03	Amount owing
04	Amount due
05	Account available credit
6-10	Reserved for ISO use
11-15	Reserved for national use
16	Credit line (FIS)
17	POS balance/ATM overdraft protection balance
18	Beginning balance
19	Reserved for private use
20	Amount remaining this cycle
21-30	Reserved for ISO use
31-35	Reserved for national use
36-39	Reserved for private use
40	Amount cash
41	Amount goods and services
42	Reserved for ISO use
43	Total cumulative amount
44-50	Reserved for ISO use
51-55	Reserved for national use
56	Hold amount
57	Pre-Authorized amount
58	Authorized amount

ISO Code	Description
59	Floor limit
60-79	Reserved for ISO use
80-89	Reserved for national use
90	Check amount
91	Original Amount
92	Reserved for private use
93	Cash Deposit Amount
94	Check Deposit Amount
95	Sales Tax Amount
96	Merchant local currency/Cash Benefit Amount
97	Unknown
98	Courtesy amount
99	Original cash back amount
3S	Co-payment
4R	Check amount, unverified check deposit
4S	Healthcare amount
4T	Transit amount
4U	Prescription/Rx amount
4V	Vision/Optical amount
4W	Clinic/Medicals amount
4X	Dental
4Y	Unverified Deposit Amount (envelope deposits)
4Z	Cash amount, unverified cash deposit
X	Citi unique; Top of large balance

Amount Type (Transaction-Related)

This code is found in positions 3 and 4 of each amount for transaction-related amounts.

ISO Code	Description
40	Amount cash
41	Amount goods and services
42-50	Reserved for ISO use
51-55	Reserved for national use
56	Hold amount
57	Pre-Authorized amount Note: Amount type 57 is used in a pre-authorized completion to identify the amount originally authorized by the issuer.
58	Authorized amount Note: Amount type 58 should be used by an issuer to partially approve a pre-authorization.
59	Floor limit
60-79	Reserved for ISO use
80-89	Reserved for national use
90	Check amount
91	Original amount Note: Amount type 91 is used by Issuer to return Original amounts for a partially authorized transaction. The Original amount is in Transaction currency (Field 49).
92	Reserved for private use
93	Cash Deposit Amount
94	Check Deposit Amount
95-96	Reserved for private use
97	Unknown Note: Typically used for return balances when the balance type is not known.
98	Courtesy amount
99	Original cash back amount
3S	Co-payment

ISO Code	Description
4R	Check amount, unverified check deposit
4S	Healthcare amount
4T	Transit amount
4U	Prescription/Rx amount
4V	Vision/Optical amount
4W	Clinic/Medicals amount
4X	Dental
4Y	Unverified Deposit Amount (envelope deposits)
4Z	Cash amount, unverified cash deposit

National POS Condition Code (bit 058)

Terminal Type Codes

Within the national POS condition code, positions 1-3 identify the terminal class, positions 9-10 identify the terminal type, and position 11 identifies the card data input capability.

Terminal Class (Positions 1-3)

Position 1 - Attendance Indicator

ISO Code	Description
0	Attended
1	Unattended
2-7	Reserved for national use
8-9	Reserved for private use

Position 2

ISO Code	Description
0	Customer-operated
1	Card acceptor-operated
2	Administrative
3-7	Reserved for national use
8-9	Reserved for private use

Position 3 - POS Terminal Location

ISO Code	Description
0	On premise
1	Off premise
2-7	Reserved for national use
8-9	Reserved for private use

Presentation Type (Positions 4-7)

Within the national POS condition code, positions 4-7 identify the presentation type.

Position 4 - POS Cardholder Presence

ISO Code	Description
0	Customer present
1	Customer not present
2	Mail/Facsimile order (customer not present)
3	Telephone order
4	Customer not present, standing order/recurring payment
5-7	Reserved for national use
8	Pre-Authorized purchase

ISO Code	Description
9	Deferred billing
A	Deferred Authorization
S	Installment Payment

Position 5

ISO Code	Description
0	Card present
1	Card not present
2-7	Reserved for national use
8	Pre-Authorized purchase
9	Reserved for private use

Position 6

ISO Code	Description
0	Device does not have card retention capability
1	Device has card retention capability
2-7	Reserved for national use
8-9	Reserved for private use

Position 7

ISO Code	Description
0	Original presentment
1	First representment
2	Second representment
3	Third representment
4	Previously authorized request
5	Resubmission

ISO Code	Description
6-7	Reserved for national use
8	Card validation/account status inquiry
9	Reserved for private use

Security Condition (Position 8)

The security condition code is found in position 8 of the national POS condition code.

Position 8

ISO Code	Description
0	No security concern
1	Suspected fraud
2	Identification verified
3	Electronic commerce transaction with digital signature
4	Nonsecure/Security unknown electronic commerce transaction
5	Secure electronic transaction with cardholder certificate
6	Secure electronic transaction without cardholder certificate
7	Channel-encrypted electronic commerce transaction
8	CVV validated and valid
9	CVV validated and invalid
A	Internet pinned debit transaction.

Terminal Type (Positions 9-10)

The terminal type code is found in positions 9-10 of the national POS condition code.

Positions 9-10

ISO Code	Description
00	Administrative terminal
01	POS terminal
02	ATM

ISO Code	Description
03	Home terminal
04	ECR
05	Dial terminal
06	Travelers check machine
07	Fuel machine
08	Scrip machine
09	Coupon machine
10	Ticket machine
11	Point-of-banking terminal
12	Teller
13	Franchise teller
14	Personal banking
15	Public utility
16	Vending
17	Self-service
18	Authorization
19	Payment
20	VRU
21	Smart phone
22	Interactive television
23	Personal Digital Assistant (PDA)
24	Screen phone
25	Electronic commerce
26	Transponder (IBM-only)
26	MICR terminals at POS (Connex on HP NonStop-only)
50	Off Premise
50+	Off Premise

Card Data Input Capability (Position 11)

The Card Data Input Capability code is found in position 11 of the national POS condition code.

Position 11

ISO Code	Description
0	Unknown
1	Manual, no terminal
2	Magnetic stripe
03	Bar code or QR code
4	OCR
5	ICC
6	Key entered
9	File
A	Contactless read capability via Mag stripe rules
M	Contactless read capability via Chip rules
S	Mag stripe reader and key entry
T	Mag stripe reader and key entry and EMV-compatible ICC reader
U	Mag stripe reader and EMV-compatible ICC reader
V	Secure Cardless Entry

Advice/Reversal Reason Codes (bit 060)

Reversal Reason Codes

Position 1

Position 1 of the reason code indicates who reversed this transaction. It is allocated as follows:

Position 1	Value	Description
	0	Not as reversal
	1	Card acceptor-originated reversal
	2	Acquirer-originated reversal
	3	Intermediate facility-originated reversal
	4-9	Reserved

Position 2

Position 2 values are FIS-Defined.

ISO Code Pos 1	ISO Code Pos 2	Description
0	0	Not a reversal
1-3	1	Incremental authorization
1-3	2	Terminal processor error
1-3	3	System time out
1-3	4	Terminal error/misdispense
1-3	5	Terminal communication error
1-3	6	Terminal error
1-3	7	Late or unsolicited response - inbound
1-3	8	Customer cancellation
1-3	A	Check cannot be retained
1-3	B	Coin dispenser problem
1-3	C	Cash presentation problem
1-3	D	Multiple check cashing problems
1-3	E	Suspect Fraud
1-3	F	Recalculated currency conversion fees
3	0	Format error, no action taken

Advice Reason Codes

Position 1

Position 1 of the reason code is intended to indicate the entity that originated the advice.

Position 1	Value	Description
	0	Not as advice - The use of this value may be dependent on what was received from an external entity.
	1	Card acceptor-originated advice
	2	Acquirer-originated advice
	3	Stand-in agent-originated advice
	4-7	Reserved
	8	Acquirer- originated token advice
	9	Reserved

Position 2

Position 2 values 5-9 are FIS-Defined.

ISO Code Pos 1	ISO Code Pos 2	Description
0	0	Not an advice (forced post)
1-3	1	Timed-out request message
1-3	2	Issuer not available (in delay)
1-3	3	Issuer signed off (logged off)
1-3	4	Within business agreement
1-3	5	POS alternate authorization
1-3	6	POS merchant authorization
1-3	7	POS switch authorization under floor limit
1-3	8	Encryption key not established
1-3	9	Issuer-requested standin
1-3	A	Check not returned
1-3	B	Coin dispense problem
1-3	C	Automatic fuel dispenser
1-3	D	Card authentication method (CAM) failure
2	I	Token create
2	J	Token deactivate
2	K	Token suspend
2	L	Token resume
2	M	Device provisioning result
2	N	OTP verification results
2	O	Mobile banking app activation
2	P	Replenishment confirmation of limited use keys
2	Q	Tokenization exception event
2	R	Call center activation
2	S	PAN expiration date update

ISO Code Pos 1	ISO Code Pos 2	Description
2	T	PAN replacement
2	U	Token replacement
2	V	Token expiry update
3	K	Provisional Credit
3	L	Loyalty Cashback
3	M	Correction for Out of Balance
4-7	0 - 9, A- Z	Reserved for national use
8	A	Device binding
8	B	Device binding results
8	C	OTP verification result - device binding
8	D	Call center step up - device binding
8	E	Mobile banking app step up - device binding
8	F	Device binding removed
8	G	Cardholder verification results
8	H	OTP verification result - cardholder verification
8	I	Call center step up - cardholder verification
8	J	Mobile banking app step up - cardholder verification
9	9	Reserved for private use

Network Management Information Codes (bit 070)

Message Type	Information Code	Description
0800	001	Sign on, both issuer and acquirer
0800	002	Sign off, both issuer and acquirer
0800	005	Special instructions (message to network operator)
0800	061	Sign on as issuer
0800	062	Sign off as issuer

Message Type	Information Code	Description
0800	071	Sign on as acquirer
0800	072	Sign off as acquirer
0800	101	Key change, both issuer and acquirer
0800	161	Issuer key change
0800	171	Acquirer key change
0800	180	Issuer/acquirer key change request
0800	181	Acquirer key change request
0800	191	Issuer key change request
0800	201	Initiate cutoff, issuer and acquirer
0800	202	Cutoff complete, issuer and acquirer
0800	261	Initiate cutoff as issuer
0800	262	Cutoff complete as issuer
0800	271	Initiate cutoff as acquirer
0800	272	Cutoff complete as acquirer
0800	281	Terminal cutoff
0800	282	Cardholder application cutoff
0800	301	Echo test (reply required handshake)
0820	301	Echo test (protocol acknowledgment handshake)
0800	361	Issuer echo test (reply required)
0820	361	Issuer echo test (protocol acknowledgment)
0800	371	Acquirer echo test (reply required)
0820	371	Acquirer echo test (protocol acknowledgment)
0600	601	Administrative Risk message
0600	800	Processor to processor mail
0600	801	ANA generated messages (future)
0600	810	Issuing institution mail to acquirer/consumer broadcast

Message Type	Information Code	Description
0600	811	Issuing institution to issuing institution mail
0600	812	Issuing institution to acquirer/consumer
0600	821	Acquirer/consumer to issuing institution mail
0600	822	Acquirer/consumer mail to acquirer/consumer
0620	900	Message format/syntax error messages

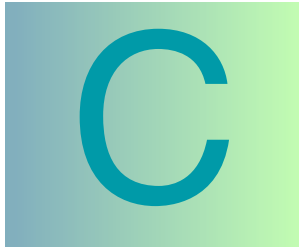
File Update Codes (bit 091)

Negative File Update Codes (0302s)

ISO Code	Description
0	Unassigned
1	Add record
2	Change record
3	Delete record
4	Bulk replacement (not supported)
5	Inquiry
6	Purge expired records (not supported)
7	Add file (not supported)
8	Delete file (not supported)
9	Unassigned
A-F	Reserved for ISO use
G-N	Reserved for national use
O-Z	Reserved for private use

Authorization Processor File Update Codes (0382s)

ISO Code	Description
0	Unassigned
1	Add record
2	Change record
3	Delete record
4	Bulk replacement (not supported)
5	Inquiry (not supported)
6	Purge expired records (not supported)
7	Add file (not supported)
8	Delete file (not supported)
9	Unassigned
A-F	Reserved for ISO use
G-N	Reserved for national use
O-Z	Reserved for private use



ISO State, Country, and Currency Codes

The codes listed in this appendix are supported in the FIS ISO 8583 Processor Interface.

State Codes

Description	Character Code	Numeric Code
Alabama	AL	01
Alaska	AK	02
Arizona	AZ	04
Arkansas	AR	05
California	CA	06
Colorado	CO	08
Connecticut	CT	09
Delaware	DE	10
District of Columbia	DC	11
Florida	FL	12
Georgia	GA	13
Hawaii	HI	15
Idaho	ID	16
Illinois	IL	17
Indiana	IN	18
Iowa	IA	19

Description	Character Code	Numeric Code
Kansas	KS	20
Kentucky	KY	21
Louisiana	LA	22
Maine	ME	23
Maryland	MD	24
Massachusetts	MA	25
Michigan	MI	26
Minnesota	MN	27
Mississippi	MS	28
Missouri	MO	29
Montana	MT	30
Nebraska	NE	31
Nevada	NV	32
New Hampshire	NH	33
New Jersey	NJ	34
New Mexico	NM	35
New York	NY	36
North Carolina	NC	37
North Dakota	ND	38
Ohio	OH	39
Oklahoma	OK	40
Oregon	OR	41
Pennsylvania	PA	42
Rhode Island	RI	44
South Carolina	SC	45
South Dakota	SD	46
Tennessee	TN	47

Description	Character Code	Numeric Code
Texas	TX	48
Utah	UT	49
Vermont	VT	50
Virginia	VA	51
Washington	WA	53
West Virginia	WV	54
Wisconsin	WI	55
Wyoming	WY	56

Canadian Provinces

Description	Character Code	Numeric Code
Alberta	AB	60
British Columbia	BC	61
Manitoba	MB	62
New Brunswick	NB	63
Newfoundland	NF	64
Newfoundland & Labrador	NL	64
NorthWest Territories	NT	65
Nunavut	NU	65
Nova Scotia	NS	66
Ontario	ON	67
Prince Edward Island	PE	68
Quebec	QC	69
Saskatchewan	SK	70
Yukon	YT	71
U.S. Military bases on foreign soil	XX	99

Country Codes

Description	2-Digit Alpha Code	3-Digit Numeric Code	3-Digit Alpha Code
Afghanistan	AF	004	AFG
Albania	AL	008	ALB
Algeria	DZ	012	DZA
American Samoa	AS	016	ASM
Andorra	AD	020	AND
Angola	AO	024	AGO
Anguilla	AI	660	AIA
Antarctica	AQ	010	ATA
Antigua	AG	028	ATG
Argentina	AR	032	ARG
Armenia	AM	051	ARM
Aruba	AW	533	ABW
Australia	AU	036	AUS
Austria	AT	040	AUT
Azerbaijan	AZ	031	AZE
Bahamas	BS	044	BHS
Bahrain	BH	048	BHR
Bangladesh	BD	050	BGD
Barbados	BB	052	BRB
Belarus	BY	112	BYN
Belgium	BE	056	BEL
Belize	BZ	084	BLZ
Benin	BJ	204	BEN
Bermuda	BM	060	BMU
Bhutan	BT	064	BTN

Description	2-Digit Alpha Code	3-Digit Numeric Code	3-Digit Alpha Code
Bolivia	BO	068	BOL
Bosnia and Herzegovina	BA	070	BIH
Botswana	BW	072	BWA
Bouvet Island	BV	074	BVT
Brazil	BR	076	BRA
British Indian Ocean Territory	IO	086	IOT
Brunei Darussalam	BN	096	BRN
Bulgaria	BG	100	BGR
Burkina Faso	BF	854	BFA
Burma	BU	104	BUR
Burundi	BI	108	BDI
Cambodia	KH	116	KHM
Cameroon	CM	120	CMR
Canada	CA	124	CAN
Cape Verde	CV	132	CPV
Cayman Islands	KY	136	CYM
Central African Republic	CF	140	CAF
Chad	TD	148	TCD
Chile	CL	152	CHL
China	CN	156	CHN
Christmas Island	CX	162	CXR
Cocos Islands	CC	166	CCK
Columbia	CO	170	COL
Comoros	KM	174	COM
Congo	CG	178	COG
Cook Islands	CK	184	COK

Description	2-Digit Alpha Code	3-Digit Numeric Code	3-Digit Alpha Code
Costa Rica	CR	188	CRI
Cote D'Ivoire	CI	384	CIV
Croatia	HR	191	HRV
Cuba	CU	192	CUB
Cyprus	CY	196	CYP
Czech Republic	CZ	203	CZE
Denmark	DK	208	DNK
Djibouti	DJ	262	DJI
Dominica	DM	212	DMA
Dominican Republic	DO	214	DOM
East Timor	TP	626	TMP
Ecuador	EC	218	ECU
Egypt	EG	818	EGY
El Salvador	SV	222	SLV
Equatorial Guinea	GQ	226	GNQ
Eritrea	ER	232	ERI
Estonia	EE	233	EST
Ethiopia	ET	231	ETH
Falkland Islands	FK	238	FLK
Faroe Islands	FO	234	FRO
Fiji	FJ	242	FJI
Finland	FI	246	FIN
France	FR	250	FRA
France Metropolitan	FX	249	FXX
French Guiana	GF	254	GUF
French Polynesia	PF	258	PYF

Description	2-Digit Alpha Code	3-Digit Numeric Code	3-Digit Alpha Code
French Southern Territories	TF	260	ATF
Gabon	GA	266	GAB
Gambia	GM	270	GMB
Georgia	GE	268	GEO
Germany	DE	276	DEU
Ghana	GH	288	GHA
Gibraltar	GI	292	GIB
Greece	GR	300	GRC
Greenland	GL	304	GRL
Grenada	GD	308	GRD
Guadeloupe	GP	312	GLP
Guam	GU	316	GUM
Guatemala	GT	320	GTM
Guinea	GN	324	GIN
Guinea-Bissau	GW	624	GNB
Guyana	GY	328	GUY
Haiti	HT	332	HTI
Heard & McDonald Is.	HM	334	HMD
Holy See	VA	336	VAT
Honduras	HN	340	HND
Hong Kong	HK	344	HKG
Hungary	HU	348	HUN
Iceland	IS	352	ISL
India	IN	356	IND
Indonesia	ID	360	IDN
Iran	IR	364	IRN

Description	2-Digit Alpha Code	3-Digit Numeric Code	3-Digit Alpha Code
Iraq	IQ	368	IRQ
Ireland	IE	372	IRL
Isle of Man	IM	833	IMN
Israel	IL	376	ISR
Italy	IT	380	ITA
Jamaica	JM	388	JAM
Japan	JP	392	JPN
Jordan	JO	400	JOR
Kazakhstan	KZ	398	KAZ
Kenya	KE	404	KEN
Kiribati	KI	296	KIR
Korea, Democratic	KP	408	PRK
Korea, Republic of	KR	410	KOR
Kosovo	QZ	900	QZZ
Kuwait	KW	414	KWT
Kyrgyzstan	KG	417	KGZ
Lao People's Democratic Republic	LA	418	LAO
Latvia	LV	428	LVA
Lebanon	LB	422	LBN
Lesotho	LS	426	LSO
Liberia	LR	430	LBR
Libyan Arab Jamahiriya	LY	434	LBY
Liechtenstein	LI	438	LIE
Lithuania	LT	440	LTU
Luxembourg	LU	442	LUX
Macau	MO	446	MAC

Description	2-Digit Alpha Code	3-Digit Numeric Code	3-Digit Alpha Code
Macedonia	MK	807	MKD
Madagascar	MG	450	MDG
Malawi	MW	454	MWI
Malaysia	MY	458	MYS
Maldives	MV	462	MDV
Mali	ML	466	MLI
Malta	MT	470	MLT
Marshall Islands	MH	584	MHL
Martinique	MQ	474	MTQ
Mauritania	MR	478	MRT
Mauritius	MU	480	MUS
Mayotte	YT	175	MYT
Mexico	MX	484	MEX
Micronesia	FM	583	FSM
Moldova, Republic of	MD	498	MDA
Monaco	MC	492	MCO
Mongolia	MN	496	MNG
Montenegro	NT	536	NTZ
Montserrat	MS	500	MSR
Morocco	MA	504	MAR
Mozambique	MZ	508	MOZ
Myanmar	MM	104	MMR
Namibia	NA	516	NAM
Nauru	NR	520	NRU
Nepal	NP	524	NPL
Netherlands	NL	528	NLD

Description	2-Digit Alpha Code	3-Digit Numeric Code	3-Digit Alpha Code
Netherlands Antilles	AN	530	ANT
New Caledonia	NC	540	NCL
New Zealand	NZ	554	NZL
Nicaragua	NI	558	NIC
Niger	NE	562	NER
Nigeria	NG	566	NGA
Niue	NU	570	NIU
Norfolk Island	NF	574	NFK
Northern Mariana Islands	MP	580	MNP
Norway	NO	578	NOR
Oman	OM	512	OMN
Pakistan	PK	586	PAK
Palau	PW	585	PLW
Palestinian Territory Occupied	PS	275	PSE
Panama	PA	591	PAN
Papua New Guinea	PG	598	PNG
Paraguay	PY	600	PRY
Peru	PE	604	PER
Philippines	PH	608	PHL
Pitcairn Island	PN	612	PCN
Poland	PL	616	POL
Portugal	PT	620	PRT
Puerto Rico	PR	630	PRI
Qatar	QA	634	QAT
Republic of Montenegro	ME	499	MNE
Reunion	RE	638	REU

Description	2-Digit Alpha Code	3-Digit Numeric Code	3-Digit Alpha Code
Romania	RO	642	ROU
Russian Federation	RU	643	RUS
Rwanda	RW	646	RWA
Saint Barthelemy	BL	652	BLM
Saint-Martin (French Part)	MF	663	MAF
Samoa	WS	882	WSM
San Marino	SM	674	SMR
San Tome and Principle	ST	678	STP
Saudi Arabia	SA	682	SAU
Senegal	SN	686	SEN
Serbia	SR	688	SRB
Seychelles	SC	690	SYC
Sierra Leone	SL	694	SLE
Singapore	SG	702	SGP
Slovakia	SK	703	SVK
Slovenia	SI	705	SVN
So. Georgia & So. Sandwich Is.	GS	239	SGS
Solomon Islands	SB	090	SLB
Somalia	SO	706	SOM
South Africa	ZA	710	ZAF
South Sudan	SS	728	SSD
Spain	ES	724	ESP
Sri Lanka	LK	144	LKA
St. Helena	SH	654	SHN
St. Kitts-Nevis-Anguilla	KN	659	KNA
St. Lucia	LC	662	LCA

Description	2-Digit Alpha Code	3-Digit Numeric Code	3-Digit Alpha Code
St. Pierre and Miquelon	PM	666	SPM
St. Vincent and the Grenadines	VC	670	VCT
Sudan	SD	729	SDN
Suriname	SR	740	SUR
Svalbard & Jan Mayen Is.	SJ	744	SJM
Swaziland	SZ	748	SWZ
Sweden	SE	752	SWE
Switzerland	CH	756	CHE
Syrian Arab Republic	SY	760	SYR
Taiwan	TW	158	TWN
Tajikistan	TJ	762	TJK
Tanzania	TZ	834	TZA
Thailand	TH	764	THA
Togo	TG	768	TGO
Tokelau	TK	772	TKL
Tonga	TO	776	TON
Trinidad and Tobago	TT	780	TTO
Tunisia	TN	788	TUN
Turkey	TR	792	TUR
Turkmenistan	TM	795	TKM
Turks & Caicos Islands	TC	796	TCA
Tuvalu	TV	798	TV
Uganda	UG	800	UGA
Ukrainian SSR	UA	804	UKR
United Arab Emirates	AE	784	ARE
United Kingdom	GB	826	GBR

Description	2-Digit Alpha Code	3-Digit Numeric Code	3-Digit Alpha Code
United States	US	840	USA
Uruguay	UY	858	URY
US Minor Outlying Islands	UM	581	UMI
US Virgin Islands	VI	850	VIR
Uzbekistan	UZ	860	UZB
Vanuatu	VU	548	VUT
Venezuela	VE	862	VEN
Viet Nam	VN	704	VNM
Virgin Islands (British)	VG	092	VGB
Wallis and Futuna Is.	WF	876	WLF
Western Sahara	EH	732	ESH
Yemen	YE	887	YEM
Yugoslavia	YU	891	YUG
Zaire	CD	180	COD
Zambia	ZM	894	ZMB
Zimbabwe	ZW	716	ZWE

Currency Codes

Currency Code	Description	Currency Precision Units
004	Afghani	2
008	Lek	2
012	Algerian Dinar	2
020	Andorran Peseta	0
024	New Kwanza	2
031	Azerbaijani Manat	2

Currency Code	Description	Currency Precision Units
032	Argentine Peso	2
036	Australian Dollar	2
044	Bahamian Dollar	2
048	Bahraini Dinar	3
050	Taka	2
051	Armenian Dram	2
052	Barbados Dollar	2
060	Bermudian Dollar	2
064	Ngultrum	2
068	Boliviano	2
072	Pula	2
084	Belize Dollar	2
090	Solomon Islands Dollar	2
096	Brunei Dollar	2
100	Lev	2
104	Kyat	2
108	Burundi Franc	0
112	Belarussian Ruble	0
116	Riel	2
124	Canadian Dollar	2
132	Cape Verde Escudo	2
136	Cayman Islands Dollar	2
144	Sri Lanka Rupee	2
152	Chilean Peso	2
156	Yuan Renminbi	2
157	Chinese Renminbi	2
170	Colombian Peso	2

Currency Code	Description	Currency Precision Units
174	Comoro Franc	0
180	New Zaire	2
188	Costa Rican Colon	2
191	Croatian Kuna	2
192	Cuban Peso	2
196	Cyprus Pound	2
203	Czech Koruna	2
208	Danish Krone	2
214	Dominican Peso	2
218	Sucre	2
222	El Salvador Colon	2
230	Ethiopian Bir	2
232	Nakfa	2
233	Kroon	2
238	Falkland Islands Pound	2
242	Fiji Dollar	2
262	Djibouti Franc	0
270	Dalasi	2
280	Deutsche Mark (old)	2
288	Cedi	2
292	Gibraltar Pound	2
320	Quetzal	2
324	Guinea Franc	0
328	Guyana Dollar	2
332	Gourde	2
340	Lempira	2
344	Hong Kong Dollar	2

Currency Code	Description	Currency Precision Units
348	Forint	2
352	Iceland Krona	2
356	Indian Rupee	2
360	Rupiah	2
364	Iranian Rial	2
368	Iraqi Dinar	3
376	Israeli Shequel	2
388	Jamaican Dollar	2
392	Yen	0
398	Kazakhstan Tenge	2
400	Jordanian Dinar	3
404	Kenyan Shilling	2
408	North Korean Wow	2
410	Wow	0
414	Kuwaiti Dinar	3
417	Som	2
418	Kip	2
422	Lebanese Pound	2
426	Loti	2
428	Latvian Lats	2
430	Liberian Dollar	2
434	Libyan Dinar	3
440	Lithuanian Litas	2
446	Pataca	2
450	Malagasy Franc	0
454	Kwacha	2
458	Malaysian Ringgit	2

Currency Code	Description	Currency Precision Units
462	Rufiyaa	2
470	Maltese Lira	2
478	Ouguiya	2
480	Mauritius	2
484	Mexican Nuevo Peso	2
496	Tugrik	2
498	Moldovan Leu	2
499	Euro	2
504	Moroccan Dirham	2
508	Metical	2
512	Rial Omani	3
516	Namibia Dollar	2
524	Nepalese Rupee	2
532	Netherlands - Antillian Guilder	2
533	Aruban Guilder	2
548	Vatu	0
544	New Zealand Dollar	2
558	Cordoba Oro	2
566	Naira	2
578	Norwegian Krone	2
586	Pakistan Rupee	2
590	Balboa	2
598	Kina	2
600	Guarani	0
604	Nuevo Sol	2
608	Philippine Peso	2
624	Guinea-Bissau Peso	2

Currency Code	Description	Currency Precision Units
626	Timor Escudo	0
634	Qarari Rial	2
642	Leu	2
643	Russian Ruble	2
646	Rwanda Franc	0
654	St Helena Pound	2
678	Dobra	2
682	Saudi Riyal	2
690	Seychelles Rupee	2
694	Leone	2
702	Singapore Dollar	2
703	Slovak Koruna	2
704	Dong	0
705	Tolar	2
706	Somali Shilling	2
710	Rand	2
716	Zimbabwe Dollar	2
728	South Sudanese Pound	2
736	Sudanese Pound	2
740	Surinam Guilder	2
748	Lilangeni	2
752	Swedish Krona	2
756	Swiss Franc	2
760	Syrian Pound	2
762	Tajik Ruble	0
764	Baht	2
776	Pa'anga	2

Currency Code	Description	Currency Precision Units
780	Trinidad & Tobago Dollar	2
784	UAE Dirham	2
788	Tunisian Dinar	3
793	Pseudo Turkish Lira	0
795	Manat	2
800	Uganda Shilling	0
807	Denar	2
810	Russian Ruble	2
818	Egyptian Pound	2
826	Pound Sterling	2
834	Tanzanian Shilling	2
840	US Dollar	2
858	Peso Uruguayo	2
860	Uzbekistan Sum	2
862	Bolivar	2
882	Tala	2
886	Yemeni Rial	2
894	Kwacha	2
901	New Taiwan Dollar	2
931	Peso Convertible	2
933	Belarussian Ruble	2
941	Serbian Dinar	2
947	WIR Euro (Switzerland)	2
948	WIR Frank (Switzerland)	2
949	New Turkish Lira	2
950	CFA Franc BEAC	0
951	East Caribbean Dollar	2

Currency Code	Description	Currency Precision Units
952	CFA Franc BCEAO	0
953	CFP Franc	0
954	European Currency Unit	2
968	Surinam Dollar	2
972	Tajikistani Somoni	2
973	Angola	2
975	Bulgaria	2
976	Franc Congolais	2
977	Convertible Mark	2
978	Euro	2
979	Mexican Unidad de Inversion	2
980	Hryvnia	2
981	Lari	2
982	Kwanza Real Readjusto	2
985	Zloty	2
986	Brazilian Real	2

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