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**Carrier Payment ICD Companion Guide**

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**Revision History**

|  |  |  |  |
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| 1.1 | 4/14/13 | Brad Fredericks | Additional clarifications added for 820 segments. |
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# 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)*.

## 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.

# Trading Partner Coordination

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

## 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*.

## 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.

# Technical Considerations for 820 Transactions

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

## 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.

## 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.

## 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.

# 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.

## 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. |

## 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 |

# Message Acknowledgements

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

## 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.

## 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.

# 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.

## Payment Overview

### 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.

### 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.

## 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.** | | | | |
| 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. Note that the 820 “Payment Notification” message does not communicate the actual transfer of funds. This loop is for informational purposes only.** | | | | |
| 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 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. |
| 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. |

## 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 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 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. |
| 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. |

## 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. |

## 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.

### 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.

## 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. |

# 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.

## Web Service Security Standards

### 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.

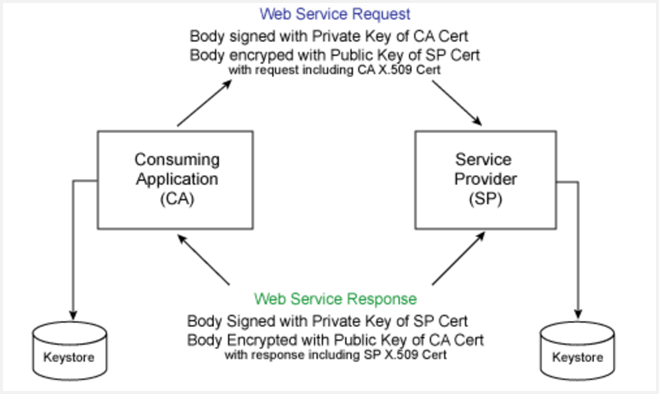


Exhibit 7: Web Service Request

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.

### 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
   1. In-memory store
   2. Non-transactional
   3. Cannot support server clustering
   4. Can survive network failure
2. Managed, non-persistent
   1. In-memory store
   2. Transaction and message sequencing support
   3. Cluster support
   4. Can survive network and server failure
3. Managed, persistent
   1. Queue store
   2. Transaction and message sequencing support
   3. Cluster support
   4. 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.

## 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.

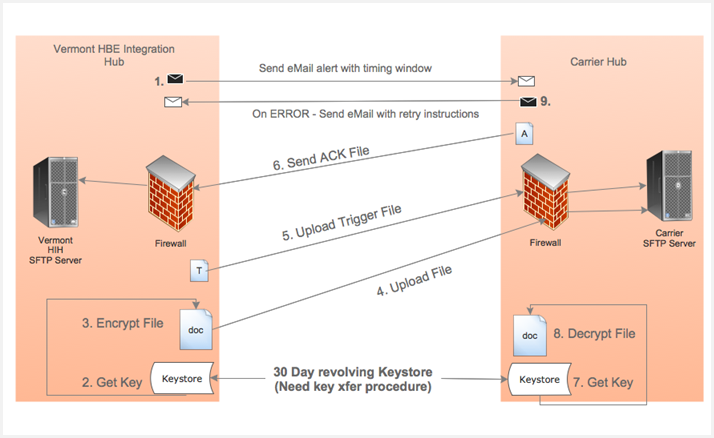


Exhibit 8: SFTP Based File Transfer Approach

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.

## 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

1. Server

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

1. System and Services

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

1. Business Logic Testing

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

1. 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

# 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.

## 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.

## 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.

## Payload Testing

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

## 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.

## 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 |