Carrier Payment ICD Companion Guide

Version 3.0

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Revision History

Version	Date	Modified By	Description
1.0	4/12/13	Brad Fredericks	Initial Draft.
1.1	4/14/13	Brad Fredericks	Additional clarifications added for 820 segments.
1.2	4/14/13	David Jurk	Reflected J. Tease comments
1.3	4/19/13	David Jurk	Changes to reflect business process decisions by SOV on 18 April 2013 and discussion of 17 April 2013
1.4	4/19/13	Justin Tease	Minor edits, grammar, and spelling
2.0	4/20/13	Brad Fredericks	Addition of 820 Payment Notification message details, payment adjustment information, and overall edits for clarity and accuracy.
2.1	4/22/13	David Jurk	Minor edits
2.2	4/26/13	Brad Fredericks	Added VT CSR details. Additional minor edits.
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1 Introduction

The Vermont Health Benefit Exchange (VT HBE) is intended by the Affordable Care Act (ACA) to be a facilitator in the provision of healthcare coverage for eligible citizens. It is intended to bring issuers and applicants together and streamline and operationally ease the task of applying for and enrolling in health benefits.

This document serves as a supplement to the information provided in the *Carrier Payment Interface Control Document (ICD)*.

1.1 Purpose

This *Carrier Payment ICD Companion Guide* provides an operational explanation of the interfaces and messages described in the *Carrier Payment Interface Control Document (ICD)*.

As a key component of that, the *820 Payment Companion Guide* defines the ASC X12N/005010X306 820 premium payment transactions (hereafter simply the —820 transactions) being implemented for use with the VT HBE.

This document describes the use of 820 messages that will be used for both the Individual and Small Business markets as outlined below.

- Premium Remittance - 820 Messages used by the VT HBE to notify QHP Issuers of the weekly remittance of individual and employer premium payment funds.
- Premium Payment Notification - 820 Messages used by the VT HBE to notify QHP Issuers on a nightly basis regarding the receipt payments for initial and ongoing premium amounts due.
- 820 Messages used by the VT HBE to notify QHP Issuers on a monthly basis regarding the remittance of Vermont Cost Sharing Reduction payments.

In addition, this guide details the transmission of a monthly "Invoice" file sent from the VT HBE to QHP Issuers, which will contain member level premium amounts due to each specific QHP Issuer participating in the Exchange.

2 Trading Partner Coordination

This section outlines coordination activities that must be addressed, including establishment of trading partner and data sharing agreements.

2.1 Establishment of Trading Partner Agreement

Information on trading partner agreements between the VT HBE and QHP Issuers will be provided in subsequent versions of the *Companion Guide*.

2.2 Establishment of Data Sharing Agreement

It is expected that a data sharing agreement will be in place between the VT HBE and QHP Issuers in order to enable the transmission and receipt of the 820 Premium Payment files.

3   Technical Considerations for 820 Transactions

This section is intended to give detailed information around the development of the technical specifications for the VT HBE.

3.1   Transmission Standards

The 820 transaction message structure is based on 820 format defined in the X12N/005010X306 Implementation Guide.   The *X12N/005010X306 Implementation Guide* should be referred to as needed when applying the control segment, acknowledgment and instructions contained in this document.

3.2   Secure Data Transfer Protocol

The VT HBE will send and receive 820 transaction and acknowledgment messages via web services, as detailed in the *Carrier Payment Interface Control Guide*. All messages will be sent via an encrypted transmission protocol.

The monthly invoice data files will be transferred via SFTP protocol.

3.3   Data Format

The data format conventions listed below will apply to 820 messages.

Dates:

The following rules apply to any dates in the 820 premium payment transactions:

- The date formats will adhere to the data standards defined in the *X12N/005010X306A1 Implementation Guide*
- The YYMMDD format will be used for the ISA09 element (interchange date).
- All other elements will use the CCYYMMDD data format will be used for the DTP02 data elements to help ensure Year 2000 compliance as defined by the "D8" code. The only value acceptable for "CC" (century) is 20.
- No spaces or character delimiters will be used in presenting dates.

Time:

The following rules apply to times contained in the 820 transactions:

- The time formats will adhere the data standards defined in the *X12N/005010X306A1 Implementation Guide*
- The following time formats will be used for BGN04: HHMMSS, HHMMSSD or HHMMSSDD, where SS – seconds, D = tenths of a seconds and DD = hundredths 0f seconds.
- All time will be in 24 hour time format, where HH = hours (00-23) and MM = Minutes (00-59).
- No spaces or character delimiters will be used in presenting times.
- Operational (non-functional) Time values should be based on Universal Time Coordinated (UTC).

Field Length:

ASC X12 standards specify minimum and maximum field lengths for all of the data elements of the 820 payment transactions. The VT HBE 820 transaction message will adhere to these standards. Refer to the *X12N/005010X306 Implementation Guide* for standard field lengths.

Phone Numbers:

Phone numbers are presented as contiguous numeric strings, without dashes or parenthesis markers. For example, 8005551212 should be used to represent the phone number (800) 555-1212. Area codes must always be included.

4   820 Control Segment Definitions

The X12N EDI Control Segments are defined in this section. The formal layout will follow the 820 5010X306 specification for Health Insurance Exchange Related Payments.

4.1   ISA – Interchange Control Header Segment

This segment within the *X12N Implementation Guide* identifies the start of an interchange of zero or more functional groups and interchange-related control segments.

The following table provides additional instructions regarding this segment.

Exhibit 1: Control Header

Loop	Element	Element Name	Code	Instruction
	ISA	Interchange Control Header		
	ISA01	Authorization Information Qualifier	"00"	00 - No authorization information present
	ISA03	Security Information Qualifier	"00"	00 - No security information present.
	ISA04	Security Information		This data element will be blank.
	ISA05	Interchange ID Qualifier	"ZZ"	Mutually defined.
	ISA06	Interchange Sender ID		A mutually defined interchange sender identifier will be provided.
	ISA07	Interchange ID Qualifier	"ZZ"	Mutually defined.
	ISA08	Interchange Receiver ID		A mutually defined receiver identifier will be provided.
	ISA09	Interchange Date		Date of interchange.
	ISA10	Interchange Time		Time of interchange.
	ISA12	Interchange Control Version Number	"00501"	
	ISA13	Interchange Control Number		A unique identifier that will never be duplicated. If a transaction is repeated (due to error resolution for example), the identifier may be reused, but there would never be a duplicate.
	ISA14	Acknowledgement Requested	"1"	TA1 requested.
	ISA15	Interchange Usage Indicator	"T" "P"	T - Test. P - Production.

4.2   ST – Transaction Set Header

This segment within the *X12N Implementation Guide* indicates the start of the transaction set and assigns a control number to the transaction. Required data elements for this segment are shown in the table below. There will be one ST segment per enrollment group. Employer and employee information will be contained within one ST/SE loop.

Additional instructions pertaining to the ST segment are provided in the following table.

Exhibit 2: Transaction Set Header

Loop	Element	Element Name	Code	Instruction
	ST01	Transaction Set Identifier Code	"820"	820 - Remittance Advice
	ST02	Transaction Set Control Number		A unique identifier. For remittance messages, this represents the identifier of the ACH transaction that moved the funds.
	ST03	Implementation Convention Reference	"005010X306"	Used for employer group and individual payments

5   Message Acknowledgements

This section defines acknowledgements used for the processing of incoming 820 premium payment files.

5.1   TA1 Interchange Acknowledgement

- The VT HBE expects to receive a TA1 interchange acknowledgment for every outbound 820 message sent.
- Each message sent via web services to the carriers will expect to have a synchronous acknowledgement response made up of a TA1 structure. This response identifies that the carrier has successfully consumed the request message structure.

5.2   999 Functional Acknowledgement

- Exception basis only - The VT HBE expects to receive a 999 functional acknowledgment for an 820 functional group only when the message fails to pass the Issuer's transaction business logic.
- A Functional Group is defined as the sending of an 820 with a new Transaction Set Control Number.

6   Detailed Business Scenarios for Payment Transactions

The VT HBE utilizes a third-party payment vendor to handle the processing of premium payments. Although the payment processor will handle the collection of funds, all payment related messages sent to QHP Issuers will originate from the VT HBE.

This section presents detailed information regarding the payment related messages that will be sent from the VT HBE to the QHP Issuers to communicate payment details.

6.1 Payment Overview

6.1.1 Individual Enrollment Payment Sequence

The sequence below represents a high-level overview of the payment related events that occur during a new individual enrollment.

Payment Method Selection

- An Individual completes the insurance plan selection on the VT HBE enrollment portal.
- The Individual enters payment information into the VT HBE. The following payment methods will be accepted:
  - Credit Card/Debit Card
  - ACH
  - Check
- The VT HBE transmits the Individual's enrollment and payment details to the premium processor in real time via a web service.

Receipt of Funds Notification

- After full payment of a premium is received by the payment processor, notification will be sent from the payment processor to the VT HBE.
- The VT HBE will send an 820 "Payment Notification" message that provides detail about payment received. This might be a check received, a credit card payment, or an ACH funds transfer. This will occur on a nightly (i.e. every 24 hours) basis.

Remittance of Funds to QHP Issuer

- The payment processor will remit funds from a State of Vermont bank account to the QHP Issuer's bank account on Wednesday of the following week.
- The payment processor will transmit a "remittance advice" message to the VT HBE containing the transaction details of the funds remitted for each QHP Issuer.
- The VT HBE will then transmit the 820 "remittance advice" message to QHP Issuers containing the transaction details of remitted funds, along with the Issuer specific individual identifier (Subscriber ID.)

Monthly Invoice to QHP Issuers for Ongoing Payments

- On a monthly basis, the VT HBE will query the payment processor's system to retrieve the individual subscriber and member premium amounts due.
- The VT HBE will transmit the invoice information to QHP Issuers.

6.1.2 Group Enrollment Payment Sequence

The sequence below represents a high level overview of the payment related events that occur during the enrollment of an employer group.

Employer Invoice Generation

- After an employer's open enrollment period ends, the VT HBE transmits the group roster enrollment information to the premium processor.
- The payment processor calculates the total amount due for the group policy and mails an invoice to the employer.

Receipt of Payment Notification

- After full payment of the employer's group premium has been received by the payment processor, notification will be sent from the payment processor to the VT HBE.
- The VT HBE transmits a series of one or more 834 messages that enroll employees into that the employer's group. For initial enrollment transactions, the 834 'Add' serves as an indication that the premium was received in full. This sequence is actually part of enrollment, and as such is described in the *Carrier Enrollment Interface Control Document* and accompanying *Carrier Enrollment ICD Companion Guide* in full detail.
- An 820 "Payment Notification" transaction will then be sent that details the actual payment received, providing actual amount paid.

Remittance of Funds to QHP Issuer

- The payment processor will remit funds from a State of Vermont bank account to the QHP Issuer's bank account on Wednesday of the following week.
- The payment processor will transmit a "remittance advice" message to the VT HBE containing the transaction details of the funds remitted to the QHP Issuer.
- The VT HBE will then transmit the 820 "remittance advice" message to QHP Issuers containing the transaction details of remitted funds, along with the Issuer specific group identifier.

Monthly Invoice to QHP Issuers for Ongoing Payments

- On a monthly basis, the VT HBE will query the payment processor's system to retrieve the employer premium amounts due.
- The VT HBE will transmit the invoice information to QHP Issuers.

6.2   820 Premium Payment Notification Message

The delivery, on a nightly basis, of an 820 "Payment Notification" message to the carriers, is intended to provide a near real-time reflection of the receipt of full premium payments.

Payments are only included on the nightly "Payment Notification" message when they satisfy the full payment of an outstanding premium amount due for a policy. Partial payments made towards a policy are not included on this message.

When several partial payments are made to fully cover a single premium amount due for a policy, the 820 will only contain a single payment transaction representing the total amount received.

If part of a full premium payment is voided for any reason, such as NSF, the entire premium amount will be show as an adjustment in the next 820 Payment Notification message. The "*Adjustments*" section in this Section 6 of this guide provides additional detail regarding the communication of payment adjustments.

This 820 message does not communicate the actual transfer of funds. The "payer" and "payee" details contained in this 820 are for identification purposes only. The actual remittance of funds from the Exchange to QHP Issuers is transmitted in a weekly "remittance advice" 820, which is detailed in the next section.

Separate 820 premium payment notification messages will be sent to QHP Issuers for group and individual payments. A QHP Issuer will only receive premium payment transaction data relating to their own subscribers.

The full structure of the 820 "Payment Notification" message is based on the 820 5010X306 specification for Health Insurance Exchange Related Payments. The table below provides specific instructions relating to the 820 message.

Exhibit 3: 820 Message Details

Loop	Element	Element Name	Code	Instruction
	BPR	Beginning Segment for Remittance Advice		
	BPR01	Transaction Handling Code	"I"	I – Remittance Information Only.
	BPR02	Monetary Amount	"0"	This indicates that no funds are being moved in this 820.
	BPR03	Credit/Debit Flag Code	"C"	C – Credit
	BPR04	Payment Method	"NON"	"Non-Payment Data" – This payment method code is used for "Premium Payment Notification" 820 messages.
	BPR16	Date		Payment effective date
	REF	Issuer Assigned Qualified Health Plan Identifier		
	REF01	Reference Identification Qualifier	TV	TV –Line of Business. This will be populated with the Employer's Group ID when appropriate.
	REF02	Reference Identification		Group ID.
	DTM	Coverage Period		
	DTM01	Date/Time Reference	"582"	582 – Report Period.
	DTM05	Date Time Period Format Qualifier	"RD8"	Range of dates expressed in the format CCYYMMDD-CCYYMMDD.
	DTM06	Date Time Period		This is the start and end date for the coverage period. The exchange will only offer monthly plans, so this date range will be from the beginning to the end of the month for which payment was made.
Loop 1000A – This Loop will contain information identifying the QHP Issuer. Note that the 820 "Payment Notification" message does not communicate the actual transfer of funds. This loop is for informational purposes only.				
1000 A	N1	Payee Name		This segment represents the QHP Issuer that is receiving the payments.
	N101	Entity Identifier Code	"PE"	PE – Payee.
	N102	Name		The QHP Issuer's organization name.
	N103	Identification Code Qualifier		FI – Federal Taxpayer Identification Number
	N104	Identification Code		The QHP Issuer's Federal Taxpayer Identification Number

Loop	Element	Element Name	Code	Instruction
Loop 1000B – Payer. Note that the 820 "Payment Notification" message does not communicate the actual transfer of funds. This loop is for informational purposes only.				
1000 B	N1	Payer's Name		This segment represents the State of Vermont
	N101	Entity Identifier Code	"RM"	Remitter Name.
	N102	Name		State of Vermont
	N103	Identification Code Qualifier	"58"	Originating Company Number
	N104	Identification Code		This code will identify the State of Vermont
1000 B	PER	Payer's Administrative Contact Information		
	PER01	Contact Function Code	"IC"	Indicates Contact Information
	PER02	Name		State of Vermont
	PER03	Communication Qualifier Number	"TE"	Telephone
	PER04	Communication Number		An appropriate telephone number for the State of Vermont will be provided.
	PER05	Communication Qualifier Number	"EM"	Electronic Mail
	PER06	Communication Number		An appropriate email address for the State of Vermont will be provided.
	PER07	Communication Qualifier Number	"FX"	Facsimile
	PER08	Communication Number		An appropriate fax number for the State of Vermont will be provided.
Loop 2000 – Remittance Information				
2000	ENT	Remittance Information		
	ENT01	Assigned Number		Sequential Number of the Loop Detail (starting at 1)
Loop 2100 – Individual Name				
2100	NM1	Individual Name		
	NM101	Entity Identifier Code	"IL"	"Insured or Subscriber"
	NM102	Entity Type Qualifier	"1"	"Person"
	NM103	Last Name		Last name of the subscriber.
	NM104	First Name		First name of the subscriber.
	NM108	Identification Code Qualifier	"C1"	Insured or Subscriber
	NM109	Identification Code		The Exchange assigned Subscriber Identification Number will be provided here.

Loop	Element	Element Name	Code	Instruction
2100	REF	Issuer Assigned Qualified Health Plan Identifier		This segment will be transmitted only for payments related to plans for Individuals.
	REF01	Reference Identification Qualifier	"TV"	TV – Line of Business
	REF02	Reference Identification		The QHP Issuer's health plan identifier will be provided here.
2100	REF	Issuer Assigned Employer Group Identifier		This segment will be transmitted only for payments related to Small Business insurance.
	REF01	Reference Identification Qualifier	"1L"	1L – Group or Policy Number
	REF02	Reference Identification		For payments related to an Employer Group, the QHP Issuer's Group identifier will be provided here.
Loop 2300 – Remittance Detail				
2300	RMR	Remittance Detail		
	RMR01	Reference Identification Qualifier	"ZZ"	Exchange Payment Type.
	RMR02	Reference Payment Type		The expected payment types that the VT HBE will send to QHP Issuers are: Premium Payment Returned Payment
	RMR04	Monetary Amount		Provide amount of payment or adjustment associated with this insured. Note that values corresponding to an adjustment may be negative.
2300	DTM	Individual Coverage Period		This segment will communicate the start and end dates related to the payment.
	DTM01	Date/Time Qualifier	"582"	582 – Report Period.
	DTM05	Date Time Period Format Qualifier		RD8 – CCYYMMDD – CCYYMMDD
	DMT06	Date Time Period		Date range corresponding to the premium payment. This will match the premium payment coverage period.

6.3   820 Remittance Message – VT HBE to QHP Issuer

The payment processor will remit funds from a State of Vermont bank account to the QHP Issuer's bank account on Wednesday of each week.

The VT HBE will transmit an 820 "remittance advice" message to QHP Issuers containing the transaction details of remitted premium funds, including the specific policy level identifiers and group or subscriber identifiers to which the payments have been applied. Note that for employer Groups, only a group identifier will be provided, as the funds represent a single payment covering the premium for all enrollees of that Group.

The remitted funds will represent only fully paid individual and employer premium payments. If multiple payments were made towards a full premium amount due, only the full premium amount will be detailed. Information regarding refunds and other adjustments is found in Section 6 "*Adjustments*" later in this guide.

Separate 820 remittance messages will be sent to QHP Issuers for group and individual payments. A QHP Issuer will only receive premium payment transaction data relating to their own subscribers.

Transaction contained on the Wednesday 820 remittance message represents full premium payments processed between Monday and Friday of the previous week.

The full structure of the 820 message will conform to the 820 5010X306 specification for Health Insurance Exchange Related Payments. The following table provides specific instructions relating to the 820 message.

Exhibit 4: 820 Message Details (VT HBE to QHP Issuer)

Loop	Element	Element Name	Code	Instruction
	BPR	Beginning Segment for Remittance Advice		
	BPR01	Transaction Handling Code	"I"	I – Remittance Information Only. Indicates that the payment is moving separately from the remittance Advice.
	BPR02	Monetary Amount		The amount of the total payment being sent in this 820 transaction set
	BPR03	Cred/Debit Flag Code	"C"	C – Credit
	BPR04	Payment Method		Leave this blank. The VT HBE will only send remittance information in the 820.
	BPR16	Date		Payment effective date
	REF	Issuer Assigned Qualified Health Plan Identifier		
	REF01	Reference Identification Qualifier	TV	TV –Line of Business. This will be populated with the Employer's Group ID when appropriate.
	REF02	Reference Identification		Group ID.
	DTM	Coverage Period		
	DTM01	Date/Time Reference	"582"	582 – Report Period.
	DTM05	Date Time Period Format Qualifier	"RD8"	Range of dates expressed in the format CCYYMMDD-CCYYMMDD.
	DTM06	Date Time Period		This is the start and end date for the coverage period. The exchange will only offer monthly plans, so this date range will be from the beginning to the end of the month for which payment was made.

Loop	Element	Element Name	Code	Instruction
Loop 1000A – This Loop will contain information identifying the QHP Issuer.				
1000A	N1	Payee Name		This segment represents the QHP Issuer that is receiving the payments.
	N101	Entity Identifier Code	"PE"	PE – Payee.
	N102	Name		The QHP Issuer's organization name.
	N103	Identification Code Qualifier		FI – Federal Taxpayer Identification Number
	N104	Identification Code		The QHP Issuer's Federal Taxpayer Identification Number
Loop 1000B – Payer				
1000B	N1	Payer's Name		This segment represents the State of Vermont
	N101	Entity Identifier Code	"RM"	Remitter Name.
	N102	Name		State of Vermont
	N103	Identification Code Qualifier	"58"	Originating Company Number
	N104	Identification Code		This code will identify the State of Vermont
1000B	PER	Payer's Administrative Contact Information		
	PER01	Contact Function Code	"IC"	Indicates Contact Information
	PER02	Name		State of Vermont
	PER03	Communication Qualifier Number	"TE"	Telephone
	PER04	Communication Number		An appropriate telephone number for the State of Vermont will be provided.
	PER05	Communication Qualifier Number	"EM"	Electronic Mail
	PER06	Communication Number		An appropriate email address for the State of Vermont will be provided.
	PER07	Communication Qualifier Number	"FX"	Facsimile
	PER08	Communication Number		An appropriate fax number for the State of Vermont will be provided.
Loop 2000 – Remittance Information				
2000	ENT	Remittance Information		
	ENT01	Assigned Number		Sequential Number of the Loop Detail (starting at 1)

Loop	Element	Element Name	Code	Instruction
Loop 2100 – Individual Name				
2100	NM1	Individual Name		
	NM101	Entity Identifier Code	"IL"	"Insured or Subscriber"
	NM102	Entity Type Qualifier	"1"	"Person"
	NM103	Last Name		Last name of the subscriber.
	NM104	First Name		First name of the subscriber.
	NM108	Identification Code Qualifier	"C1"	Insured or Subscriber
	NM109	Identification Code		The Exchange assigned Subscriber Identification Number will be provided here.
2100	REF	Issuer Assigned Qualified Health Plan Identifier		This segment will be transmitted only for payments related to plans for Individuals.
	REF01	Reference Identification Qualifier	"TV"	TV – Line of Business
	REF02	Reference Identification		The QHP Issuer's health plan identifier will be provided here. This represents the HIOS identifier received from SERFF. This will consist of the HIOS Plan ID Component + subcomponent.
2100	REF	Issuer Assigned Employer Group Identifier		This segment will be transmitted only for payments related to Small Business insurance.
	REF01	Reference Identification Qualifier	"1L"	1L – Group or Policy Number
	REF02	Reference Identification		For payments related to an Employer Group, the QHP Issuer's Group identifier will be provided here.
Loop 2300 – Remittance Detail				
2300	RMR	Remittance Detail		
	RMR01	Reference Identification Qualifier	"ZZ"	Exchange Payment Type.
	RMR02	Reference Payment Type		The expected payment types that the VT HBE will send to QHP Issuers are: Premium Payment Returned Payment
	RMR04	Monetary Amount		Provide amount of payment or adjustment associated with this insured. Note that values corresponding to an adjustment may be negative.

Loop	Element	Element Name	Code	Instruction
2300	DTM	Individual Coverage Period		This segment will communicate the start and end dates related to the payment.
	DTM01	Date/Time Qualifier	"582"	582 – Report Period.
	DTM05	Date Time Period Format Qualifier		RD8 – CCYYMMDD – CCYYMMDD
	DMT06	Date Time Period		Date range corresponding to the premium payment. This will match the premium payment coverage period.

6.4   Invoice Notification – VT HBE to QHP Issuer

On a monthly basis, the VT HBE will query the payment processor's system to retrieve the individual subscriber and member premium amounts due.

The VT HBE will transmit this invoice information to QHP Issuers to aid in their accounts receivable business processes. The day of the month for this reoccurring transfer will be specified in a later draft of this *Companion Guide.*

The invoice data provided by the VT HBE will reside in a comma delimited "flat text file" and will be sent via SFTP file transfer. This data file will contain one record for every individual and employer premium amount due for the following month. Each QHP Issuer will only receive records pertaining to their subscribers.

The following table illustrates the fields that will be provided in the data file.

Exhibit 5: Invoice Notification File Layout

Invoice Number	Group ID	Plan Identifier	Subscriber ID	Member ID	Premium Due Date	Premium Amount Due
The invoice number generated by the payment processor.	For Employer invoices, this identifies the Group.	This represents the QHP ID corresponding to the plan.	The QHP Issuer Assigned Subscriber ID.	The QHP Issuer Assigned Member ID.	The due date of the premium amount.	The total premium due.

6.5   Adjustments

When the VT HBE premium processor initiates an adjustment to a premium payment, the details of this transaction will be present in the 820 "remittance advice" message sent to QHP Issuers on Wednesday of each week. The adjustment will also appear in the nightly "Premium Payment Notification" 820 in a situation where a policy moves from "fully paid" back to a "partial payment" status. The following adjustment scenarios further clarify how adjustments will be communicated.

All refunds of premium payments back to subscribers or employer groups will be handled by the Exchange.

The following payment type will be present in 820 messages:

▪   Premium Payment – Represents funds relating to the payment of a specific policy.

> ▸ Positive Amount: Premium amount remitted from the Exchange to the Insurance Carrier.
>
> ▸ Negative Amount: Premium amount that is being returned from the Insurance Carrier to the Exchange. This amount is deducted from the overall total of funds being moved, which are reported in BPR02.

- Returned Payment – A negative amount representing a prior payment that has been returned to the originating bank. This includes checks returned for non-sufficient funds or disputed credit card payments.

6.5.1 Adjustment Scenarios

Return of Payment Prior to Remittance of Funds

- An individual has previously paid $400 towards his $800 total premium due this month.
- Thursday morning, a $400 payment is made via check for a policy, and the full premium amount due has been satisfied.
- Thursday night, the Exchange includes the $800 premium payment for the policy in the nightly premium payment notification 820.
- Monday, the $400 check is returned for non-sufficient funds, meaning that the full premium amount has not been met.
- Monday night, the Exchange will send an 820 "Premium Payment Notification" containing a value of -$800 for this policy.

Return of Payment After Remittance of Funds

- An individual has previously paid $400 towards his $800 total premium due this month.
- On Friday morning, a $400 payment is made via credit card, meaning the full premium amount due has been satisfied.
- Friday night, the Exchange includes the $800 premium payment for the policy in the nightly premium payment notification 820.
- On Wednesday, the $800 payment is included on the 820 "remittance" to the Carrier.
- The next day, the $400 credit card payment is captured back by the credit card processor due to a payment dispute, meaning that the full premium amount has not been met.
- That evening, the Exchange will send an 820 "Premium Payment Notification" containing a premium payment of -$800 for this policy. This signals to the Carrier that this policy should not be considered paid in full.
- On Wednesday of the following week, the Exchange will send an 820 "remittance" with two transactions relating to this policy:
  - ▸ A -$400 "premium" payment type, which corresponds to the partial payment that was received.
  - ▸ A -$400 "returned" payment type, which corresponds to the returned credit card payment.
  - ▸ These funds are deducted from the other net positive amounts being remitted.

6.6 Cost Sharing Reduction Payment Remittance

Vermont Cost Sharing Reduction (VTCSR) payments represent funds that are provided to Carriers to offset the assumption of costs that are not reflected in the price of a premium. Although VTCSR payments are made at the policy level, there is no relationship between VTCSR payments and the payment of premiums for a policy.

VTCSR payments will be remitted to Carriers on the last banking day of the month, along with an 820 message that describes transaction level details of the fund transfer.

This 820 message will always be sent separately from any of the other usages of the 820 described in this document. A "VTCSR" payment type in RMR02 of the remittance detail segment distinguishes these payments from other 820 messages sent by the exchange.

The VTCSR 820 message follows the same structure as the 820 messages described earlier. The table below shows the remittance details that will be sent in this message.

Exhibit 6: VTCSR Remittance Detail Loop

Loop	Element	Element Name	Code	Instruction
Loop 2300 – Remittance Detail				
2300	RMR	Remittance Detail		
	RMR01	Reference Identification Qualifier	"ZZ"	Exchange Payment Type.
	RMR02	Reference Payment Type	"VTCSR"	
	RMR04	Monetary Amount		Amount of the VT CSR applied to this policy.
2300	DTM	Individual Coverage Period		This segment will communicate the start and end dates related to the payment.
	DTM01	Date/Time Qualifier	"582"	582 - Report Period.
	DTM05	Date Time Period Format Qualifier		RD8 - CCYYMMDD - CCYYMMDD
	DMT06	Date Time Period		First day of month to the last day of month for which the CSR payment applies.

7   Problem Resolution

A detailed issue resolution plan is being developed independently from this *Companion Guide.* These procedures will take effect when logical errors are encountered involving any messages sent from the VT HBE to QHP Issuers, or when any other issues in the payment cycle arise.

7.1   Web Service Security Standards

7.1.1   WS-Security

One of the most important elements of an interface is the reliable application of appropriate security levels; further, we need to strike a balance between the very strict privacy mandates we face with the performance needs of the VT HBE system.

Standardized security for web services is provided through a very mature, well-tested model described in the OASIS WS-Security specification.

Depicted below is a fully WS-Security compliant layer for a web service request/response pair. This consists of:

1. Transport layer security (SSL)

2. A two-phase process using both symmetric and asymmetric algorithms.

3. A shared key that is used to encrypt/decrypt the message data using a symmetric algorithm such as Triple DES. Symmetric algorithms are very efficient and work with a single key for both encryption and decryption calculations. WS-Security implementations use a key that is randomly generated. Once the data of the message is encrypted, the key itself is inserted into the message. (Note that the key is also encrypted as described below.)

4. Passing the shared key in the SOAP message with the key encrypted/decrypted using an asymmetric algorithm such as RSA-V1.5. Encryption of the shared key is performed differently than the message data with an algorithm that utilizes a pair of keys – private and public. An X.509 certificate has two keys, one that is private to the owner of the certificate and a second key that is shared with others with whom they are conducting business. Symmetric algorithms are more efficient than asymmetric algorithms; however, they require management of shared keys between the parties and have inherent security risks of their being exposed to others outside of your organization or business partners. By using only asymmetric algorithms on the random key, WS-Security provides both a relatively efficient solution and one that is easy to manage.
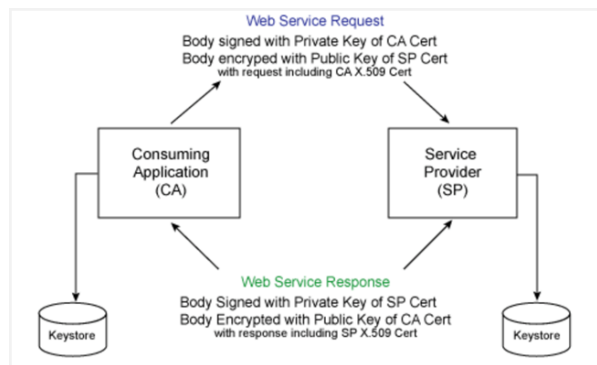

Exhibit 7: Web Service Request

Note that the implementation of this full set of security measures is an application of layers. Two of these layers require careful coordination of security keys between message exchangers, and multiple types of encryption/decryption per message exchange. The full implementation also requires the provision of formal security certificates.

7.1.2 WS-ReliableMessaging

WS-RM, another in the OASIS WS-* specification family, describes three levels of reliability assurance for web service messages.

1. Unmanaged, non-persistent

    a. In-memory store

    b. Non-transactional

    c. Cannot support server clustering

    d. Can survive network failure

2. Managed, non-persistent

    a. In-memory store

    b. Transaction and message sequencing support

  c. Cluster support

  d. Can survive network and server failure

 3. Managed, persistent

  a. Queue store

  b. Transaction and message sequencing support

  c. Cluster support

  d. Can survive network, server and messaging engine failure (fully recoverable)

Again, each of these levels brings additional overhead to the infrastructure as well as the application layer. The goal, much as in WS-Security, is to strike an effective balance in the use of the various levels of implementation.

7.2 File Transfers

Though the use of file transfers as a communication mechanism is intended to be limited only to those scenarios where absolutely appropriate (reports, reconciliation data, etc.), there will still be significant security and reliability issues with which to be concerned.

Below is a SFTP-based approach (using communication of a file to a Carrier Hub as an example) that is intended to address these concerns.
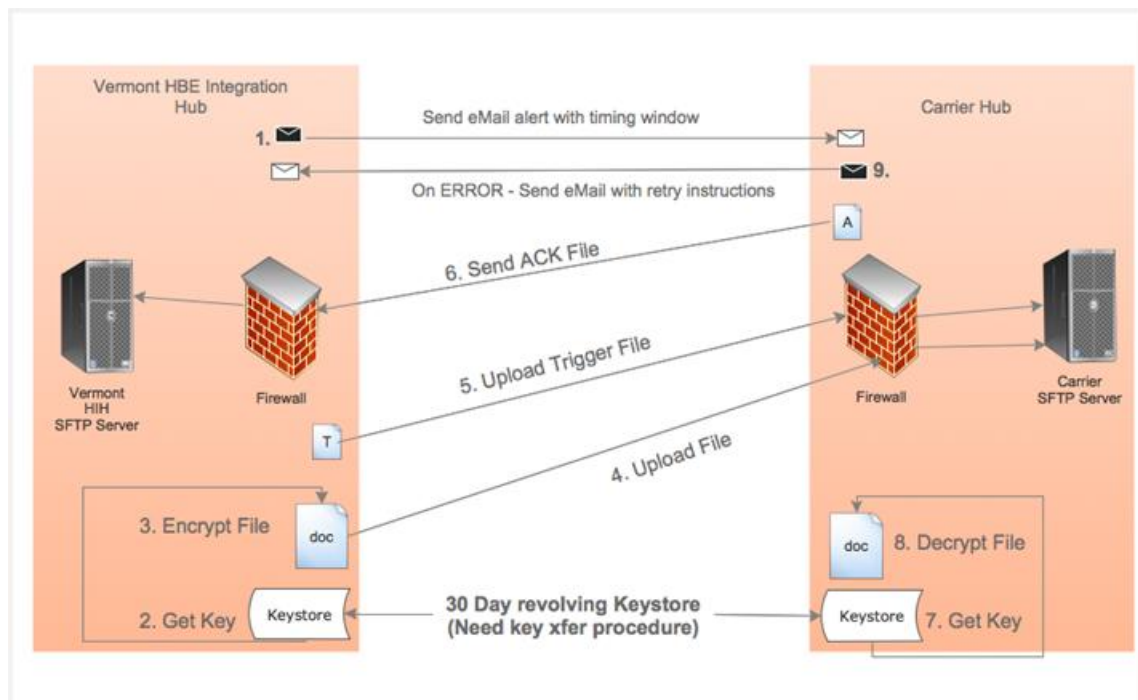

Exhibit 8: SFTP Based File Transfer Approach

Briefly, the model above provides for the following:

- Security via
  - SSL transport layer

> ▸ Asymmetric encryption with secure key store exchanges
- ▪ Reliability via
    - ▸ Alerts that establish a file transmission "timing window"
    - ▸ Use of a 'trigger' file to explicitly identify that a target file was uploaded in its entirety
    - ▸ Use an a response ('Ack') file to indicate that the recipient confirms successful upload

Note a few key aspects of the SFTP procedure as identified above:

1. The entire process is initiated by an email exchange, the purpose of which is to establish the window of time within which the carrier would expect to receive the file exchange.

2. The actual transfer process is a two-step operation. First, the file that contains the actual data that is the target of the transfer is sent. Second, when that operation is completed from the sender's perspective, a 'trigger' file is sent which indicates to the carrier that the primary file is ready to be read. The 'trigger' file itself is never read – it is important only by its presence, as a 'trigger' to tell the carrier that the primary file completed uploading successfully.

7.3   Monitoring

The five high-level monitoring topics listed below are the minimum that CGI would consider adequate. These may be met by a spectrum of COTS packages, EA services, and customized software.

The general goal would be to provide the means by which the health of the SOA system, its underlying infrastructure, and the utilities necessary to its effective messaging can be easily observed in a real-time (or 'dashboard') fashion.

1. Connection

    - ▸ Monitor service connectivity from the server and from the External Partners
    - ▸ Provide 'ping' tests that run on a schedule and report to an Admin-accessible dashboard
    - ▸ Log on a scheduled basis

2. Server

    - ▸ Monitor all relevant supporting processes; check utilization levels of the server against pre-established thresholds
    - ▸ Notify and log

3. Software

    - ▸ Identify key software that should be running
    - ▸ Set expected performance levels if any and then monitor and log
    - ▸ Provide Admin-accessible dashboard status

4. Business Logic Testing

    - ▸ Have regularly running scripts testing any system workflows and then monitor and log
    - ▸ Provide Admin-accessible dashboard status

5. SOA performance

    - ▸ Establish capacity and flow-through SLA's
    - ▸ Implement SOA Suite BAM events at key points to provide real-time measures and then monitor and log
    - ▸ Provide Admin-accessible dashboard status

8   Interoperability Testing

Carrier testing with the VT HBE will include connectivity, payload, and scenario testing. All carriers will be required to successfully complete a baseline set of test scenarios before go-live is approved. Throughout the testing process carriers and the VT HBE will enable a consistent communication and defect resolution process.

8.1   Credentialing

The first step in the testing process will be for the VT HBE and the Carriers to complete agreements to allow for EDI and Web Service Connections to be set up and to exchange the appropriate credentialing information.

8.2   Connectivity Testing

Connectivity Testing will include an interface to interface hand shake to confirm system communication. It will not verify whether the transmitted data is accurate.

8.3   Payload Testing

The VT HBE will send fully populated payload tests with different transactions that the Carrier test team will evaluate for accuracy.

8.4   Scenario Testing

The VT HBE will create a full set of detailed scenarios that cover a carrier's integration with the Exchange. This will include business logic for each type of transaction that was completed in the Payload Testing.

8.5   Operational Readiness Testing

The primary goal of this phase is to help ensure that the VT HBE and Carriers have exchanged credentials and provisioned those credentials for production operations. The VT HBE and the Carriers will need to verify connectivity is working and ready for October 1, 2013.

Appendix A: Acronyms

The following table is a list of acronyms introduced in this document.

Exhibit 9: List of Acronyms

Acronym	Description
CMS	Centers for Medicare & Medicaid Services
ICD	Interface Control Document
LDM	Logical Data Model
SDD	System Design Document
HIH	VT HBE Integration Hub
OPA	Oracle Policy Automation
PGP	Pretty Good Privacy
SFTP	Secure File Transfer Protocol