

California Department of Health Care Services
820 Phase 2

Design Specifications

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1 Introduction

The purpose of this document is to provide software-level and hardware-level architecture specifications for the *820 Phase 2* project. This document identifies the new application's building blocks (software components) and their interdependencies. These are the detailed software specifications that will be used by application developers to build the 820 Phase 2 application. This document also serves as an 820 technical manual for architects and developers to extend and maintain the system.

This document is divided into the following sections that define how the system will be built from a Software Engineering perspective.

- Software Architecture
- Orchestrations
- Business Objects
- Data Objects
- Database Model
- User Interface

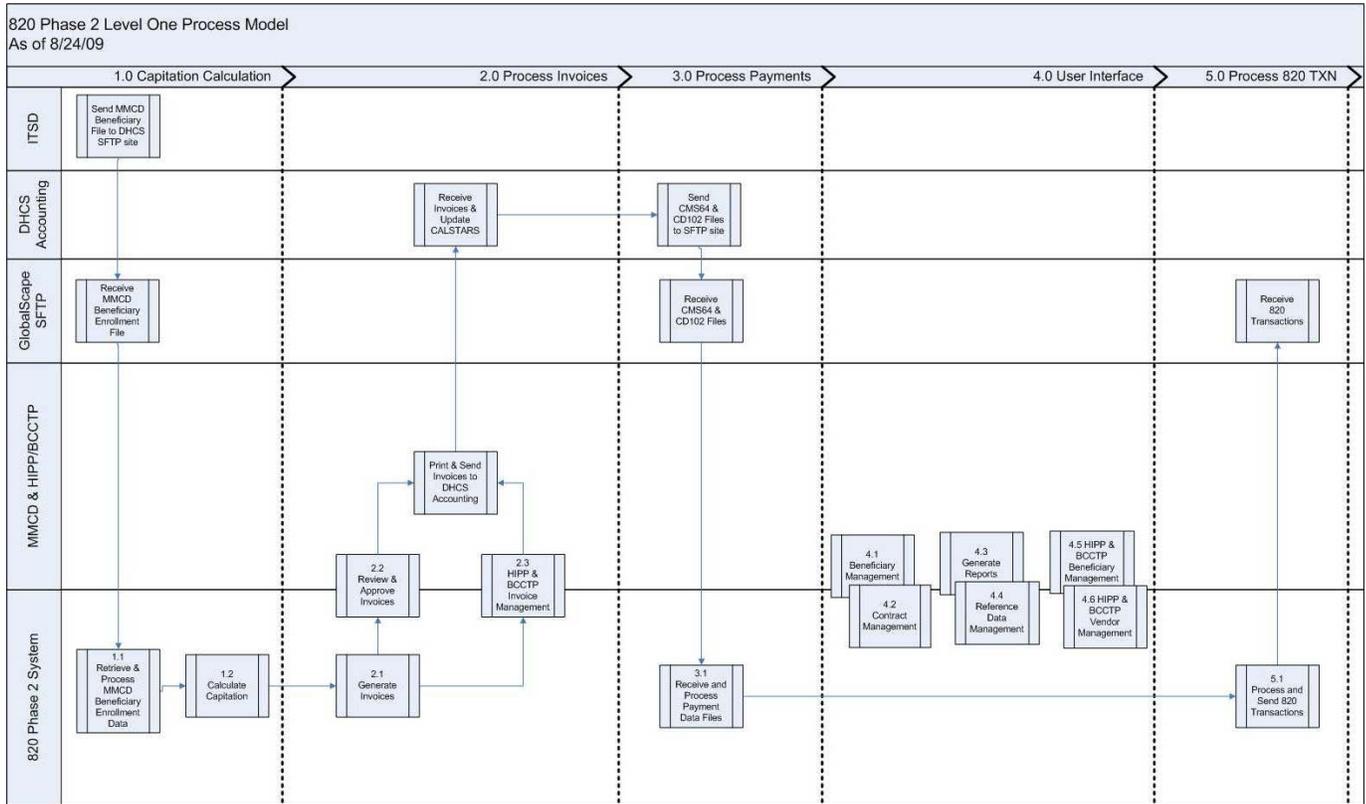
The document also contains sections from a Network Architecture perspective, including:

- Solution and Server Platforms
- Scalability
- Security
- Backup and Disaster Recovery

A draft of the System Administration Guide (as specified as part of this deliverable, has been created separately in the 820 SharePoint site; filename: Draft System Admin Guide), includes:

- System Modifications and Maintenance
- Release Management
- Transition Management
- Software and Hardware Upgrades
- Customer Support

Key artifacts gathered during the Analysis Phase were used to support the creation of the Design Specifications Document included the identification of Use Cases and the creation of the 820 Phase 2 Level One Process Model below.



The below table represents a traceability matrix from the Use Cases in the Requirements Specification Document to the technical sections defined in this document. The Use Case analysis was fundamental in guiding the design of the technical components detailed in the following sections.

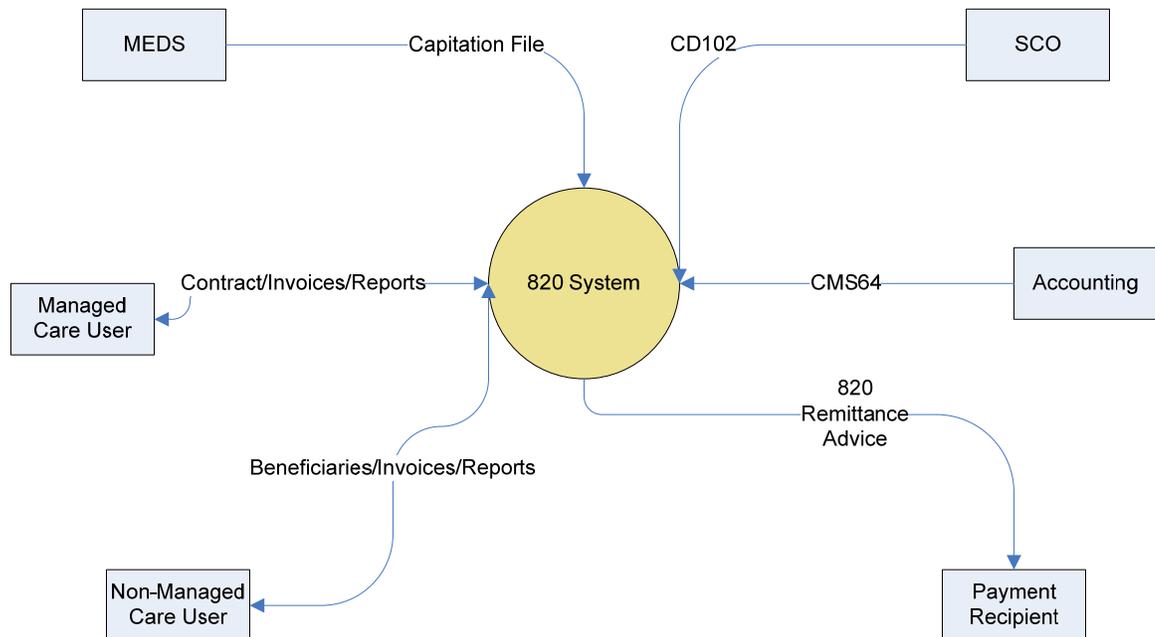
Use Case	Design Specification Section
1.1 Receive and Process Enrollment Data	2.1, 2.2, 3, 4.1, 4.2, 5.3
1.2 Calculate Capitation	2.1, 2.2, 3, 4.1, 4.2, 5.3, 6.6, 6.7
2.1 Generate Invoices	2.1, 2.2, 3, 4.1, 4.2, 5.3, 6.6, 7.2, 7.3
2.2 Review and Approve Invoices	2.1, 2.2, 4.1, 4.2, 6.6, 7.2, 7.3, 9.1, 9.6
2.3 HIPP BCCTP Invoice Management	2.1, 2.2, 4.1, 5.3, 6.6, 7.2, 7.3, 9.6, 9.10
3.1 Process Payment Files Use Case	2.1, 2.2, 3, 4.1, 4.2, 5.1, 5.2, 6.1, 6.5
4.1 Beneficiary Management	2.1, 2.2, 4.1, 6.3, 7.2, 9.8, 9.9
4.2 Contract Management	2.1, 2.2, 4.1, 6.2, 7.1, 9.13, 9.14
4.3 Generate Reports	2.1, 2.2, 4.1, 6.4, 9.22
4.4 Reference Data	2.1, 2.2, 4.1, 9.23
4.5 HIPP BCCTP Beneficiary Management	2.1, 2.2, 4.1, 6.3, 7.2, 9.8, 9.9, 9.10
4.6 HIPP BCCTP Vendor Management	2.1, 2.2, 4.1, 9.19, 9.20
5.1 Process and Send 820 Transactions	2.1, 2.2, 3, 4.1, 4.2, 5.4, 6.5, 7.3,

2 System Context Diagram

The *System Context Diagram* represents all external entities that may interact with the system. The diagram is the highest level view of the system and is a good starting point to represent the system.

2.1 Level 1 Context Diagram

The Level 1 Context Diagram provides a high level view of the 820 Phase 2 system as a single entity and shows the flow of all external entities in and out of the system.



Level 1 Context Diagram

MEDS will send a file containing beneficiary eligibility information for the current months information and 12 historical months.

Managed Care User will operate on the user interface and manages contracts, approves invoices and retrieves reports.

Non-Managed Care User will operate on the user interface and manages beneficiaries, approves invoices and retrieves reports.

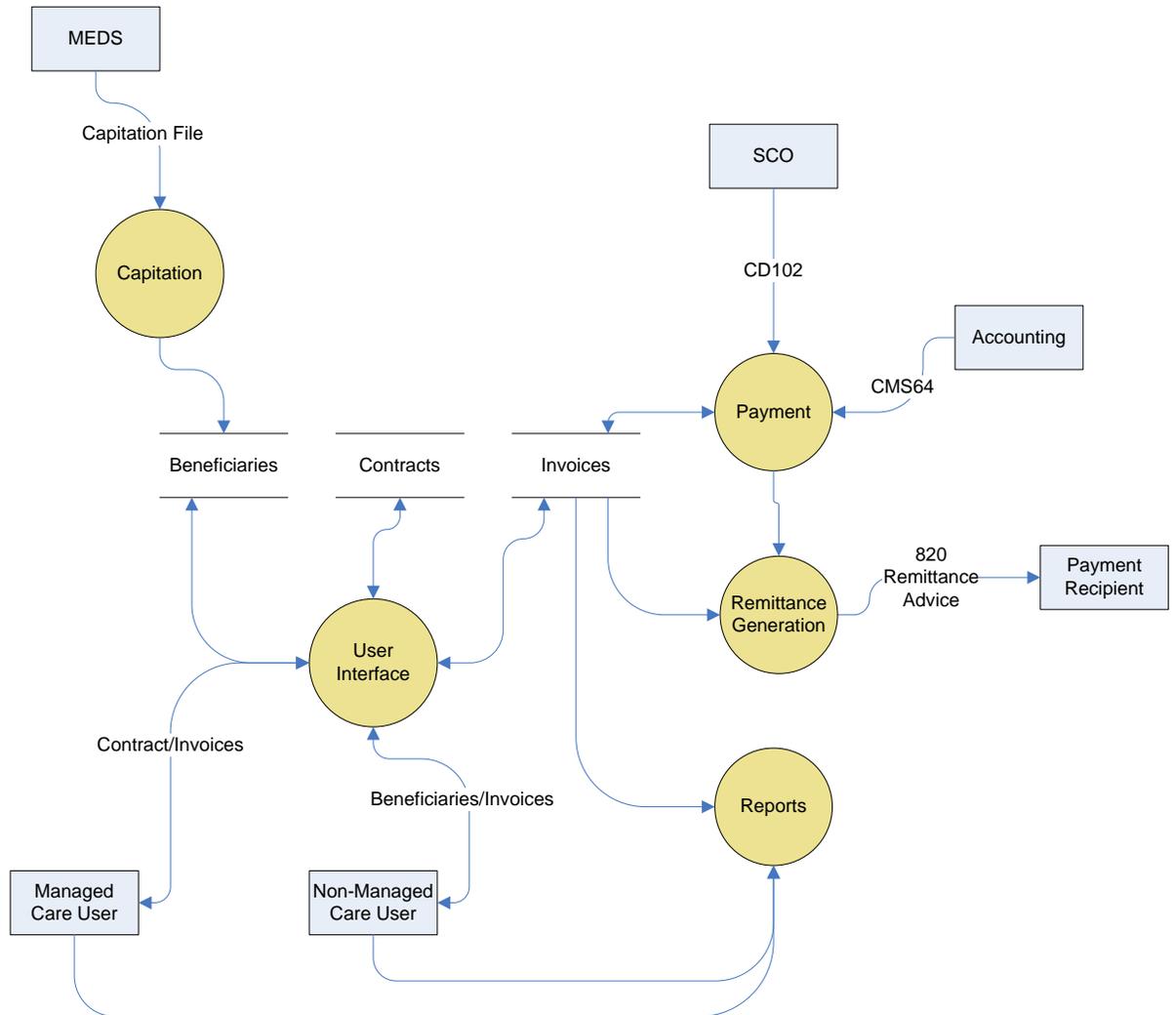
Accounting will send a file (*CMS64*) which contains warrant information for invoice payments.

SCO will send a file (CD102) summarizing all warrants (or payments) made out to a vendor.

Vendor will receive an 820 Remittance Advice representing all invoice payments for a given month.

2.2 Level 2 Context Diagram

The *Level 2* Context Diagram breaks the CapMan system down into smaller components, while the external entities stay the same. Data storage also becomes visible.



Level 2 Context Diagram

In this diagram the CapMan system has been decomposed into five different processes.

Capitation represents the process of consuming the capitation file from *MEDS* and processing the beneficiary eligibility data into data storage.

Payment represents the process of consuming files from *Accounting* and *SCO*. Which includes verification and matching of payment information with invoices and finally calling the *820 Generation*.

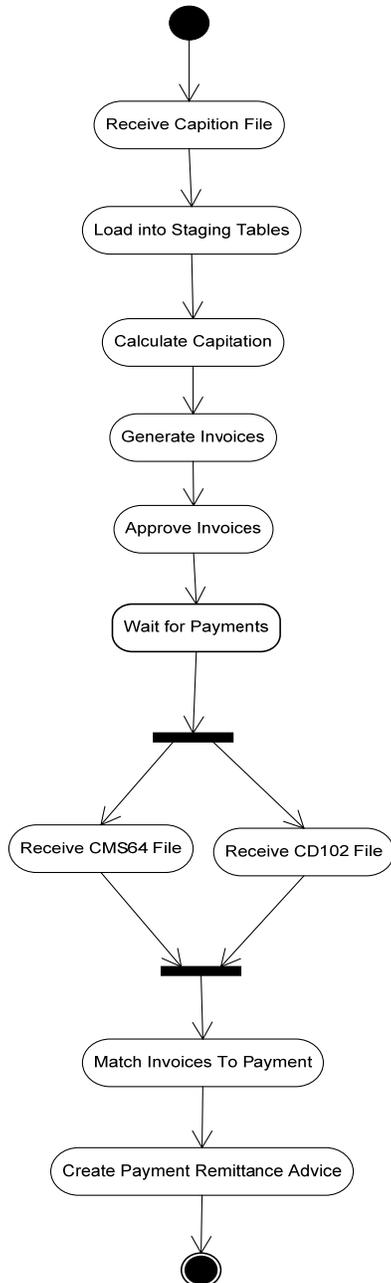
Remittance Generation represents creating the Remittance Advice (based on invoices processed within *Payment*). This process also manages sending the 820 file to the appropriate location.

User Interface represents any user interaction with managed and non-managed care users. Beneficiary, Contract and Invoice management falls under this process.

Reports represent the process of creating reports from the Invoice data storage.

3 820 System Activity Diagram

The *820 System Activity Diagram* represents the workflow for the backend processing. The flow represents the entire high level process and does not show any errors condition processing. Error conditions will be addressed at a lower level in relation to the specific component that handles the error. This Activity Diagram is based of the Level 1 Process Model (see *Appendix B*) from the Requirement Specification.



Shape	Description
Receive Capitation File	The system will receive the capitation file coming from <i>MEDS</i> .
Load into Staging Tables	The capitation file will be parsed and loaded into a staging table.
Calculate Capitation	The parsed capitation data will be processed and calculations will be performed.
Generate Invoices	Invoices will be generated based on the calculations.
Approve Invoices	Invoices will be approved (from the UI).
Wait for Payments	Since approved invoices will be mailed to accounting, the system will be an idle wait stage.
Receive CMS64 File	The system will receive <i>CMS64</i> files coming from accounting.
Receive CD102 File	The system will receive <i>CD102</i> files coming from <i>SCO</i> .
Match Invoices To Payment	Payment information coming from Accounting and <i>SCO</i> will be matched against invoices.
Create Payment Remittance Advice	A payment remittance advice will created to send to the vendors.

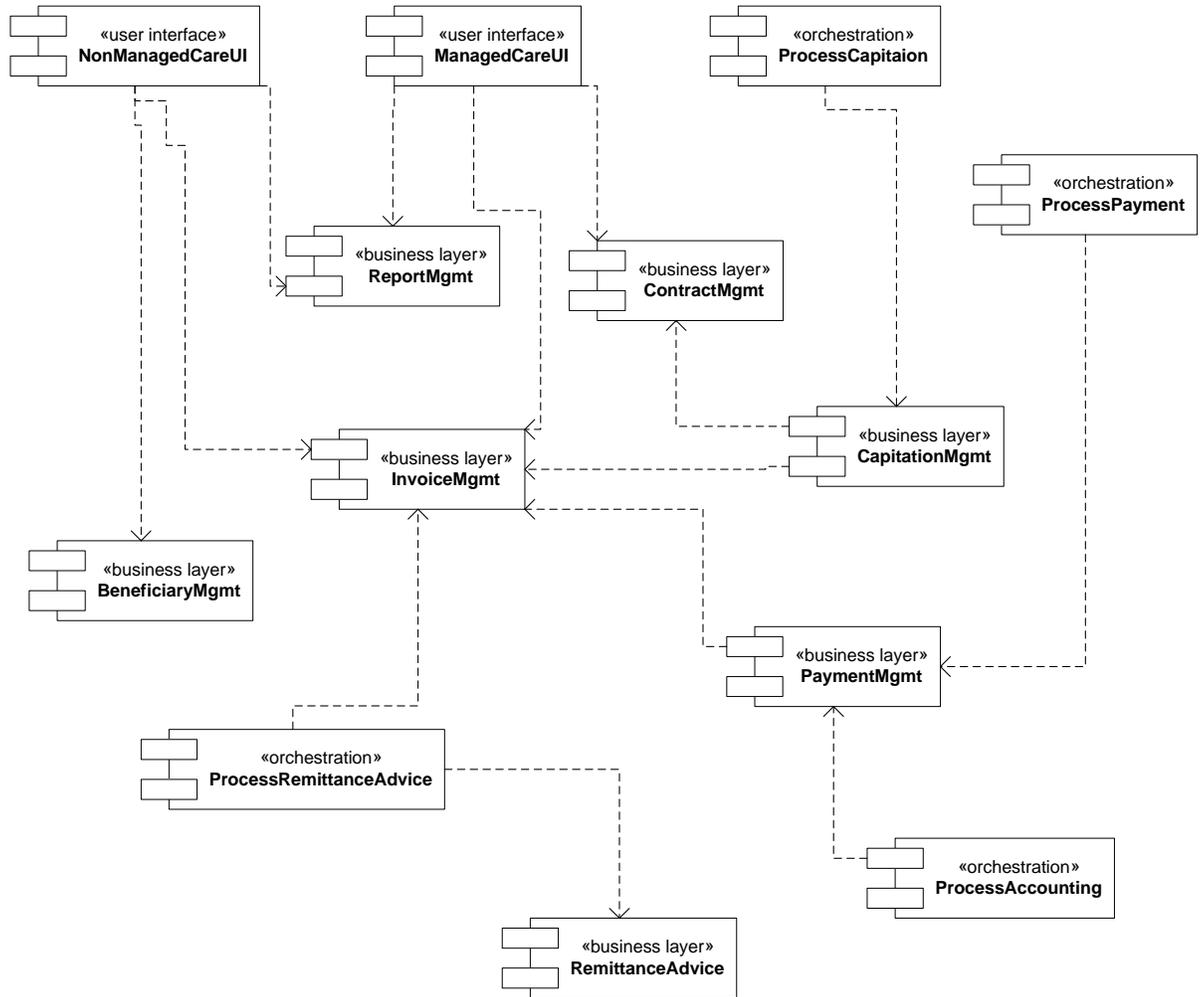
4 Component Architecture

This section represents the components of the system. Components are high level pieces of code that can either be physical (i.e. DLL) or logical (interrelated groups of code).

4.1 Component Diagram

The component diagram's main purpose is to show the structural relationships between the components of a system.

The component diagram provides a high-level, architectural view of the system, which helps developers begin formalizing a roadmap for the implementation, and make decisions about task assignments and/or design. System administrators will find the component diagram useful because they get a view of the logical software components that will be running on their systems.



Component Diagram

Component	Type	Description
InvoiceMgmt	Business	This component will be responsible for generating and approving invoices. The generation part will include performing retroactive adjustments and generating net-changes from previous invoices. It will provide calculations on a beneficiary level. Status management will also be part of this component (i.e. Approved, Paid).

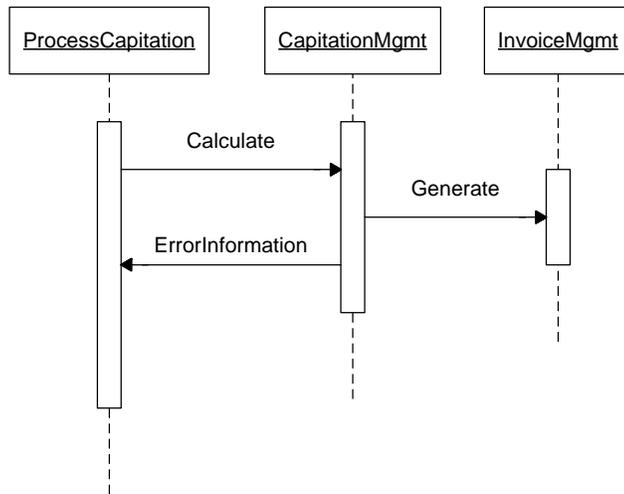
Component	Type	Description
CapitationMgmt	Business	The Capitation component will be responsible to process the beneficiary data coming in from the monthly capitated file. It will handle the loading and pre-populating invoice data before performing the calculations.
ProcessCapition	Orchestration	This orchestration will receive and process the capitation file coming from <i>MEDS</i> . The data will be processed into a staging table and then instantiate <i>CapitionMgmt</i> to process the data.
ProcessAccounting	Orchestration	This component will process the <i>CMS64</i> file coming from Accounting. This will include parsing and mapping the file into a structure which will be used to call into <i>PaymentMgmt</i> .
PaymentMgmt	Business	This component manages the <i>CMS64</i> and <i>CD102</i> data coming from Accounting and <i>SCO</i> .
ProcessPayment	Orchestration	This component will process the <i>CD102</i> file coming from <i>SCO</i> . Which includes parsing and mapping the file into a structure which will be used to call into <i>PaymentMgmt</i> .
ProcessRemittanceAdvice	Orchestration	This component will start the process to create an 820 Remittance Advice when a payment file has been received. It will call into <i>RemittanceAdviceMgmt</i> .
RemittanceAdviceMgmt	Business	This component will receive information from <i>ProcessRemittanceAdvice</i> and create the 820 Remittance Advice.
ContractMgmt	Business	This component manages contracts within the system. This will include versioning of contracts and keeping invoices aligned with the correct version of a contract.
ManagedCareUI	User Interface	This will be a user interface component containing all managed care user interfaces.

Component	Type	Description
NonManagedCareUI	User Interface	This will be a user interface component containing all non managed care user interfaces.
ReportMgmt	Business	This component will manage the creation of reports.
BeneficiaryMgmt	Business	This component will be part of non managed care and will handle versioning of beneficiaries to invoices.

4.2 Sequence Diagrams

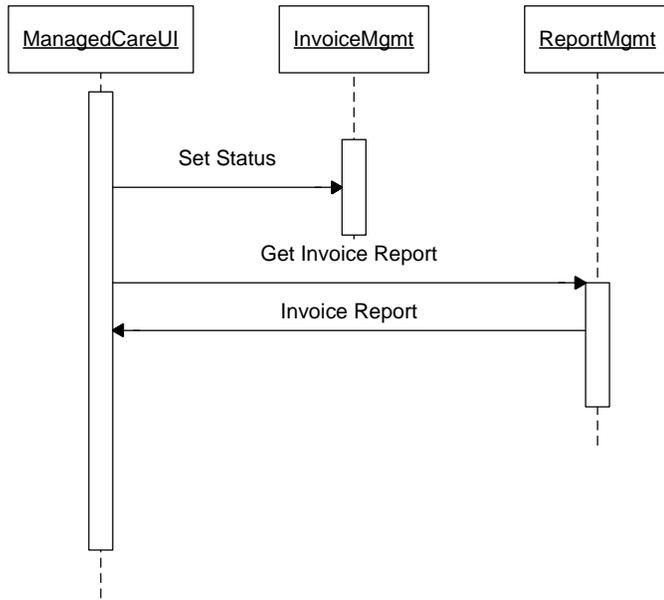
Sequence Diagrams show how components of the 820 Phase 2 System interact with each other. They also represent lifeline and message calls between components.

4.2.1 Invoice Generation



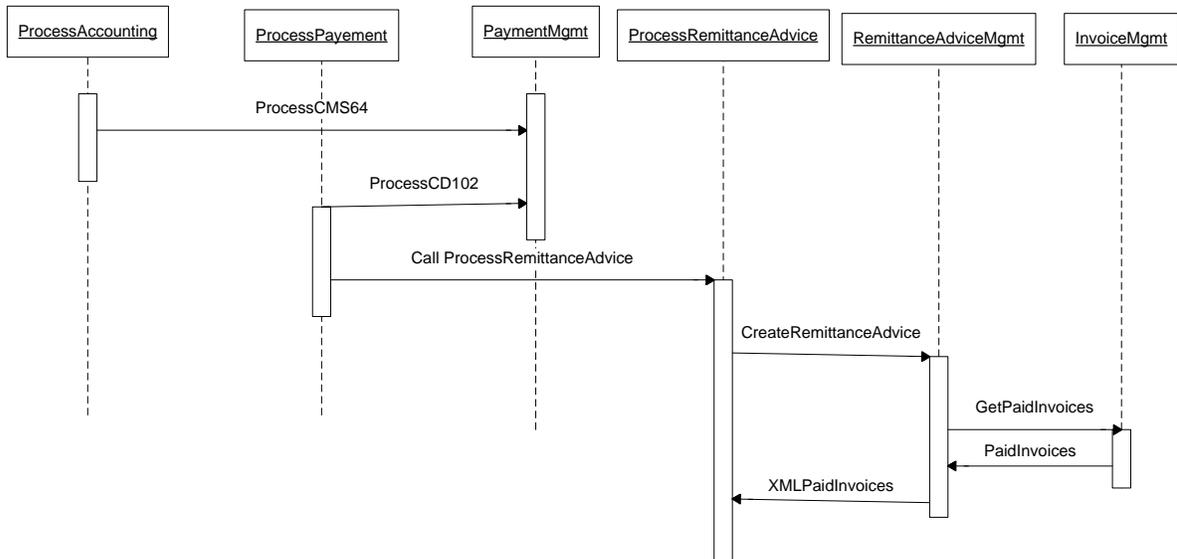
This sequence diagram represents how invoices will be created. The *ProcessCapitation* component will call *Calculate* in the *CapitationMgmt* component; *CapitationMgmt* will then call *Generate* in *InvoiceMgmt*. *CapitationMgmt* will return any error information to *ProcessCapitation*.

4.2.2 Approving Invoices



This sequence diagram represents how invoices will be approved. The *ManagedCareUI* will call into *InvoiceMgmt* with an invoice status, in this case “Approved”. The *ManagedCareUI* retrieves the invoice by calling *ReportMgmt*.

4.2.3 Generate Remittance Advice



This sequence diagram represents how the 820 Remittance Advice will be generated. The *ProcessAccounting* component will call into *PaymentMgmt* to process the *CMS64* file. The *ProcessPayment* component will also call into *PaymentMgmt* to process the *CD102* file. Subsequently *ProcessPayment* will call *ProcessRemittanceAdvice* component to initiate the 820 Remittance Advice process. A call into *RemittanceAdviceMgmt* will then gather paid invoices from *InvoiceMgmt* and create an 820 Remittance Advice.

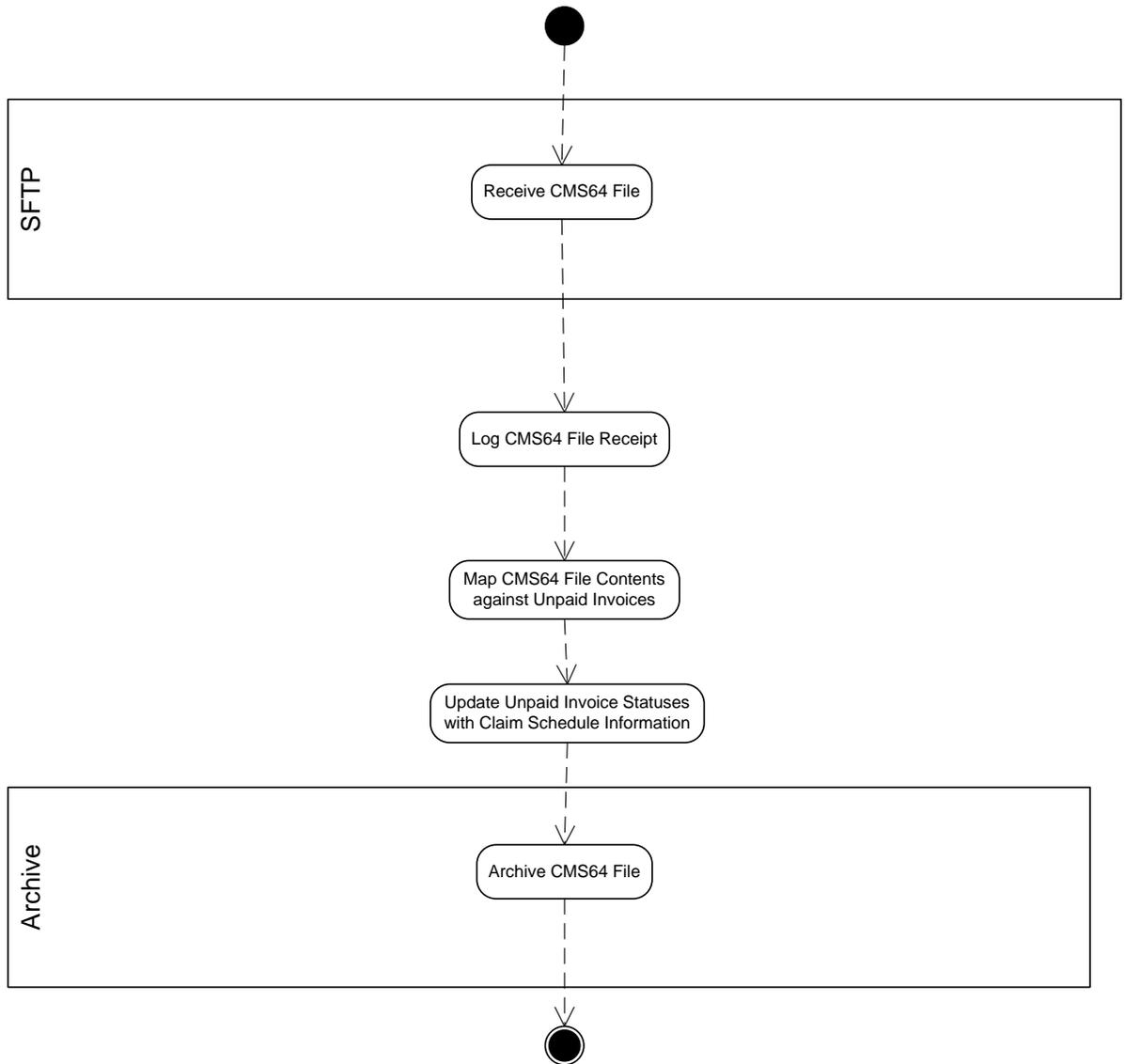
5 Orchestrations

Orchestrations control the workflow for a business process. An example of an orchestration could be receiving and parsing a file and then calling logic to complete a business process. The following sections are design details for the orchestration types defined in the component diagram (section 4.1).

5.1 ProcessAccounting

The *ProcessAccounting* Orchestration will be responsible for receiving and logging the receipt of the CMS64 file from accounting and archiving the file. The orchestration will also parse the CMS64 file to match the invoice numbers within the file to the unpaid invoices within the 820 Phase 2 system.

5.1.1 Activity Diagram



Activity	Description
Receive CMS64 File	Receive CMS64 File from external interface, instantiating an instance of the orchestration.
Log CMS64 File Receipt	Log receipt of CMS64 File in 820 Phase 2 event log.
Map CMS64 to Unpaid Invoices	BizTalk Map that extracts invoice information for only the 820 Phase 2 system from CMS64 and matches to invoice information.
Update Invoice Statuses and Information	For all 820 Phase 2 invoices matched, the system will update the invoice status to CMS64 received.
Archive CMS64	Archive the CMS64 physical file to the pre-determined archive location.

5.2 *ProcessPayment*

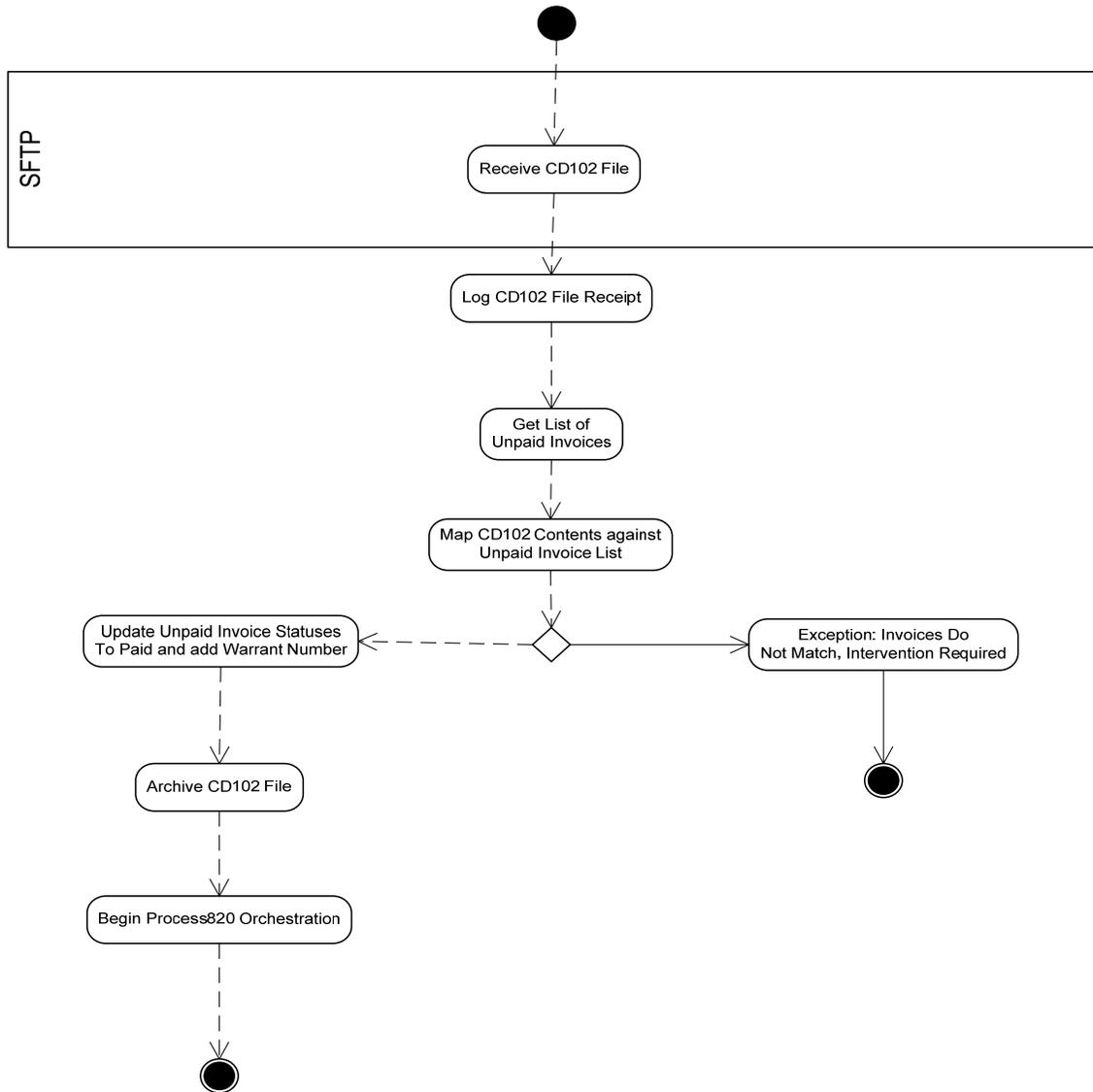
The ProcessPayment Orchestration will be responsible for receiving and logging the receipt of the CD102 file from SCO and archiving the file. The orchestration will parse the CD102 file and match the claim schedule numbers to any unpaid invoices.

The orchestration will enter an exception state given the following conditions:

- If any unpaid invoices have yet to receive claim schedule numbers
- If there are any unpaid invoices with claim schedule numbers that are not matched with the CD102 file
- If any invoice amounts are inconsistent

If all unpaid invoices are matched correctly, then the orchestration will start the Process820 orchestration.

5.2.1 Activity Diagram



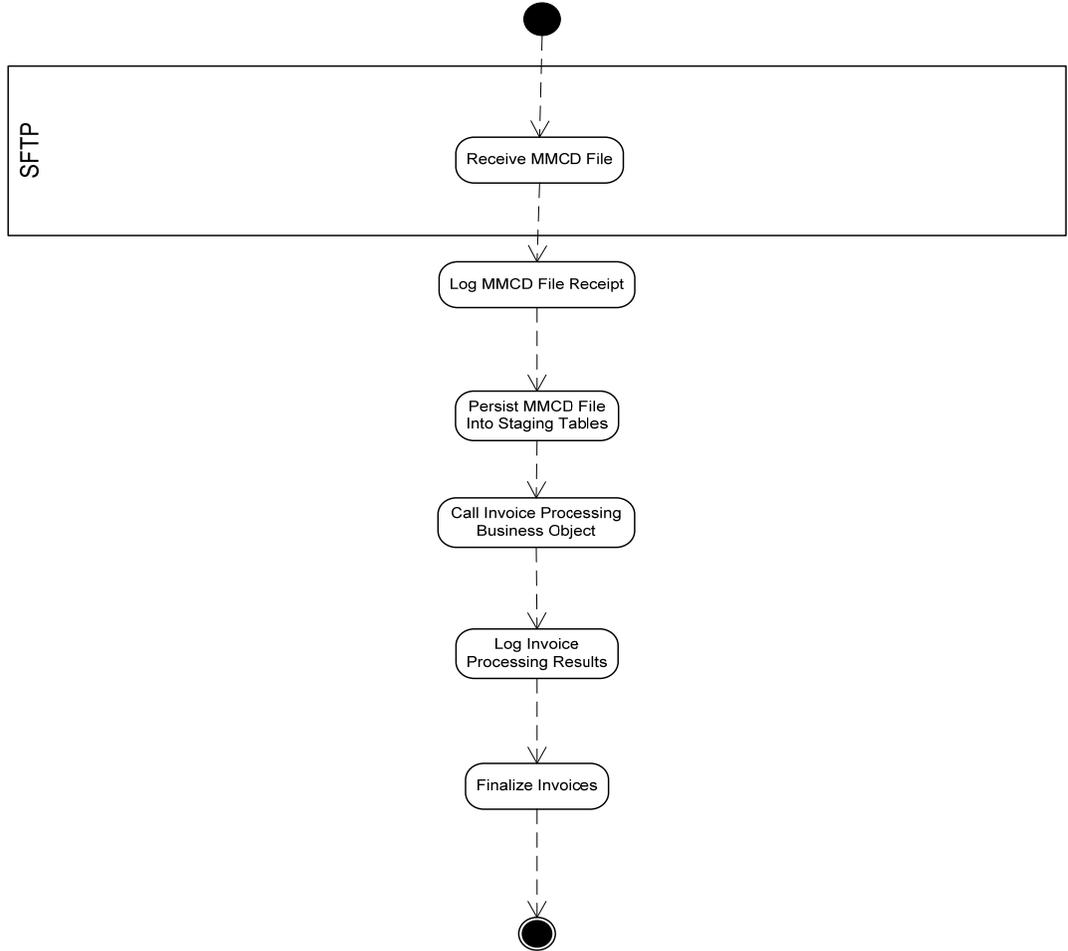
Activity	Description
Receive CD102 File	Receive CD102 File from external interface, instantiating an instance of the orchestration.
Log CD102 File Receipt	Log receipt of CD102 File in 820 Phase 2 event log
Get List of Unpaid Invoices	Poll the 820 Phase 2 system to get all unpaid invoices.
Map CD102 against Unpaid Invoices	A BizTalk Map that extracts claim schedule information for only the 820 Phase 2 system from the CD102 file and performs the matching.

Activity	Description
Exception: Invoices Do Not Match	System enters an exception state if invoice information is incomplete for unpaid invoices in the 820 Phase 2 system. The exception is reported to the system administrator and the orchestration instance is suspended awaiting further review.
Update Invoice Statuses and Information	For all 820 Phase 2 invoices matched, update invoice with warrant information and status to CD102 received.
Archive CD102	Archive the CD102 physical file to the pre-determined archive location.
Begin Process820	Begin the Orchestration to process the 820 file for all unpaid invoices that have received the CMS64 and CD102 file.

5.3 ProcessCapitation

The *ProcessCapitation* Orchestration will be responsible for receiving and logging the receipt of the MMCD Capitation files from MEDS and archiving the MMCD file. The orchestration will invoke the business layer to create invoices based upon the beneficiaries in the capitation file. This orchestration is a singleton, so only one instance of the *ProcessCapitation* orchestration will be run at the same time.

5.3.1 Activity Diagram

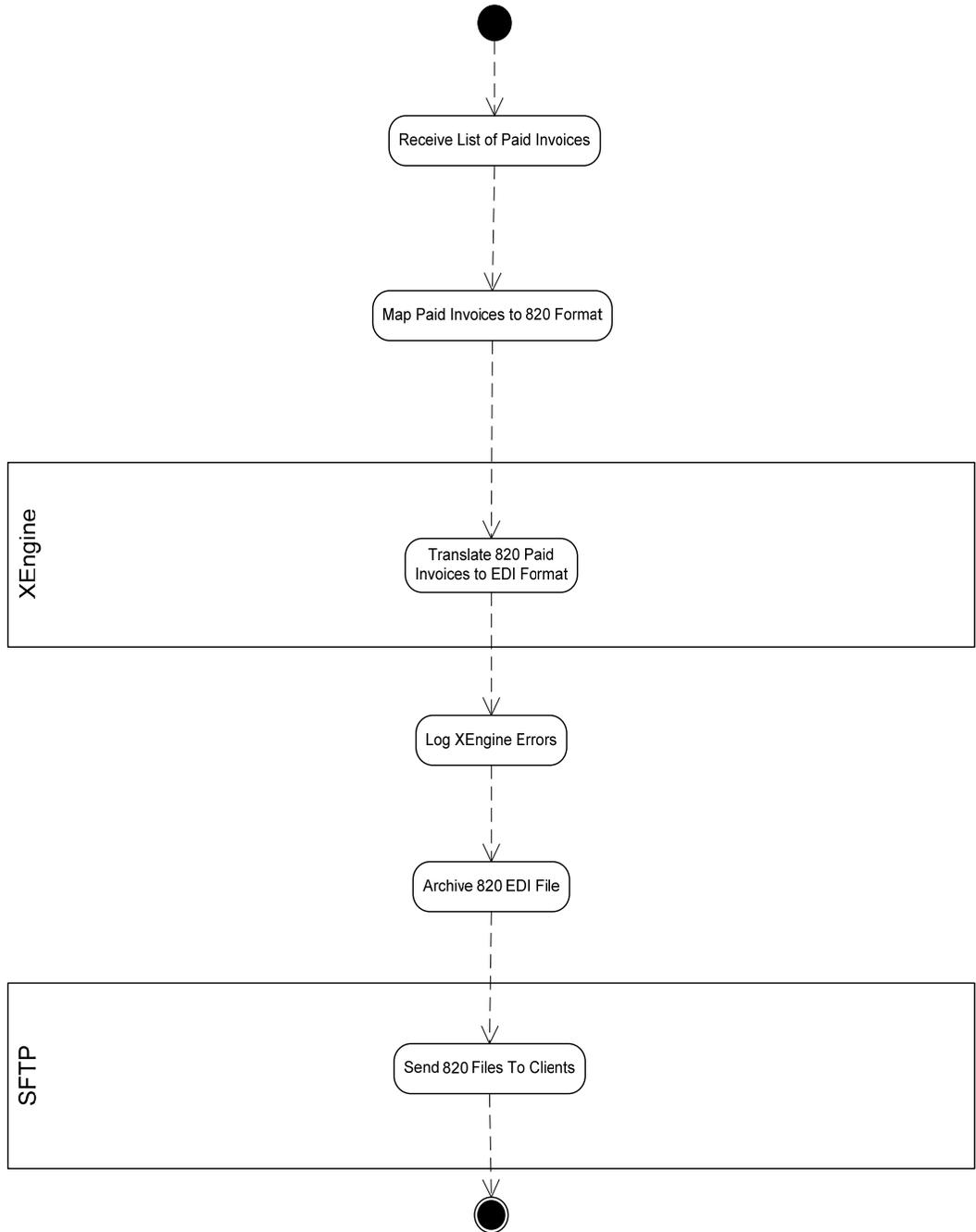


Activity	Description
Receive MMCD File	Receive MMCD File from external interface, starting the orchestration. The orchestration receipt also validates the format of the MMCD File.
Log MMCD File Receipt	Log receipt of MMCD File in 820 Phase 2 Event Log.
Persist MMCD File into Staging Table	Contents of the MMCD File are persisted into staging tables in the 820 Phase 2 database.
Call Invoice Processing Business Object	This will call into the OHC820.BO.InvoiceMgmt business layer to process the capitation calculations.
Log Invoice Processing Results	The calculation log from the OHC820.BO.InvoiceMgmt component is persisted.
Finalize Invoices	Upon processing all MMCD files (by plan), invoices are created allowing the calculated values and the invoices themselves to be visible on the UI.

5.4 *ProcessRemittanceAdvice*

The ProcessRemittanceAdvice Orchestration will be responsible for creating the 820 Remittance Advice file upon receiving a list of paid warrants from the Process Payments Orchestration. This will generate XML-Formatted 820 files which are then processed by the XEngine interface to validate and transform the XML files to X12 5010 820 EDI files. The X12 5010 820 EDI Files are then processed and sent to the external SFTP Interface to be delivered to clients.

5.4.1 Activity Diagram



Activity	Description
Receive List of Paid Invoices	A list of paid invoices is received from the ProcessPayments orchestration.
Map Paid Invoices to 820 Format	The List of Paid Invoices is mapped to multiple 820 files in XML Format.
Translate 820 Paid Invoices to EDI Format	The 820 XML Files are sent to the XEngine interface to be validated and transformed to a 5010 820 Remittance Advice EDI File.
Log XEngine Errors	Any XEngine errors (SNIP) that occur during translation are returned and persisted the 820 Phase 2 Event Log.
Archive 820 EDI File	The 820 EDI File is archived to the file system.
Send 820 Files to Clients	All 820 Files are sent to the SFTP Interface where they are then forwarded to the corresponding recipients.

6 Business Objects

The *Business Objects* will define business logic and rules. The objects are designed following Object Oriented Design methodologies (OOD). Both the user interface layer and orchestration layer call into the business layer. The following sections are design details for the business types defined in the component diagram (section 4.1).

6.1 PaymentMgmt

The *PaymentMgmt* component will handle the processing of the two distinct payment files for 820 Payment Processing, *CMS64* and *CD102*.

CMS64 processing entails matching approved invoices with an incoming CMS64 file. For a matching invoice, a *Claim Schedule Number* will be persisted with a new status of *CMS64Processed*.

CD102 processing entails matching CMS64 processed invoices with the incoming CD102 file. For a matching invoice, a warrant numbers will be persisted with a new status of *Paid*.

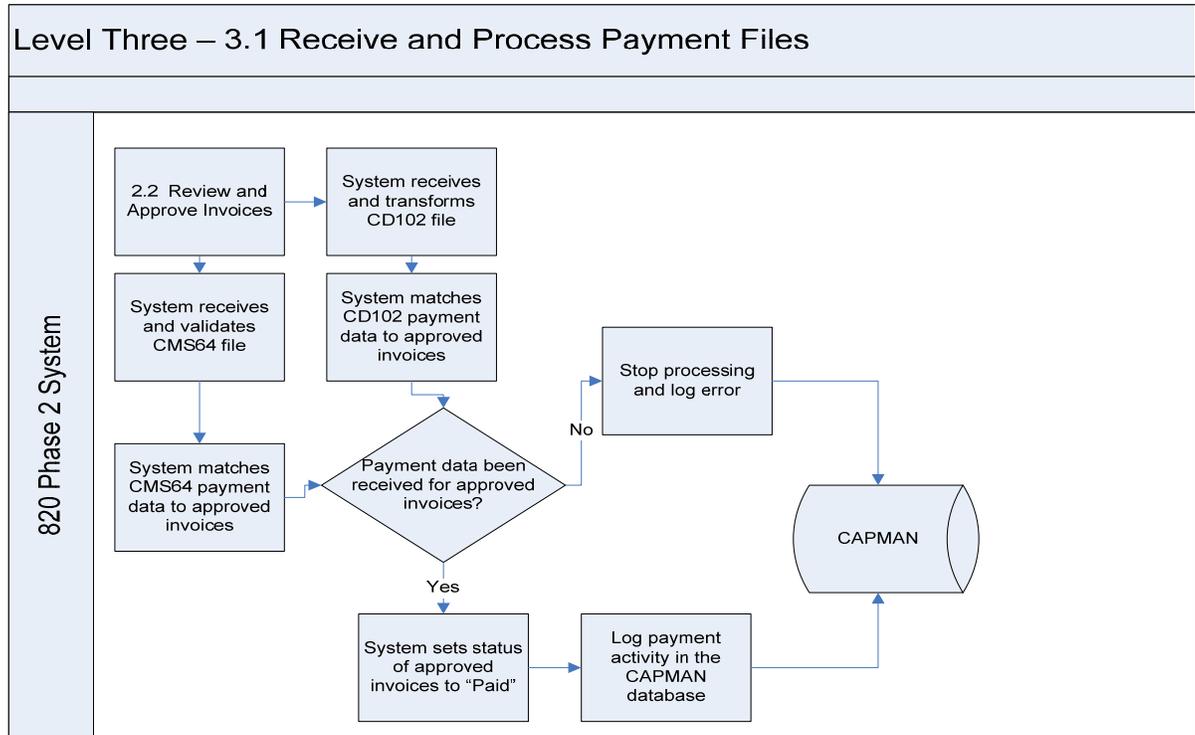
All errors will be logged in an XML error document.

6.1.1 Use Case - 3.1 Receive and Process Payment Files

Requirement Specification

The Process Payments process focuses on the receipt and reconciliation of the CMS64 and CD102 payment files received from the Accounting Office. The System matches the invoices to the Claim Schedule Numbers on the CMS64 on a weekly basis, and then reconciles the Claim Schedule Numbers to the Warrant Numbers on the CD102 file, which is received on a monthly basis. Once the invoices have been reconciled to the payment data (CD102 File), the invoices are ready to for the next process of going on an 820 transaction.

Process Model

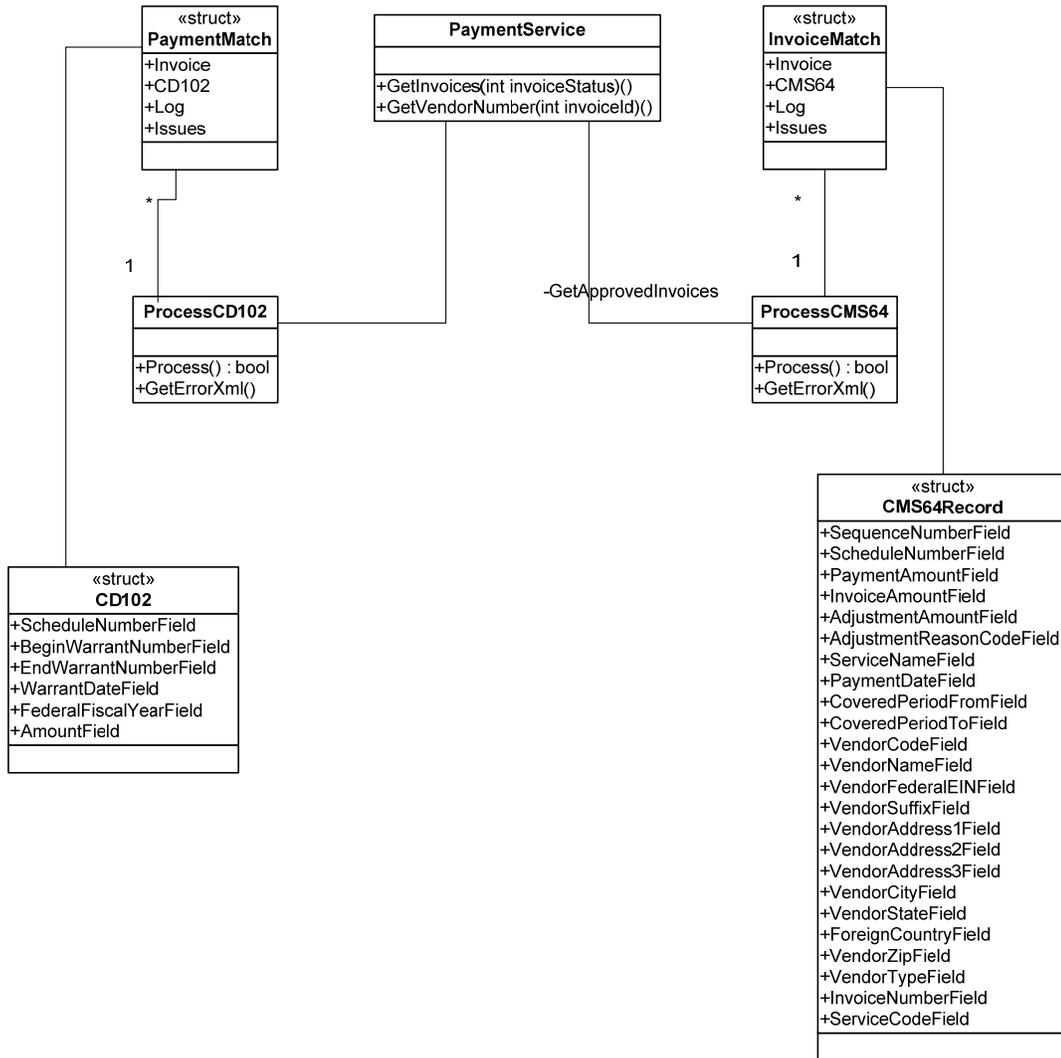


6.1.1.1 Use Case Exceptions

- If the format or structure is incorrect then system logs an error and halts processing of file (CMS64).
- If the vendor number from the CMS64 file does not match with the CAPMAN vendor number, System updates Invoice status to “CMS64 Payment Error”. System generates the following payment error notification: “CMS64 Payment Error – Vendor Number [##] in system Does Not Match Vendor Number [##] on CMS64 file for Invoice Number [##]. Accounting must re-submit a corrected Claim Schedule. Else, if warrant has already been issued for original Claim Schedule, user must enter a payment error adjustment.”
- If the invoice amount from the CMS64 file does not match with the CAPMAN invoice amount, System updates Invoice status to “CMS64 Payment Error.” System generates the following payment error notification: “CMS64 Payment Error – Invoice Amount [\$\$] Does Not Match Amount [\$\$] on CMS64 file for Invoice Number [##]. Accounting must re-submit a corrected Claim Schedule. Else, if warrant has already been issued for original Claim Schedule, user must enter a payment error adjustment.”
- If file format or structure is incorrect, system logs an error and halts processing of file (CD102)
- If Invoice Status = “CMS64 Payment Error”, the invoice is not retrieved and the CD102 Payment information for that invoice is not processed. Invoice Status remains “CMS64 Payment Error”, and is flagged to

- resume further processing once the invoice status becomes CMS64 Received.
- If the total dollar amount of the invoices within a Claim Schedule does not match the Warrant Amount on the CD102, system updates the status of all invoices on that Claim Schedule to “CD102 Payment Error”. System generates the following payment error notification for each invoice with status of CD102 Payment Error: “CD102 Payment Error – Sum of Invoice Amounts [\$\$] for Claim Schedule [##] is not equal to the Warrant Amount [\$\$] on CD102 File. User must enter a payment error adjustment.”
 - If the number of warrants associated with the Claim Schedule Number does not equal the number of unique vendor codes for the all invoices within the Claim Schedule, then system updates the status of all invoices to “CD102 Payment Error”. System generates the following payment error notification for each invoice with status of CD102 Payment Error: “CD102 Payment Error – Number of Warrants [##] on CD102 for Claim Schedule Number [##] is not equal to Number of Vendors [##] for the Claim Schedule in System. User must enter a payment error adjustment.”

6.1.2 Class Diagram



6.1.2.1 PaymentService

The *PaymentService* class will be used to retrieve invoices that will either be a) *Approved* or b) *CMS64Processed*. The class will also provide services to retrieve the vendor number for an invoice. The *ProcessCD102* and *ProcessCMS64* classes will use this class.

Method	Description
GetInvoices	Retrieve a list invoices. The <i>ProcessCMS64</i> class will use this list to create the CMS64 files and <i>ProcessCD102</i> class will use to create the CD102 files.

Parameters	Type	Description
invoiceStatus	enumStatus	Either enum64 or enumCD102 status
Output		Description
IList<Invoice>		List of <i>Invoice</i> objects

Method	Description	
GetVendorNumber	Retrieve the Vendor number for an invoice.	
Parameters	Type	Description
invoiced	int	The invoice id
Output		Description
String		The invoice number

6.1.2.2 ProcessCMS64

The *ProcessCMS64* class will be used to process a *CMS64* file. After retrieving a list of invoices with the status of *CMS64Processed* (using *PaymentService*), matching of each invoice will occur against the *CMS64* file. Any matching errors will be generated in an XML error log.

Method	Description
Process	This method will start the process of matching invoices against the <i>CMS64</i> file
Output	Description
bool	Success or Failure.

Method	Description
GettErrorXml	Retrieve the list of errors if <i>Process</i> fails.
Output	Description
XmlDocument	An XML representation of the any errors during invoice matching.

6.1.2.3 InvoiceMatch

The *InvoiceMatch* class will be a helper class to keep track of any issues matching the incoming CMS64 file invoices with the existing invoices in the database. Any issues will be logged.

<i>Property</i>	<i>Description</i>
Invoice	The invoice matched from the CMS64 file. .
<i>Output</i>	<i>Description</i>
OHC820.Data.Invoice	The Invoice object coming from the Data objects.

<i>Property</i>	<i>Description</i>
CMS64	A single CMS64 record coming from the CMS64 file
<i>Output</i>	<i>Description</i>
CMS64Record	An object representing the CMS64 record.

<i>Property</i>	<i>Description</i>
Log	A log entry when a failure happens.
<i>Output</i>	<i>Description</i>
XmlDocument	An xml representation of a a failure

6.1.2.4 ProcessCD102

The *ProcessCD102* class will be used to process a *CD102* file. After retrieving a list of invoices with the status of *Paid* (using *PaymentService*), matching of each invoice will occur against the *CD102* file. Any matching errors will be generated in an XML error log.

<i>Method</i>	<i>Description</i>
Process	This method will start the process of matching invoices against the CD102 file
<i>Output</i>	<i>Description</i>
bool	Success or Failure.

<i>Method</i>	<i>Description</i>
GettErrorXml	Retrieve the list of errors if <i>Process</i> fails.
<i>Output</i>	<i>Description</i>
XmlDocument	An XML representation of the any errors during invoice matching.

6.1.2.5 PaymentMatch

The *InvoiceMatch* class will be a helper class to keep track of any issues matching the incoming CMS64 file invoices with the existing invoices in the database. Any issues will be logged.

<i>Property</i>	<i>Description</i>
Invoice	The invoice matched from the CMS64 file. .
<i>Output</i>	<i>Description</i>
OHC820.Data.Invoice	The Invoice object coming from the Data objects.

<i>Property</i>	<i>Description</i>
CD102	A single CD102 record coming from the CMS64 file
<i>Output</i>	<i>Description</i>
CD102Record	An object representing the CD102 record.

<i>Property</i>	<i>Description</i>
Log	A log entry when a failure happens.

6.1.2.6 CMS64Record

This class will represent a single record in the CMS64 file.

<i>Property</i>	<i>Type</i>	<i>Description</i>
SequenceNumberField	String	The sequence number
ScheduleNumberField	String	The schedule number
PaymentAmountField	String	The payment amount
InvoiceAmountField	String	The invoice amount
AdjustAmountField	String	The adjustment amount
AdjReasonCodeField	String	The adjustment reason code
ServiceNameField	String	The service name
PayDateField	String	The pay date
CovdPeriodFromField	String	The coverage period from
CovdPeriodToField	String	The coverage period to
VendorCodeField	String	The vendor code
VendorNameField	String	The vendor name
VendorEinField	String	The vendor ein
VendorcityField	String	The vendor city
VendorstateField	String	The vendor state

ForeigncntryField	String	The foreign country
VendorzipField	String	The vendor zip code
VendorTypeField	String	The vendor type
InvoiceNumberField	String	The invoice number
ServiceCodeField	String	Sthe service code

6.1.2.7 CDI02Record

<i>Property</i>	<i>Type</i>	<i>Description</i>
ScheduleNumberField	String	The schedule number
BeginWarrantNumberField	String	The start warrant number
EndWarrantNumberField	String	The end warrant number
WarrantDateField	String	The warrant date
FederalFiscalYearField	String	The federal fiscal year
AmountField	String	The amount field

6.2 ContractMgmt

The *ContractMgmt* component will be used with contract data. Contracts will be versioned for every change made. There will be no deletion or updates. This component will also handle HCP's, Aid Code Group and Aid Codes. Both *ManagedCareUI* and *InvoiceMgmt* components will interact with it.

6.2.1 Use Case - 4.2 Contract Management

Requirement Specification

This Use Case describes the process for Users to view, add and update Contracts, Amendments, Change Orders and Disbursement Register for Managed Care Plans.

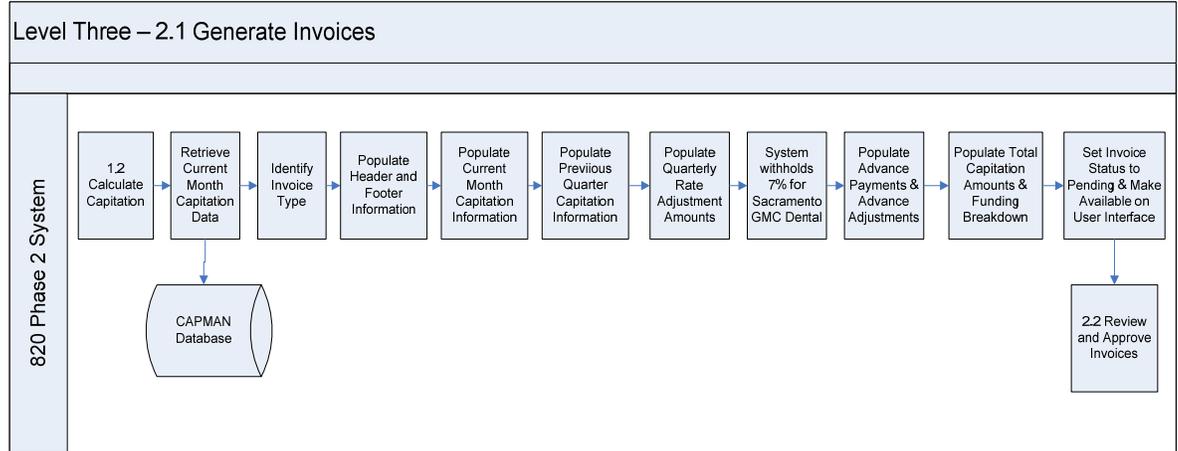
6.2.2 Use Case - 2.1 Generate Managed Care Invoices

Requirement Specification

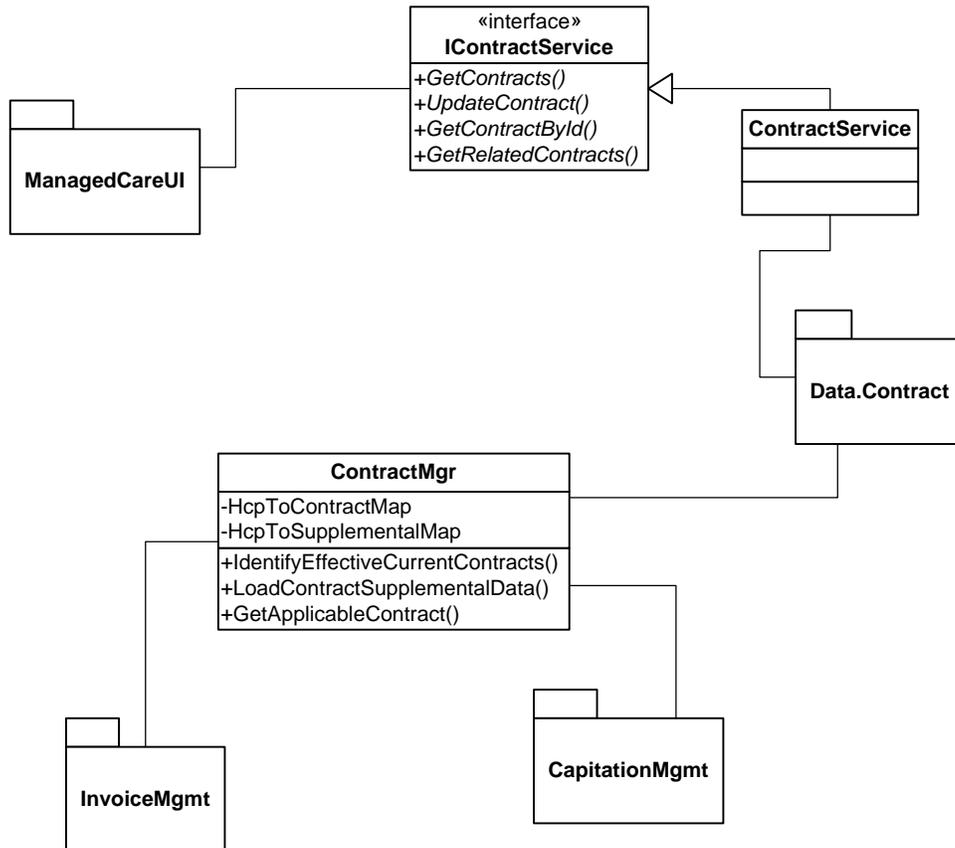
The Process Invoices process begins with the generation of all Managed Care invoices for the current enrollment month based on the completion of processing the Beneficiary Enrollment file. The invoices are then made available for review and approval by the Managed Care Department. They are then manually printed by the user and provided to the DHCS Accounting department. Additionally, HIP/BCCTP Department staff manually creates invoices and print them out for the DHCS Accounting Department. Contract and Beneficiary Adjustments are also available for the user in this process, which will ultimately be shown on the appropriate

invoice(s). The invoices are now ready for payment reconciliation, which is described in the next section: Process Payments.

Process Model



6.2.3 Class Diagram



6.2.3.1 IContractService

The *IContractService* interface will define methods to retrieve and save contract information. This interface will be used by the *ManagedCareUI* component.

Method	Description	
GetContracts	Get all contract related data. This includes HCP, Aid Code groups and Aid codes.	
Parameters	Type	Description
IncludeDetails	Bool	Flag indicated if all contract relationships should be loaded
vendorTypeId	Int	The vendor type id

contractNumber	String	The contract number
healthCarePlanTypeId	Int	The health care plan type
countyCodeTypeId	Int	The country code type id
contractTypeId	Int	The contract type id
effectiveFrom	DateTime	Effective from date
effectiveTo	DateTime	Effective to date
Output		Description
Contract[]	An array of Data.Contract objects	

Method	Description	
UpdateContract	Update contract information. This will create a new version of all contract data.	
Parameters	Type	Description
Contract	Data.Contract	The contract values to update.

Method	Description	
GetContractById	Get all contract related data. This includes HCP, Aid Code groups and Aid codes.	
Parameters	Type	Description
IncludeDetails	Bool	Flag indicated if all contract relationships should be loaded
contractId	Int	The contract id
Output	Description	
Contract	A Data.Contract object	

<i>Method</i>	<i>Description</i>	
GetRelatedContracts	Get all contact version tied to a specific contract	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
IncludeDetails	Bool	Flag indicated if all contract relationships should be loaded
contractId	Int	The contract id
<i>Output</i>	<i>Description</i>	
Contract[]	An array of Data.Contract objects	

6.2.3.2 ContractMgr

The *ContractMgr* class will be used by the *InvoiceMgmt* component to retrieve the applicable contract information to perform invoice calculations on beneficiaries.

<i>Method</i>	<i>Description</i>
LoadContractData	Loads all contracts from the database

<i>Method</i>	<i>Description</i>	
IdentifyEffectiveCurrentContracts	Identifies the contracts matched for beneficiary information	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
Beneficiary	Data.Beneficiary	The beneficiary to match with a contract
<i>Output</i>	<i>Description</i>	
Contract	The matching contract	

<i>Method</i>	<i>Description</i>	
LoadContractSupplementalData	Load the supplemental contract information	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
supplementalAidCodeType	Data.AidCodeType	The supplemental aid code

<i>Method</i>	<i>Description</i>
GetApplicableContract	Get applicable supplemental contract

<i>Parameters</i>	<i>Type</i>	<i>Description</i>
hcpId	Short	The id of the health care plan
serviceMonth	DateTime	The applicable service month
payType	Short	The applicable payment type
<i>Output</i>	<i>Description</i>	
List<Data.SupplementalInfo>	A list of Data.Supplemental objects	

<i>Property</i>	<i>Description</i>
HcpToContractMap	Dictionary mapping an HCP to contracts
<i>Output</i>	<i>Description</i>
Dictionary<int, List<Data.Contract>>	A dictionary keyed on hcp id with a list of applicable contracts

<i>Property</i>	<i>Description</i>
HcpToSupplementalMap	Dictionary mapping an HCP to supplemental data
<i>Output</i>	<i>Description</i>
Dictionary<int, List<SupplementalData>>	A dictionary keyed on hcp id with a list of supplemental data

6.3 BeneficiaryMgmt

The *BeneficiaryMgmt* component will be used to manage beneficiaries and their associated entities. This will include retrieval for both non-managed and managed care beneficiaries. For managed care only, adding risk factor and supplemental information, and for non-managed care only, creating new beneficiaries with associated coverage. This component will be referenced by *ManagedCareUI* and *NonManagedCareUI*, and will be reference the *Data* component.

6.3.1 Use Case - 4.1 Beneficiary Management

Requirement Specification

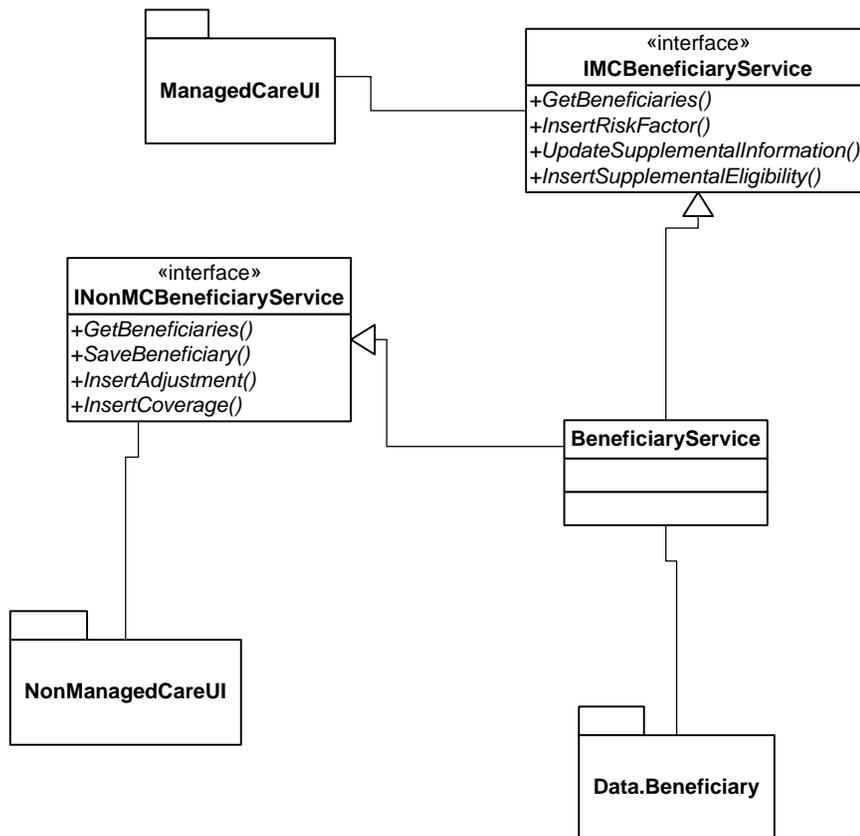
This use case describes the process for users to view Beneficiary Eligibility Data and Payment History, and update Supplemental Eligibility information via the user interface.

6.3.2 Use Case - 4.5 HIPP and BCCTP Beneficiary Management

Requirement Specification

This Use Case describes the steps for adding, updating and viewing HIPP, BCCTP, and GHPP Beneficiary information in the 820 Phase 2 System via the user interface.

6.3.3 Class Diagram



6.3.3.1 IMCBeneficiaryService

The *IMCBeneficiaryService* interface will define methods to retrieve beneficiaries and add supplemental information. This interface will be used by the *ManagedCareUI* component.

<i>Method</i>	<i>Description</i>	
GetBeneficiaries	Retrieve beneficiaries	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
CIN	String	The CIN number of a beneficiary to retrieve
firstName	String	First Name
lastName	String	Last Name
dateOfBirth	DateTime	The date of birth
alienStatus	String	The alien status
healthCarePlanId	Int	The health care plan id
primaryEligibilityId	Int	The primary eligibility id
supplementalEligibilityId	Int	The supplemental eligibility id
supplementalEligibilityFromDate	DateTime	The from date of the supplemental eligibility information
supplementalEligibilityToDate	DateTime	The to date of the supplemental eligibility information
<i>Output</i>	<i>Description</i>	
Beneficiary[]	An array of Data.Beneficiary objects	

<i>Method</i>	<i>Description</i>	
UpdateContract	Update contract information. This will create a new version of all contract data.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>

Contract	Data.Contract	The contract values to update.
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Method	Description	
InsertRiskFactor	Insert Risk factor for a beneficiary.	
Parameters	Type	Description
beneficiaryId	Long	The beneficiary id
riskFactor	Decimal	The risk factor

Method	Description	
InsertSupplementalEligibility	Insert supplemental information for a beneficiary	
Parameters	Type	Description
beneficiaryId	Long	The beneficiary id
supplementalAidId	Long	The supplemental id code id
diagnosis	String	The diagnosis code

6.3.3.2 INonMCBeneficiaryService

The *INonMCBeneficiaryService* interface will define methods to retrieve and save beneficiary information. This interface will be used by the *NonManagedCareUI* component.

<i>Method</i>	<i>Description</i>	
GetBeneficiaries	Retrieve beneficiaries	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
CIN	String	The CIN number of a beneficiary to retrieve
firstName	String	First Name
lastName	String	Last Name
dateOfBirth	DateTime	The date of birth
alienStatus	String	The alien status
healthCarePlanId	Int	The health care plan id
primaryEligibilityId	Int	The primary eligibility id
supplementalEligibilityId	Int	The supplemental eligibility id
supplementalEligibilityFromDate	DateTime	The from date of the supplemental eligibility information
supplementalEligibilityToDate	DateTime	The to date of the supplemental eligibility information
<i>Output</i>	<i>Description</i>	
Beneficiary[]	An array of Data.Beneficiary objects	

<i>Method</i>	<i>Description</i>	
SaveBeneficiary	Save a single beneficiary	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
Beneficiary	Data.Beneficiary	The beneficiary to save

6.4 ReportMgmt

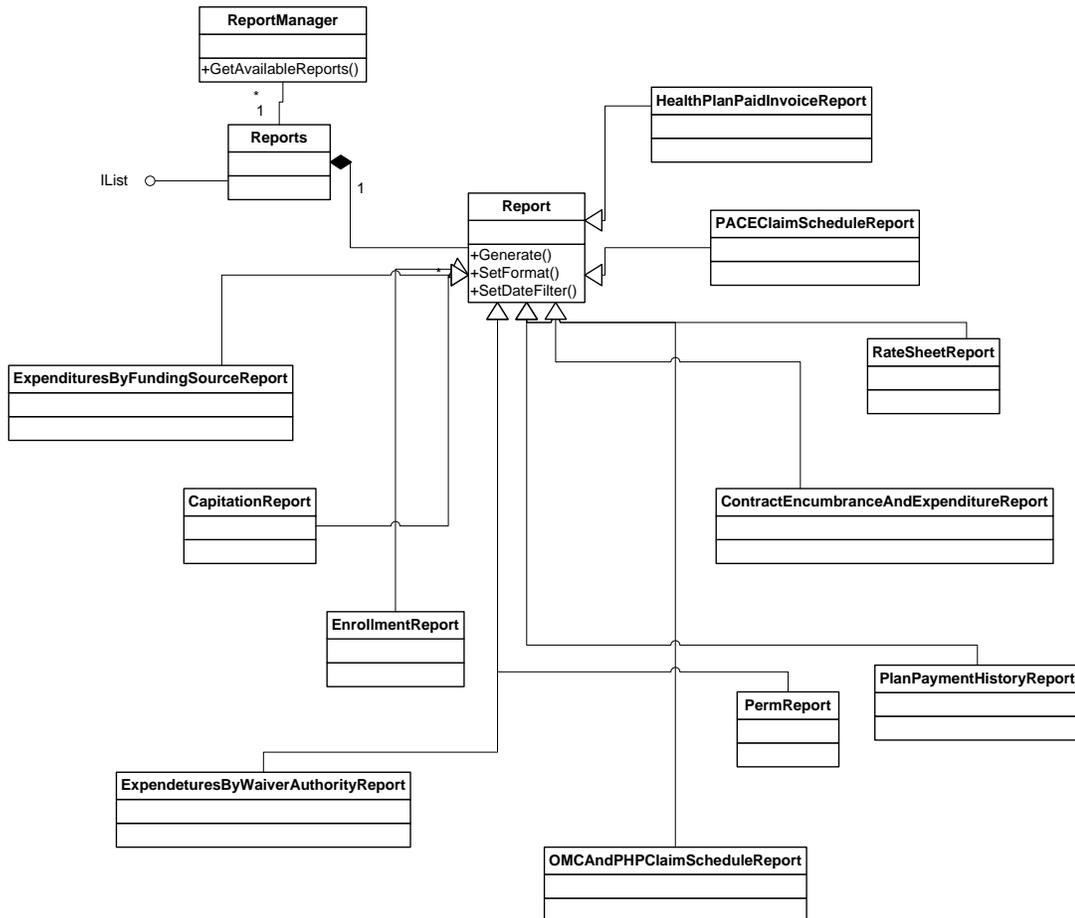
The *ReportMgmt* component will be used manage and create reports. Reports will be initiated from the user interface and will either be formatted for *Excel* or *Adobe Reader*. The *ManagedCareUI* and *NonManagedCareUI* components will use it. This component will reference the *Data* component.

6.4.1 Use Case - 4.3 Generate Reports

Requirement Specification

This use case describes the process for users to generate, view, print and export reports via the user interface.

6.4.2 Class Diagram



6.4.2.1 ReportManager

The *ReportManager* class will be the managing class within this component. It will be used to access all available reports.

<i>Method</i>	<i>Description</i>
GetAvailableReports	Get a list of available reports
<i>Output</i>	<i>Description</i>
Reports	A list of Report objects

6.4.2.2 Reports

The *Reports* class will implement *System.Collections.Generic.IList* and will contain a list of *Report* objects. The list will be strongly typed and each object can be accessed by index.

6.4.2.3 Report

The *Report* class will be an abstract class containing methods that are common across report objects within the system.

<i>Method</i>	<i>Description</i>
Generate	Generate the report based on a date filter.
<i>Output</i>	<i>Description</i>
Reports	A list of Report objects

<i>Method</i>	<i>Description</i>	
SetFormat	Set the format of the report to either PDF or Excel	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
formatType	enumFormat {excel, pdf}	An enumerator of either value defining either excel or pdf

1. Method	Description	
SetDateFilter	Set the to and from date filter	
Parameters	Type	Description
dateFrom	DateTime	The date from
dateTo	DateTime	The date To

6.4.2.4 EnroEnllmentReport

The *EnrollmentReport* class will represent Beneficiaries grouped by County and Aid Code Group. Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.

Enrollment Report by County and Aid Code Groups													
JUNE 2009													
Run Date: August 1, 2009													
County Code	County Name	Health Plan Model	Health Care Plan Name	HCP code	FAMILY			AGED			Total		
					Medi-Cal Only	Medicare Part D	Total	Medi-Cal Only	Medicare Part D	Total	Medi-Cal Only	Medicare Part D	Total for all Aid Code Groups
21	Marin	PHP	Kaiser - Marin	81	487	2	489	19	35	54	506	37	543
Total - Marin					487	2	489	19	35	54	506	37	543
49	Sonoma	PHP	Kaiser - Sonoma	87	997	4	1001	20	45	65	1017	49	1066
Total - Sonoma					997	4	1001	20	45	65	1017	49	1066
36	San Bernardino	PHP DENTAL	Western Dental	415	20,111	83	20,194	82	191	273	20,193	274	20,467
		PHP DENTAL	Safeguard Dental Inc.	408	12,832	95	12,927	73	173	246	12,905	268	13,173
		PHP DENTAL	Watts Health Foundation	404	30,768	80	30,848	159	238	397	30,927	318	31,245
		Total - San Bernardino					63,711	258	63,969	314	602	916	64,025
33	Riverside	PHP DENTAL	Western Dental	414	18,383	133	18,516	170	489	659	18,553	622	19,175
		PHP DENTAL	Safeguard Dental Inc.	407	75,890	292	76,182	276	426	702	76,166	718	76,884
		Total - Riverside					94,273	425	94,698	446	915	1,361	94,719

6.4.2.5 CapitationReport

The *CapitationReport* class will represent Beneficiaries grouped by Aid Code Group, HCP, Rate, Term date and County. Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.

Capitation Report - JUNE 2009									
Run Date: August 1, 2009									
Health Plan Model	County Name	County Code	Health Care Plan Name	HCP code	Payment Type	Current Enrollment	Capitation Amount	Aid Code Group	Rates
PHP	Marin	21	Kaiser - Marin	81	Medi-Cal Only	631	\$118,675	FAMILY	\$104.10
									\$378.84
								AGED	\$460.58
								BLIND/DISABLED	\$420.59
								ADULT REFUGEES FAMILY	\$104.10
								BCCTP	\$743.70
								AIDS	\$1,576.66
					Medicare Part D	147	\$14,118	FAMILY	\$104.10
									\$110.82
								AGED	\$91.19
								BLIND/DISABLED	\$420.59
								ADULT REFUGEES FAMILY	\$104.10
								BCCTP	\$743.70
								AIDS	\$1,576.66
Sub Total						778	\$132,793		
PHP	Sonoma	49	Kaiser - Sonoma	87	Medi-Cal Only	1342	\$241,662	FAMILY	\$96.77
									\$378.84
								AGED	\$460.58
								BLIND/DISABLED	\$420.59
								ADULT REFUGEES FAMILY	\$104.10
								BCCTP	\$743.70
								AIDS	\$1,576.66
					Medicare Part D	225	\$21,018	FAMILY	\$104.10
									\$110.82
								AGED	\$91.19
								BLIND/DISABLED	\$420.59
								ADULT REFUGEES FAMILY	\$104.10
								BCCTP	\$743.70
								AIDS	\$1,576.66
Sub Total						1567	\$262,680		
Total - PHP						2345	\$395,473		



6.4.2.6 ExpendituresByFundingSourceReport

The *ExpendituresByFundingSourceReport* class will represent Amounts paid, broken down by State Fiscal Year and Quarter of Payment Date, HCP and Model Type, for Funding Sources:

Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.

Expenditure by Funding Source Report												
JUNE 2009												
Run Date: August 1, 2009												
Health Plan Model	County Name	County Code	Health Care Plan Name	HCP code	Title 19 (State/Fed)				100% Fed (Refugees)			
					Medi-Cal Only Amount Paid	Medicare Part D Amount Paid	Agnews Amount Paid	Total Amount Paid	Medi-Cal Only Amount Paid	Medicare Part D Amount Paid	AIDS Amount Paid	Total Amount Paid
PHP	Marin	21	Kaiser - Marin	81	\$100.00	\$50.00	\$0.00	\$150.00	\$0.00	\$0.00	\$25.00	\$25.00
	Sonoma	49	Kaiser - Sonoma	87	\$0.00	\$0.00	\$30.00	\$30.00	\$50.00	\$30.00	\$0.00	\$80.00
Total - PHP					\$100.00	\$50.00	\$30.00	\$180.00	\$50.00	\$30.00	\$25.00	\$105.00
GMC SAC	Sacramento	34	Molina Healthcare	130	\$40.00	\$40.00	\$0.00	\$80.00	\$0.00	\$0.00	\$20.00	\$20.00
			Western Health Advantage	140	\$0.00	\$0.00	\$20.00	\$20.00	\$30.00	\$50.00	\$0.00	\$80.00
			Health Net	150	\$30.00	\$30.00	\$0.00	\$60.00	\$25.00	\$25.00	\$0.00	\$50.00
			Kaiser	170	\$60.00	\$40.00	\$0.00	\$100.00	\$0.00	\$0.00	\$25.00	\$25.00
			Blue Cross of California	190	\$0.00	\$0.00	\$25.00	\$25.00	\$50.00	\$70.00	\$0.00	\$120.00
Total - GMC SAC					\$130.00	\$110.00	\$45.00	\$330.00	\$105.00	\$145.00	\$45.00	\$295.00

6.4.2.7 ExpendituresByWaiverAuthorityReport

The *ExpendituresByWaiverAuthorityReport* class will represent Waiver Amounts paid per State Fiscal Year and Quarter, broken down by HCP, Claim Sch. Number, Payment Type, Funding Source and Aid code group for each waiver. Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.

Expenditures by Waiver Authority Report Summary - QTR 01/09 - 03/09																					
Run Date: August 1, 2009																					
Health Care Plan Name	HCP Code	Pay Date (from CMS64)	State Fiscal Year	Claim Schedule No	Payment Type	Total Amount of Payment								Enhanced Title 21				Monthly Enrollment		Amount per Enrollee per Quarter	
						Total Invoice Amount	Total Enrollment	Waiver Amount on Invoice	Waiver Enrollment	Total Invoice Amount	Total Enrollment	Waiver Amount on Invoice	Waiver Enrollment	Total Invoice Amount	Total Enrollment	Waiver Amount on Invoice	Waiver Enrollment	Title 19	Title 21	Title 19	Title 21
Molina Healthcare	130	01/27/09	08/09	5181653	Medi-Cal Only	\$41,114.59	302	\$41,114.59	302	\$41,114.59	302	\$41,114.59	302	\$0.00	0	-\$0.01	0				
		01/27/09	08/09	5181653	Medicare Part D	\$1,209.70	8	\$1,209.70	8	\$1,209.70	8	\$1,209.70	8	\$0.00	0	\$0.00	0				
		01/30/09	08/09	6280121	Healthy Families	\$65.07	1	\$65.07	1	\$0.00	2	\$0.00	2	\$65.07	1	\$65.07	1	3	1		
		02/27/09	08/09	5181976	Medi-Cal Only	\$40,354.48	303	\$40,354.48	303	\$40,354.48	303	\$40,354.48	303	\$0.00	0	\$0.00	0				
		02/27/09	08/09	5181976	Medicare Part D	\$1,232.18	8	\$1,232.18	8	\$1,232.18	8	\$1,232.18	8	\$0.00	0	\$0.00	0				
		02/27/09	08/09	6280165	Healthy Families	\$69.71	1	\$69.71	1	\$0.00	2	\$0.00	2	\$69.71	1	\$69.71	1	2	1		

6.4.2.8 PermReport

The *PermReport* class will represent expenditures by HCP, Aid Code Group, Aid Code, Rate, and Beneficiary. Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.



The PERM Report																
06/01/09 - 06/30/09																
Run Date: August 1, 2009																
Beneficiary CIN	First Name	Last Name	Middle Initial	Gender	Date Of Birth	Health Plan Model	County Name	County Code	Health Care Plan Name	HCP code	Aid Code Group	Aid Code	Payment Type	Month of Service	Rate	Amount Paid
91811048M	Joe	Smith	A	M	05/10/75	PHP	Marin	21	Kaiser - Marin	81	PA FAMILY	30	Medical Only	05/09	\$10.00	\$10.00
91811048M	Joe	Smith	A	M	05/10/75	PHP	Marin	21	Kaiser - Marin	81	PA FAMILY	30	Medical Only	04/09	\$10.00	\$10.00
91811048M	Joe	Smith	A	M	05/10/75	PHP	Marin	21	Kaiser - Marin	81	PA FAMILY	30	HYDE Medical Only	05/09	\$30.00	\$30.00
91811048M	Joe	Smith	A	M	05/10/75	PHP	Marin	21	Kaiser - Marin	81	PA FAMILY	30	AIDS Medical Only	05/09	\$10.00	\$10.00
91753313M	Jane	Smith	M	F	05/10/75	PHP	Marin	21	Kaiser - Marin	81	PA AGED	3N	Medicare Part D	05/09	\$20.00	\$20.00
91753313M	Jane	Smith	M	F	05/10/75	PHP	Marin	21	Kaiser - Marin	81	PA AGED	3N	HYDE Medicare Part D	05/09	\$30.00	\$30.00
91753313M	Jane	Smith	M	F	05/10/75	PHP	Marin	21	Kaiser - Marin	81	PA AGED	3N	Agnews Medicare Part D	05/09	\$10.00	\$10.00
91811048M	Joe	Smith	A	M	05/10/75	PHP	Sonoma	49	Kaiser - Sonoma	87	PA FAMILY	30	Medical Only	05/09	\$20.00	\$20.00
91811048M	Joe	Smith	A	M	05/10/75	PHP	Sonoma	49	Kaiser - Sonoma	87	PA FAMILY	30	HYDE Medical Only	05/09	\$30.00	\$30.00
91811048M	Joe	Smith	A	M	05/10/75	PHP	Sonoma	49	Kaiser - Sonoma	87	PA FAMILY	30	AIDS Medical Only	05/09	\$10.00	\$10.00
91753313M	Jane	Smith	M	F	05/10/75	PHP	Sonoma	49	Kaiser - Sonoma	87	PA AGED	3N	Medicare Part D	05/09	\$20.00	\$20.00
91753313M	Jane	Smith	M	F	05/10/75	PHP	Sonoma	49	Kaiser - Sonoma	87	PA AGED	3N	HYDE Medicare Part D	05/09	\$30.00	\$30.00
91753313M	Jane	Smith	M	F	05/10/75	PHP	Sonoma	49	Kaiser - Sonoma	87	PA AGED	3N	Agnews Medicare Part D	05/09	\$10.00	\$10.00

6.4.2.9 PlanPaymentHistoryReport

The *PlanPaymentHistoryReport* class will represent expenditures by Month of Payment or Month of Service/. Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.

Month of Service/Payment: June 2009																	
Run Date: August 1, 2009																	
HP Model	County	County Code	HCP Name	HCP Code	Number of Pending Invoices	Number of Paid Invoices	Invoice Number	Service Month	Invoice Status	Invoice Date	Invoice Payment Type	Claim Schedule Number	Warrant Number	Warrant Date	Amount of Pending Invoices	Amount of Paid Invoices	Total Amount of Paid and Pending Invoices
Two-Plan	San Francisco	38	Anthem Blue Cross Partnership, Inc, San Francisco	343	5	2	4123		Pending		Medi-Cal Only				\$10.00	\$10.00	
							5532		Reviewed		HYDE				\$11.00	\$15.00	
							7534		Approved		Medi-Cal Only				\$10.00		
							5564		CMS64 Received		Medi-Cal Only	4532			\$10.00		
							6354		CD102 Received (Paid)		Medicare Part D	6937	5656565	6/30/2009	\$12.00		
Subtotal														\$53.00	\$25.00	\$78.00	
Two-Plan	Contra Costa	7	Anthem Blue Cross	344	2	2	7898		Pending		HYDE				\$15.00	\$20.00	
							5654		820 Sent		Medi-Cal	8472	390112	6/30/2009	\$30.00	\$50.00	
Subtotal															\$45.00	\$70.00	\$115.00
TOTAL					7	4									\$98.00	\$95.00	\$193.00

6.4.2.10 ContractEncumbranceAndExpenditureReport

The *ContractEncumbranceAndExpenditureReport* class will represent expenditures by Contract. Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.



Contract Encumbrance and Expenditure Status Report														
Month of Service: June 2009														
Run Date: August 1, 2009														
Health Plan Model	HCP Name	HCP Code	Contract Number	Term Date	Contract Amount	Contract Amount Expended	Unexpended Contract Amount	Prior Month Capitation	Current Month Capitation	% Change Current Month	Remain Expended Month	Months Remaining Per FY	Possible Funding Shortfall?	Term Expiration <120 Days
Two-Plan	Alameda Alliance for Health	300	01-11111 A01	12/31/2009	\$100,000	\$50,000	\$50,000 Calculation: Contract Amount - Contract Amount Expended	\$25,000	\$25,500	Calculation: (Current Month CAP - Prior Month CAP) divided by Prior Month CAP 37%	Calculation: Unexpended Contract Amount/Current Month CAP	Calculation: End of Fiscal year - Current Month (# of months from Curr month until end of FY)	If (Remain Expended Month < Months Remaining Per FY), then (Term Date - Current Date) >= (Term Date - Current Date) then Possible Funding Shortfall = 'NO' else = 'YES'	IF (Term Date > Current Date +120), THEN 'OK', else IF (Term Date > Current Date +90, THEN 'LESS THAN 120 DAYS', else IF (Term Date > Current Date +60, THEN 'LESS THAN 90 DAYS', else IF (Term Date > Current Date +30, THEN 'LESS THAN 60 DAYS', else IF (Term Date > Current Date, THEN 'TERM EXPIRED')
	Contra Costa Health Plan	301	01-11112 A01	12/31/2009	\$120,000	\$50,000	\$70,000 Calculation: Contract Amount - Contract Amount Expended	\$25,000	\$25,500	Calculation: (Current Month CAP - Prior Month CAP) divided by Prior Month CAP 37%	Unexpended Contract Amount/Current Month CAP	Calculation: End of Fiscal year - Current Month (# of months from Curr month until end of FY)		
	Kern Family Health Care	303	01-11113 A01	12/31/2009	\$150,000	\$50,000	\$100,000 Calculation: Contract Amount - Contract Amount Expended	\$25,000	\$25,500	Calculation: (Current Month CAP - Prior Month CAP) divided by Prior Month CAP 37%	Unexpended Contract Amount/Current Month CAP	Calculation: End of Fiscal year - Current Month (# of months from Curr month until end of FY)		
TOTAL of Two Plan Model					\$370,000	\$150,000	\$220,000	\$75,000	\$76,500					
GMC_Sacramento	Molina Healthcare of California Partner Plan, Inc Sacramento	130	01-11114 A01	12/31/2009	\$100,000	\$20,000	\$80,000 Calculation: Contract Amount - Contract Amount Expended	\$25,000	\$30,000	Calculation: (Current Month CAP - Prior Month CAP) divided by Prior Month CAP 37%	Unexpended Contract Amount/Current Month CAP	Calculation: End of Fiscal year - Current Month (# of months from Curr month until end of FY)	If (Remain Expended Month < Months Remaining Per FY), then (Term Date - Current Date) >= (Term Date - Current Date) then Possible Funding Shortfall = 'NO' else = 'YES'	IF (Term Date > Current Date +120), THEN 'OK', else IF (Term Date > Current Date +90, THEN 'LESS THAN 120 DAYS', else IF (Term Date > Current Date +60, THEN 'LESS THAN 90 DAYS', else IF (Term Date > Current Date +30, THEN 'LESS THAN 60 DAYS', else IF (Term Date > Current Date, THEN 'TERM EXPIRED')
	Western Health Advantage Community Health Plan Sacramento	140	01-11115 A01	12/31/2009	\$200,000	\$70,000	\$130,000 Calculation: Contract Amount - Contract Amount Expended	\$25,000	\$30,000	Calculation: (Current Month CAP - Prior Month CAP) / Prior Month CAP 37%	Unexpended Contract Amount/Current Month CAP	Calculation: End of Fiscal year - Current Month (# of months from Curr month until end of FY)		
GMC_Sacramento Model					\$300,000	\$90,000	\$210,000	\$50,000	\$60,000					
Total of all HP Model Types					\$670,000	\$240,000	\$430,000	\$125,000	\$136,500					

6.4.2.11 OMCAndPHPClaimScheduleReport

The *ContractEncumbranceAndExpenditureReport* class will represent Payments by Date of Payment. Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.



OTHER MANAGED CARE AND PHP CLAIM SCHEDULE														
Current Quarter 04-06/09														
Run Date: August 1, 2009														
Program Type	Funding Source	Federal Funding Percentage	Claim Schedule No	Invoice No	Month of Service	Pay Date Month & Year	Total Amount	No Waiver	Waiver 1 - Waiver Name 1	Waiver 2 - Waiver Name 2	Waiver 3 - Waiver Name 3	Waiver 4 - Waiver Name 4	Waiver 5 - Waiver Name 5	FED Total Amount
OMC	Title 19 (State/Fed)	50.00%	5182724	4123	04/09	05/09	7,819,341.97	7,729,858.55						89,483.42
OMC	Title 19 (State/Fed)	50.00%	5182732	5532	04/09	05/09	23,430,129.34	22,801,291.65						628,837.69
PHP	Title 19 (State/Fed)	50.00%	5182743	7534	04/09	05/09	389,683.68	389,683.68						194,841.84
PHP	Title 19 (State/Fed)	50.00%	5182762	5564	04/09	05/09	209.67	209.67						104.84
OMC	Title 19 (State/Fed)	50.00%	5183000	6354	04/09	05/09	8,840,429.77	8,634,447.74						205,982.03
OMC	Title 19 (State/Fed)	50.00%	5182942	5645	04/09	05/09	2,953,242.69	2,892,701.19						60,541.50
Total - Title 19 (State/Fed)							43,433,037.12	42,448,192.48						984,844.64
OMC	Enhanced Title 21	65.00%	5182949	4123	04/09	05/09	3,151,676.29	3,098,728.13						52,948.16
OMC	Enhanced Title 21	65.00%	5182958	5532	04/09	05/09	2,018,120.71	1,978,363.73						39,756.98
OMC	Enhanced Title 21	65.00%	5182962	7534	04/09	05/09	24,197,901.18	23,856,710.75						341,190.43
OMC	Enhanced Title 21	65.00%	5182970	5564	04/09	05/09	89,624,591.85	88,307,110.35						1,317,481.50
OMC	Enhanced Title 21	65.00%	5182975	6354	04/09	05/09	56,014,676.99	54,972,393.03						1,042,283.96
Total - Enhanced Title 21							175,006,967.02	172,213,305.99						2,793,661.03
OMC	Enhanced BCCTP	65.00%	5182996	4123	04/09	05/09	39,575.70	38,993.93						581.77
OMC	Enhanced BCCTP	65.00%	5183016	5532	04/09	05/09	34,194.11	34,159.89						34.22
OMC	Enhanced BCCTP	65.00%	5183018	7534	04/09	05/09	29,548.50	29,060.31						488.19
OMC	Enhanced BCCTP	65.00%	5183022	5564	04/09	05/09	2,527.62	2,488.95						38.67
OMC	Enhanced BCCTP	65.00%	5183023	6354	04/09	05/09	6,938.40	6,799.56						138.84
Total - Enhanced BCCTP							113,384.93	111,502.34						1,882.59
OMC	ARRA	61.59%	5183000	4123	04/09	05/09	204,373.77	204,373.77						0.00
OMC	ARRA	61.59%	5182942	5532	04/09	05/09	6,400,487.30	6,204,632.39						195,854.91
OMC	ARRA	61.59%	5182958	7534	04/09	05/09	8,231,897.68	8,039,899.12						191,998.56
OMC	ARRA	61.59%	5182962	5564	04/09	05/09	2,551,523.43	2,499,217.20						52,306.23
OMC	ARRA	61.59%	5182996	6354	04/09	05/09	255,127.50	255,127.50						0.00
Total - ARRA							17,643,209.68	17,203,249.98						439,959.70
OMC	100% State	0.00%	5182674	4123	04/09	05/09	4,513.78							
OMC	100% State	0.00%	5182703	5532	04/09	05/09	3,440.50							
OMC	100% State	0.00%	5182714	7534	04/09	05/09	4,579.04							
OMC	100% State	0.00%	5182715	5564	04/09	05/09	1,824.54							
OMC	100% State	0.00%	5182716	6354	04/09	05/09	61,212.10							
Total - 100% State							75,569.96							
OMC	100% Fed (Refugees)	100.00%	5182958	4123	04/09	05/09	294.92							
OMC	100% Fed (Refugees)	100.00%	5182962	5532	04/09	05/09	1,372.15							
OMC	100% Fed (Refugees)	100.00%	5182970	7534	04/09	05/09	-120.96							
OMC	100% Fed (Refugees)	100.00%	5182975	5564	04/09	05/09	-13.73							
OMC	100% Fed (Refugees)	100.00%	5182984	6354	04/09	05/09	2,619.50							
Total - 100% Fed (Refugees)							4,151.88							

6.4.2.12 PACEClaimScheduleReport

The *PACEClaimScheduleReport* class will represent Payments by Date of Payment (Hierarchy: Program Type, Managed Care Plan Name, Funding Source, Quarterly). Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.

PACE CLAIM SCHEDULE													
Current Quarter 04-06/09													
Run Date: August 1, 2009													
Program Type	Funding Source	Federal Funding Percentage	Claim Schedule No	Invoice No	Month of Service	Pay Date Month & Year	Total Amount	Managed Care Plan Name 1	Managed Care Plan Name 2	Managed Care Plan Name 3	Managed Care Plan Name 4	Managed Care Plan Name 5	FED Total Amount
PACE	Title 19 (State/Fed)	50.00%	5182162	4123	04/09	04/09	615,226.72	0.00	0.00	615,226.72	0.00	0.00	378,918.14
PACE	Title 19 (State/Fed)	50.00%	5182225	5532	04/09	04/09	3,836,634.32	0.00	0.00	3,836,634.32	0.00	0.00	2,362,983.08
PACE	Title 19 (State/Fed)	50.00%	5182226	7534	04/09	04/09	5,137,258.04	2,431,336.90	706,496.74	0.00	1,814,976.73	184,447.67	3,164,037.23
PACE	Title 19 (State/Fed)	50.00%	5182596	5564	04/09	04/09	4,417,247.23	0.00	0.00	4,417,247.23	0.00	0.00	2,720,582.57
PACE	Title 19 (State/Fed)	50.00%	5182604	6354	04/09	04/09	5,240,592.60	2,421,273.42	780,301.38	0.00	1,830,768.65	208,249.15	3,227,680.98
PACE	Title 19 (State/Fed)	50.00%	5183001	5645	05/09	05/09	4,434,966.83	0.00	0.00	4,434,966.83	0.00	0.00	2,731,496.07
PACE	Title 19 (State/Fed)	50.00%	5183003	3474	05/09	05/09	5,127,614.53	2,440,877.73	719,900.74	0.00	1,738,360.62	228,475.44	3,158,097.79
PACE	Title 19 (State/Fed)	50.00%	5183205	9674	06/09	06/09	4,523,382.33	0.00	0.00	4,523,382.33	0.00	0.00	2,785,951.18
PACE	Title 19 (State/Fed)	50.00%	5183206	3699	06/09	06/09	5,375,596.88	2,439,762.63	795,572.24	0.00	1,839,195.92	301,066.09	3,310,830.12
Total							38,708,519.48	9,733,250.68	3,002,271.10	17,827,457.43	7,223,301.92	922,238.35	23,840,577.15



6.4.2.13 RateSheetReport

The *RateSheetReport* class will represent Payment Rates per Aid Code Group (or Supplemental Payment Rate), per HCP, and per current Effective Date(s). Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.

Rate Sheet Report										
Current Rates										
Run Date: August 1, 2009										
HCP Name	HCP Code	Contract Type	Contract Number	Amendment #	Change Order #	Payment Type	Aid Code Group	Current Effective Date From	Current Effective Date To	Current Rate
Partnership Health Plan of California - Solano	343	Primary Contract	123456	A2	C2	Primary Medi-Cal Only	Family	6/1/2009	6/10/2009	\$10
							Aged	6/1/2009	6/10/2009	\$10
							Disabled	6/1/2009	6/10/2009	\$10
							Adult	6/1/2009	6/10/2009	\$10
							OBRA	6/1/2009	6/10/2009	\$10
							LTC	6/1/2009	6/10/2009	\$10
						Primary Medi-Care Part D	BCCTP	6/1/2009	6/10/2009	\$10
							Family	6/1/2009	6/20/2009	\$50
							Aged	6/1/2009	6/20/2009	\$50
							Disabled	6/1/2009	6/20/2009	\$50
							Adult	6/1/2009	6/20/2009	\$50
							OBRA	6/1/2009	6/20/2009	\$50
						Healthy Families Medi-Cal Only	LTC	6/1/2009	6/20/2009	\$50
							BCCTP	6/1/2009	6/20/2009	\$50
						Healthy Families Medicare Part D	Healthy Families	6/1/2009	6/30/2009	\$50
						Healthy Families Medicare Part D	Healthy Families	6/1/2009	6/25/2009	\$10
						AIDS Medi-Cal Only	AIDS Medi-Cal Only	6/1/2009	6/12/2009	\$50
						AIDS Medicare Part D	AIDS Medicare Part D	6/1/2009	6/10/2009	\$10
						Agnews Medi-Cal Only	Agnews Medi-Cal Only	6/1/2009	6/20/2009	\$50
						Agnews Medicare Part D	Agnews Medicare Part D	6/1/2009	6/30/2009	\$60
Craig vs. Bonta Medi-Cal Only	Craig vs. Bonta Medi-Cal Only	6/1/2009	6/25/2009	\$70						
Craig vs. Bonta Medicare Part D	Craig vs. Bonta Medicare Part D	6/1/2009	6/12/2009	\$80						
Maternity	Maternity	6/1/2009	6/7/2009	\$90						
GMC Dental 7% Withhold Release	GMC Dental 7% Withhold Release	6/1/2009	6/22/2009	\$100						
Savings Sharing Disbursement	Savings Sharing Disbursement	6/1/2009	6/11/2009	\$10						
Initial Advance Payment	Initial Advance Payment	6/1/2009	6/28/2009	\$50						
Partnership Health Plan of California - Solano	343	Hyde Contract	123456	A3		HYDE Medi-Cal Only	Family	6/1/2009	6/10/2009	\$90
							Adult	6/1/2009	6/10/2009	\$90
						HYDE Medi-Care Part D	Family	6/1/2009	6/20/2009	\$40
							Adult	6/1/2009	6/20/2009	\$40
						HYDE Healthy Families Medi-Cal Only	Healthy Families	6/1/2009	6/30/2009	\$10
						HYDE Healthy Families Medicare Part D	Healthy Families	6/1/2009	6/25/2009	\$10

6.4.2.14 HealthPlanPaidInvoiceReport

The *HealthPlanPaidInvoiceReport* class will represent Payments by Date of Payment (Hierarchy: HCP, Invoice No., Monthly). Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.



Health Plan Paid Invoices Report																
June 2009																
Run Date: August 1, 2009																
HCP Name	HCP Code	Health Plan Model	County Name	Invoice Number	Service Month	Invoice Date	Invoice Payment Type	Total Amount on Invoice	No. of Eligibles	Applicable Aid Codes	Original Capitation Claim Schedule No.	Adjustment Type	Adjustment Amount	Original Capitation Pay Date for Service Month		
Anthem Blue Cross Partnership, Inc. San Francisco	343	Two-Plan	San Francisco	4123	05/09	06/15/09	Medi-Cal Only	\$10.00	4	30, 3M, 3N		Capitation Rate Adjustment	\$5.00	6/25/2009		
												Capitation Net changes	\$5.00			
				5632			HYDE	\$11.00	5							
				7534			Craig V. Bonta	\$10.00	10							
				5564			Medi-Cal Only	\$10.00	6							
Anthem Blue Cross Partnership, Inc. Contra Costa	344	Two-Plan	Contra Costa	7898			HYDE	\$15.00	20							
				5654			Agnews	\$30.00	15							

6.4.2.15 BeneficiaryPaymentHistorySummaryReport

The *HealthPlanPaidInvoiceReport* class will represent a summary of payment history per Beneficiary. Invoice Types will be both Medi-Cal Only and Medicare Part D. The invoice statuses will be Pending through 820 Sent.

Managed Care Beneficiary Payment History (Summary Report)			
Service Months: 03/07-03/10			
Run Date: July 1, 2009			
Beneficiary CIN: 123456789			
Last Name: Smith		First Name: Joe	
Date of Birth: 7/15/1955		Gender: Male	
Health Care Plan (HCP) Name	HCP Code	Service Month	Total Amount Paid
Partnership Health Plan (Yolo)	509	03/07	\$433.41
Partnership Health Plan (Yolo)	509	04/07	\$433.41
Partnership Health Plan (Yolo)	509	05/07	\$433.89
Partnership Health Plan (Yolo)	509	06/07	\$433.89
Partnership Health Plan (Yolo)	509	07/07	\$433.89
Partnership Health Plan (Yolo)	509	08/07	\$433.89
Partnership Health Plan (Yolo)	509	09/07	\$433.89
Partnership Health Plan (Yolo)	509	10/07	\$433.89
Partnership Health Plan (Yolo)	509	11/07	\$433.89
Partnership Health Plan (Yolo)	509	12/07	\$433.89
Partnership Health Plan (Yolo)	509	01/08	\$433.89
Partnership Health Plan (Yolo)	509	02/08	\$433.89
Partnership Health Plan (Yolo)	509	03/08	\$433.89
Partnership Health Plan (Yolo)	509	04/08	\$433.89
Partnership Health Plan (Yolo)	509	05/08	\$433.89
Partnership Health Plan (Yolo)	509	06/08	\$433.89
Partnership Health Plan (Yolo)	509	07/08	\$433.89
Partnership Health Plan (Yolo)	509	08/08	\$511.69
Partnership Health Plan (Yolo)	509	09/08	\$511.69
Partnership Health Plan (Yolo)	509	10/08	\$511.69
Partnership Health Plan (Yolo)	509	11/08	\$511.69
Partnership Health Plan (Yolo)	509	12/08	\$511.69
Partnership Health Plan (Yolo)	509	01/09	\$511.69
Partnership Health Plan (Yolo)	509	02/09	\$511.69
Partnership Health Plan (Yolo)	509	03/09	\$511.69
Partnership Health Plan (Yolo)	509	04/09	\$511.69
Partnership Health Plan (Yolo)	509	05/09	\$178.36
Partnership Health Plan (Yolo)	509	06/09	\$178.36
Partnership Health Plan (Yolo)	509	07/09	\$178.36
Partnership Health Plan (Yolo)	509	08/09	\$333.13
Partnership Health Plan (Yolo)	509	09/09	\$333.13
Partnership Health Plan (Yolo)	509	10/09	\$333.13
Partnership Health Plan (Yolo)	509	11/09	\$333.13
Partnership Health Plan (Yolo)	509	12/09	\$336.45
Partnership Health Plan (Yolo)	509	01/10	\$336.45
Partnership Health Plan (Yolo)	509	02/10	\$231.90
Partnership Health Plan (Yolo)	509	03/10	\$231.90
Total =			

6.5 RemittanceAdviceMgmt

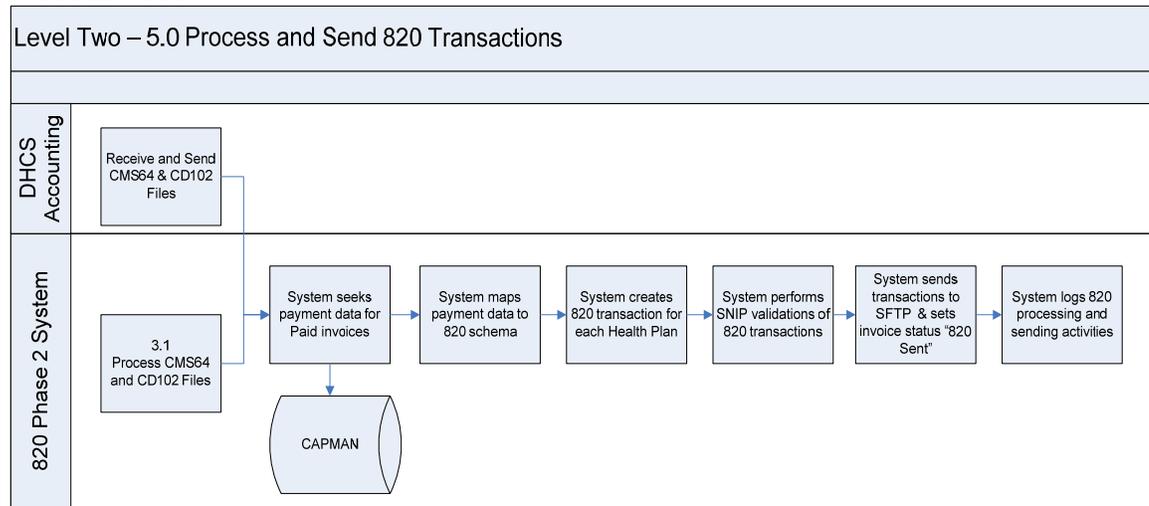
The *RemittanceAdviceMgmt* component will handle the internal processing of gathering invoices from the system and generating and 820 Remittance Advice. The invoices should have the status of *Paid*, meaning that Accounting and SCO have paid out the invoices to the Vendor. The component will then transform the invoice data into an 820 Remittance Advice XML document suitable for processing in XEngine to produce the actual *820 EDI* document.

6.5.1 Use Case - 5.1 Process and Send 820 Transactions

Requirement Specification

The *Process and Send 820 Transactions* process produces HIPAA-compliant 820 transactions that show the beneficiary, invoice and payment data for Trading Partners to receive from an SFTP site.

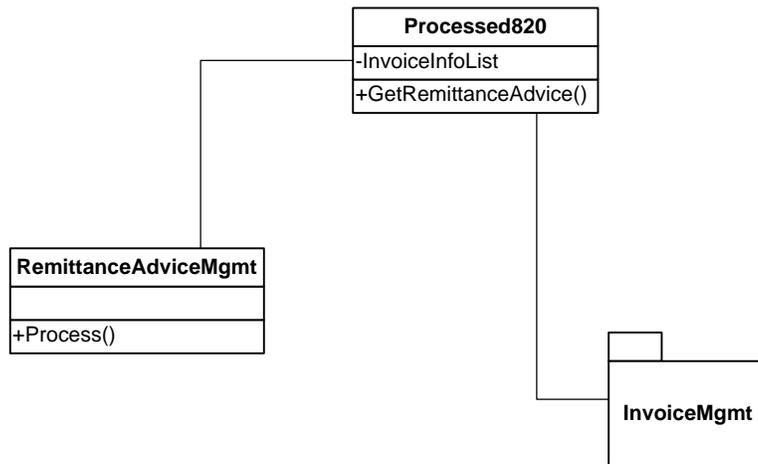
Process Model



1.1.1.1 Use Case Exceptions

- If the invoice payee is a beneficiary or a beneficiary representative, do NOT generate an 820 transaction for invoice.
- If an 820 transaction does not pass SNIP validations, system halts processing of the transaction and posts SNIP Error Report. System logs an error for System Administrator.

6.5.2 Class Diagram



6.5.2.1 RemittanceAdviceMgmt

The *RemittanceAdviceMgmt* class will manage and start the processing of a new remittance advice file (the 820 EDI file). With a warrant number, invoices with the status of *Paid* will be processed and sent into *XEngine* to create the EDI file.

Method	Description	
Process	Starts the process the generating the remittance advice.	
Parameters	Type	Description
warrantNumber	Long	The warrant number to be processed against
Output	Description	
XmlDocument	An XML document validated against the 820 XEngine Schema	

6.5.2.2 Processed820

The *Processed820* class will be used create the remittance advice. The format of the remittance advice will be an XML document validated against the 820 XEngine schema.

Method	Description
GetRemittanceAdvice	This method will create an return the XML format of the 820 XEngine remittance advice

Output	Description
XmlDocument	An XML document validated against the 820 XEngine Schema

6.6 InvoiceMgmt

The *InvoiceManagement* component will handle generation of all supported invoices. The component will be used by the capitation process and, invoice recalculation.

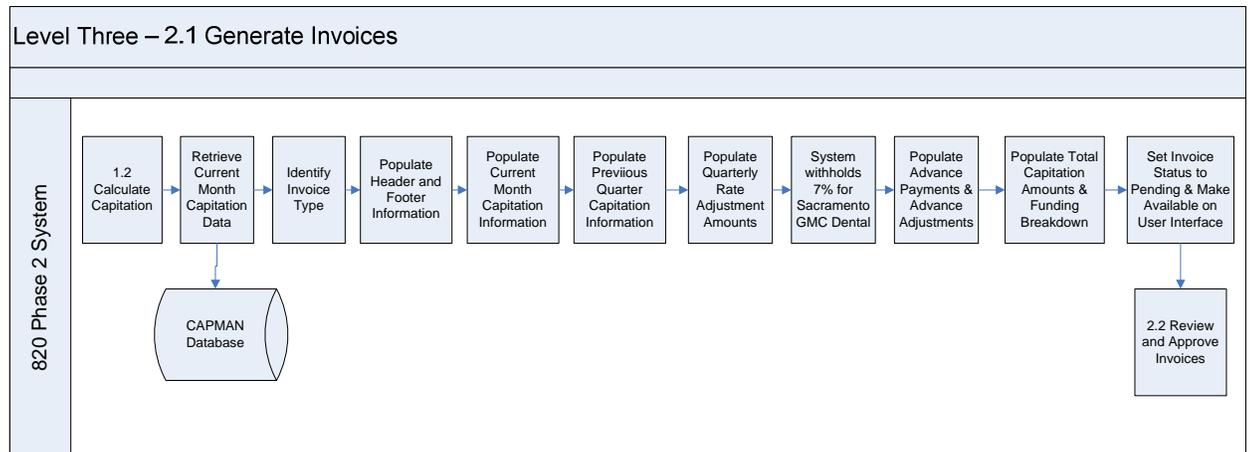
All supported invoices can be grouped in three logical groups: capitation invoices, supplemental invoices, and adjustment invoices. Though all these invoices generate same kind of output, each group has different source of input data. The caller of the component has to load required input data.

6.6.1 Use Case - 2.1 Generate Managed Care Invoices

Requirement Specification

The *Process Invoices* process begins with the generation of all Managed Care invoices for the current enrollment month based on the completion of processing the Beneficiary Enrollment file. The invoices are then made available for review and approval by the Managed Care Department. They are then manually printed by the user and provided to the DHCS Accounting department. Additionally, HIPP/BCCTP Department staff manually creates invoices and print them out for the DHCS Accounting Department. Contract and Beneficiary Adjustments are also available for the user in this process, which will ultimately be shown on the appropriate invoice(s). The invoices are now ready for payment reconciliation, which is described in the next section: *Process Payments*.

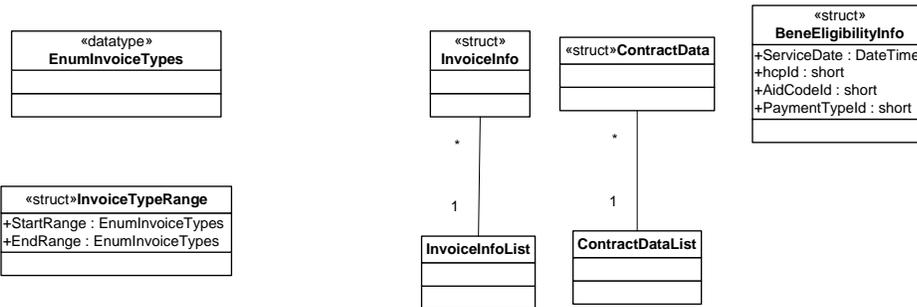
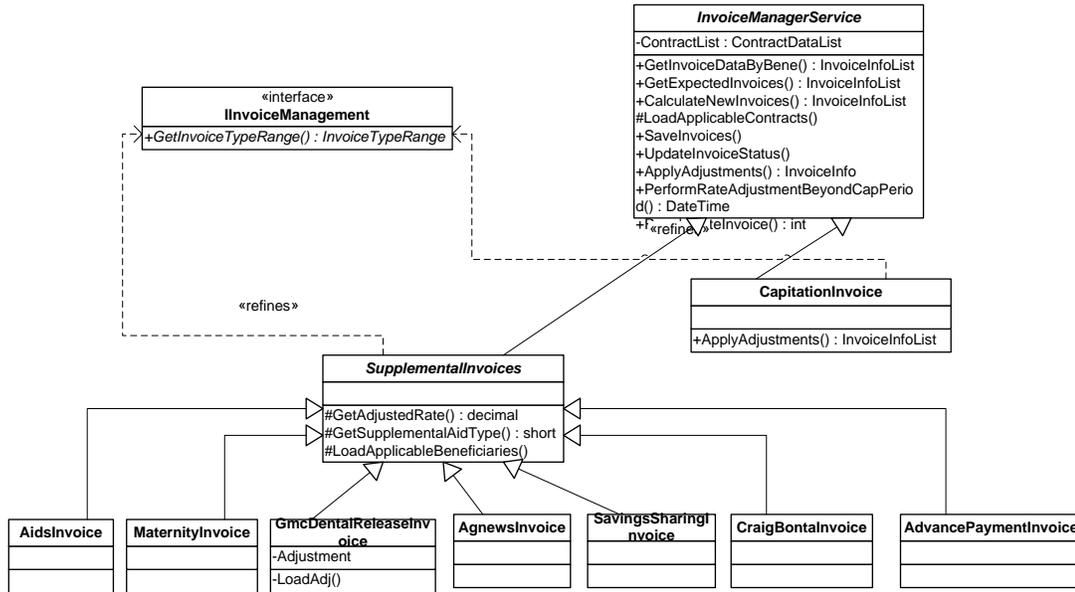
Process Model



6.6.1.1 Use Case Exceptions

- If Rate Adjustment is Negative, refer to Business Rule 2.1.21 for 25% Recoupment Cutoff logic.
- If a Rate Adjustment or Adjustments apply to a Service Month prior to the 12 previous service months (but no earlier than 24 months prior to current month), system creates a separate invoice apart from the 13-month capitation invoices. Invoices are generated based on State Fiscal Year, Contract Number, HCP, and Invoice Type. Invoice format and calculations are the same as described in Steps 2 and 3, except Service Months do not include the current service month or the 12 prior service months.
- Rate Adjustments for Beneficiary-Based Supplemental Payments are calculated for service months up to **2 years** prior to current month.

6.6.2 Class Diagram



6.6.2.1 InvoiceManagement

Every supported invoice class will inherit *InvoiceManagement*.

Method	Description
GetInvoiceTypeRange	Provides a range of invoice types.

Output	Description
InvoiceTypeRange	Start and end value of an invoice type range.

6.6.2.2 InvoiceManagerService

The *InvoiceManagerService* will be an abstract base class. It will contain business logic that is common for all types of invoices.

Method	Description	
GetInvoiceDataByBene	Provides historical invoices for a list of beneficiaries.	
Parameters	Type	Description
BeneficiariesId	List<integer>	A list of beneficiary Ids whose historical invoices are needed.
LatestDate	DateTime	The end date for historical invoices' date range (often capitation date).
MonthsInHistory	Integer	Count of historical months for which the data is needed.
Range	InvoiceTypeRange	A range invoice types that should be extracted.
Output	Description	
InvoiceInfoList	A list of historical invoices.	

Method	Description	
GetExpectedInvoices	Provides a list of expected invoices based on provided eligibility information of a beneficiary and already loaded applicable contract information.	
Parameters	Type	Description
CapitationDate	DateTime	Capitation date.
EligibilityInfo	BeneEligibilityInfo	Provides a beneficiary's eligibility information including the service month for which the expected invoices will be identified.

HistoricalCapitationData	InvoiceInfoList	List of historical capitation data, it will be required for supplemental invoices.
Output	Description	
InvoiceInfoList	A list of expected invoices.	

Method	Description	
CalculateNewInvoices	Using provided lists of historical and expected invoices, provides a list of actual invoices that should be saved in the database.	
Parameters	Type	Description
HistoricalInvoices	InvoiceInfoList	A list of historical invoices.
ExpectedInvoices	InvoiceInfoList	A list of expected invoices.
Output	Description	
InvoiceInfoList	A list of actual invoices that should be saved.	

Method	Description	
LoadApplicableContracts	This method will be a protected abstract method; hence every derived class should provide its implementation.	
Parameters	Type	Description
CapitationDate	DateTime	Capitation date.
Output	Description	
None	However the method populates applicable contract data in <i>ContractList</i> data member.	

Method	Description	
SaveInvoices	This method will be a public virtual method. It will save the provided data (as input parameter) in tb_invoice_detail and tb_invoice tables. ApplyAdjustment method should be called before saving the invoices. invoicesToBeSaved input parameter should be grouped on capitation date, contract plan code, invoice type, and fiscal year to identify records for tb_invoice table.	
Parameters	Type	Description

InvoicesToBeSaved	InvoiceInfoList	List of InvoiceInfo records that needs to be saved.
CapitationDate	DateTime	Capitation date.
Output		Description
None	However the method will throw exceptions and the caller is expected to handle it.	

Method		Description
UpdateInvoiceStatus		This method will be a public method; It will save 'Pending' tb_invoice_status records for invoices of a specific capitation date and invoice type range.
Parameters		Type Description
CapitationDate	DateTime	Capitation date.
range	InvoiceTypeRange	Type of invoices whose status needs to be saved.
Output		Description
None	However the method will throw exceptions and the caller is expected to handle it.	

Method		Description
ApplyAdjustments		This method will perform Adjustment on every invoice that is getting saved.
Parameters		Type Description
InvoiceInfoRecord	InvoiceInfo	An invoice detail data that needs to be saved.
Output		Description
None	However the method will throw exceptions and the caller is expected to handle it.	

Method		Description
PerformRateAdjustmentBeyondCapPeriod		This method will perform rate adjustment calculation for 24 service months before the oldest service month of the current capitation.
Parameters		Type Description

CapitationDate	DateTime	Capitation date.
Output		Description
None		However the method will throw exceptions and the caller is expected to handle it.

Method	Description	
RecalculateInvoice	This method will be a public method; It will save 'Pending' tb_invoice_status records for invoices of a specific capitation date and invoice type range.	
Parameters	Type	Description
InvoiceId	integer	Invoice that needs to be recalculated..
Output	Description	
None	However the method will throw exceptions and the caller is expected to handle it.	

6.6.2.3 CapitationInvoice

The *CapitationInvoice* will be a class used by capitation process to generate capitation invoices. It must be derived from *InvoiceManagerService* and *InvoiceManagement*. Most of the business logic required for generation of capitation invoice will exist in *InvoiceMethodService* base class. Any logic specific to capitation invoices should be implemented in this class.

Method	Description	
LoadApplicableContracts	Override this inherited method to extract contracts that are applicable for capitation invoices.	
Parameters	Type	Description
CapitationDate	DateTime	Capitation date.
Output	Description	
None	However the method populates applicable contract data in <i>ContractList</i> data member.	

Method	Description
---------------	--------------------

GetExpectedInvoices	Override this method to identify expected capitation invoices. The expected capitation invoices can be identified by locating applicable contract for a beneficiary. No historical invoice information will be needed here.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
CapitationDate	DateTime	Capitation date.
EligibilityInfo	BeneEligibilityInfo	Provides a beneficiary's eligibility information including the service month for which the expected invoices will be identified.
HistoricalCapitationData	InvoiceInfoList	Ignore this parameter.
<i>Output</i>	<i>Description</i>	
InvoiceInfoList	A list of expected invoices.	

<i>Method</i>	<i>Description</i>	
ApplyAdjustments	This method will apply adjustments that are required for capitation invoices. It includes GM Dental Withhold, Advance Payment, and Recoupment Balance. Note that the adjustments are applicable to only capitation invoices. Any applicable adjustment should be applied on the related invoice.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
CapitationDate	DateTime	Capitation date.
Invoices	InvoiceInfoList	List of invoices that should be saved in the database.
<i>Output</i>	<i>Description</i>	
InvoiceInfoList.	List of adjusted invoices that should be saved in the database.	

<i>Method</i>	<i>Description</i>
---------------	--------------------

CalculateNewInvoices	Override this method only to apply the adjustment on capitation invoices. The methods should call base implementation of the method and output of the call should be sent as parameter to ApplyAdjustment method. The output of the ApplyAdjustment should be returned to the caller.	
Parameters	Type	Description
HistoricalInvoices	InvoiceInfoList	A list of historical invoices.
ExpectedInvoices	InvoiceInfoList	A list of expected invoices.
Output	Description	
InvoiceInfoList	A list of actual adjusted invoices that should be saved.	

6.6.2.4 SupplementalInvoice

The *SupplementalInvoice* will be an abstract base class for all supplemental and adjustment invoices. It will be derived from *InvoiceManagerService*, so that all common business logic of invoice generation can be utilized. Every class derived from *SupplementalInvoice* should also inherit *InvoiceManagement*.

Method	Description	
LoadApplicableBeneficiary	Provides supplemental eligibility information of a list of beneficiaries for a date range.	
Parameters	Type	Description
StartServiceDate	DateTime	Start date of date range.
EndServiceDate	DateTime	End date of date range.
BeneficiaryIds	List<integer>	A list of beneficiary ids whose supplemental eligibility is required.
Output	Description	
SupplementalInfoList	A list that contains supplemental eligibility information of all beneficiaries whose id was provided as input parameter.	

Method	Description
---------------	--------------------

GetAdjustedRate	This method will be a protected abstract method. Every derived class should provide its implementation. The implementation should provide adjusted rate for the applicable supplemental eligibility of a beneficiary.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
SupplementalRate	Decimal	Effective supplemental rate.
CapitaionPaid	Decimal	Capitation amount that was paid to the beneficiary.
<i>Output</i>	<i>Description</i>	
adjustedRate	Adjusted Rate that should be saved in the database.	

<i>Method</i>	<i>Description</i>	
GetSupplementalAidType	This method will be a protected abstract method. Every derived class should provide its implementation. The implementation should provide type of supported supplemental eligibility.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
none		
<i>Output</i>	<i>Description</i>	
supplementalType	Type of supported supplemental eligibility.	

<i>Method</i>	<i>Description</i>	
LoadApplicableContracts	Override this inherited method to extract contracts that are applicable for supplemental invoices. Since supplemental eligibility has its own applicable contract data, use <i>GetSupplementalAidType</i> method in this common implementation to identify type of supplemental eligibility whose contract data needs to be loaded.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
CapitationDate	DateTime	Capitation date.
<i>Output</i>	<i>Description</i>	
None	However the method populates applicable contract data in <i>ContractList</i> data member.	

<i>Method</i>	<i>Description</i>
---------------	--------------------

GetInvoiceTypeRange	Define this method as abstract, so that every non-abstract derived class must provide its implementation.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
None		
<i>Output</i>	<i>Description</i>	
InvoiceTypeRange	Returns range of the applicable invoice types.	

<i>Method</i>	<i>Description</i>	
GetExpectedInvoices	Override this method to identify expected supplemental invoices. The expected supplemental invoices can be identified by locating applicable contract for a beneficiary and the related capitation eligibility.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
CapitationDate	DateTime	Capitation date.
EligibilityInfo	BeneEligibilityInfo	Provides a beneficiary's eligibility information including the service month for which the expected invoices will be identified.
HistoricalCapitationData	InvoiceInfoList	List of historical capitation data.
<i>Output</i>	<i>Description</i>	
InvoiceInfoList	A list of expected invoices.	

6.6.2.5 AidsInvoice

The *AidsInvoice* will be a class used by processes to generate invoices for Aids. It must be derived from *SupplementalInvoice* and *InvoiceManagement*. Most of the business logic required for generation of this invoice will exist in *InvoiceMethodService* and *SupplementalInvoice* base classes. Any logic specific to aids invoices should be implemented in this class.

<i>Method</i>	<i>Description</i>	
GetAdjustedRate	Provide specific implementation for this protected abstract method.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>

SupplementalRate	Decimal	Effective supplemental rate.
CapitaionPaid	Decimal	Capitation amount that was paid to the beneficiary.
Output		Description
adjustedRate	Adjusted Rate that should be saved in the database.	

Method		Description
GetSupplementalAidType		Provide specific implementation for this protected abstract method.
Parameters		Type Description
none		
Output		Description
supplementalType		Type of supported supplemental eligibility.

Method		Description
GetInvoiceTypeRange		Implement this interface method.
Parameters		Type Description
None		
Output		Description
InvoiceTypeRange		Returns range of the applicable invoice types.

6.6.2.6 AgnewsInvoice

The *AgnewsInvoice* will be a class used by processes to generate invoices for Agnews. It must be derived from *SupplementalInvoice* and *InvoiceManagement*. Most of the business logic required for generation of this invoice will exist in *InvoiceMethodService* and *SupplementalInvoice* base classes. Any logic specific to Agnews invoices should be implemented in this class.

Method		Description
GetAdjustedRate		Provide specific implementation for this protected abstract method.

<i>Parameters</i>	<i>Type</i>	<i>Description</i>
SupplementalRate	Decimal	Effective supplemental rate.
CapitaionPaid	Decimal	Capitation amount that was paid to the beneficiary.
<i>Output</i>		<i>Description</i>
adjustedRate		Adjusted Rate that should be saved in the database.

<i>Method</i>	<i>Description</i>	
GetSupplementalAidType	Provide specific implementation for this protected abstract method.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
none		
<i>Output</i>		<i>Description</i>
supplementalType		Type of supported supplemental eligibility.

<i>Method</i>	<i>Description</i>	
GetInvoiceTypeRange	Implement this interface method.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
None		
<i>Output</i>		<i>Description</i>
InvoiceTypeRange		Returns range of the applicable invoice types.

6.6.2.7 MaternityInvoice

The *MaternityInvoice* will be a class used by processes to generate invoices for Maternity. It must be derived from *SupplementalInvoice* and *InvoiceManagement*. Most of the business logic required for generation of this invoice will exist in *InvoiceMethodService* and *SupplementalInvoice* base classes. Any logic specific to Maternity invoices should be implemented in this class.

<i>Method</i>	<i>Description</i>
GetAdjustedRate	Provide specific implementation for this protected abstract method.

<i>Parameters</i>	<i>Type</i>	<i>Description</i>
SupplementalRate	Decimal	Effective supplemental rate.
CapitaionPaid	Decimal	Capitation amount that was paid to the beneficiary.
<i>Output</i>		<i>Description</i>
adjustedRate		Adjusted Rate that should be saved in the database.

<i>Method</i>	<i>Description</i>	
GetSupplementalAidType	Provide specific implementation for this protected abstract method.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
None		
<i>Output</i>		<i>Description</i>
supplementalType		Type of supported supplemental eligibility.

<i>Method</i>	<i>Description</i>	
GetInvoiceTypeRange	Implement this interface method.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
None		
<i>Output</i>		<i>Description</i>
InvoiceTypeRange		Returns range of the applicable invoice types.

6.6.2.8 CraigBontaInvoice

The *CraigBontaInvoice* will be a class used by processes to generate invoices for CraigBonta. It must be derived from *SupplementalInvoice* and *InvoiceManagement*. Most of the business logic required for generation of this invoice will exist in *InvoiceMethodService* and *SupplementalInvoice* base classes. Any logic specific to CraigBonta invoices should be implemented in this class.

<i>Method</i>	<i>Description</i>
---------------	--------------------

LoadApplicableBeneficiary	Override implementation of this virtual method. This implementation should provide Craig Vs. Bonta eligibility information of a list of beneficiaries for a date range.	
Parameters	Type	Description
StartServiceDate	DateTime	Start date of date range.
EndServiceDate	DateTime	End date of date range.
BeneficiaryIds	List<integer>	A list of beneficiary ids whose supplemental eligibility is required.
Output	Description	
SupplementalInfoList	A list that contains supplemental eligibility information of all beneficiaries whose id was provided as input parameter.	

Method	Description	
GetAdjustedRate	Provide specific implementation for this protected abstract method.	
Parameters	Type	Description
SupplementalRate	Decimal	Effective supplemental rate.
CapitaionPaid	Decimal	Capitation amount that was paid to the beneficiary.
Output	Description	
adjustedRate	Adjusted Rate that should be saved in the database.	

Method	Description	
GetSupplementalAidType	Provide specific implementation for this protected abstract method.	
Parameters	Type	Description
None		
Output	Description	
supplementalType	Type of supported supplemental eligibility.	

Method	Description	
GetInvoiceTypeRange	Implement this interface method.	
Parameters	Type	Description
None		
Output	Description	
InvoiceTypeRange	Returns range of the applicable invoice types.	

6.6.2.9 GmcDentalReleaseInvoice

The *GmcDentalReleaseInvoice* will be a class used by processes to generate invoices for GMC Dental Release. It must be derived from *SupplementalInvoice* and *InvoiceManagement*. However this invoice is different from all other supplemental invoices, the following methods should be overridden to provide the specific implementation.

Method	Description	
LoadApplicableBeneficiary	Override implementation of this virtual method. This implementation should provide GMC Dental Release eligibility information of a list of beneficiaries for a date range.	
Parameters	Type	Description
StartServiceDate	DateTime	Start date of date range.
EndServiceDate	DateTime	End date of date range.
BeneficiaryIds	List<integer>	A list of beneficiary ids whose supplemental eligibility is required.
Output	Description	
SupplementalInfoList	A list that contains supplemental eligibility information of all beneficiaries whose id was provided as input parameter.	

Method	Description	
GetAdjustedRate	Provide specific implementation for this protected abstract method.	
Parameters	Type	Description

SupplementalRate	Decimal	Effective supplemental rate.
CapitaionPaid	Decimal	Capitation amount that was paid to the beneficiary.
Output		Description
adjustedRate	Adjusted Rate that should be saved in the database.	

Method		Description
GetSupplementalAidType		Provide specific implementation for this protected abstract method.
Parameters		Type Description
None		
Output		Description
supplementalType		Type of supported supplemental eligibility.

Method		Description
LoadAdj		Load Adjustment data specific to GMC Dental Release.
Parameters		Type Description
None		
Output		Description
none		However populate the extracted data in <i>Adjustment</i> data member.

Method		Description
GetExpectedInvoices		Override this virtual method to identify expected invoices for GMC Dental Release.
Parameters		Type Description
CapitationDate		DateTime Capitation date.

EligibilityInfo	BeneEligibilityInfo	Provides a beneficiary's eligibility information including the service month for which the expected invoices will be identified.
HistoricalCapitationData	InvoiceInfoList	List of historical capitation data, it will be required for supplemental invoices.
Output		Description
InvoiceInfoList	A list of expected invoices.	

Method	Description	
CalculateNewInvoices	Override this virtual method to identify actual invoices for GMC Dental Release.	
Parameters	Type	Description
HistoricalInvoices	InvoiceInfoList	A list of historical invoices.
ExpectedInvoices	InvoiceInfoList	A list of expected invoices.
Output		Description
InvoiceInfoList	A list of actual invoices that should be saved.	

Method	Description	
GetInvoiceTypeRange	Implement this interface method.	
Parameters	Type	Description
None		
Output		Description
InvoiceTypeRange	Returns range of the applicable invoice types.	

6.6.2.10 SavingSharingInvoice

The *SavingSharingInvoice* will be a class used by processes to generate invoices for Savings Sharing Disbursement. It must be derived from *SupplementalInvoice* and *InvoiceManagement*. However this invoice is different from all other supplemental invoices, the following methods should be overridden to provide the specific implementation.

<i>Method</i>	<i>Description</i>	
GetAdjustedRate	Provide specific implementation for this protected abstract method.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
SupplementalRate	Decimal	Effective supplemental rate.
CapitaionPaid	Decimal	Capitation amount that was paid to the beneficiary.
<i>Output</i>	<i>Description</i>	
adjustedRate	Adjusted Rate that should be saved in the database.	

<i>Method</i>	<i>Description</i>	
GetSupplementalAidType	Provide specific implementation for this protected abstract method.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
None		
<i>Output</i>	<i>Description</i>	
supplementalType	Type of supported supplemental eligibility.	

<i>Method</i>	<i>Description</i>	
LoadAdj	Load Adjustment data specific to Savings Sharing Disbursement.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>
None		
<i>Output</i>	<i>Description</i>	
none	However populate the extracted data in <i>Adjustment</i> data member.	

<i>Method</i>	<i>Description</i>	
CalculateNewInvoices	Override this virtual method to identify actual invoices for Saving Sharing Disbursement.	
<i>Parameters</i>	<i>Type</i>	<i>Description</i>

HistoricalInvoices	InvoiceInfoList	No historical invoices will be needed to identify actual invoices that need to be saved.
ExpectedInvoices	InvoiceInfoList	A list of expected invoices.
Output		Description
InvoiceInfoList	A list of actual invoices that should be saved.	

Method		Description
GetInvoiceTypeRange		Implement this interface method.
Parameters		Type Description
None		
Output		Description
InvoiceTypeRange		Returns range of the applicable invoice types.

6.6.2.11 AdvancePaymentInvoice

The *AdvancePaymentInvoice* will be a class used by processes to generate invoices for Advance Payments. It must be derived from *SupplementalInvoice* and *InvoiceManagement*. However this invoice is different from all other supplemental invoices, the following methods should be overridden to provide the specific implementation.

Method		Description
GetAdjustedRate		Provide specific implementation for this protected abstract method.
Parameters		Type Description
SupplementalRate		Decimal Effective supplemental rate.
CapitaionPaid		Decimal Capitation amount that was paid to the beneficiary.
Output		Description
adjustedRate		Adjusted Rate that should be saved in the database.

Method	Description
---------------	--------------------

GetSupplementalAidType	Provide specific implementation for this protected abstract method.	
Parameters	Type	Description
None		
Output	Description	
supplementalType	Type of supported supplemental eligibility.	

Method	Description	
LoadAdj	Load Adjustment data specific to Advance Payments.	
Parameters	Type	Description
None		
Output	Description	
none	However populate the extracted data in <i>Adjustment</i> data member.	

Method	Description	
CalculateNewInvoices	Override this virtual method to identify actual invoices for Advance Payments.	
Parameters	Type	Description
HistoricalInvoices	InvoiceInfoList	No historical invoices are needed to identify the actual invoices that need to be saved.
ExpectedInvoices	InvoiceInfoList	A list of expected invoices.
Output	Description	
InvoiceInfoList	A list of actual invoices that should be saved.	

Method	Description	
GetInvoiceTypeRange	Implement this interface method.	
Parameters	Type	Description
None		
Output	Description	

InvoiceTypeRange	Returns range of the applicable invoice types.
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6.7 CapitationMgmt

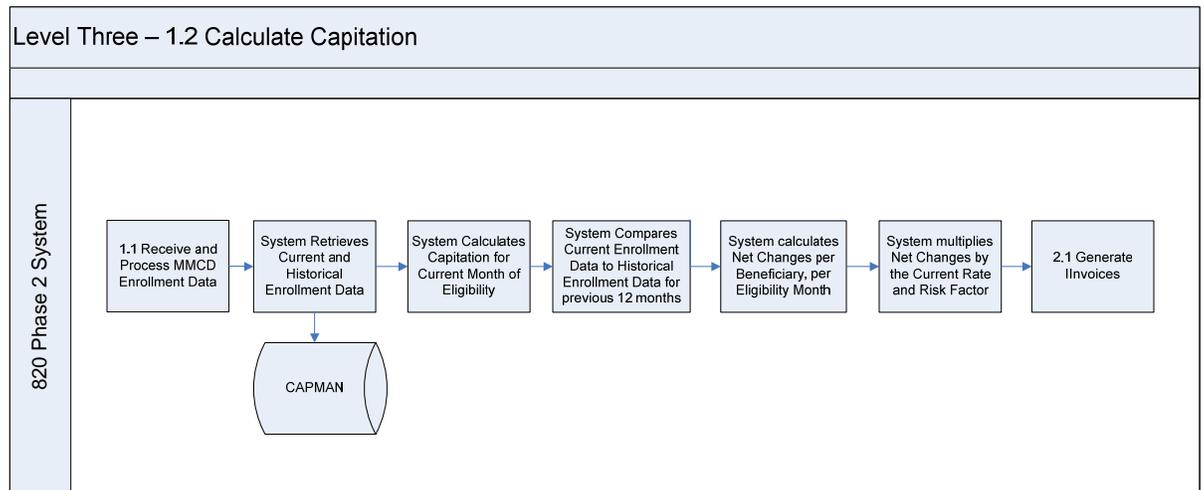
The *CapitationMgmt* component will handle import of MMCD data into the 820 database. It will compute every eligible beneficiary's current as well prior month's capitation. Also, it will generate data for capitation invoices.

6.7.1 Use Case - 1.2 Calculate Capitation

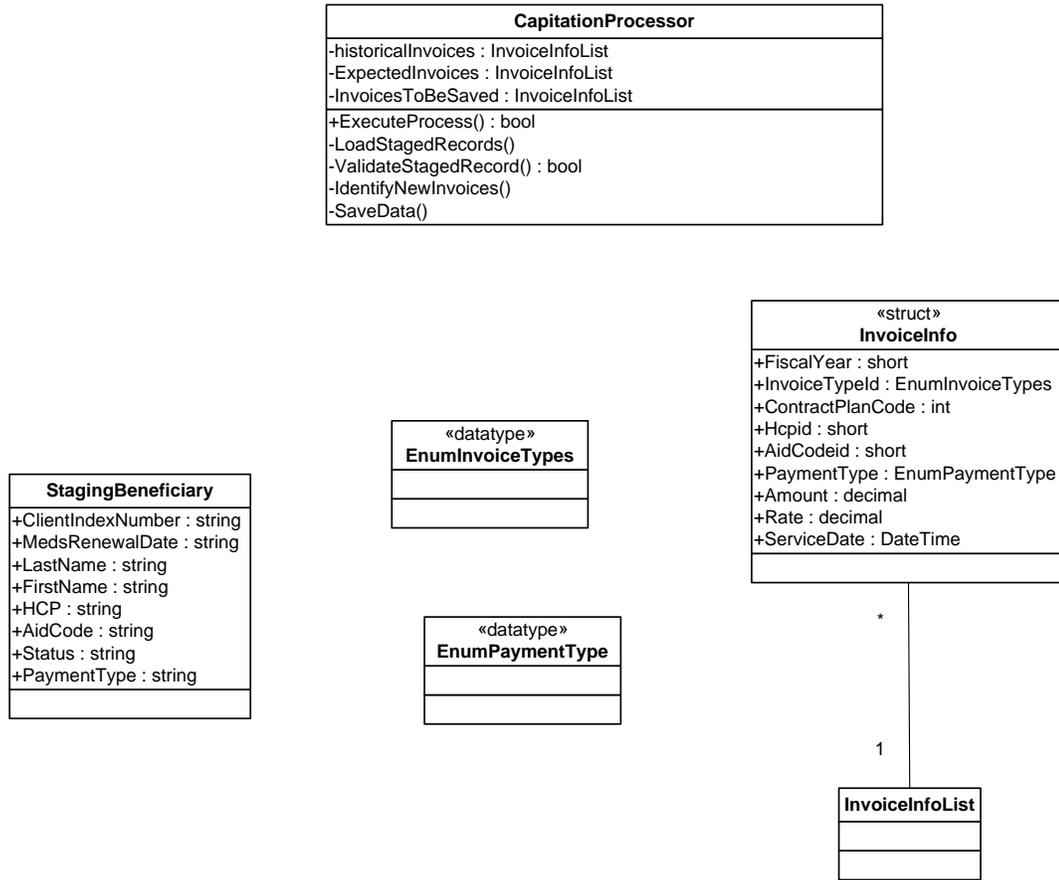
Requirement Specification

The *Calculate Capitation* process begins with the receipt and processing of the Beneficiary Enrollment files, where the Managed Care Health Care Plans (HCPs) and their enrolled beneficiary data for the current month plus 12 prior months is supplied. The HCP and beneficiary data is captured and used to calculate the capitation. This is where the System calculates the current month's enrollment data, and then compares the previous twelve months enrollment on the current file to the previous twelve months in history. The outcome is capturing and calculating the net eligibles per HCP for use in the next process of generating Managed Care invoices.

Process Model



6.7.2 Class Diagram



6.7.2.1 CapitationProcessor

The *CapitationProcessor* class will be a sealed class and it will be responsible for the execution of the capitation process. Before executing the process, the caller should ensure that only latest MMCD enrollment data is available in TB_STAGING_BENEFICIARY and TB_STAGING_MONTHLY_INFO tables. The class would not contain any logic to ensure completeness or validity of the enrollment data.

Status of the process will be logged-in an XML file for reporting purposes.

In addition to its public constructor, the class will contain only one public method.

Method	Description
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ExecuteProcess	<p>This method will execute the entire capitation process that includes saving of MMCD enrollment data in CAPMAN database, calculation of capitation amount and saving of invoice data.</p> <p>Since the caller of this method does not have any information about the capitation date for which the process is being executed, the class will assume MedsRenewalDate of the very first enrollment record as the capitation date. Using the capitation date, start and end service date will be identified (13 month period).</p> <p>Once capitation and service dates are identified, the process will read MMCD enrollment data. Using the enrollment data, expected invoices will be identified by calling <i>GetExpectedInvoices</i> method of <i>CapitationInvoice</i> class. The returned expected invoices will be stored in expectedInvoices data member. The expected invoices will be compared against the historical invoices to find the invoices that should be saved in the database.</p>	
Parameters	Type	Description
None		
Output	Description	
Bool	True if the process completes successfully otherwise false.	

Method	Description	
LoadStagedRecords	This private method will get MMCD enrollment data from staging database tables. Paging should be used to read the staged data.	
Parameters	Type	Description
LastReadCin	String	Last read client identification number. This will help to implement paginated reading of the staged data.
Output	Description	
List<StagingBeneficiary>	A list of staged enrollment data.	

Method	Description
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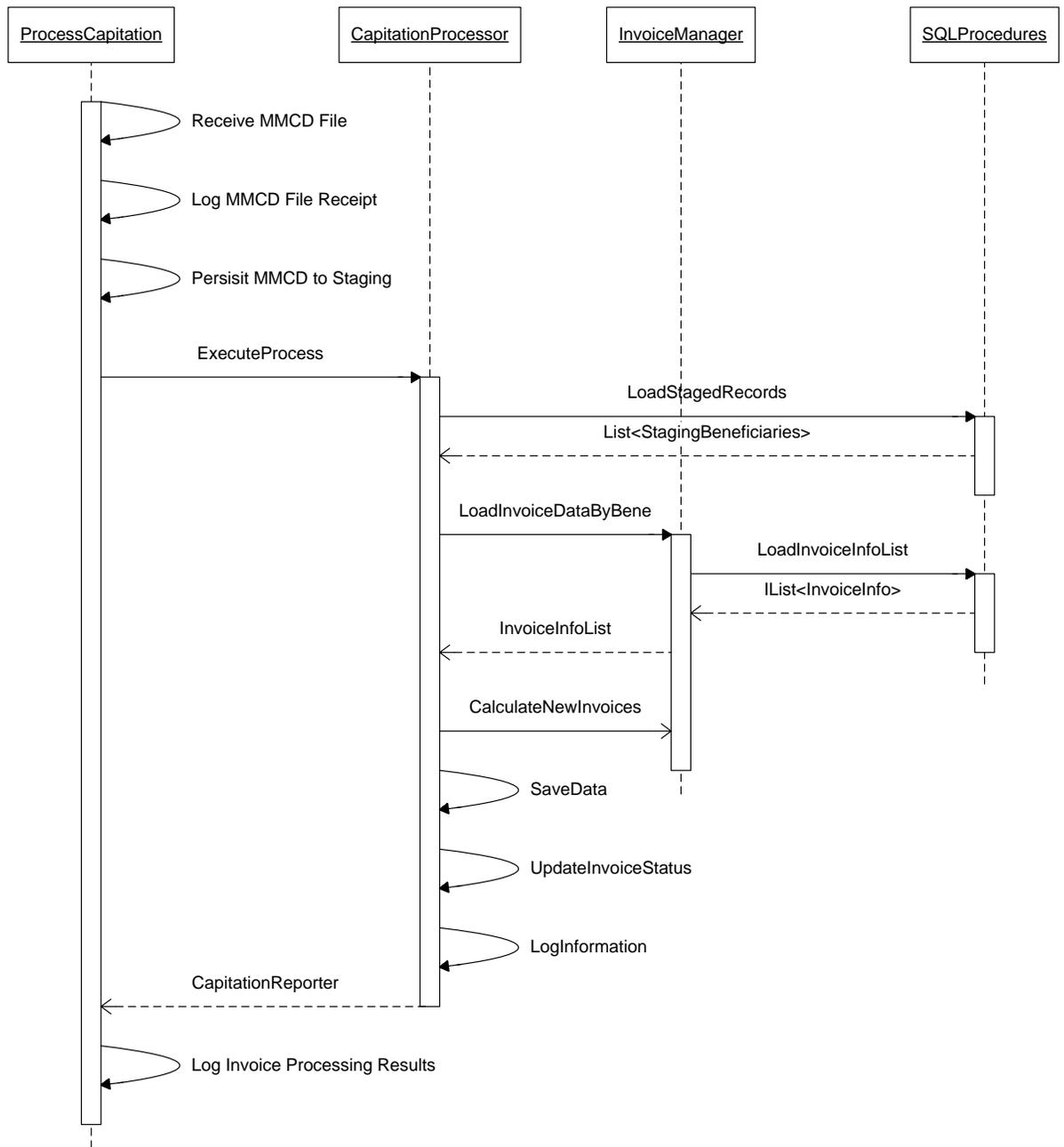
ValidateStagedRecord	<p>This private method will perform validation of individual staged record. The method will be called for each record extracted by <i>LoadStagedRecords</i> method.</p> <p>A few of the critical validations that the method will perform:</p> <ol style="list-style-type: none"> 1. MedsRenewalDate of the record should be same as the capitation date identified at the start of the process. 2. Client Index Number should not be null or empty and it must be exactly 9 characters long. 3. First Name and Last Name should not be null. 4. Hcp code and aid code must exist in CAPMAN database. 	
Parameters	Type	Description
stagedRec	StagingBeneficiary	The staged record that should be validated.
Output	Description	
bool	True if valid otherwise false.	

Method	Description	
IdentifyNewInvoices	<p>This private method will load historical invoices in historicalInvoices data member. It will pass historicalInvoices and expectedInvoices as parameters to <i>CalculateNewInvoices</i> method of <i>CapitationInvoice</i> class to identify the actual invoices. The returned values will be saved in invoiceToBeSaved.</p>	
Parameters	Type	Description
None		
Output	Description	
none		

Method	Description	
SaveData	<p>This private method should call saveInvoices method of CapitationInvoice object. It will save invoices in invoiceToBeSaved data member to tb_invoice and tb_invoice_detail tables. However, before calling the method ensure that all beneficiaries whose data is getting saved exist in CAPMAN database.</p>	
Parameters	Type	Description

none		
<i>Output</i>	<i>Description</i>	
None	However an exception will be thrown if any error occurs during save and <i>ExecuteProcess</i> will catch it.	

6.7.3 Sequence Diagram - Process Capitation



This sequence diagram illustrates how the *MMCD* file will be processed.

1. *ProcessCapitation* object receives the MMCD file in “*Receive MMCD File*”
2. *ProcessCapitation* object logs the file receipt in “*Log MMCD File Receipt*”

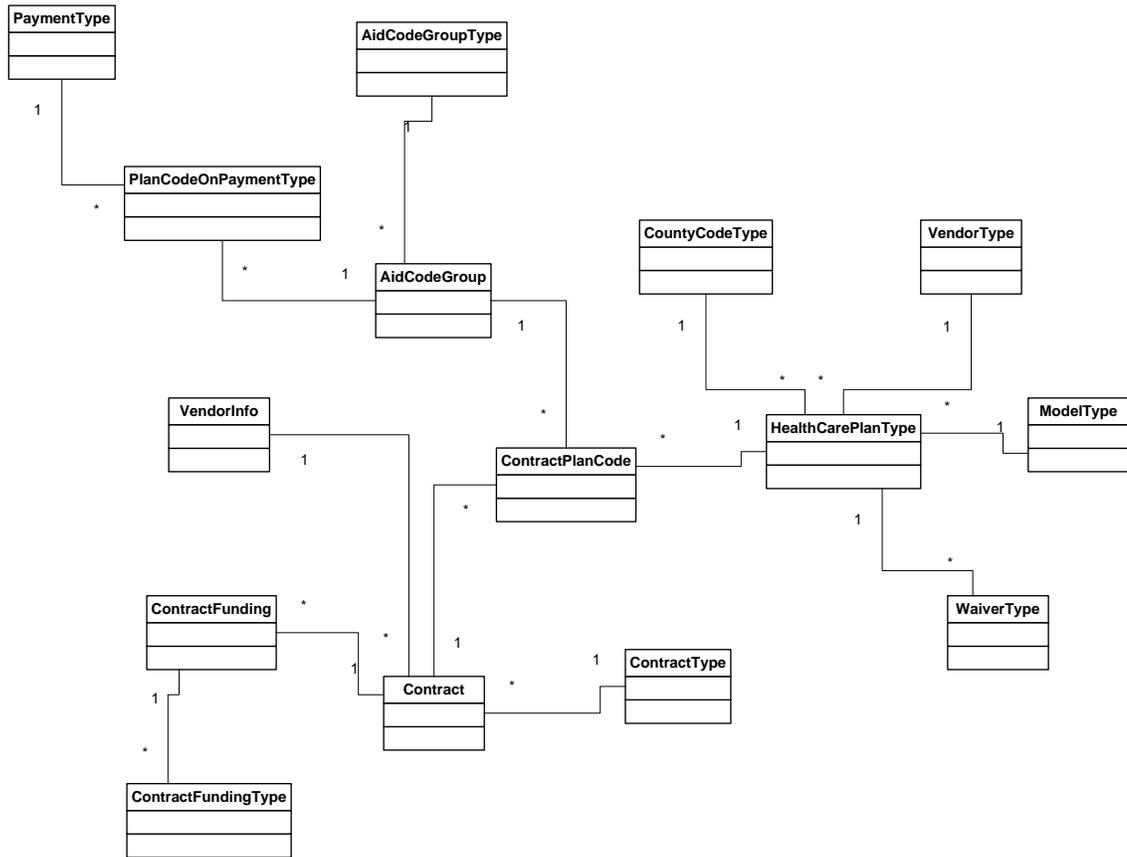
3. *ProcessCapitation* object persists the MMCD file into staging tables in “*Persist MMCD to Staging*”
4. *ProcessCapitation* calls *CapitationProcessor* with function “*ExecuteProcess*” to start the calculation process
5. *CapitationProcessor* calls *SQLProcedures* with function “*LoadStageRecords*” to load the Beneficiary records from the staging tables
6. *SQLProcedures* returns a list of *StagingBeneficiary* objects loaded from the staging tables
7. *CapitationProcessor* calls *InvoiceManager* with function “*LoadInvoiceDataByBene*” to get the historical beneficiary records
8. *InvoiceManager* calls *SQLProcedures* with function “*LoadInvoiceInfoList*” to load historical beneficiary records
9. *SQLProcedures* returns a list of historical beneficiary records
10. *InvoiceManager* returns a list of historical beneficiary records
11. *CapitationProcessor* calls *InvoiceManager* with function “*CalculateNewInvoices*” to start the calculation using historical and current beneficiary records
12. *CapitationProcessor* saves the calculated beneficiary records with function “*SaveData*”
13. *CapitationProcessor* updates the invoice status to “*Pending*” with function “*UpdateInvoiceStatus*”
14. *CapitationProcessor* logs the processing information with function call “*LogInformation*”
15. *CapitationProcessor* returns object *CapitationReporter* which will contain the logged processing information
16. *ProcessCapitation* persist the processing results in “*Log Invoice Processing Results*”.

7 Data Objects

The *Data Objects* will be an in memory representation of the database and provide mechanism to retrieve and update data. The objects will be tightly coupled with the database and in most cases there will be a one-to-one relationship between a table and a data object.

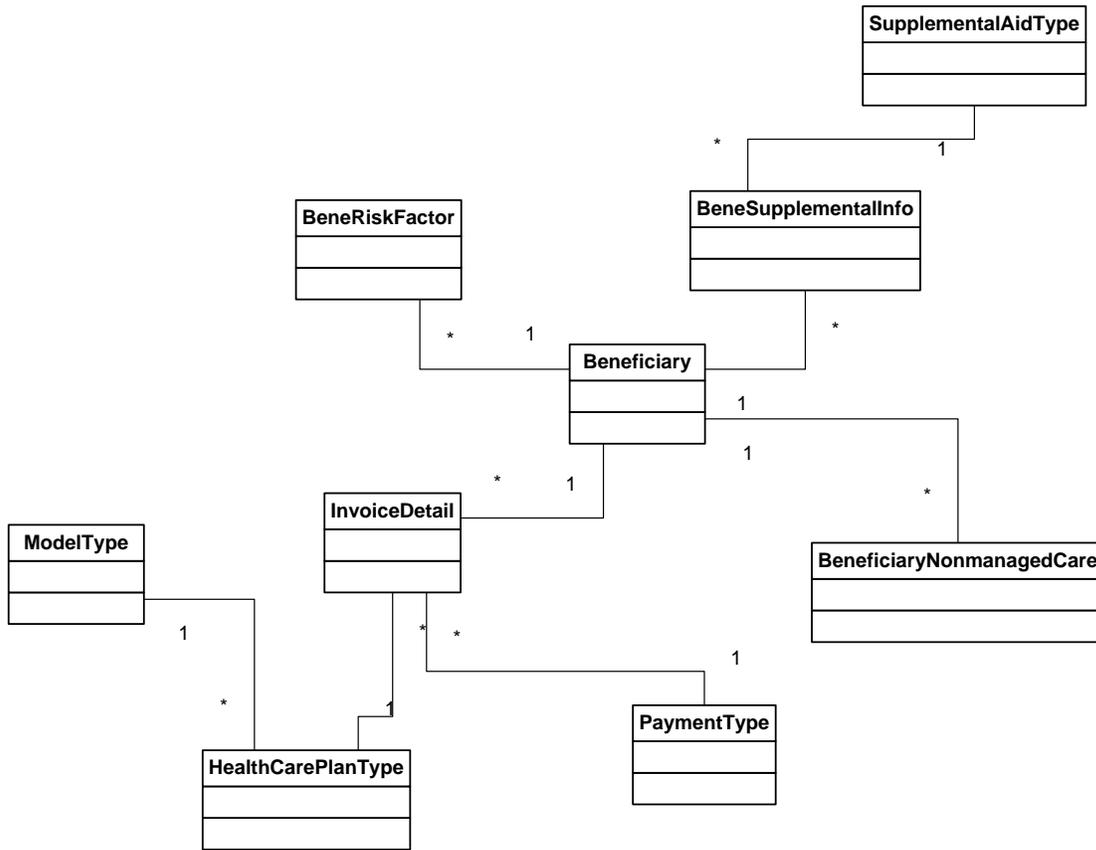
The Data Objects will be generated from the database using the *Microsoft Entity Framework*. Since the Data Objects are generated the description for each class is part of the *Table Description* in section 9.1 (no “TB_” prefix is on the data objects).

7.1 Contract Data



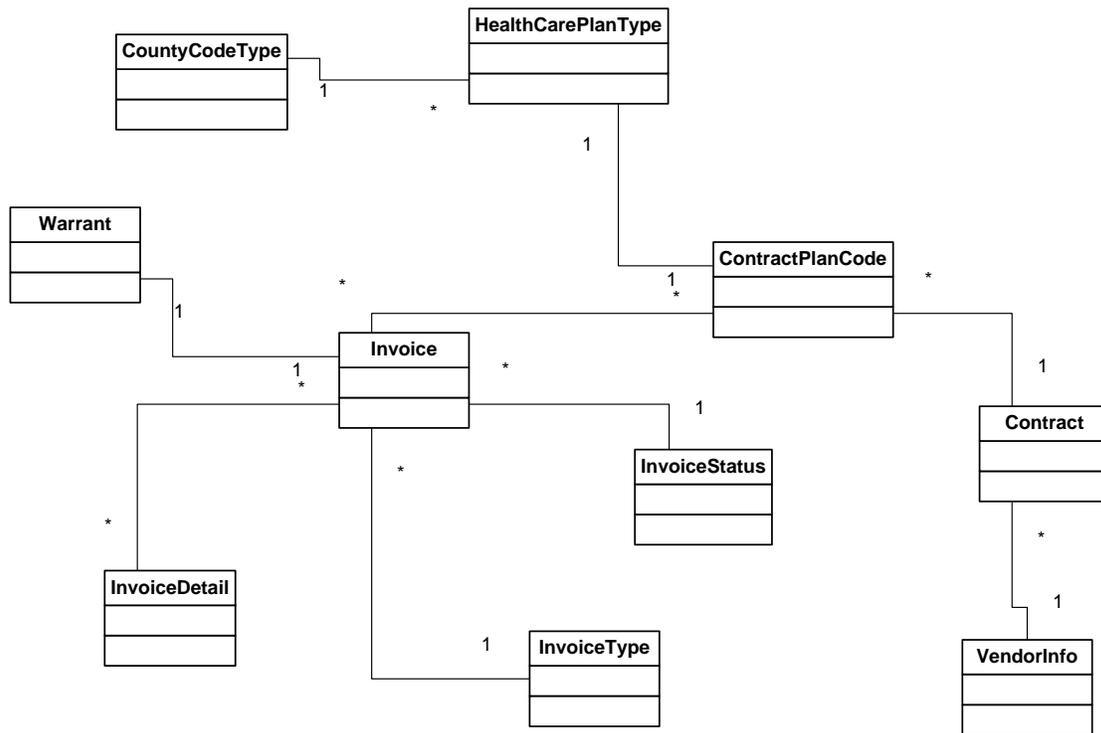
The *Contract Data* class diagram represents all classes within the scope of contract management.

7.2 Beneficiary Data



The *Beneficiary Data* class diagram represents all classes within the scope of beneficiary management.

7.3 Invoice Data



The *Invoice Data* class diagram represents all classes within the scope of invoice management.

8 Database

The following subsections describe the structure of database. It will contain the *Entity Relationship Diagram* and table description. The detailed data dictionary is in *Appendix A*.

8.1 Entity Relationship Diagram

8.2 Table Descriptions

The following table lists each table in the database and semantically describes its purpose.

Name	Domain	Description
TB_ADJUSTMENT	Contract Management	Details of Health Care Plan-Level adjustments within each Contract
TB_ADJUSTMENT_TYPE	Reference Table	Reference Table detailing the type of the adjustment (GMC Dental, Payment Received)
TB_AID_CODE	Contract Management	Join table to determine what aid codes are in what aid codes group per contract
TB_AID_CODE_GROUP	Contract Management	Join table of Aid Code Groups eligible within a Contract. Also contains rate effective dates
TB_AID_CODE_GROUP_TYPE	Reference Table	Reference Table of Aid Code Group Names (Blind, Aged, Disabled)
TB_AID_CODE_TYPE	Reference Table	Aid Code Reference Table listing all Aid Codes in MEDS
TB_BENE_RISK_FACTOR	Beneficiary Management	Risk Factor of a Beneficiary with versioning
TB_BENE_SUPPLEMENTAL_INFO	Beneficiary Management	Join table of Beneficiary Eligibility for Supplemental Aid
TB_BENEFICIARY	Beneficiary Management	Beneficiary Reference Information for both Managed and Non-Managed Care
TB_BENEFICIARY_ADJUSTMENT	Non-managed Care Management	Non-Managed Care Adjustments at the Beneficiary Level
TB_BENEFICIARY_NONMANAGED_CARE	Non-managed Care Management	Supplemental Beneficiary Information when Beneficiary is in Non-Managed Care (HIP/BCCTP)
TB_CONTRACT	Contract Management	High Level Contract Details, detailing Contract Number and Contract Change History
TB_CONTRACT_CHANGE_TYPE	Contract Management	The change type of the contract, denoting the most recent change as being an original, a change order, or an amendment.
TB_CONTRACT_FUNDING	Contract Management	Funding within a contract, detailing the amount of funding each payment type receives
TB_CONTRACT_FUNDING_TYPE	Reference Table	Reference table that enumerates the funding breakdown of the contract encumbrance
TB_CONTRACT_PLAN_CODE	Contract Management	Join Table of Contract and the Plan Codes enrolled within the contract, and any potential waiver eligibility for the Plan Codes

Name	Domain	Description
TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO	Contract Management	Join Table of Contract Health Plan Eligibility for Supplemental Aid and accompanying rates
TB_CONTRACT_TYPE	Reference Table	Reference details of what is the type of the Contract (Primary or Hyde)
TB_COUNTY_CODE_TYPE	Reference Table	Reference Table of All County Codes
TB_DATABASE_UPDATE_SCRIPT	Reference Table	ITSD Required table used for database update DML / DDL scripts
TB_ETHNICITY_CODE_TYPE	Reference Table	Reference Table enumerating all valid ethnicity codes
TB_FUNDING_TYPE	Reference Table	Reference Table of Funding Types
TB_GENDER_CODE_TYPE	Reference Table	Reference Table to hold all possible Gender Codes from MEDS
TB_HEALTH_CARE_PLAN_TYPE	Reference Table	Reference Table of 3-Digit Health Care Plan (HCP) Codes
TB_INVOICE	Invoice Management	All Invoice-related details and additional details received from CMS64 file
TB_INVOICE_CHANGE_TYPE	Reference Table	Reference Table to hold all possible values for Change Type in Invoice Detail Table
TB_INVOICE_DETAIL	Monthly Beneficiary Details	Table to hold invoice payment details for beneficiaries
TB_INVOICE_STATUS	Invoice Management	Invoice Status Audit Table
TB_INVOICE_TYPE	Invoice Management	Reference Table of Invoice Types (Primary Medi-Cal, Medicare Part D, HYDE)
TB_MODEL_TYPE	Reference Table	The Model / Sub-Model Type of the Health Plan (COHS, PHP, PACE, SCAN)
TB_NONMANAGED_COVERAGE	Non-Managed Care Management	Non-Managed Care (HIPP/BCCTP) Coverage Information Table
TB_NONMANAGED_COVERAGE_TYPE	Non-Managed Care Management	Reference Table of Non-Managed Coverage Type (Medical, Dental, Vision)
TB_NONMANAGED_PROGRAM_TYPE	Non-Managed Care Management	Reference Table of Non-Managed Care Program Type (HIPP or BCCTP)
TB_NONMANAGED_VENDOR_COVERAGE	Non-Managed Care Management	Eligibility of Coverage for Non-Managed Care Vendors
TB_PAYMENT_TYPE	Reference Table	Reference Table of the Aid Code Group Payment Type (Healthy Families, Medi-Cal Only, Medicare Part D)
TB_PLAN_CODE_ON_PAYMENT_TYPE	Contract Management	The program mapped against the plan types used within the program, with rates given
TB_STAGING_BENEFICIARY	Beneficiary Management	Staging Table to hold raw beneficiary data from MMCD Record

Name	Domain	Description
TB_STAGING_MONTHLY_INFO	Beneficiary Management	Staging Table to hold raw beneficiary monthly records from MMCD Record
TB_STATUS_TYPE	Invoice Management	Invoice Status Reference Table (Pended, Approved)
TB_SUPPLEMENTAL_AID_TYPE	Reference Table	Supplemental Aid Reference Table (AIDS, Craig v Bonta, AGNEWS)
TB_VENDOR_INFO	Contract Management	Additional Vendor Contact Information for Vendors to be Paid in 820 Invoice
TB_VENDOR_TYPE	Reference Table	Managed Care Company Name Reference Table
TB_WAIVER_TYPE	Reference Table	Reference Table of Waivers (Sacramento GMC, Santa Barbara Regional Health)
TB_WARRANT	Invoice Management	Warrant Information received from CD102 Warrant file

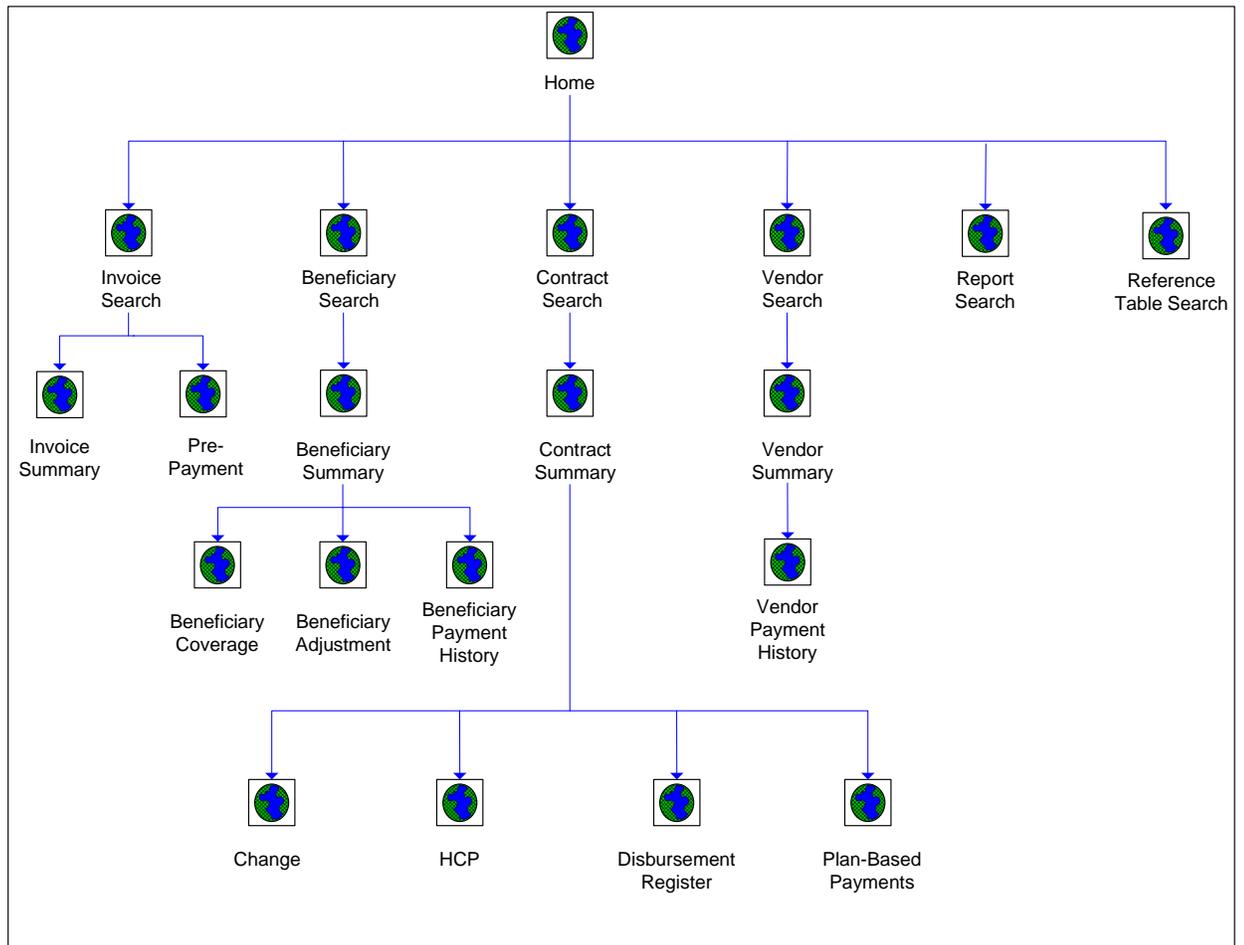
9 User Interface

The user interface will be comprised of the web pages that will be accessed using a standard web browser. Contracts, beneficiaries and invoices will be managed through the user interface.

The following sections are based on prototypes implemented with windows standard forms and do not reflect aesthetical presentations, but rather should reflect fields and flow needed to implement the user interface requirements. The field mapping and control tables reflect what is presented in the prototype user interface. Actual implementation may aggregate and streamline the functionality denoted in the prototype.

9.1 Site Map

The *Site Map* illustrates the user interface pages and the entire website navigation.



9.2 Master Page

The 820 Phase 2 Master Page will dictate a consistent layout. The layout will be consistent for the header, footer, and navigation panes, and will define the area for 820 Phase 2 content pages.

9.3 Master Page Layout

Master Page for 820 Phase 2 System will conform to the web page design standards and will consist of the header, footer, navigation and content page areas.

9.3.1 Header

The header section of the 820 Phase 2 Master Page will contain the menu for navigating the system.



WELCOME TO
THE STATE OF CALIFORNIA

Skip to: [Content](#) | [Footer](#) | [Accessibility](#)

Home | [Invoices](#) | [Beneficiaries](#) | [Contracts](#) | [Vendors](#) | [Reports](#) | [References](#)

[About](#) | [Accessibility](#) | [Contact](#) | [Conditions of Use](#) | [Privacy Policy](#) | [Help](#)

Controls

Control	Description
Link Label	Used for the 'skip to' sub-section to allow user to quickly navigate to a desired page.
Menu Control	Used for the navigation sub-section that contains links to all pages in the system.

9.3.2 Footer

The footer section of the 820 Phase 2 Master Page will consist of internal and external link sub-section. The internal link sub-section allows user to navigate to back to the top of the page, 820 Phase 2 Help Page, 820 Phase 2 Contact Page, and 820 Phase 2 Site Map. The external link sub-section allows user to navigate to conditions of use and privacy policy pages.

[Back to Top](#) | [Help](#) | [Contact Us](#) | [Site Map](#)

[Conditions of Use](#) | [Privacy Policy](#)
Copyright © 2010 State of California

Controls

Control	Description
Link Label	Used for the internal and external sub-sections to allow user to quickly navigate to a desired page.

9.3.3 Content Page

The content page section of the 820 Phase 2 Master Page consists of content page navigation and content page sub-sections. The content page navigation sub-section displays quick navigation links to the desired pages on the content page level. The content page sub-section displays the actual content page.

MORE:

- [About](#)
- [Accessibility](#)
- [Contact](#)
- [Conditions of Use](#)
- [Privacy Policy](#)
- [Help](#)

[Home](#)

Welcome to OHC 820 Phase II!

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Quisque elementum elementum metus, quis convallis erat ullamcorper ac. Aenean ultricies posuere nisi. Sed sodales nisi enim, ac commodo mauris. Vestibulum ut gravida lorem. Cras suscipit fermentum ligula, eu adipiscing augue mattis eu. Nullam sit amet ipsum id ipsum consectetur volutpat. Mauris sit amet sem ante, vel adipiscing nunc. Nunc commodo viverra neque, vel accumsan nisi venenatis at. Aliquam ac vehicula arcu. Proin et turpis sapien. Nam sit amet lectus sapien. Maecenas consectetur bibendum orci eu aliquet.

Maecenas sed ornare tellus. Vestibulum id tellus ipsum. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Integer porttitor tortor vitae sem egestas vehicula. Pellentesque non magna euismod velit tempus pellentesque vitae et magna. Praesent semper felis eget justo blandit semper non at nunc. Nullam blandit, nibh eu cursus commodo, est sapien ultrices purus, non viverra sapien enim quis lacus. Phasellus sollicitudin metus in libero pellentesque et varius quam dictum. Nunc nisi mi, malesuada ut adipiscing at, dignissim dapibus massa. Fusce nibh sem, tincidunt ut vehicula ac, ornare eu ipsum. Etiam imperdiet, ipsum auctor viverra vulputate, tortor neque condimentum sapien, id sagittis leo sem vel ipsum.

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9.4 Site Constraints

The page is ADA compliant and conforms to the ADA standards.

9.5 Invoice Search

Invoice Search content page will allow users to search for managed care and non-managed care invoices.

Managed care users will be required to search by invoice status, HCP, invoice amount, state fiscal year, capitation month, or payment month.

Non-managed care users will be required to search by program, beneficiary CIN, invoice status, payee name, invoice number, vendor code, vendor name, and case ID.

Invoice Management	Beneficiary Management	Vendor Management	Reports				
Search	Invoice Details	Pre-Payment					
Program:	BCCTP	Beneficiary CIN:					
Invoice Status:	820Sent	Vendor Code:					
Invoice Number:		Case ID:					
Vendor Name:							
			BCCTP GHPP HIPP 820Sent Approved CD102 Received/Paid CMS64Received PaymentError Pending Reviewed				
Invoice Queue contains Payment Errors!							
Search		Clear					
Select Invoice(s)	Invoice Number	Case ID	Beneficiary CIN	Vendor Name	Vendor Code	Invoice Status	Program
<input type="checkbox"/>	1888551	C001	C1111111	Vendor1	VEN111	PaymentError	HIPP
<input type="checkbox"/>	1888552	C002	C2222222	Vendor2	VEN222	Pending	BCCTP
<input type="checkbox"/>	1888553	C003	C3333333	Vendor3	VEN333	Reviewed	HIPP
<input type="checkbox"/>	1888554	C004	C1111111	Vendor4	VEN444	Reviewed	BCCTP
<input type="checkbox"/>	1888555	C005	C2222222	Vendor5	VEN555	Approved	HIPP
<input type="checkbox"/>	1888556	C006	C3333333	Vendor6	VEN666	Approved	BCCTP
<input type="checkbox"/>	1888557	C007	C1111111	Vendor7	VEN777	CMS64 Received	HIPP
<input type="checkbox"/>	1888558	C008	C2222222	Vendor8	VEN888	CD102 Received...	BCCTP
<input type="checkbox"/>	1888559	C009	C3333333	Vendor9	VEN999	820Sent	HIPP
<input type="checkbox"/>	1888560	C010	C3333333	Vendor10	VEN000	Deleted	BCCTP

9.5.1 Interface Rules

Invoice Search page will be accessible by users with appropriate roles and rights. Only the users who have invoice search rights will be able to view and execute the actions on the page. Furthermore, users with managed care rights will be able to see managed care information, and users with non-managed care rights will be able to see non-managed care information. The page is ADA compliant and conforms to the ADA standards.

9.5.2 Field to Database Mapping

Component	Input	Description
Invoice Status	TB_STATUS_TYPE.Status_Name	Status of the invoice.
HCP	TB_HEALTH_CARE_PLAN_TYPE.Name	HCP of the invoice.
Invoice Amount	TB_INVOICE.Invoice_Amount	Amount of the invoice.

Component	Input	Description
State Fiscal Year	TB_INVOICE.Fiscal_Year	State fiscal year of the invoice.
Service Month	TB_INVOICE.Service_Month	Service month of the invoice.
Payment Month	TB_INVOICE.Payment_Date	Payment month of the invoice.
Invoice Number	TB_INVOICE.Invoice_Number	Number of the invoice.
Vendor Code	TB_VENDOR_INFO.Vendor_Code	Invoice vendor code.
Contract Number	TB_CONTRACT.Contract_Number	Contract number of the invoice.
Model Type	TB_MODEL_TYPE.Model_Name	Model type of the invoice.
Invoice Type	TB_INVOICE_TYPE.Invoice_Type	Type of the invoice.
Program	TB_NONMANAGED_PROGRAM_TYPE.Name	Invoice program.
Beneficiary CIN	TB_BENEFICIARY.CIN	Invoice beneficiary CIN.
Payee Name	TB_VENDOR_INFO.Other_Name	Invoice payee name.
Vendor Name	TB_VENDOR_INFO.Vendor_Name	Invoice vendor name.
Case ID	TB_BENEFICIARY_NONMANAGED_CARE.Case_Id	Beneficiary case ID on the invoice.

9.5.3 Controls

Control	Display	Description
Input Button	Search	Finds invoice results according to input criteria.
Input Button	Clear	Clears the input fields and the search queue.
Input Button	View Invoices	Views invoices based on selection criteria in the invoice queue.
Input Button	Approve All	Approves all invoices in the invoice queue.
Text Field	Invoice Amount	Allows user to input amount for the invoice.
Text Field	Beneficiary CIN	Allows user to input beneficiary CIN for the invoice.
Text Field	Payee Name	Allows user to input payee name for the invoice.
Text Field	Vendor Name	Allows user to input vendor name for the invoice.

Control	Display	Description
Text Field	Case ID	Allows user to input case ID for the invoice.
Drop Down Box	Invoice Status	Allows user to select status for the invoice.
Drop Down Box	HCP	Allows user to select HCP for the invoice.
Drop Down Box	State Fiscal Year	Allows user to select state fiscal year for the invoice.
Drop Down Box	Month	Allows user to select month for the invoice.
Drop Down Box	Year	Allows user to select year for the invoice.
Drop Down Box	Program	Allows user to select program for the invoice.
Radio Button	Capitation Month	Allows user to select capitation month for the invoice.
Radio Button	Payment Month	Allows user to select payment month for the invoice.
Data Grid View	N/A	Displays search results: Invoice Number, HCP, Vendor Number, Contract Number, Invoice Status, Capitation Month, Payment Month, Model Type, Invoice Type, Total Invoice Amount, and State Fiscal Year

9.5.4 Error Conditions

Invoice Search page will validate user's input when the Search button is clicked. Additionally, a warning message will be displayed informing user of invoices in 'Payment Error' status.

For managed care, if either HCP, invoice status, invoice amount, state fiscal year, capitation month, or payment month are not entered then a validation message will be displayed informing user to input at least one combination of fields. Furthermore, invoice amount will be validated for proper format.

For non-managed care, if no fields are entered then a validation message will be displayed informing user to input or select at least one field.

9.6 Invoice Summary

Invoice Summary content page will allow users to view and modify status of an invoice. Users will additionally enter the adjustment amount and reason to an invoice that is in Payment Error status.

Non-managed care users will also update payment information by providing a revolving fund number, date, and amount.

The screenshot displays a web application interface for managing health insurance payments. At the top, there are navigation tabs: Invoice Management, Beneficiary Management, Vendor Management, and Reports. Below these are sub-tabs: Search, Invoice Details, and Pre-Payment. The main content area is titled "Health Insurance Premium Payment" and includes the following sections:

- Program:** Breast & Cervical Cancer Treatment Program (BCCTP)
- Index:** 9912, **Object Detail:** 751, **PCA:** 95915, **Agency Code:** 43
- Invoice Number:** 4584, **Case ID:** 592765
- Vendor Number:** 12345, **Beneficiary Name:** Joe Smith

Below the details are three main action sections:

- Payment Error Adjustment:** Includes input fields for "Adjustment Amount(\$)" and "Reason", with "Save" and "Cancel" buttons.
- Revolving Fund Payment Data:** Includes input fields for "Revolving Fund Number", "Revolving Fund Date", and "Revolving Fund Amount", with "Save" and "Cancel" buttons.
- Update Invoice Status:** Features a "Select Action" dropdown menu (currently set to "Approve"), a "Submit" button, and a "Back To Search" button. A "Comments" text area is also present.

At the bottom, there is an **Invoice History** table:

Invoice Status	Date of Action	Comments	User Name
820Sent	5/7/2009	System.	System
PaymentError	5/6/2009	System.	System
CD102 Received/Paid	5/5/2009	System	System

9.6.1 Interface Rules

Invoice Summary page will be accessible by users with appropriate roles and rights. Only the users who have invoice view and update rights will be able to view and execute the actions on the page. Furthermore, users with managed care rights will be able to see managed care information, and users with non-managed care rights will be able to see non-managed care information. The page is ADA compliant and conforms to the ADA standards.

9.6.2 Field to Database Mapping

Component	Input	Description
Action	TB_STATUS_TYPE.Status_Name	Status action of the invoice.
Comments	TB_INVOICE_STATUS.Comments	Comments of the invoice status.
Invoice Status	TB_STATUS_TYPE.Status_Name	Status of the invoice.

Component	Input	Description
Date of Action	TB_INVOICE_STATUS.Status_Date	Date when the status was added to the invoice.
User Name	TB_INVOICE_STATUS.Audit_User	User who added the status to the invoice.
Adjustment Amount	TB_ADJUSTMENT.Amount	Amount to be adjusted for invoice in Payment Error status.
Adjustment Reason	TB_ADJUSTMENT.Reason	Reason for adjusting the invoice in Payment Error status.
Revolving Fund Number	TB_WARRANT.Warrant_Number_Begin and TB_WARRANT.Warrant_Number_End	Revolving fund number for the invoice in Approved status. Assumption is that accounting will not provide warrant number for the invoice.
Revolving Fund Date	TB_WARRANT.Warrant_Date	Revolving fund date for the invoice in Approved status. Assumption is that accounting will not provide warrant date for the invoice.
Revolving Fund Amount	TB_WARRANT.Warrant_Amount	Revolving fund amount for the invoice in Approved status. Assumption is that accounting will not provide warrant amount for the invoice.

9.6.3 Controls

Control	Display	Description
Input Button	View Previous Invoice	Navigates to the previous invoice in selection queue.
Input Button	View Next Invoice	Navigates to the next invoice in selection queue.
Input Button	View Detail	Displays invoice with detailed information.
Input Button	View Summary	Displays invoice with summarized information.
Input Button	Print	Prints the invoice.
Input Button	Export	Exports the invoice.
Input Button	Submit	Submits the status change on the invoice.
Input Button	Save Adjustment	Saves Amount and Reason entries for the invoice.
Input Button	Cancel Adjustment	Cancel Amount and Reason entries for the invoice.
Input Button	Save Payment Update	Saves payment update entries for the invoice.

Control	Display	Description
Input Button	Cancel Payment Update	Cancels payment update entries for the invoice.
Input Button	Recalculate	Recalculates information on the invoice.
Input Button	Back To Search	Navigates user back to the search page.
Drop Down Box	Action	Allows user to select a status for the invoice.
Text Field	Comments	Allows user to input status comment for the invoice.
Text Field	Adjustment Amount	Allows user to input adjustment amount for the invoice.
Text Field	Reason	Allows user to input adjustment reason for the invoice.
Text Field	Revolving Fund Number	Allows user to input revolving fund number for the invoice.
Text Field	Revolving Fund Date	Allows user to input revolving fund date for the invoice.
Text Field	Revolving Fund Amount	Allows user to input revolving fund amount for the invoice.

9.6.4 Error Conditions

Invoice Summary page will validate user's input when action buttons are clicked. For a submit action, if an item from the action list was not selected then a validation message will be displayed informing user to select required value. For the save action, if adjustment amount and reason values are not entered then a validation message will be displayed informing user to enter required values. Furthermore, for non-managed care users, if a revolving fund number, date, or amount are not entered then a validation message will be displayed informing user to enter required values.

9.7 Pre Payment

Invoice Pre-Payment content page will allow non-managed care users to create pre-payment invoices. Users may enter into date period fields in order to specify the time frame of the pre-payment invoices.

Invoice Management | Beneficiary Management | Vendor Management | Reports

Search | Invoice Details | Pre-Payment

Generate Pre-Payment Invoices

Due Date From: Due Date To:

Save Cancel

9.7.1 Interface Rules

Invoice Pre-Payment page will be accessible by users with appropriate roles and rights. Only the users who will have invoice view and update rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.7.2 Field to Database Mapping

Component	Input	Description
Due Date From	TB_PRE_PAYMENT.Due_Date_From	'Due date from' of the pre-payment.
Due Date To	TB_PRE_PAYMENT.Due_Date_To	'Due date to' of the pre-payment.

9.7.3 Controls

Control	Display	Description
Input Button	Save	Saves pre-payment information.
Input Button	Cancel	Cancel pre-payment information.
Text Field	Due Date From	Allows user to input 'due date from' for the pre-payment.
Text Field	Due Date To	Allows user to input 'due date to' for the pre-payment.

9.7.4 Error Conditions

Invoice Pre-Payment page will validate user's input when Save button is clicked. If the date period fields are not entered then a validation message will be displayed informing user to enter required values.

9.8 Beneficiary Search

Beneficiary Search content page will allow users to search for managed and non-managed care beneficiaries. Managed care users will not be able to view non-managed care beneficiaries and vice versa.

Managed care users are required to search by beneficiary CIN or last name and date of birth or the HCP. Additionally, users will be able to narrow down the search by specifying beneficiary primary eligibility, beneficiary first name, beneficiary supplemental eligibility, and supplemental eligibility dates.

Non-managed care users will be able to search by program, Case ID, CIN, policy number, first name, and last name. Additionally, users may add a new non-managed care beneficiary.

Invoice Management	Beneficiary Management	Vendor Management	Reports		
Search	Summary	Coverage	Adjustments	Payment History	
Program:	BCCTP	Case ID:	<input type="text"/>	BCCTP GHPP HIPP	
CIN:	<input type="text"/>	Policy Number:	<input type="text"/>		
First Name:	<input type="text"/>	Last Name:	<input type="text"/>		
Birth Date From:	<input type="text"/>	Birth Date To:	<input type="text"/>		
<input type="button" value="Search"/> <input type="button" value="Clear"/> <input type="button" value="Add Beneficiary"/>					
CIN	Case ID	Program	Last Name	First Name	Policy Number
C1111111	C001	HIPP	System1	Bene1	P001
C2222222	C002	HIPP	System2	Bene2	P002
C3333333	C003	HIPP	System3	Bene3	P003
C4444444	C004	HIPP	System4	Bene4	P004
C5555555	C005	HIPP	System5	Bene5	P005
C6666666	C006	HIPP	System6	Bene6	P006
C7777777	C007	BCCTP	System7	Bene7	P007
C8888888	C008	BCCTP	System8	Bene8	P008
C9999999	C008	BCCTP	System9	Bene9	P008

9.8.1 Interface Rules

Beneficiary Search page will be accessible by users with appropriate roles and rights. Only the users who have beneficiary search rights will be able to view and execute the actions on the page. Furthermore, users with managed care rights will be able to see managed care information, and users with non-managed care rights will be able to see non-managed care information. The page is ADA compliant and conforms to the ADA standards.

9.8.2 Fields to Database Mappings

Component	Input	Description
CIN	TB_BENEFICIARY.CIN	CIN number of the beneficiary.
First Name	TB_BENEFICIARY.NameFirst	First name of the beneficiary.
Last Name	TB_BENEFICIARY.NameLast	Last name of the beneficiary.
Date of Birth	TB_BENEFICIARY.DOB	Date of birth of the beneficiary.

Component	Input	Description
HCP	TB_HEALTH_CARE_PLAN_TYPE.Name	HCP of the beneficiary.
Primary Eligibility	TB_MONTHLY_BENE_AID_CODE.Medicare_Status	Primary eligibility of the beneficiary.
Supplemental Eligibility	TB_SUPPLEMENTAL_AID_TYPE.Supplemental_Code	Supplemental eligibility of the beneficiary.
Supplemental Eligibility From	TB_BENE_SUPPLEMENTAL_INFO.Effective_Date_From	Supplemental eligibility from of the beneficiary.
Supplemental Eligibility To	TB_BENE_SUPPLEMENTAL_INFO.Effective_Date_To	Supplemental eligibility to of the beneficiary.
Birth Date From	TB_BENEFICIARY.DOB	Date of birth from of the beneficiary.
Birth Date To	TB_BENEFICIARY.DOB	Date of birth to of the beneficiary.
Policy Number	TB_NONMANAGED_COVERAGE.Policy_Num	Policy number of the beneficiary.
Case ID	TB_BENEFICIARY_NONMANAGED_CARE.Case_Id	Case ID of the beneficiary.
Program	TB_NONMANAGED_PROGRAM_TYPE.Name	Program of the beneficiary.

9.8.3 Controls

Control	Display	Description
Input Button	Search	Finds beneficiary results according to input criteria.
Input Button	Clear	Clears the input fields and the search queue.
Drop Down Box	HCP	Allows user to select beneficiary's HCP.
Drop Down Box	Primary Eligibility	Allows user to select beneficiary's primary eligibility.
Drop Down Box	Supplemental Eligibility	Allows user to select beneficiary's supplemental eligibility.
Drop Down Box	Program	Allows user to select beneficiary's program.
Text Field	CIN	Allows user to input beneficiary's CIN number.
Text Field	Last Name	Allows user to input beneficiary's last name.
Text Field	Date of Birth	Allows user to input beneficiary's date of birth.
Text Field	Case ID	Allows user to input beneficiary's case ID.

Control	Display	Description
Text Field	Policy Number	Allows user to input beneficiary's policy number.
Text Field	First Name	Allows user to input beneficiary's first name.
Text Field	Supplemental Eligibility From	Allows user to input beneficiary's supplemental eligibility date from.
Text Field	Supplemental Eligibility To	Allows user to input beneficiary's supplemental eligibility date to.
Data Grid View	N/A	Displays search results for managed care: CIN, First Name, Last Name, HCP, Date of Birth, Supplementary Eligibility, and Primary Eligibility. Displays search results for non-managed care: CIN, First Name, Last Name, Program, Policy Number, and Case ID.

9.8.4 Error Conditions

Beneficiary Search page will validate user's input when search action is initiated.

For managed care, if either CIN or last name and date of birth or HCP are not entered then a validation message will be displayed informing user to input at least one combination of fields. Furthermore, supplemental eligibility dates will be validated for proper format.

For non-managed care, if either of the fields is not entered then a validation message will be displayed informing user to input at least one combination of fields.

9.9 Beneficiary Summary

Beneficiary Summary content page will allow users to view and modify details of a managed care or a non-managed care beneficiary. Managed care users will not be able to view non-managed care beneficiaries and vice versa.

Managed care users will be able to view beneficiary information and add beneficiary supplemental information.

Non-managed care users will be able to view and add beneficiary information and beneficiary eligibility information.

Invoice Management | Beneficiary Management | Contract Management | Reports | Reference Tables

Search | Summary

Beneficiary Information

CIN: **C1111111** Date of Birth: **1/1/2001**
 First Name: **Bene 1** Date of Death: **N/A**
 Last Name: **System 1** Alien Status: **Non-Alien**
 Middle Initial: **D** Dental HCP: **405 - Health Net**
 Gender: **Female** Medical HCP: **300 - Alameda Alliance**
 Primary Eligibility: **Medi-Cal Only** Risk Factor:

Supplemental Eligibility History

Eligibility Type	Effective Date From	Effective Date To	Diagnosis Date	Diagnosis	Delivery Date	User Name	Updated On
Craig vs. Bonta	1/1/2008	4/1/2009				User1	1/1/2008
Maternity	5/1/2008	2/1/2009			2/2/2009	User1	5/1/2008
AGC	6/1/2008	5/31/2009	5/31/2009	UW		User1	6/1/2008

-- Select Supplemental Eligibility --
 None
 AIDS
 AGNEWS
 Maternity
 -- Select Diagnosis --
 AIDS
 HIV

Add Supplemental Eligibility

-- Select Supplemental Eligibility -- Effective Date From: Effective Date To:
 Diagnosis: -- Select Diagnosis -- Diagnosis Date: Date of Delivery:

Beneficiary Payment History

Beneficiary CIN: 565303656

Last Name: Smith First Name: Joe MI: L
 Date of Birth: 10/20/1950 Gender: Male Date of Death:

Model Type	HCP Name	HCP Code	Aid Code Group	Aid Code	Rates	Invoice Number	Invoice Date	Service Month	Claim Schedule Number	Warrant Number	Date of Warrant	Payment Type	Paid Amount
	Molina Healthcar e of												

9.9.1 Interface Rules

Beneficiary Summary page will be accessible by users with appropriate roles and rights. Only the users who have beneficiary view and update rights will be able to view and execute the actions on the page. Furthermore, users with managed care rights will be able to see managed care information, and users with non-managed care rights will be able to see non-managed care information. The page is ADA compliant and conforms to the ADA standards.

9.9.2 Components

Component	Input	Description
CIN	TB_BENEFICIARY.CIN	CIN number of the beneficiary.
Last Name	TB_BENEFICIARY.Name_Last	Last name of the beneficiary.
First Name	TB_BENEFICIARY.Name_First	First name of the beneficiary.

Component	Input	Description
Middle Initial	TB_BENEFICIARY.Name_Middle_Initial	Middle initial of the beneficiary.
Gender	TB_BENEFICIARY.Gender_Code	Gender code of the beneficiary.
Date of Birth	TB_BENEFICIARY.Date_Of_Birth	Date of birth of the beneficiary.
Date of Death	TB_BENEFICIARY.Date_Of_Death	Date of death of the beneficiary.
Alien Status	TB_BENEFICIARY.Alien_Code	Alien code of the beneficiary.
Medical HCP	TB_HEALTH_CARE_PLAN_TYPE.Name	Medical HCP of the beneficiary.
Dental HCP	TB_HEALTH_CARE_PLAN_TYPE.Name	Dental HCP of the beneficiary.
Primary Eligibility	TB_MONTHLY_BENE_AID_CODE.Medicare_Status	Primary eligibility of the beneficiary.
Risk Factor	TB_BENE_RISK_FACTOR.Risk_Factor	Risk factor of the beneficiary.
Case ID	TB_BENEFICIARY_NONMANAGED_CARE.Case_Id	Case ID of the beneficiary.
Program	TB_NONMANAGED_PROGRAM_TYPE.Name	Program of the beneficiary.
Case Status	TB_BENEFICIARY_NONMANAGED_CARE.Case_Status	Case status of the beneficiary.
Case Termination Date	TB_BENEFICIARY_NONMANAGED_CARE.Case_Termination_Date	Case termination date of the beneficiary.
Supplemental Eligibility Type	TB_SUPPLEMENTAL_AID_TYPE.Supplemental_Code	Supplemental eligibility type of the beneficiary.
Supplemental Eligibility Effective Date From	TB_BENE_SUPPLEMENTAL_INFO.Effective_Date_From	Supplemental eligibility effective date from of the beneficiary.
Supplemental Eligibility Effective Date To	TB_BENE_SUPPLEMENTAL_INFO.Effective_Date_To	Supplemental eligibility effective date to of the beneficiary.
Supplemental Eligibility Diagnosis Date	TB_BENE_SUPPLEMENTAL_INFO.Diagnosis_Date	Supplemental eligibility diagnosis date of the beneficiary.
Supplemental Eligibility Diagnosis	TB_BENE_SUPPLEMENTAL_INFO.Diagnosis	Supplemental eligibility diagnosis of the beneficiary.

Component	Input	Description
Supplemental Eligibility Delivery Date	TB_BENE_SUPPLEMENTAL_I NFO.Delivery_Date	Supplemental eligibility delivery date of the beneficiary.
Supplemental Eligibility User Name	TB_BENE_SUPPLEMENTAL_I NFO.Audit_User	User name that created/updated the record.
Supplemental Eligibility Updated On	TB_BENE_SUPPLEMENTAL_I NFO.Audit_Date	Date when the supplemental eligibility was updated.
Beneficiary Payment History Report – Beneficiary CIN	TB_BENEFICIARY.CIN	CIN of the beneficiary.
Beneficiary Payment History Report – Last Name	TB_BENEFICIARY.Name_Last	Last name of the beneficiary.
Beneficiary Payment History Report – First Name	TB_BENEFICIARY.Name_First	First name of the beneficiary.
Beneficiary Payment History Report - MI	TB_BENEFICIARY.Name_Midd le_Initial	Middle initial of the beneficiary.
Beneficiary Payment History Report - Date of Birth	TB_BENEFICIARY.Date_Of_Bi rth	Date of birth of the beneficiary.
Beneficiary Payment History Report - Gender	TB_BENEFICIARY.Gender_Co de	Gender of the beneficiary.
Beneficiary Payment History Report - Date of Death	TB_BENEFICIARY.Date_Of_D eath	Date of death of the beneficiary.
Beneficiary Payment History Report - Model Type	TB_MODEL_TYPE.Model_Nam e	Model type of the invoice.
Beneficiary Payment History Report - HCP Name	TB_HEALTH_CARE_PLAN_TY PE.Name	HCP name of the invoice.
Beneficiary Payment History Report - HCP Code	TB_HEALTH_CARE_PLAN_TY PE.Health_Care_Plan_Code	HCP code of the invoice.
Beneficiary Payment History Report - Aid Code Group	TB_AID_CODE_GROUP_TYP E.Aid_Code_Group_Name	Aid code group of the invoice.
Beneficiary Payment History Report - Aid Code	TB_AID_CODE_TYPE.Aid_Cod e	Aid code of the invoice.
Beneficiary Payment History Report - Rates	TB_PLAN_CODE_ON_PAYME NT_TYPE.Rate	Rates of the invoice.
Beneficiary Payment History Report - Invoice Number	TB_INVOICE.Invoice_Number	Number of the invoice.
Beneficiary Payment History Report - Invoice Date	TB_INVOICE.Payment_Date	Date of the invoice.

Component	Input	Description
Beneficiary Payment History Report - Service Month	TB_INVOICE.Capitation_Month	Service month of the invoice.
Beneficiary Payment History Report - Claim Schedule Number	TB_INVOICE.Claim_Schedule_Number	Claim schedule number of the invoice.
Beneficiary Payment History Report - Warrant Number	TB_WARRANT.Warrant_Number_Begin and TB_WARRANT.Warrant_Number_End	Warrant number of the invoice.
Beneficiary Payment History Report - Date of Warrant	TB_WARRANT.Warrant_Date	Date of warrant of the invoice.
Beneficiary Payment History Report - Payment Type	TB_INVOICE_TYPE.Invoice_Type	Payment type of the invoice.
Beneficiary Payment History Report - Paid Amount	TB_INVOICE.Invoice_Amount	Paid amount of the invoice.

9.9.3 Controls

Control	Display	Description
Input Button	Save	Saves supplemental eligibility information entered for the beneficiary.
Input Button	Cancel	Cancel the supplemental eligibility information entered for the beneficiary.
Input Button	Print	Prints beneficiary payment history report.
Input Button	Export	Exports beneficiary payment history report to Excel or PDF.
Drop Down Box	Select supplemental eligibility	Allows user to select supplemental eligibility for the beneficiary.
Drop Down Box	Select Diagnosis	Allows user to select diagnosis for the beneficiary.
Drop Down Box	Program	Allows user to select program for the beneficiary.
Drop Down Box	Case Status	Allows user to select case status for the beneficiary.
Text Field	Case ID	Allows user to input case ID for the beneficiary.
Text Field	Program	Allows user to input program for the beneficiary.
Text Field	Case Status	Allows user to input case status for the beneficiary.
Text Field	Case Termination Date	Allows user to input case termination date for the beneficiary.

Control	Display	Description
Text Field	Risk Factor	Allows user to input risk factor for the beneficiary.
Text Field	Effective Date From	Allows user to input supplemental effective date from for the beneficiary.
Text Field	Effective Date To	Allows user to input supplemental effective date to for the beneficiary.
Text Field	Diagnosis Date	Allows user to input supplemental diagnosis date for the beneficiary.
Text Field	Date of Delivery	Allows user to input supplemental date of delivery for the beneficiary.
Report	Beneficiary Payment History	Displays beneficiary information in header section: Beneficiary CIN, Last Name, First Name, MI, Date of Birth, Gender, and Date of Death Displays historical beneficiary payment information: Model Type, HCP Name, HCP Code, Aid Code Group, Aid Code, Rates, Invoice Date, Service Month, Claim Schedule Number, Warrant Number, Date of Warrant, Payment Type, and Paid Amount

9.9.4 Error Conditions

Beneficiary Summary page will validate user's input when a save action is initiated. For managed care if either effective dates, or delivery date for maternity supplemental information, or diagnosis and diagnosis dates for AIDS supplemental information are not entered then a validation message will be displayed informing user to input required fields.

Furthermore, effective dates will be validated for proper format. For non-managed care if either of the fields is not entered then a validation message will be displayed informing user to input required fields. Furthermore, case termination dates will be validated for proper format.

9.10 Beneficiary Coverage

Beneficiary Coverage content page will allow users to add coverage information for a non-managed care beneficiary. This page also captures the monthly premium amount for the non-managed care beneficiary.

Invoice Management | **Beneficiary Management** | Vendor Management | Reports

Search | Summary | **Coverage** | Adjustments | Payment History

Coverage Details

Vendor Code: Coverage Type:

Group Number: Policy Number:

Premium Due Date: Policy Start Date:

Policy Holder Name: Policy Stop Date:

Payment Frequency: Number of individuals covered on policy:

Monthly Premium Amount: Premium Amount:

Dental

Medical

Vision

Annually

Bi-annually

Bi-monthly

Bi-weekly

Monthly

Quarterly

Weekly

9.10.1 Interface Rules

Beneficiary Coverage page will be accessible by users with appropriate roles and rights. Only the users who have beneficiary update rights will be able to execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.10.2 Components

Component	Input	Description
Vendor Code	TB_VENDOR_INFO.Vendor_Code	Vendor code of the beneficiary coverage.
Coverage Type	TB_NONMANAGED_COVERAGE_TYPE.Coverage_Name	Coverage type of the beneficiary coverage.
Group Number	TB_NONMANAGED_COVERAGE.Group_Number	Group number of the beneficiary coverage.
Policy Number	TB_NONMANAGED_COVERAGE.Policy_Num	Policy number of the beneficiary coverage.

Component	Input	Description
Premium Due Date	TB_NONMANAGED_COVERAGE.Premium_Due_Date	Premium due date of the beneficiary coverage.
Policy Start Date	TB_NONMANAGED_COVERAGE.Policy_Start_Date	Policy start date of the beneficiary coverage.
Policy Stop Date	TB_NONMANAGED_COVERAGE.Policy_Stop_Date	Policy stop date of the beneficiary coverage.
Policy Holder Name	TB_NONMANAGED_COVERAGE.Policy_Holder_Name	Policy holder name of the beneficiary coverage.
Payment Frequency	TB_NONMANAGED_COVERAGE.Payment_Frequency	Payment frequency of the beneficiary coverage.
Number of individuals covered on policy	TB_NONMANAGED_COVERAGE.Num_Covered	Number of individuals covered on policy.
Premium Amount	TB_NONMANAGED_COVERAGE.Premium_Amount	Premium amount of the beneficiary coverage.
Monthly Premium Amount	TB_NONMANAGED_COVERAGE.Monthly_Premium_Amount	Monthly premium amount of the beneficiary coverage. Monthly premium amount is calculated by multiplying the payment frequency and premium amount up to a year, and then dividing it by 12.

9.10.3 Controls

Control	Display	Description
Input Button	Save	Saves coverage information entered for the beneficiary.
Input Button	Edit	Edits coverage information for the beneficiary.
Input Button	Cancel	Cancel the changes to coverage information entered for the beneficiary.
Drop Down Box	Payment Frequency	Payment Frequency of the beneficiary coverage.
Text Field	Vendor Code	Vendor Code of the beneficiary coverage.
Text Field	Coverage Type	Coverage Type of the beneficiary coverage.
Text Field	Group Number	Group Number of the beneficiary coverage.
Text Field	Policy Number	Policy Number of the beneficiary coverage.
Text Field	Policy Holder Name	Policy Holder Name of the beneficiary coverage.
Text Field	Premium Due Date	Premium Due Date of the beneficiary coverage.

Control	Display	Description
Text Field	Policy Start Date	Policy Start Date of the beneficiary coverage.
Text Field	Policy Stop Date	Policy Stop Date of the beneficiary coverage.
Text Field	Premium Amount	Premium Amount of the beneficiary coverage.
Text Field	Monthly Premium Amount	Monthly Premium Amount of the beneficiary coverage.

9.10.4 Error Conditions

Beneficiary Coverage page will validate user's input when an action is initiated. If any of the fields are not entered then a validation message will be displayed informing user to input required fields.

9.11 Beneficiary Adjustment

Beneficiary Adjustment content page will allow users to add adjustment information for a non-managed care beneficiary in the CAPMAN system. Users may add overpayments, underpayments, or payments received types of adjustment to a non-managed care beneficiary.

Invoice Management | Beneficiary Management | Vendor Management | Reports

Search | Summary | Coverage | Adjustments | Payment History

Adjustments

Premium Payment Period From: Premium Payment Period To:

Adjustment Reason: Adjustment Amount:

Check Date: Check Number:

Generate Invoice

Overpayment
Payment Received
Underpayment

< August, 2009 >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Today: 8/19/2009

9.11.1 Interface Rules

Beneficiary Adjustment page will be accessible by users with appropriate roles and rights. Only the users who have beneficiary update rights will be able to execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.11.2 Components

Component	Input	Description
Adjustment Reason	TB_BENEFICIARY_ADJUSTMENT.Adjustment_Reason	Reason for the beneficiary adjustment.
Adjustment Amount	TB_BENEFICIARY_ADJUSTMENT.Adjustment_Amount	Amount for the beneficiary adjustment.
Premium Payment Period From	TB_BENEFICIARY_ADJUSTMENT.Premium_Payment_From	'Premium payment period from' for the beneficiary adjustment.
Premium Payment Period To	TB_BENEFICIARY_ADJUSTMENT.Premium_Payment_To	'Premium payment period to' for the beneficiary adjustment.

Component	Input	Description
Check Date	TB_BENEFICIARY_ADJUSTM ENT.Check_Date	Check date for the beneficiary adjustment. Used for payment received adjustment reason.
Check Number	TB_BENEFICIARY_ADJUSTM ENT.Check_Number	Check number for the beneficiary adjustment. Used for payment received adjustment reason.
Generate Invoice	N/A	Generate invoice indicator for the adjustment. If the indicator is checked, then a new invoice will be created with the adjustment, otherwise the adjustment will be shown on the next automated invoice created for the beneficiary.

9.11.3 Controls

Control	Display	Description
Input Button	Save	Saves adjustment information entered for the beneficiary.
Input Button	Cancel	Cancels the changes to adjustment information entered for the beneficiary.
Drop Down Box	Adjustment Reason	Reason of the beneficiary adjustment.
Drop Down Box	Check Date	Check date of the beneficiary adjustment.
Text Field	Premium Payment Period From	Premium payment period from of the beneficiary adjustment.
Text Field	Premium Payment Period To	Premium payment period to of the beneficiary adjustment.
Text Field	Adjustment Amount	Amount of the beneficiary adjustment.
Text Field	Check Number	Check number of the beneficiary adjustment.
Check Box	Generate Invoice	Generate invoice indicator for the adjustment.

9.11.4 Error Conditions

Beneficiary Adjustment page will validate user's input when an action button is initiated. If either premium payment period date from, premium payment period date to, adjustment amount, or adjustment reason is not entered then a validation message will be displayed informing user to input required fields. Furthermore, check number and check dates will be required for payment received adjustment reason.

9.12 Beneficiary Payment History

Beneficiary Payment History content page will allow users to view payment history information for a non-managed care beneficiary in the CAPMAN system.

Invoice Management | **Beneficiary Management** | Vendor Management | Reports

Search | Summary | Coverage | Adjustments | **Payment History**

Payment History

From: 09/2009 To: 09/2009

HIPP/BCCTP Beneficiary Payment History July 2008- June 2009											
Beneficiary CIN: 565303656				Case ID: 778899							
Last Name: Smith			First Name: Joe			MI: L					
Date of Birth: 10/20/1950			Program: HIPP								
Gender: Male											
Payment History											
Invoice Number	Invoice Status	Invoice Approval Date	Invoice Approved By	Premium Payment Amount	Program	Adjustments	Type of Coverage	Vendor Name	Vendor Code	Warrant Number	Date of Warrant
123456	820 Sent	12/15/2008	Stephanie	\$300	HIPP		Medical	Health Net	HNET12345	DB Calculation	12/26/2008
789101	820 Sent	1/15/2009	Stephanie	\$300	HIPP		Medical	Health Net	HNET12345		1/26/2009
89234	820 Sent	2/15/2009	Stephanie	\$300	HIPP		Dental	Health Net	HNET12345		2/26/2009
123456	820 Sent	3/15/2009	Stephanie	\$300	HIPP		Medical	Health Net	HNET12345		3/26/2009
789101	820 Sent	4/15/2009	Stephanie	\$300	HIPP		Dental	Blue Shield of CA	BLSH87329		4/26/2009
89234	CM S64	5/15/2009	Stephanie	\$500	HIPP		Medical	Blue Shield of CA	BLSH87329		5/26/2009
											Total \$2

9.12.1 Interface Rules

Beneficiary Payment History page will be accessible by users with appropriate roles and rights. Only the users who have beneficiary view rights will be able to execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.12.2 Components

Component	Input	Description
From	TB_INVOICE.Payment_Date	From date of the payment history report.
To	TB_INVOICE.Payment_Date	To date of the payment history report.

Component	Input	Description
Beneficiary Payment History Report – Beneficiary CIN	TB_BENEFICIARY.CIN	CIN of the beneficiary.
Beneficiary Payment History Report – Case Id	TB_BENEFICIARY_NONMANAGED_CARE.Case_Id	Case Id of the beneficiary.
Beneficiary Payment History Report – Last Name	TB_BENEFICIARY.Name_Last	Last name of the beneficiary.
Beneficiary Payment History Report – First Name	TB_BENEFICIARY.Name_First	First name of the beneficiary.
Beneficiary Payment History Report - MI	TB_BENEFICIARY.Name_Middle_Initial	Middle initial of the beneficiary.
Beneficiary Payment History Report - Date of Birth	TB_BENEFICIARY.Date_Of_Birth	Date of birth of the beneficiary.
Beneficiary Payment History Report - Program	TB_NONMANAGED_PROGRAM_TYPE.Name	Program of the beneficiary.
Beneficiary Payment History Report - Gender	TB_BENEFICIARY.Gender_Code	Gender of the beneficiary.
Beneficiary Payment History Report - Invoice Number	TB_INVOICE.Invoice_Number	Number of the invoice.
Beneficiary Payment History Report - Invoice Status	TB_STATUS_TYPE.Status_Name	Status of the invoice.
Beneficiary Payment History Report - Invoice Date	TB_INVOICE.Payment_Date	Date of the invoice.
Beneficiary Payment History Report – Invoice Approved By	TB_INVOICE_STATUS.Audit_User	Audit user of the invoice.
Beneficiary Payment History Report – Invoice Amount	TB_INVOICE.Invoice_Amount	Amount of the invoice.
Beneficiary Payment History Report - Program	TB_NONMANAGED_PROGRAM_TYPE.Name	Program of the invoice.
Beneficiary Payment History Report – Type of Coverage	TB_NONMANAGED_COVERAGE_TYPE.Coverage_Name	Type of coverage of the invoice.
Beneficiary Payment History Report – Vendor Name	TB_VENDOR_INFO.Vendor_Name	Vendor name of the invoice.
Beneficiary Payment History Report – Vendor Code	TB_VENDOR_INFO.Vendor_Code	Vendor code of the invoice.

Component	Input	Description
Beneficiary Payment History Report - Warrant Number	TB_WARRANT.Warrant_Number_Begin and TB_WARRANT.Warrant_Number_End	Warrant number of the invoice.
Beneficiary Payment History Report - Date of Warrant	TB_WARRANT.Warrant_Date	Date of warrant of the invoice.
Beneficiary Payment History Report - Warrant Amount	TB_INVOICE.Invoice_Amount	Paid amount of the invoice.

9.12.3 Controls

Control	Display	Description
Input Button	View	Displays payment history report according to From and To dates.
Input Button	Clear	Clears the From and To dates.
Input Button	Print	Prints the payment history report.
Input Button	Export	Exports the payment history report.
Drop Down Box	From	From date of the payment history report.
Drop Down Box	To	To date of the payment history report.
Report	HIPP/BCCTP Beneficiary Payment History	Displays beneficiary information in header: From and To dates, Beneficiary CIN, Case ID, Last Name, First Name, MI, Date of Birth, Program, and Gender Displays beneficiary payment history in detail: Invoice Number, Invoice Status, Invoice Date, Invoice Approved By, Premium Payment Amount, Program, Type of Coverage, Vendor Name, Vendor Code, Warrant Number, Date of Warrant, and Warrant Amount

9.12.4 Error Conditions

Beneficiary Payment History page will validate user's input when View button is clicked. If either of the From and To dates are not entered then a validation message will be displayed informing user to select required fields.

9.13 Contract Search

Contract Search content page will allow users to search for managed care contracts. Users will be required to search by managed care plan name, contract number, health care plan, term date from, term date to, county code, and contract type. Additionally, the page will allow users to initiate creation of a new contract.

The screenshot displays a web application interface for contract search. At the top, there are navigation tabs: Invoice Management, Beneficiary Management, Contract Management (selected), Reports, and Reference Tables. Below these are sub-tabs: Search (selected), Summary, HCP, Amendments/Change Orders, Disbursement Register, and Plan-Based Payments/Adjustments. The main search area contains several dropdown menus and text input fields: Managed Care Plan Name (set to 'select a Managed Care Plan'), Health Care Plan (set to '-- Select an HCP --'), County Code (set to '-- Select a County --'), Contract Type (set to '-- Select a Contract Type --'), Contract Number, Term Date From, and Term Date To. There are 'Search', 'Clear', and 'Add New Contract' buttons. On the right side, there are three vertical dropdown menus: '- Select a Managed Care Plan -' (listing Blue Shield, Blue Cross, Health Net), '- Select an HCP -' (listing 300-Alameda Alliance, 301-Contra Costa Health Plan, 303-Kern Family Health Care, 305-Inland Empire Health Plan, 340-Blue Cross Alameda, 345-Blue Cross Santa Clara, 360-Health Net Kern), and '- Select a County -' (listing 01-Alameda, 02-Alpine, 03-Amador, 04-Butte, 05-Calaveras, 06-Colusa, 07-Contra Costa). Below the search area is a table with the following data:

Contract Number	Managed Care Plan Name	HCPs	Term Date From	Term Date To	County Code	Contract Type
CON-227	Blue Shield	300 - Alameda Alli...	7/1/2009	6/30/2010	01-Alameda	Managed Care
CON-228	Blue Cross	301 - Contra Cost...	7/1/2009	6/30/2010	07-Contra Costa	Hyde
CON-229	Health Net	303 - Kern Family ...	7/1/2009	6/30/2010	15-Kern	Managed Care
CON-230	Health Net	305 - Inland Empi...	7/1/2009	6/30/2010	33-Riverside	Hyde
CON-231	Blue Shield	340 - Blue Cross ...	7/1/2009	6/30/2010	01-Alameda	Managed Care
CON-232	Blue Cross	345 - Blue Cross ...	7/1/2009	6/30/2010	43-Santa Clara	Hyde
CON-233	Health Net	360 - Health Net ...	7/1/2009	6/30/2010	15-Kern	Managed Care
CON-234	Blue Shield	300 - Alameda Alli...	7/1/2009	6/30/2010	01-Alameda	Managed Care
CON-235	Blue Shield	301 - Contra Cost...	7/1/2009	6/30/2010	07-Contra Costa	Hyde

9.13.1 Interface Rules

Contract Search page will be accessible by users with appropriate roles and rights. Only the users who have contract search rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.13.2 Fields to Database Mapping

Component	Input	Description
Managed Care Plan Name	TB_VENDOR_INFO.Vendor_Name	Name of the managed care plan.

Component	Input	Description
Contract Number	TB_CONTRACT.Contract_Number	Number of the contract.
Health Care Plan	TB_HEALTH_CARE_PLAN_TYPE.Name	Name of the health care plan.
Term Date From	TB_CONTRACT.Effective_Date_From	Contract term date from.
Term Date To	TB_CONTRACT.Effective_Date_To	Contract term date to.
County Code	TB_COUNTY_CODE_TYPE.County_Code and TB_COUNTY_CODE_TYPE.County_Name	Contract county code.
Contract Type	TB_CONTRACT_TYPE.Contract_Type_Name	Contract type.

9.13.3 Controls

Control	Display	Description
Input Button	Search	Finds contract results according to input criteria.
Input Button	Clear	Clears the input fields and the search queue.
Input Button	Add New Contract	Allows user to create a new contract.
Drop Down Box	Managed Care Plan Name	Allows user to select contract managed care plan name.
Text Field	Contract Number	Allows user to input contract number.
Drop Down Box	Health Care Plan	Allows user to select contract health care plan number and name.
Text Field	Term Date From	Allows user to input contract term date from.
Text Field	Term Date To	Allows user to input contract term date to.
Drop Down Box	County Code	Allows user to select contract county code.
Drop Down Box	Contract Type	Allows user to select contract type.
Data Grid View	N/A	Displays search results: Managed Care Plan Name, Contract Number, Health Care Plan, Term Date From, Term Date To, County Code, and Contract Type.

9.13.4 Error Conditions

Contract Search page will validate user's input when Search button is clicked. Additionally, term dates will be validated for proper format.

9.14 Contract Summary

Contract Summary content page will allow user to view and modify details of a managed care contract. User will be able to view current contract information, view historical contract information, and add new amendment or change order.

The screenshot shows a web application interface for 'Contract Management'. The main navigation bar includes 'Invoice Management', 'Beneficiary Management', 'Contract Management', 'Reports', and 'Reference Tables'. Below this, a secondary navigation bar has 'Search', 'Summary', 'HCP', 'Amendments/Change Orders', 'Disbursement Register', and 'Plan-Based Payments/Adjustments'. The 'Contract Information' section contains the following fields:

- Managed Care Plan: [Text Input]
- Federal Tax ID (EIN): [Text Input]
- Contract Type: [Dropdown Menu]
- Vendor Code: [Text Input]
- Total Encumbrance Amount: [Text Input]
- Primary Encumbrance Amount: [Text Input]
- Mailing Address: [Text Input]
- City/State/Zip: [Text Input] CA [Text Input]
- Contract Manager Phone Number: [Text Input]
- Contract Manager Name: [Text Input]
- Advance Payment Eligibility: [Text Input]
- Advance Payment From: [Text Input]
- Advance Payment To: [Text Input]
- Object: [Text Input]
- Contract Number: [Text Input]
- Model Type: [Dropdown Menu]
- Model Subtype: [Dropdown Menu]
- Term Date From: [Text Input]
- Term Date To: [Text Input]
- Healthy Families Encumbrance Amount: [Text Input]
- Correspondence Address: [Text Input]
- City/State/Zip: [Text Input] [Text Input] [Text Input]
- Other Contact Phone Number: [Text Input]
- Other Contact Name: [Text Input]
- Override 25% Recoupment Cutoff: [Checkbox]
- Recoupment Duration: [Text Input]
- Index: [Text Input]
- PCA: [Text Input]

Two dropdown menus are open on the right side:

- Select a Contract Type --**
 - Managed Care
 - Hyde
- Select a Model Subtype --**
 - COHS
 - Dental Managed Care
 - GMC Sacramento
 - GMC San Diego
 - GMC Dental
 - PHP Dental
 - PACE
 - SCAN
 - Commercial

At the bottom of the form, there are three buttons: 'Add HCP', 'Save', and 'Cancel'.

9.14.1 Interface Rules

Contract Summary page will be accessible by users with appropriate roles and rights. Only the users who have contract view and update rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.14.2 Fields to Database Mapping

Component	Input	Description
Managed Care Plan Name	TB_VENDOR_INFO.Vendor_Name	Managed care plan name of the contract.
Contract Number	TB_CONTRACT.Contract_Number	Number of the contract.
Federal Tax ID (EIN)	TB_VENDOR_INFO.EIN	EIN of the contract vendor.
Model Type	TB_MODEL_TYPE.Model_Name	Model type of the contract.
Model Subtype	TB_MODEL_TYPE.Model_Name	Model subtype of the contract.
Vendor Code	TB_VENDOR_INFO.Vendor_Code	Code of the contract vendor.
Contract Type	TB_CONTRACT_TYPE.Contract_Type_Name	Type of the contract.
Term Date From	TB_CONTRACT.Effective_Date_From	Term date from of the contract.
Term Date To	TB_CONTRACT.Effective_Date_To	Term date to of the contract.
Total Encumbrance Amount	TB_CONTRACT.Encumbrance_Amount	Total encumbrance amount of the contract.
Primary Encumbrance Amount	TB_CONTRACT_FUNDING.Amount	Primary encumbrance amount of the contract.
Healthy Family Encumbrance Amount	TB_CONTRACT_FUNDING.Amount	Healthy family encumbrance amount of the contract.
Mailing Address	TB_VENDOR_INFO.Address	Mailing address of the contract.
City/State/Zip	TB_VENDOR_INFO.City and TB_VENDOR_INFO.Zip and TB_VENDOR_INFO.Code	City/State/Zip of the contract.
Correspondence Address	TB_VENDOR_INFO.Other_Address	Correspondence address of the contract.
City/State/Zip	TB_VENDOR_INFO.Other_City and TB_VENDOR_INFO.Other_Zip and TB_VENDOR_INFO.Other_Code	Correspondence City/State/Zip of the contract.
Contract Manager Name	TB_VENDOR_INFO.Contract_Manager	Contract manager name of the contract.

Component	Input	Description
Contract Manager Phone Number	TB_VENDOR_INFO.Contract_Manager_Phone	Contract manager phone number of the contract.
Other Contact Name	TB_VENDOR_INFO.Other_Contract_Manager	Other contact name of the contract.
Other Contact Phone Number	TB_VENDOR_INFO.Other_Contract_Manager_Phone	Other contact phone number of the contract.
Advance Payment Eligibility	TB_CONTRACT.Advance_Payment	Advance payment eligibility of the contract.
Advance Payment From	TB_CONTRACT.Advance_Payment_From	Advance payment from of the contract.
Advance Payment To	TB_CONTRACT.Advance_Payment_To	Advance payment to of the contract.
Override 25% Recoupment Cutoff	TB_CONTRACT.Override_Recoupment_Cutoff	Override 25% recoupment cutoff of the contract.
Recoupment Duration	TB_CONTRACT.Recoupment_Duration	Recoupment duration for the contract.
Index	TB_CONTRACT.Index	Index of the contract.
Object	TB_CONTRACT.Object	Object of the contract.
PCA	TB_CONTRACT.PCA	PCA of the contract.
HCP	TB_HEALTH_CARE_PLAN_TYPE.Name	HCP of the contract.
County Code	TB_COUNTY_CODE_TYPE.County_Code and TB_COUNTY_CODE_TYPE.County_Name	County code of the HCP.
Waiver Name	TB_WAIVER_TYPE.Waiver_Name	Waiver name of the HCP.
Amendment/CO Number	TB_CONTRACT.Amendment_Num or TB_CONTRACT.Change_Order_Num	Amendment/Change order number of the amendment or change order.
Term Date From	TB_CONTRACT.Effective_Date_From	Term date from of the amendment or change order.
Term Date To	TB_CONTRACT.Effective_Date_To	Term date to of the amendment or change order.
Comments	TB_CONTRACT.Comment	Comments of the amendment or change order.

9.14.3 Controls

Build a table of the list of controls that are used in the header.

Control	Display	Description
Input Button	Add Amendment	Navigates user to the amendment page in the add mode.
Input Button	Add Change Order	Navigates user to the change order page in the add mode.
Input Button	View Disbursements	Navigates user to the disbursement register page.
Input Button	Add HCP	Navigates user to the HCP page in the add mode.
Input Button	Save	Saves information entered for the contract.
Input Button	Cancel	Cancels information entered for the contract.
Drop Down Box	Contract Type	Allows user to select type of the contract.
Drop Down Box	Model Type	Allows user to input model type for the contract.
Drop Down Box	Model Subtype	Allows user to input model subtype for the contract.
Text Field	Managed Care Plan Name	Allows user to input managed care plan name for the contract.
Text Field	Contract Number	Allows user to input contract number for the contract.
Text Field	Federal Tax ID (EIN)	Allows user to input federal tax id for the contract.
Text Field	Vendor Code	Allows user to input vendor code for the contract.
Text Field	Term Date From	Allows user to input term date from for the contract.
Text Field	Term Date To	Allows user to input term date to for the contract.
Text Field	Total Encumbrance Amount	Allows user to input total encumbrance amount for the contract.
Text Field	Primary Encumbrance Amount	Allows user to input primary encumbrance amount for the contract.
Text Field	Healthy Family Encumbrance Amount	Allows user to input Healthy Family encumbrance amount for the contract.
Text Field	Mailing Address	Allows user to input mailing address for the contract.
Text Field	City/State/Zip	Allows user to input city, state, and zip for the contract.
Text Field	Correspondence Address	Allows user to input correspondence address for the contract.

Control	Display	Description
Text Field	City/State/Zip	Allows user to input correspondence city, state, and zip for the contract.
Text Field	Contract Manager Name	Allows user to input contract manager name for the contract.
Text Field	Contract Manager Phone Number	Allows user to input contract manager phone number for the contract.
Text Field	Other Contact Name	Allows user to input other contact name for the contract.
Text Field	Other Contact Phone Number	Allows user to input other contact phone number for the contract.
Text Field	Advance Payment Eligibility	Allows user to input advance payment eligibility for the contract.
Text Field	Advance Payment From	Allows user to input advance payment from for the contract.
Text Field	Advance Payment To	Allows user to input advance payment to for the contract.
Text Field	Override 25% Recoupment Cutoff	Allows user to input override 25% recoupment cutoff for the contract.
Text Field	Recoupment Duration	Allows user to input recoupment duration for the contract.
Text Field	Index	Allows user to input index for the contract.
Text Field	Object	Allows user to input object for the contract.
Text Field	PCA	Allows user to input PCA for the contract.
Data Grid View	Health Care Plans	Displays HCP, county code, and waiver name for each HCP on the contract.
Data Grid View	Contract History	Displays amendment/change order number, term date from, term date to, and comments for each HCP on the contract.

9.14.4 Error Conditions

Contract Summary page will validate user's input when save is initiated. If either of the input fields are not entered then a validation message will be displayed informing user to input required fields. Furthermore, there needs to be at least one HCP selected for a new contract.

9.15 Contract Change

Contract Change content page will allow user to view and add amendments and change orders of a managed care contract. User will be able to view current and historical

amendment and change order information, and add a new amendment or change order to an existing contract version.

Invoice Management
Beneficiary Management
Contract Management
Reports
Reference Tables

Search
Summary
HCP
Amendments/Change Orders
Disbursement Register
Plan-Based Payments/Adjustments

Contract Details

Vendor Code: **VEN1111** Managed Care Plan Name: **Blue Shield** Contract Number: **CON-227** [Edit](#)

Amendment Details

Amendment/Change Order Number: Encumbrance Amount:

Effective Date From: Effective Date To:

Comments:

Health Care Plans

351 - Health Net - Fresno [Edit](#) [Delete](#)

352 - Health Net - Los Angeles [Edit](#) [Delete](#)

353 - Health Net - Tulare [Edit](#) [Delete](#)

360 - Health Net - Kern [Edit](#) [Delete](#)

361 - Health Net - Stanislaus [Edit](#) [Delete](#)

9.15.1 Interface Rules

Contract Change page will be accessible by users with appropriate roles and rights. Only the users who have contract view and update rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.15.2 Fields to Database Mapping

Component	Input	Description
Vendor Code	TB_VENDOR_INFO.Vendor_Code	Vendor code of the contract.
Managed Care Plan Name	TB_VENDOR_INFO.Vendor_Name	Managed care plan name of the contract.
Contract Number	TB_CONTRACT.Contract_Number	Number of the contract.

Component	Input	Description
Amendment/Change Order Number	TB_CONTRACT.Amendment_Number or TB_CONTRACT.Change_Order_Number	Number of the amendment or change order.
Encumbrance Amount	TB_CONTRACT.Encumbrance_Amount	Encumbrance amount of the amendment or change order.
Effective Date From	TB_CONTRACT.Effective_Date_From	'Effective date from' of the amendment or change order.
Effective Date To	TB_CONTRACT.Effective_Date_To	'Effective date to' of the amendment or change order.
Comments	TB_CONTRACT.Comment	Comments of the amendment or change order.
HCP Name	TB_HEALTH_CARE_PLAN_TYPE.Name	Name of the HCP.
County Code	TB_COUNTY_CODE_TYPE.County_Code	County code of the HCP.
Waiver Name	TB_WAIVER_TYPE.Waiver_Name	Waiver name of the HCP.

9.15.3 Controls

Control	Display	Description
Input Button	Add new HCP	Navigates user to contract HCP content page in add mode.
Input Button	Save	Saves changes to the amendment or change order.
Input Button	Cancel	Cancel changes to the amendment or change order.
Link Label	Edit Contract	Navigates user to contract summary content page in edit mode.
Link Label	Edit HCP	Navigates user to contract HCP content page in edit mode.
Link Label	Delete HCP	Deletes the HCP.
Text Field	Amendment/Change Order Number	Allows user to input the number for the amendment or change order.
Text Field	Encumbrance Amount	Allows user to input the encumbrance amount for the amendment or change order.
Text Field	Effective Date From	Allows user to input the 'effective date from' for the amendment or change order.
Text Field	Effective Date To	Allows user to input the 'effective date to' for the amendment or change order.
Data Grid View	Health Care Plans	Displays HCP, county code, and waiver name for each HCP on the contract version.

9.15.4 Error Conditions

Contract Change page will validate user's input when save action is initiated. If either of the input fields is not entered then a validation message will be displayed informing user to input required fields. Furthermore, at least one HCP needs to be added to the amendment or change order before user can save the changes.

9.16 Contract HCP

Contract HCP content page will allow user to view and modify details of a managed care. User will be able to view HCP information under a contract, modify an existing HCP in case of an amendment or change order, and add a new HCP.

The screenshot displays the 'Contract Management' section of a software interface. It includes a navigation bar with tabs for 'Invoice Management', 'Beneficiary Management', 'Contract Management', 'Reports', and 'Reference Tables'. Below this is a search and filter area with 'HCP' selected. The main content area is titled 'Health Care Plan (HCP) Details' and contains several sections:

- Health Care Plan (HCP) Details:** Includes dropdown menus for 'HCP' and 'County Code'.
- Aid Code Groups and Rates:** Contains dropdowns for 'Action', 'Payment Type', and 'Aid Code Group', along with input fields for 'Rate', 'Effective Date From', and 'Effective Date To'. Below this is a 'Select/Unselect Aid Codes' section with a grid of checkboxes for codes 30 through 59.
- Add Supplemental Eligibility:** Features a dropdown for 'Supplemental Eligibility' and input fields for 'Medi-Cal Only Rate', 'Medicare Part D Rate', 'Effective Date From', and 'Effective Date To'.

On the right side, a vertical list of HCP options is visible, including '351 - Health Net - Fresno', '352 - Health Net - Los Angeles', '353 - Health Net - Tulare', '360 - Health Net - Kern', and '361 - Health Net - Stanislaus'. Other options include '01-Alameda', '02-Alpine', '03-Amador', '04-Butte', '05-Calaveras', '06-Colusa', '07-Contr Costa', 'Medi-Cal Only', 'Medicare Part D', 'Healthy Families', 'Hyde', 'Hyde Healthy Families', 'Adult', 'Aged', 'BCCTP', 'Disabled', 'Family', 'Healthy Families', 'LTC', 'OBRA', 'None', 'AIDS', 'AGNEWS', 'Maternity', and 'Craig vs. Bonta'.

9.16.1 Interface Rules

Contract HCP page will be accessible by users with appropriate roles and rights. Only the users who have contract view and update rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.16.2 Fields to Database Mapping

Component	Input	Description
HCP	TB_HEALTH_CARE_PLAN_TYPE.Name	Name of the HCP.
County Code	TB_COUNTY_CODE_TYPE.County_Code	County code of the HCP.
Waiver Name	TB_WAIVER_TYPE.Waiver_Name	Waiver name of the HCP.
Waiver Number	TB_WAIVER_TYPE.Waiver_Number	Waiver number of the HCP.
Payment Type	TB_PAYMENT_TYPE.Payment_Type	Payment type of the HCP.
Aid Code Group	TB_AID_CODE_GROUP_TYPE.Aid_Code_Group_Name	Aid code group of the HCP.
Rate	TB_PLAN_CODE_ON_PAYMENT_TYPE.Rate	Rate of the aid code group in the HCP.
Effective Date From	TB_AID_CODE_GROUP.Rate_Effective_Date_From	'Effective date from' of the aid code group rate in the HCP.
Effective Date To	TB_AID_CODE_GROUP.Rate_Effective_Date_To	'Effective date to' of the aid code group rate in the HCP.
Aid Code	TB_AID_CODE_TYPE.Aid_Code	Aid code of the aid code group in the HCP.
Supplemental Eligibility Type	TB_SUPPLEMENTAL_AID_TYPE.	Supplemental eligibility type of the HCP.
Medi-Cal Only Rate	TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO.MediCal_Only_Rate	Medi-Cal only rate of the supplemental eligibility in the HCP.
Medicare Part D Rate	TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO.Medicare_Rate	Medicare Part D rate of the supplemental eligibility in the HCP.
Effective Date From	TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO.Effective_Date_From	'Effective date from' of the supplemental eligibility in the HCP.
Effective Date To	TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO.Effective_Date_To	'Effective date to' of the supplemental eligibility in the HCP.

9.16.3 Controls

Control	Display	Description
Input Button	Submit	Submits the change to the HCP.

Control	Display	Description
Input Button	Add	Adds the supplemental eligibility to the HCP.
Input Button	Save	Saves changes to the HCP.
Input Button	Cancel	Cancel changes to the HCP.
Drop Down Box	HCP	Allows user to select name of the HCP.
Drop Down Box	County Code	Allows user to select county code of the HCP.
Drop Down Box	Action	Allows user to select an action to change the HCP.
Drop Down Box	Payment Type	Allows user to select payment type of the HCP.
Drop Down Box	Aid Code Group	Allows user to select aid code group of the HCP.
Drop Down Box	Supplemental Eligibility Type	Allows user to select supplemental eligibility type of the HCP.
Text Field	Rate	Allows user to input the rate for the aid code group.
Text Field	Effective Date From	Allows user to input the 'effective date from' for the aid code group rate.
Text Field	Effective Date To	Allows user to input the 'effective date to' for the aid code group rate.
Text Field	Medi-Cal Only Rate	Allows user to input the Medi-Cal Only rate for the supplemental eligibility.
Text Field	Medicare Part D Rate	Allows user to input the Medicare Part D rate for the supplemental eligibility.
Text Field	Effective Date From	Allows user to input the 'effective date from' for the supplemental eligibility.
Text Field	Effective Date To	Allows user to input the 'effective date to' for the supplemental eligibility.
Checked List Box	Aid Code	Allows user to select aid codes for the aid code group.

9.16.4 Error Conditions

Contract HCP page will validate user's input when action buttons are initiated.

If either of the input fields is not entered when Submit or Add buttons are clicked, then a validation message will be displayed informing user to input required fields. Furthermore, at least one payment type needs to be added to the HCP before user can save the changes.

9.17 Contract Disbursement Register

Contract Disbursement Register content page allows user to view contract disbursement registers. Additionally, user can transfer funds between different funding types on the contract.

Date of Invoice/Encumbrance	Date of Approval	Payment Type	HCP Code	HCP Name	Month of Service	Invoice Amount	Encumbrance Amount	Pay Date (CM954)	Claim Schedule Number	Invoice Status	Warrant Date	Warrant Number	Contract Balance
4/1/2009	4/13/2009	New Contract	N/A	N/A	May-09		\$ 400,000.00	5/1/2009	12345	NA	5/18/2009	98745632	\$ 400,000.00
4/26/2009	4/27/2009	Medicare Part D	341	Blue Cross of CA - Fresno	May-09	\$ 145,922.00		5/5/2009	95789	Paid	5/15/2009	123456789	\$ 254,078.00
4/22/2009	4/30/2009	Medicare Part D	343	Blue Cross of CA - San Francisco	May-09	\$ 100,000.00		5/7/2009	478903	Paid	5/17/2009	64550891	\$ 154,078.00
4/29/2009	5/2/2009	Amendment 1	344	Blue Cross of CA - Contra Costa	May-09		\$ 300,000.00			NA			\$ 454,078.00
4/13/2009	4/26/2009	Medi-Cal Only	344	Blue Cross of CA - Contra Costa	May-09	\$ 6,612.00				Pending			\$ 447,466.00
4/26/2009	4/30/2009	Medicare Part D	340	Blue Cross of CA - Alameda	May-09	\$ 1,700.00				Pending			\$ 445,766.00
Totals						\$ 254,234.00	\$ 700,000.00						\$ 445,766.00

9.17.1 Interface Rules

Contract Disbursement Register page will be accessible by users with appropriate roles and rights. Only the users who have contract view and update rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.17.2 Fields to Database Mapping

Component	Input	Description
From Funding Type	TB_PAYMENT_TYPE.Payment_t_Type	Funding type to deduct money from.

Component	Input	Description
To Funding Type	TB_PAYMENT_TYPE.Payment_Type	Funding type to add money to.
Amount	TB_CONTRACT_FUNDING.Amount	Amount to be transferred between the funding types.
Disbursement Register Type	N/A	Disbursement register type to be viewed.
State Fiscal Year	TB_INVOICE.Fiscal_Year and TB_CONTRACT.Effective_Date_From	State fiscal year to be displayed on the disbursement register.

9.17.3 Controls

Control	Display	Description
Input Button	Transfer	Transfers the amount from the 'From Funding Type' to the 'To Funding Type'.
Input Button	View	Displays a disbursement register based on the selection criteria.
Input Button	Print	Prints the disbursement register.
Input Button	Export	Exports the disbursement register.
Drop Down Box	From Funding Type	Allows user to select 'from funding type' of the contract.
Drop Down Box	To Funding Type	Allows user to select 'to funding type' of the contract.
Drop Down Box	Disbursement Register Type	Allows user to select type of the disbursement register.
Drop Down Box	State Fiscal Year	Allows user to select state fiscal year of the disbursement register.
Text Field	Amount	Allows user to input the amount to be transferred from the 'From Funding Type' to the 'To Funding Type'.
Report	Disbursement Register	Displays the Contract, Healthy Families, and the REG disbursement registers.

9.17.4 Error Conditions

Contract Disbursement Register page will validate user's input when transfer action is initiated.

If either of the transfer input fields is not entered then a validation message will be displayed informing user to input required fields. Furthermore, disbursement register selection values will be validated when view action is initiated.

9.18 Contract Plan-Based Payments

Contract Plan-Based Payments content page will allow user to add contract plan-based payments. Additionally, a user will be able to view current GMC Dental Withhold/Release disbursement register when GMD Dental 7% Withhold Release adjustment type is selected.

Invoice Management | Beneficiary Management | Contract Management | Reports | Reference Tables

Search | Summary | HCP | Amendments/Change Orders | Disbursement Register | Plan-Based Payments/Adjustments

Plan-Based Payments/Adjustments

Plan-Based Payment/Adjustment Type: HCP:

Effective Date From: Effective Date To:

Amount(\$): Reason:

Payment Type: Payment Percentage(%):

Payment Percentage and Corresponding Reason: Service Date:

State Fiscal Year:

GMC Dental Withhold/Release Register
HCP: 407 Safeguard Dental, Inc.

Contract Number:		Vendor Number:		Index:		FY:		Amendment#:					
Term Date From:		Term Date To:		Obj:		PCA:		Change Order #:					
Date of Invoice	Date of Approval	Month of Service	Pay Date (CMS64)	Claim Schedule Number	Invoice Type	Invoice Status	Warrant Date	Warrant Number	% Released	Reason for Release	Amount Withheld	Amount Released	GMC Balance
4/26/2009	4/27/2009	May-09	5/7/2009	564987	Primary Medical Only	Paid	5/17/2009	12345			\$100.00		\$100.00
5/1/2009	N/A	May-09	5/9/2009	N/A	GMC Dental Release	Pending	N/A	N/A				\$50.00	\$50.00
Total											\$100.00	\$50.00	\$50.00

9.18.1 Interface Rules

Contract Plan-Based Payments page will be accessible by users with appropriate roles and rights. Only the users who have contract view and update rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.18.2 Fields to Database Mapping

Component	Input	Description
Plan-Based Payment/Adjustment Type	TB_ADJUSTMENT_TYP E.Name	Adjustment type to be added to the HCP.

Component	Input	Description
HCP	TB_HEALTH_CARE_PLA N_TYPE.Name	Name of the HCP.
Effective Date From	TB_ADJUSTMENT.Effecti ve_Date_From	'Effective date from' of the plan- based payment/adjustment.
Effective Date To	TB_ADJUSTMENT.Effecti ve_Date_To	'Effective date to' of the plan- based payment/adjustment.
Amount	TB_ADJUSTMENT.Amoun t	Amount of the plan-based payment/adjustment.
Reason	TB_ADJUSTMENT.Reaso n	Reason of the plan-based payment/adjustment.
Payment Percentage	TB_ADJUSTMENT_TYP E.Withhold_Percentage	Payment percentage of the GMC dental plan-based payment/adjustment.
Payment Type	TB_PAYMENT_TYPE.Pa yment_Type	Payment type of the initial advance plan-based payment/adjustment.
Check Number	TB_ADJUSTMENT.Check _Number	Check number of the payment received for the plan.
Check Date	TB_ADJUSTMENT.Check _Date	Check date of the payment received for the plan.
Payment Percentage and Corresponding Reason	TB_ADJUSTMENT.Perce ntage_Reason	Payment percentage and corresponding reason of the payment received for the plan.
Service Date	TB_INVOICE.Service_Dat e	Date of service of the invoice.

9.18.3 Controls

Control	Display	Description
Input Button	Save	Saves the plan-based payment/adjustment.
Input Button	Cancel	Cancels the plan-based payment/adjustment.
Input Button	Print	Prints the GMC Dental Withhold Release register.
Input Button	Export	Exports the GMC Dental Withhold Release register.
Drop Down Box	Plan-Based Payment/Adjustment Type	Allows user to select type of the plan-based payment/adjustment.
Drop Down Box	HCP	Allows user to select name of the HCP which the plan-based payment/adjustment will be applied to.

Control	Display	Description
Drop Down Box	Payment Type	Allows user to select payment type which the plan-based payment/adjustment will be applied to.
Text Field	Effective Date From	Allows user to input the 'effective date from' for the plan-based payment/adjustment.
Text Field	Effective Date To	Allows user to input the 'effective date to' for the plan-based payment/adjustment.
Text Field	Amount	Allows user to input the amount for the plan-based payment/adjustment.
Text Field	Reason	Allows user to input the reason for the plan-based payment/adjustment.
Text Field	Payment Percentage	Allows user to input the payment percentage for the plan-based payment/adjustment.
Text Field	Check Number	Allows user to input the check number for the plan-based payment/adjustment.
Text Field	Check Date	Allows user to input the check date for the plan-based payment/adjustment.
Text Field	Comments	Allows user to input the comments for the plan-based payment/adjustment.
Report	GMC Dental Withhold Register	Displays the GMC Dental Withhold Register.

9.18.4 Error Conditions

Contract Plan-Based Payments page will validate user's input when save action is initiated.

If either of the input fields is not entered then a validation message will be displayed informing user to input required fields.

9.19 Vendor Search

Vendor Search content page will allow users to search for non-managed care vendors. Users will be required to search by a vendor by vendor code, vendor name, or vendor status.

Invoice Management | Beneficiary Management | Vendor Management | Reports

Search | Summary | Payment History

Vendor Code: Vendor Name: Vendor Status:

	Vendor Code	Vendor Name	Contact Name	Vendor Type	Vendor Status
▶	VEN111	Vendor Name 1	Contact Name1	Employer	Active
	VEN222	Vendor Name2	Contact Name2	Insurance Company	Active
	VEN333	Vendor Name3	Contact Name3	Insurance Carrier	Active
	VEN444	Vendor Name4	Contact Name4	Employer	Active
	VEN555	Vendor Name5	Contact Name5	Insurance Company	Active
	VEN666	Vendor Name6	Contact Name6	Insurance Carrier	Active
	VEN777	Vendor Name7	Contact Name7	Employer	Active
	VEN888	Vendor Name8	Contact Name8	Employer	Active
	VEN999	Vendor Name9	Contact Name9	Insurance Company	Active
	VEN000	Vendor Name10	Contact Name10	Insurance Carrier	Active
*					

9.19.1 Interface Rules

Vendor Search page will be accessible by users with appropriate roles and rights. Only the users who have vendor search rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.19.2 Fields to Database Mapping

Component	Input	Description
Vendor Code	TB_VENDOR_INFO.Vendor_Code	Code of the vendor.
Vendor Name	TB_VENDOR_INFO.Vendor_Name	Name of the vendor.
Vendor Status	TB_VENDOR_INFO.Vendor_Status	Status of the vendor.
Contact Name	TB_VENDOR_INFO.Contact_Manager	Contact name of the vendor

Component	Input	Description
Vendor Type	TB_VENDOR_INFO.Vendor_Type	Type of the vendor.

9.19.3 Controls

Control	Display	Description
Input Button	Search	Finds vendor results according to input criteria.
Input Button	Clear	Clears the input fields and the search queue.
Input Button	Add Vendor	Allows user to add a new vendor.
Text Field	Vendor Code	Allows user to input vendor's code.
Text Field	Vendor Name	Allows user to input vendor's name.
Drop Down Box	Vendor Status	Allows user to select vendor's status.
Data Grid View	N/A	Displays search results: Vendor Code, Vendor Name, Contact Name, Vendor Type, and Vendor Status.

9.19.4 Error Conditions

Vendor Search page will validate user's input when search action is initiated. If either vendor code or vendor name or vendor status is not entered then a validation message will be displayed informing user to input at least one combination of fields.

9.20 Vendor Summary

Vendor Summary content page will allow users to view and modify details of a non-managed care vendor. Users may view and update vendor information and beneficiary representative detail section.

Invoice Management | Beneficiary Management | **Vendor Management** | Reports

Search | Summary | Payment History

Vendor Information

Vendor Code:

Vendor Name:

Vendor Type:

Type of Coverage:

Vendor Status:

Contact Name:

Mailing Address:

Federal Tax ID (EIN):

City/State/Zip: CA

Beneficiary Representative Details

First Name:

Last Name:

Organization Name:

Beneficiary
Beneficiary Representative
Employer
Insurance Carrier
Insurance Company

Dental
Medical
Vision

Active
Inactive

9.20.1 Interface Rules

Vendor Summary page will be accessible by users with appropriate roles and rights. Only the users who have vendor view and update rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.20.2 Fields to Database Mapping

Component	Input	Description
Vendor Code	TB_VENDOR_INFO.Vendor_Code	Code of the vendor.
Vendor Name	TB_VENDOR_INFO.Vendor_Name	Name of the vendor.
Vendor Type	TB_VENDOR_INFO.Vendor_Type	Type of the vendor.
Type of Coverage	TB_NONMANAGED_COVERAGE_TYPE.Coverage_Name	Type of coverage of the vendor.

Component	Input	Description
Mailing Address	TB_VENDOR_INFO.Address	Mailing address of the vendor.
City/State/Zip	TB_VENDOR_INFO.City and TB_VENDOR_INFO.Zip and TB_VENDOR_INFO.State	City, State and Zip of the vendor.
Federal Tax ID (EIN)	TB_VENDOR_INFO.EIN	Federal tax ID of the vendor.
Contact Name	TB_VENDOR_INFO.Contract_Manager	Contact Name of the vendor.
Vendor Status	TB_VENDOR_INFO.Vendor_Status	Status of the vendor.
First Name	TB_VENDOR_INFO.First_Name	First name of the beneficiary representative.
Last Name	TB_VENDOR_INFO.Last_Name	Last name of the beneficiary representative.
Organization Name	TB_VENDOR_INFO.Organization_Name	Organization name of the beneficiary representative.

9.20.3 Controls

Control	Display	Description
Input Button	Save	Saves information entered for the vendor.
Input Button	Cancel	Cancels the information entered for the vendor.
Drop Down Box	Vendor Type	Allows user to select a type for the vendor.
Drop Down Box	Type of Coverage	Allows user to select type of coverage for the vendor.
Text Field	Federal Tax ID (EIN)	Allows user to input federal tax ID for the vendor.
Text Field	Vendor Code	Allows user to input code for the vendor.
Text Field	Vendor Name	Allows user to input name for the vendor.
Text Field	Mailing Address	Allows user to input mailing address for the vendor.
Text Field	City/State/Zip	Allows user to input city, state and zip for the vendor.
Text Field	Contact Name	Allows user to input contact name for the vendor.
Text Field	Vendor Status	Allows user to input status for the vendor.

Control	Display	Description
Text Field	First Name	Allows user to input first name for the beneficiary representative.
Text Field	Last Name	Allows user to input last name for the beneficiary representative.
Text Field	Organization Name	Allows user to input organization name for the beneficiary representative.

9.20.4 Error Conditions

Vendor Summary page will validate user's input when save action is initiated. If either of the vendor fields are not entered then a validation message will be displayed informing user to input required fields.

9.21 Vendor Payment History

Vendor Payment History content page will allow users to view payment history information for a non-managed care vendor in the CAPMAN system.

Invoice Management | Beneficiary Management | Vendor Management | Reports

Search | Summary | **Payment History**

Payment History

From: 08/2009 To: 08/2009

HIPP/BCCTP/GHPP Vendor Payment History May 2009											
Vendor Name: Health Net				Vendor Code: HNET12345							
Contact Name: Joe Smith				Vendor Address: 123 Main Street, Sacramento, CA 95816							
Payment History											
Invoice Number	Invoice Status	Invoice Date	Invoice Approved By	Premium Payment Amount	Type of Coverage	Program	Case ID	Vendor Name	Warrant Number	Warrant Date	Warrant Amount
567899	820 Sent	5/25/2009	Stephanie	\$300	Dental	HIPP	12355	Health Net	555555	5/26/2009	\$
445566	820 Sent	5/25/2009	Stephanie	\$300	Medical	BCCTP	63632	Health Net	77777	5/26/2009	\$
667788	820 Sent	5/25/2009	Stephanie	\$300	Dental	HIPP	322367	Health Net	888888	5/26/2009	\$
Total											\$9

9.21.1 Interface Rules

Vendor Payment History page will be accessible by users with appropriate roles and rights. Only the users who have vendor view rights will be able to execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.21.2 Fields to Database Mapping

Component	Input	Description
From	TB_INVOICE.Payment_Date	From date of the payment history report.
To	TB_INVOICE.Payment_Date	To date of the payment history report.
Vendor Payment History Report – Vendor Name	TB_VENDOR_INFO.Vendor_Name	Name of the vendor.
Vendor Payment History Report – Vendor Code	TB_VENDOR_INFO.Vendor_Code	Code of the vendor.
Vendor Payment History Report – Contact Name	TB_VENDOR_INFO.Other_Name	Contact name of the vendor.
Vendor Payment History Report – Vendor Address	TB_VENDOR_INFO.Address and TB_VENDOR_INFO.City and TB_VENDOR_INFO.Zip and TB_VENDOR_INFO.State	Address of the vendor.
Vendor Payment History Report – Invoice Number	TB_INVOICE.Invoice_Number	Number of the invoice.
Vendor Payment History Report – Invoice Status	TB_STATUS_TYPE.Status_Name	Status of the invoice.
Vendor Payment History Report – Invoice Date	TB_INVOICE.Payment_Date	Date of the invoice.
Vendor Payment History Report – Invoice Approved By	TB_INVOICE_STATUS.Audit_User	User who approved the invoice.
Vendor Payment History Report – Premium Payment Amount		Premium payment amount of the invoice.
Vendor Payment History Report – Type of Coverage	TB_NONMANAGED_COVERAGE_TYPE.Coverage_Name	Type of coverage of the invoice.
Vendor Payment History Report – Program	TB_NONMANAGED_PROGRAM_TYPE.Name	Program of the invoice.

Component	Input	Description
Vendor Payment History Report – Case ID	TB_BENEFICIARY_NONMANAGED_CARE.Case_Id	Case ID of the invoice.
Vendor Payment History Report – Vendor Name	TB_VENDOR_INFO.Vendor_Name	Vendor name of the invoice.
Vendor Payment History Report – Warrant Number	TB_WARRANT.Warrant_Number_Begin and TB_WARRANT.Warrant_Number_End	Warrant number of the invoice.
Vendor Payment History Report – Warrant Date	TB_WARRANT.Warrant_Date	Warrant date of the invoice.
Vendor Payment History Report – Warrant Amount	TB_INVOICE.Invoice_Amount	Warrant amount of the invoice.

9.21.3 Controls

Control	Display	Description
Input Button	View	Displays payment history report according to From and To dates.
Input Button	Clear	Clears the From and To dates.
Input Button	Print	Prints the payment history report.
Input Button	Export	Exports the payment history report.
Drop Down Box	From	From date of the payment history report.
Drop Down Box	To	To date of the payment history report.
Report	HIPP/BCCTP Vendor Payment History	Displays vendor information in header: From and To dates, Vendor Name, Vendor Code, Vendor Type, Vendor Address, and Contact Name Displays vendor payment history in detail: Invoice Number, Invoice Status, Invoice Date, Invoice Approved By, Premium Payment Amount, Program, Type of Coverage, Program, CIN, Payee Name, Warrant Number, Date of Warrant, and Warrant Amount

9.21.4 Error Conditions

Vendor Payment History page will validate user's input when view action is initiated. If either of the From and To dates are not entered then a validation message will be displayed informing user to select required fields.

9.22 Report Search

Report Search content page will allow users to search for managed care reports. Users will be required to search by report type, month from, year from, month to, and month to. For Plan Payment History report user will be required to select month of payment or month of service values.

Once the report is generated based on the input criteria, page will allow users to export the report as an Excel or PDF file.

The screenshot shows a web application interface for report search. At the top, there are navigation tabs: Invoice Management, Beneficiary Management, Contract Management, Reports, and Reference Tables. Below these is a 'Generate' button. The main search area includes dropdown menus for 'Report Type', 'Month From', 'Month To', 'Year From', and 'Year To'. There are also radio buttons for 'Month of Payment' and 'Month of Service'. 'View' and 'Clear' buttons are present. On the right side, there is a vertical list of report types and months, with 'Select a Report Type' and 'Select Month From' highlighted. Below the search area is a table titled 'Contract Encumbrance and Expenditure Status Report' for 'Month of Service: June 2009'. The table has columns for Health Plan Model, HCP Name, HCP Code, Contract Number, Term Date, Contract Amount, Contract Amount Expended, Unexpended Contract Amount, Prior Month Capitation, Current Month Capitation, % Change Current Month, Remain Expended Month, Months Remaining Per FY, and Pct Full Sh. The table contains three rows of data for different health plans: Alameda Alliance for Health, Contra Costa Health Plan, and Kern Family Health Care.

Health Plan Model	HCP Name	HCP Code	Contract Number	Term Date	Contract Amount	Contract Amount Expended	Unexpended Contract Amount	Prior Month Capitation	Current Month Capitation	% Change Current Month	Remain Expended Month	Months Remaining Per FY	Pct Full Sh
Two-Plan	Alameda Alliance for Health	300	01-11111 A01	12/31/2009	\$100,000	\$50,000	\$50,000 Calculation: Contract Amount - Contract Amount Expended	\$25,000	\$25,500	Calculation: (Current Month CAP-Prior Month CAP) divided by Prior Month CAP 37%	Calculation: Unexpended Contract Amount/Current Month CAP	Calculation: End of Fiscal year - Current Month (# of months from Curr month until end of FY)	
	Contra Costa Health Plan	301	01-11112 A01	12/31/2009	\$120,000	\$50,000	\$70,000 Calculation: Contract Amount - Contract Amount Expended	\$25,000	\$25,500	Calculation: (Current Month CAP-Prior Month CAP) divided by Prior Month CAP 37%	Unexpended Contract Amount/Current Month CAP	Calculation: End of Fiscal year - Current Month (# of months from Curr month until end of FY)	if Ren Month Rem in if Ren Month Date Poss Short #M
	Kern Family Health Care	303	01-11113 A01	12/31/2009	\$150,000	\$50,000	\$100,000 Calculation: Contract Amount - Contract Amount Expended	\$25,000	\$25,500	Calculation: (Current Month CAP-Prior Month CAP) divided by Prior Month CAP 37%	Unexpended Contract Amount/Current Month CAP	Calculation: End of Fiscal year - Current Month (# of months from Curr month until end of FY)	

9.22.1 Interface Rules

Report Search page will be accessible by users with appropriate roles and rights. Only the users who have report search and view rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.22.2 Fields to Database Mapping

Component	Input	Description
Report Type	N/A	Type of the report.

Component	Input	Description
Month From	TB_MONTHLY_BENE_AID_CODE.Capitation_Month or TB_INVOICE.Payment_Date	Depending on the report, the date will be matched either against Capitation Dates or Payment Dates.
Year From	TB_MONTHLY_BENE_AID_CODE.Capitation_Month or TB_INVOICE.Payment_Date	Depending on the report, the date will be matched either against Capitation Dates or Payment Dates.
Month To	TB_MONTHLY_BENE_AID_CODE.Capitation_Month or TB_INVOICE.Payment_Date	Depending on the report, the date will be matched either against Capitation Dates or Payment Dates.
Year To	TB_MONTHLY_BENE_AID_CODE.Capitation_Month or TB_INVOICE.Payment_Date	Depending on the report, the date will be matched either against Capitation Dates or Payment Dates.
Month of Payment	TB_INVOICE.Payment_Date	Depending on the selection for plan payment history report, the date will be matched either against Capitation Dates or Payment Dates. This selection only appears for the Plan Payment History report type.
Month of Service	TB_MONTHLY_BENE_AID_CODE.Capitation_Month	Depending on the selection for plan payment history report, the date will be matched either against Capitation Dates or Payment Dates. This selection only appears for the Plan Payment History report type.

9.22.3 Controls

Control	Display	Description
Input Button	View	Generates report according to input criteria.
Input Button	Clear	Clears the input fields.
Input Button	Print	Allows user to print the report.
Input Button	Export	Allows user to export the report to Excel or PDF.
Drop Down Box	Report Type	Allows user to select report type.
Drop Down Box	Month From	Allows user to select month from.

Control	Display	Description
Drop Down Box	Year From	Allows user to select year from.
Drop Down Box	Month To	Allows user to select month to.
Drop Down Box	Year To	Allows user to select year to.
Radio Button	Month of Payment	Allows user to select month of payment.
Radio Button	Month of Service	Allows user to select month of service.

9.22.4 Error Conditions

Report Search page will validate user's input when a view action is initiated. If either of report type, month from, month to, year from, year to are not selected then a validation message will be displayed informing user to select the missing criteria. Additionally, month of payment and month of service values will be validated if plan payment history is selected.

9.23 Reference Table Search

Reference Table Search content page will allow users to search for managed care reference tables in the CAPMAN system. Users will be required to search by reference table name.

Once the reference table is displayed based on the input criteria, the page will allow users to export the reference table as an Excel or PDF file.

Invoice Management | Beneficiary Management | Contract Management | Reports | Reference Tables

View

Reference Table Name: -- Select a Reference Table --

View Clear

Print Export

Waiver Numbers and Split Percentages Per HCP									
Waiver Name	Waiver Number	Date of Payment FY	Effective From Date	Effective To Date	Model Type	Health Care Plan Name	HCP Code	County Name	County Code
Health Plan of San Mateo Waiver	CA.08.R08.07	09-10	07/01/09	06/30/10	COHS	San Mateo Health Commission dba: Health Plan of San Mateo	503	San Mateo	41
Santa Barbara San Luis Obispo Regional Health Authority Waiver	CA.11.R09.07	09-10	07/01/09	06/30/10	COHS	Santa Barbara San Luis Obispo Regional Health Authority	501	San Luis Obispo	40
Santa Barbara San Luis Obispo Regional Health Authority Waiver	CA.11.R09.07	09-10	07/01/09	06/30/10	COHS	Santa Barbara San Luis Obispo Regional Health Authority	502	Santa Barbara	42
Health Insuring Organizations of California Waiver	CA.26.R03.07	09-10	07/01/09	06/30/10	COHS	Orange County Organized Health Systems dba: CalOptima	506	Orange	30
Health Insuring Organizations of California Waiver	CA.26.R03.07	09-10	07/01/09	06/30/10	COHS	Santa Cruz-Monterey Managed Medical Care Commission, dba: Central Coast Alliance for Health	505	Santa Cruz	44
Health Insuring Organizations of California Waiver	CA.26.R03.07	09-10	07/01/09	06/30/10	COHS	Santa Cruz-Monterey Managed Medical Care Commission, dba: Central Coast Alliance for Health	505	Monterey	27

9.23.1 Interface Rules

Reference Table Search page will be accessible by users with appropriate roles and rights. Only the users who have reference table search and view rights will be able to view and execute the actions on the page. The page is ADA compliant and conforms to the ADA standards.

9.23.2 Fields to Database Mapping

Component	Input	Description
Reference Table Name	N/A	Reference Table name.

9.23.3 Controls

Control	Display	Description
Input Button	View	Displays reference table according to input criteria.

Control	Display	Description
Input Button	Clear	Clears the input fields.
Input Button	Print	Allows user to print the reference table.
Input Button	Export	Allows user to export the reference table to Excel or PDF.
Drop Down Box	Reference Table Name	Allows user to select reference table name.
Data Grid View	N/A	Search results will vary based on the reference table name selection.

9.23.4 Error Conditions

Reference Table Search page will validate user's input the view action is initiated. If reference table name is not selected then a validation message will be displayed informing user to select the missing criteria.

10 Network Requirements

The physical architecture for the 820 Phase 2 project describes the platform, server and hardware configuration of the 820 Phase 2 project. Topics in this section include:

- Solution Platforms
- Environments
 - Network configuration
 - Communication protocols
 - Security and firewall requirements
 - Server configurations
 - Hardware requirements
- Load balancing & server redundancy

10.1 Solution Platforms

This section aims to describe the software tools and server platforms used to implement the 820 Phase 2 project. The solution platform is the basis for the operation of the completed 820 Phase 2 system. All operating systems, server products and user applications necessary to design, develop, implement and support the day to day operations of the system are to be described. Effort has been invested to ensure a consistent Microsoft tool platform is used to implement the 820 Phase 2 system project.

Four separate platform contexts are used to describe the software used to implement the 820 Phase 2 project:

- Server Platform
- Developer Platform
- Analyst Platform
- User Platform

10.1.1 Server Platform

As the core of the solution, the server platform represents to operating systems, databases and application platforms that host and operate the 820 Phase 2 system. Instances of these servers and applications will be implemented in all project environments. All systems use the 64-bit versions of the operating system and server applications where available.

The system components will be implemented using the following software application stack:

- Microsoft Windows Server 2003 R2 (Service Pack 2) x64
 - .NET 2.0 (SP2), .NET 3.0 (SP2), .NET 3.5 (SP1)
 - IIS 6.0
- Microsoft SQL Server 2008 Enterprise x64 (SP1)
 - SQL Server Reporting Services
- Microsoft BizTalk Server 2009 Enterprise x64
 - Business Rules Engine
- Edifecs XEngine version 6.6

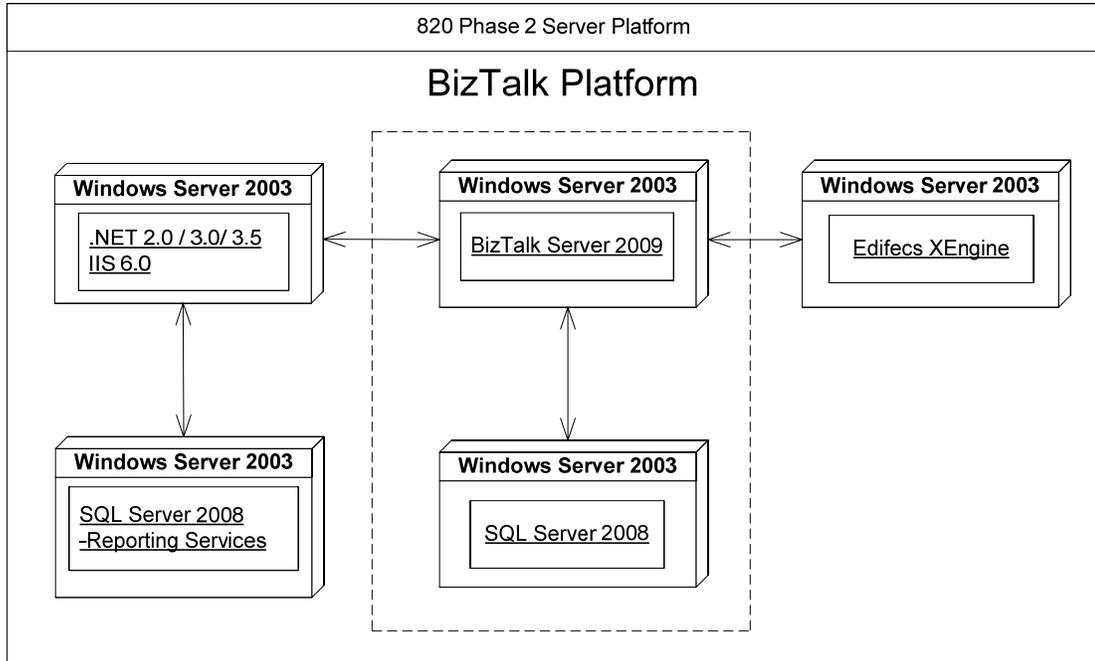


Figure 10-1: BizTalk Platform

Operating System

Each server in the system implementation uses Windows Server 2003 R2 Enterprise Edition as the core operating system. The 64-bit version of the operating system is required to provide the server applications with access to a greater amount of RAM. The enterprise edition of Windows Server 2003 R2 is required to license the installation of the operating system on multi-processor systems. The server configurations incorporate the ITSD standards and guidelines for Windows 2003 based servers. In addition to the base operating system, each server configured to support the 820 Phase 2 project also includes additional services or packages available with Windows Server 2003. Some of the additional services and packages include: .NET 2.0, 3.0, 3.5 and IIS 6.0.

Windows Server Clustering is used on many servers in the production environment to support redundant or load balanced server configurations.

Database Server

SQL Server 2008 x64 Edition provides the data foundation layer for both BizTalk 2009 and all other data model implementations. The size of the beneficiary history tables requires the use of SQL Server 2008 Enterprise Edition in the production environments. System reports produced through SQL Server 2008 Reporting Services (SSRS) rely on the information in the 820 Phase 2 system database to generate reports for the system consumers. SSRS will be used to manage report definitions, execute reports, render reports and assist with distribution.

User Interface

User interfaces into the system will be implemented through ASP.NET web sites hosted on IIS. All user interfaces follow both the ITSD web-application architecture guidelines as well as the industry accepted standards for web-based application, and will be accessible through Internet Explorer 6.0 or greater.

The User Interface will also be designed and developed to adhere to ADA accessibility guidelines.

BizTalk Server

BizTalk Server 2009 is the Microsoft server platform that provides the core services and tools used to implement the 820 Phase 2 system. BizTalk provides the system interfaces to external systems, implements system orchestrations, explicitly defines business rules and integrates all external platforms used by the system through being a flow manager. System processes are implemented as orchestrations on the BizTalk server, coordinating a series of service implementations to execute the business functionality contained within each process.

BizTalk Server 2009 Enterprise Edition is required for the production environment, addressing the licensing restrictions of operating BizTalk on a multi-CPU system as well as providing the required redundant and load balance configuration capabilities.

XEngine Server

A 3rd-party HIPAA/EDI validation engine, Edifecs XEngine will be used to compliment the orchestration framework provided by the BizTalk Server. XEngine is a complete HIPAA/EDI validation and translation product. XEngine will be used to perform X12 implementation guide based validations of all EDI transactions in accordance with the validation rules outlined the DHCS 820 Companion Guide. The engine is capable of validating transactions up to WEDI-SNIP level 7, and allows for any number of EDI schemas to be validated and translated by the system. XEngine will be implemented as an integration component on the BizTalk platform, providing validation and translation services for outbound 820 EDI Transactions.

10.1.2 Developer Platform

The developer platform is the set of operating systems and products necessary to design, develop, and maintain the 820 Phase 2 solution. A standard suite of Microsoft Office tools, such as Microsoft Office, Visio and Project, are assumed to be available to all developers.

Developer Tools

In addition to the Office suite, the developers use a suite consisting of the following Microsoft development products:

- Visual Studio 2008 (SP1)
- Team Foundation Server Explorer (SP1)
- BizTalk Server 2009
- SQL Management Studio 2008 (SP1)

Visual Studio is an industry standard IDE for producing software to run on Microsoft's application platforms. Team Foundation Server Explorer is an extension to Visual Studio to integrate source

code control and SDLC management into the IDE. BizTalk Server 2009 is a secondary application necessary to support the development BizTalk Server components.

Non-Microsoft development tools to be used include:

- Edifecs SpecBuilder

SpecBuilder is a desktop product used in conjunction with the XEngine server to develop EDI specifications and implementation guides. Self-documenting and user friendly, the interface allows analysts and developers to implement as many versions of EDI implementation guides as necessary.

Developer Toolkit Additions

The following tools are utilized by 820 Phase 2 developers to support the development process and provide development automation:

- Team Foundation Server Power Tools
- MSBuild
- MS Visual Studio Test Edition

MS Test Edition and Test Edition designer are used by development staff to implement and automate execution of unit tests to validate code implementations. MS Test Edition provides the execution framework for ensuring all unit test cases are executed.

Developer Desktop Configuration

Each developer machine will use Microsoft Windows XP as the operating system. In order to promote a more efficient use of resources and provide a more agile development environment, VMWare Server or Player will be used to host virtualized instances of Windows Server 2003 R2 on top of the base operating system. Each virtual host will contain:

- IIS 6.0
- BizTalk Server 2009
- SQL Server 2008 (SP1)
- SQL Client Tools
- Visual Studio 2008 (SP1)
- Team Foundation Server Explorer (SP1)
- Microsoft Visio 2003
- XMLSpy 2008

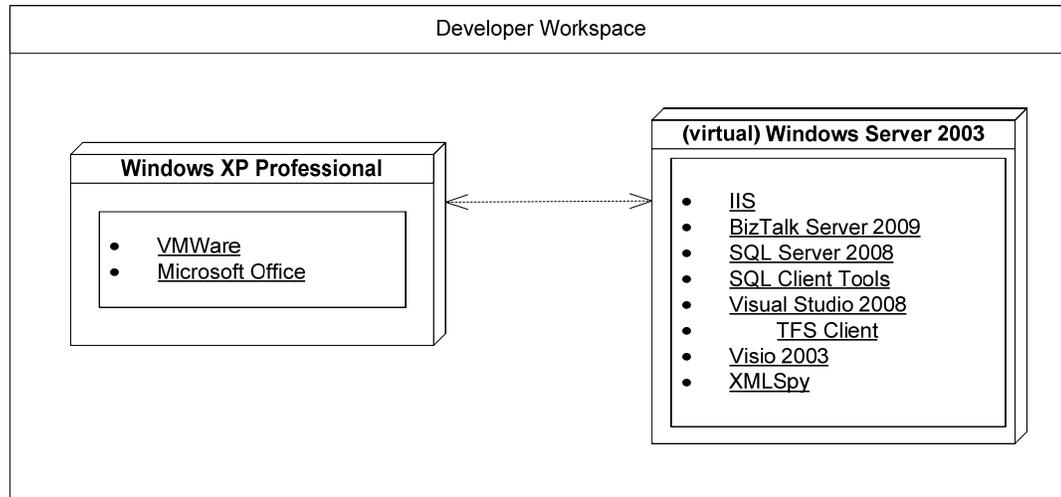


Figure 10-2: Developer Workspace

Preconfigured virtual development environments are to be built for the 820 Phase 2 project and distributed to all software developers working on the project. Licensing for the virtualized software development environment is covered through Microsoft's MSDN subscription program, granting licensed developers unrestricted access to Microsoft products and platforms for development and testing purposes.

10.1.3 Analyst Platform

Testing and validation of the 820 Phase 2 system requires some non-standard software to be installed on the analysts' desktop PC system. This software includes:

- Edifecs SpecBuilder
- SQL Server 2008 Client tools
- Snag-It

Furthermore, analysts require remote access to the desktops of servers in the server environments to utilize the following applications:

- BizTalk Server Administration
- BizTalk Health and Administration Tool
- SQL Server 2008 Client tools

These tools support review and tracing the day-to-day operations of the BizTalk server application and allow testers to restart suspended processes, retrieve or update system metrics, and monitor general system health. The SQL tools allow them to query the CAPMAN Database to view actual stored data.

10.1.4 User Platform

Daily operation of the 820 Phase 2 system after roll-out and deployment does not require any software application not included in ITSD's standard desktop PC system build, as documented in Information Technology Hardware and Software Standards (Revised May 9, 2008). Specific products required for users to inquire and operate the 820 Phase 2 system include:

- MS Internet Explorer v6 SP2
- Adobe Acrobat Reader 8.x
- MS Office 2003 Professional SP3

10.2 Server Platforms

The 820 Phase 2 system has four operating environments:

- Production
- Staging
- Test
- Development

In an effort to reduce hardware cost and increase the agility of system configurations, server virtualization technology will be utilized to consolidate multiple server instances onto individual physical hardware systems in all environments. ITSD will be utilized to host the Development and Test environments in a virtualized infrastructure. Staging and Production will be hosted with DTS, and the physical requirements will be aligned with the COEMS service offering.

Specifications for all environments, including host configuration, virtual system instances, and network requirements are included in this section.

10.2.1 Development and Test Environment

Using the advantages provided by virtualization, the Development and Test environments share the same physical hardware. This section will present both environments. A total of eight server instances on four physical systems are required to support the two environments. The 820 Phase 2 project is going to reuse four existing server instances, and require the addition of four new server instances for the Development and Test environments.

Server Instances

Four server instances are required for the development environment. These server instances include:

- 1 x IIS 6.0 Server
- 1 x Microsoft BizTalk Server 2009
- 1 x Edifecs XEngine Server
- 1 x Microsoft SQL Server 2008

Four server instances are required for the Test environment. These server instances include:

- 1 x IIS 6.0 Server
- 1 x Microsoft BizTalk Server 2009
- 1 x Edifecs XEngine Server
- 1 x Microsoft SQL Server 2008

Environment	Server Name	Host	Pre-existing
Development	DHSOHCHIP30	Edifecs XEngine Server	Yes
Development	DHSOHCWEB30	IIS 6.0	Yes
Development	DHOHCEECSQLIP35	SQL Server 2008	No

Environment	Server Name	Host	Pre-existing
Development	DHOHCEECBIZIP35	BizTalk Server 2009	No
Test	DHSOHCHIP20	Edifecs XEngine Server	Yes
Test	DHSOHCWEB20	IIS 6.0	Yes
Test	DHOHCEECSQLIP25	SQL Server 2008	No
Test	DHOHCEECBIZIP25	BizTalk Server 2009	No

820 Phase 2 System Instances – Development & Test Environments

Test	 DHSOHCWEB20	 DHSOHCHIP20	 DHOHCEECEBIZIP25	 DHOHCEECSQLIP25
	 DHSOHCWEB30	 DHSOHCHIP30	 DHOHCEECEBIZIP35	 DHOHCEECSQLIP35
Dev.				
Software	Windows Server 2003 R2 SP2 IIS 6.0 .NET 2.0 .NET 3.0 .NET 3.5	Windows Server 2003 R2 SP2 Edifecs Xengine 6.6 (64 bit) IIS 6.0 JRE6 (64 bit)	Windows Server 2003 R2 SP2 Microsoft BizTalk 2009 IIS 6.0 .NET 2.0 .NET 3.0 .NET 3.5	Windows Server 2003 R2 SP2 SQL Server 2008 SP1 SQL Reporting Services SQL Analysis Services .NET 2.0 .NET 3.0 .NET 3.5

Legend



System Instance



Virtual Server Instance Requirements

The following table details the hardware resources required by both of the environments. In alignment with the virtualization strategy, hardware resources are detailed by both environment and as commoditized totals across both environments.

Server Name	Operating System	# CPU Cores	RAM (GB)	Hard Drive Space
DHSOHCHIP30	Windows 2003 R2	2	4	120
DHSOHCWEB30	Windows 2003 R2	2	4	60
DHOHCEECSQLIP35	Windows 2003 R2	2	4	200
DHOHCEECEBIZIP35	Windows 2003 R2	2	4	60
DHSOHCHIP20	Windows 2003 R2	2	4	120
DHSOHCWEB20	Windows 2003 R2	2	4	60
DHOHCEECSQLIP25	Windows 2003 R2	2	4	200
DHOHCEECEBIZIP25	Windows 2003 R2	2	4	60
Total:		16	32	880

Virtual Machine Software Requirements

The following table identifies the primary software applications and support packages that must be installed on the each of the virtual server instances. Specific version of system utilities, patches and development frameworks have been included where possible.

DHSOHCWEB20 DHSOHCWEB30	DHSOHCHIP20 DHSOHCHIP30	DHOHCEECEBIZIP25 DHOHCEECEBIZIP35	DHOHCEECSQLIP25 DHOHCEECSQLIP35
Windows Server 2003 R2 Standard Edition x 64 SP2	Windows Server 2003 R2 Standard Edition x 64 SP2	Windows Server 2003 R2 Standard Edition x 64 SP2	Windows Server 2003 R2 Standard Edition x 64 SP2
Microsoft Internet Information Services (IIS) 6.0	Microsoft Internet Information Services (IIS) 6.0	Microsoft Internet Information Services (IIS) 6.0	SQL Server 2008 x 64 with Service Pack 1
Microsoft Management Console (MMC) 3.0	Microsoft Management Console (MMC) 3.0	Windows SharePoint Services 3.0	SQL Server 2008 Reporting Services
Microsoft .NET Framework 1.1	Microsoft .NET Framework 1.1	Microsoft Visual Studio 2008	SQL Server 2008 Analysis Services
Microsoft .NET Framework 2.0	Microsoft .NET Framework 2.0	SQL Server Client Tools	SQL Server Notification Services 2.0 with Service Pack 1
Microsoft .NET Framework 3.0/3.5	Microsoft .NET Framework 3.0/3.5	SQL Server Analysis Services	SQL Server 2008 Integration Services

DHSOHCWEB20 DHSOHCWEB30	DHSOHCCHIP20 DHSOHCCHIP30	DHOHCCECBIZIP25 DHOHCCECBIZIP35	DHOHCCECSQLIP25 DHOHCCECSQLIP35
Microsoft Message Queuing Service (MSMQ)	Edifecs XEngine	Microsoft Office Excel 2007	Microsoft Management Console (MMC) 3.0
Windows SharePoint Services 3.0	JRE 6 x64	Microsoft Office InfoPath 2007	Microsoft .NET Framework 1.1
		Microsoft .NET Framework 1.1	Microsoft .NET Framework 2.0
		Microsoft .NET Framework 2.0	Microsoft .NET Framework 3.0/3.5
		Microsoft .NET Framework 3.0/3.5	SQLXML 3.0 with Service Pack 3
		Microsoft Visual Studio 2008 Service Pack 1	SQLXML 4.0 with Service Pack 1
		Microsoft Data Access Components (MDAC) 2.8 Service Pack 1	
		SQLXML 4.0	
		Microsoft XML Core Services (MSXML) 6.0	
		Microsoft Office Web Components 11	
		ADO.NET 9.0, 10.0	
		Microsoft Management Console (MMC) 3.0	
		Internet Explorer 7.0	
		ASP.NET 2.0	
		Visual C#	
		MS Document Explorer 2008 and KB953196 Patch	
		Enterprise Single Sign-On Server	

Other System Requirements

Existing ITSD infrastructure is utilized to support the 820 Phase 2 project. This includes the Source Code Control (SCC) and SFTP host software.

Microsoft Team Foundation Server 2005 is used as the SCC platform for the 820 Phase 2 project. The ITSD WSU provides a hosted TFS offering, and has been used to host the project's source code.

Multiple 820 Phase 2 system interfaces require the use of an SFTP server to exchange files with external system. ITSD provides an SFTP server offer with the GlobalScape software. The same SFTP host is used for all environments, with separate user accounts configured to secure access across environments.

The following table identifies the other systems supporting the development and test environments

Environment	Server Name	Role
Dev and Test	eft.dhcs.ca.gov	GlobalScape SFTP Server
Dev	DHSSACTFS01	Team Foundation Server (SCC)

Physical System Requirements

The eight system instances required for both environments are allocated across three physical servers. DHCS-ITSD currently has host servers to support the virtual server instances. Four instances will be reused, while four new instances will be added to the existing environment to support the development of the 820 Phase 2 system.

The VMWare host configuration relies on the availability of a SAN and FBA connectivity for the servers indicated. Approximately 520 GB of disk space is required on the SAN for the physical servers in both environments for the additional four virtual instances. Some of disk space will be reallocated from existing server instances, which are not fully utilizing resources. Physical servers are assumed to have local hard disks of adequate size to provide the space listed in either a RAID 1, 10 or 5 configurations.

Utilizing virtualization requires that VMWare ESX Server is used as the “base” operating system for the servers described above. ESX Server provides a more efficient utilization of hardware resources across the physical hardware.

Network Configuration

The virtualized development and test environments can be described through a traditional physical network model. Virtual systems will appear within the network the same as within the physical system, and the same architecture constraints and requirements will be enforced.

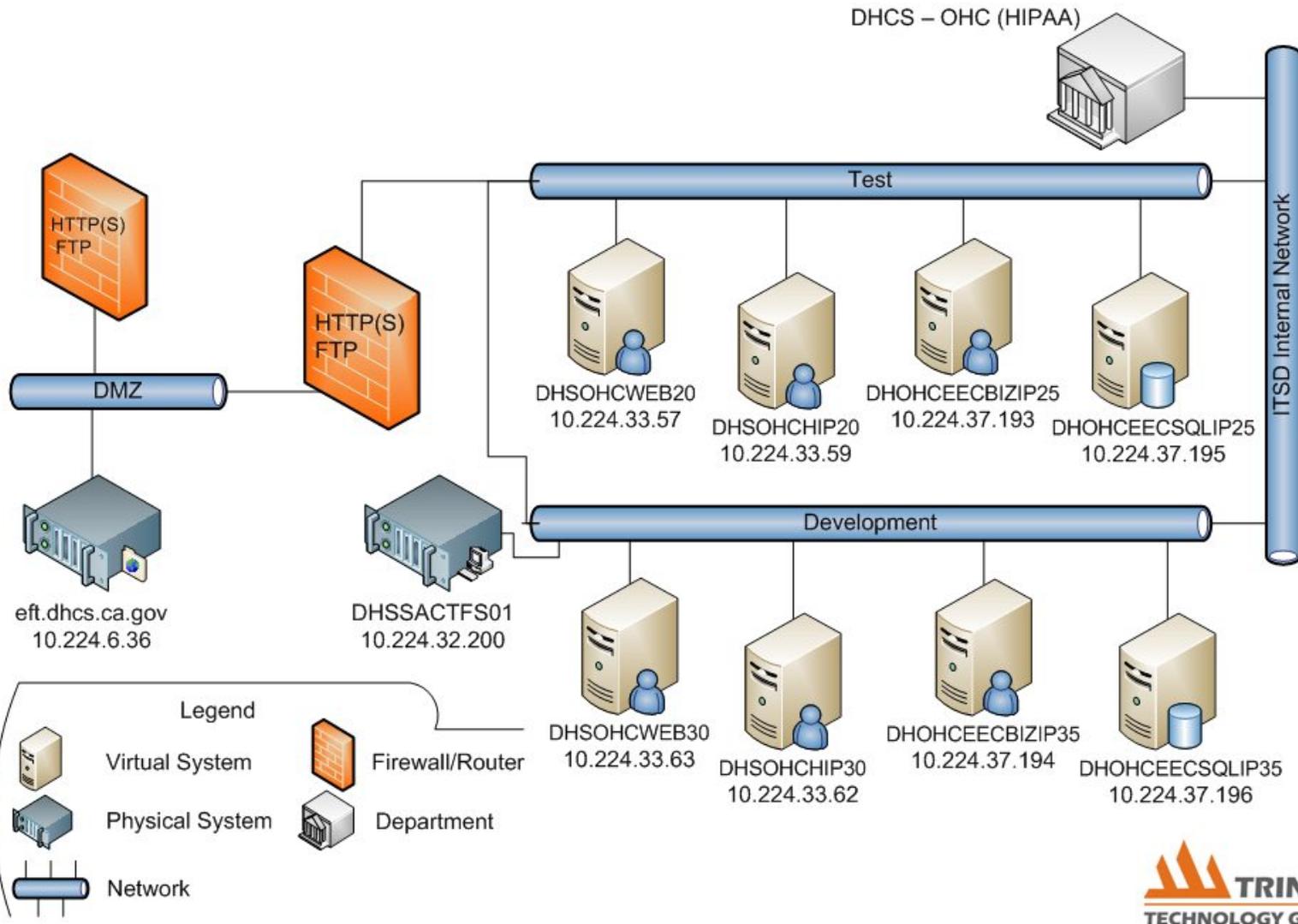
A variety of network protocols are required to be supported between the server instances in the environments, including:

- HTTP
- SFTP
- SQL

Within each environment (i.e. Dev & QA), unrestricted network access is required between the core individual server instances. Security credential authentication and permission management rely on an Active Directory login within each environment. Forms-based authentication is to be used for access to web-based interfaces hosted on the web servers, with authentication managed through the intranet AD domain.

In support of the traditional 3-tier design identified in ITSD standards, three tiers of platforms, UI, Application and Database are to be used in the development and test environment. For simplicity of construction and configuration of the environments, all BizTalk, XEngine, web servers and SQL Server databases will exist on the same (v)Lan segment.

Development and Test System Architecture



10.2.2 Staging and Production Environment

Using the advantages provided by virtualization, the Staging and Production environments share the same physical hardware. This section will present both environments. A total of twenty server instances on three physical systems supported by a SAN are required to support the two environments. The 820 Phase 2 project is going to reuse four physical existing server instances, and require the addition of sixteen new virtual server instances for the Staging and Production environments.

The staging environment mirrors the configuration of production environment, with clustered and redundant server topology.

Server Instances

Ten server instances are required for the Staging environment. These server instances include:

- 2 x IIS 6.0 Server
- 2 x Microsoft BizTalk Server 2009
- 2 x Edifecs XEngine Server (one licensed server currently exists)
- 4 x Microsoft SQL Server 2008

Ten server instances are required for the Production environment. These server instances include:

- 2 x IIS 6.0 Server
- 2 x Microsoft BizTalk Server 2009
- 2 x Edifecs XEngine Server (one licensed server currently exists)
- 4 x Microsoft SQL Server 2008

Since the Production and Staging servers will be virtualized there is an option to deploy two less SQL servers into the environments. By using the VMware and vSphere product stack single SQL database instances can be configured for high availability and redundancy.. If this option is viable then the physical host servers need to run on Intel 31xx, 33xx, 52xx, 54xx, 55xx, 74xx chip sets. By using the virtualization configuration it would reduce the need to set up a Microsoft Active/Passive cluster, which is notoriously difficult to configure and manage.

Environment	Server Name	Host	Pre-existing
Staging	DHSEAPPHIP21	Edifecs XEngine Server	Yes
Staging	DHSEAPPHIP22	Edifecs XEngine Server	Yes*
Staging	DHOHCGOLSQLIS21	SQL Server 2008	No
Staging	DHOHCGOLSQLIS22	SQL Server 2008	No
Staging	DHOHCGOLSQLIS23	SQL Server 2008	No
Staging	DHOHCGOLSQLIS24	SQL Server 2008	No
Staging	DHOHCGOLBIZIS21	BizTalk Server 2009	No
Staging	DHOHCGOLBIZIS22	BizTalk Server 2009	No
Staging	DHOHCGOLAPPIS21	IIS 6.0	No
Staging	DHOHCGOLAPPIS22	IIS 6.0	No

Environment	Server Name	Host	Pre-existing
Production	DHSEAPPHIP01	Edifecs XEngine Server	Yes
Production	DHSEAPPHIP02	Edifecs XEngine Server	Yes*
Production	DHOHCGOLSQLIP01	SQL Server 2008	No
Production	DHOHCGOLSQLIP02	SQL Server 2008	No
Production	DHOHCGOLSQLIP03	SQL Server 2008	No
Production	DHOHCGOLSQLIP04	SQL Server 2008	No
Production	DHOHCGOLBIZIP01	BizTalk Server 2009	No
Production	DHOHCGOLBIZIP02	BizTalk Server 2009	No
Production	DHOHCGOLAPP01	IIS 6.0	No
Production	DHOHCGOLAPP02	IIS 6.0	No

*Physical server exists but does not have a license for Edifecs XEngine Server.

820 Phase 2 System Instances – Staging & Production Environments

Production	 DHOHCGOLAPP01 DHOHCGOLAPP02	 DHSEAPPHIP01 DHSEAPPHIP02	 DHOHCGOLBIZ01 DHOHCGOLBIZ02	 DHOHCGOLSQLIP01 DHOHCGOLSQLIP02	 DHOHCGOLSQLIP03 DHOHCGOLSQLIP04
Staging	 DHOHCGOLAPPIS21 DHOHCGOLAPPIS22	 DHSEAPPHIP21 DHSEAPPHIP22	 DHOHCGOLBIZIS21 DHOHCGOLBIZIS22	 DHOHCGOLSQLIS21 DHOHCGOLSQLIS22	 DHOHCGOLSQLIS23 DHOHCGOLSQLIS24
Software	Windows Server 2003 R2 SP2 IIS 6.0 .NET 2.0 .NET 3.0 .NET 3.5	Windows Server 2003 R2 SP2 Edifecs Xengine 6.6 (64 bit) IIS 6.0 JRE6 (64 bit)	Windows Server 2003 R2 SP2 Microsoft BizTalk 2009 IIS 6.0 .NET 2.0 .NET 3.0 .NET 3.5	Windows Server 2003 R2 SP2 SQL Server 2008 SP1 SQL Reporting Services SQL Analysis Services .NET 2.0 .NET 3.0 .NET 3.5	Windows Server 2003 R2 SP2 SQL Server 2008 SP1 SQL Reporting Services SQL Analysis Services .NET 2.0 .NET 3.0 .NET 3.5

Legend

 System Instance


Virtual Server Instance Requirements

The following table details the hardware resources required by both of the environments. In alignment with the virtualization strategy, hardware resources are detailed by both environment and as commoditized totals across both environments.

The allocation of resources for the virtual instances maps directly to the resource allocation of the physical hosts. The virtual servers can be allocated the resources, but after the system has been in production the resources can be reallocated depending on usage. For instance, 1008 GB of hard drive space can be provisioned for use by a SQL server, but the actual physical use can be smaller. The disk space that is allocated for each server should be thinly provisioned, especially for the SQL servers. Thin provisioning allows the servers to grow automatically as needed without taking the systems down or disrupting users. When the servers are initially configured, space is pre-allocated but the servers only use the space needed to store the actual data.

The following pre-existing physical servers are not in the virtual server instance requirements:

Server Name	Operating System	# CPU Cores	RAM (GB)	Hard Drive Space
DHSEAPPHIP21	Windows 2003 R2 64 Bit	2	32	252
DHSEAPPHIP22	Windows 2003 R2 64 Bit	2	32	252
DHSEAPPHIP01	Windows 2003 R2 64 Bit	2	32	252
DHSEAPPHIP02	Windows 2003 R2 64 Bit	2	32	252
	Total:	8	128	1008

Virtual server instance requirements:

Server Name	Operating System	# CPU Cores	RAM (GB)	Hard Drive Space
DHSEAPPHIP21	Windows 2003 R2 64 Bit	2	32	252
DHSEAPPHIP22	Windows 2003 R2 64 Bit	2	32	252
DHOHCGOLSQLIS21	Windows 2003 R2 64 Bit	2	16	500
DHOHCGOLSQLIS22	Windows 2003 R2 64 Bit	2	16	Shared
DHOHCGOLSQLIS23	Windows 2003 R2 64 Bit	2	8	120
DHOHCGOLSQLIS24	Windows 2003 R2 64 Bit	2	8	Shared
DHOHCGOLBIZIS21	Windows 2003 R2 64 Bit	2	16	120
DHOHCGOLBIZIS22	Windows 2003 R2 64 Bit	2	16	120
DHOHCGOLAPPIS21	Windows 2003 R2 64 Bit	2	16	80
DHOHCGOLAPPIS22	Windows 2003 R2 64 Bit	2	16	80
DHSEAPPHIP01	Windows 2003 R2 64 Bit	2	32	252

Server Name	Operating System	# CPU Cores	RAM (GB)	Hard Drive Space
DHSEAPPHIP02	Windows 2003 R2 64 Bit	2	32	252
DHOHCGOLSQLIP01	Windows 2003 R2 64 Bit	4	32	7500
DHOHCGOLSQLIP02	Windows 2003 R2 64 Bit	4	32	Shared
DHOHCGOLSQLIP03	Windows 2003 R2 64 Bit	2	16	504
DHOHCGOLSQLIP04	Windows 2003 R2 64 Bit	2	16	Shared
DHOHCGOLBIZIP01	Windows 2003 R2 64 Bit	8	64	252
DHOHCGOLBIZIP02	Windows 2003 R2 64 Bit	8	64	252
DHOHCGOLAPP01	Windows 2003 R2 64 Bit	2	16	120
DHOHCGOLAPP02	Windows 2003 R2 64 Bit	2	16	120
Total:		48	368	9768

Virtual Software Requirements

The following table identifies the primary software applications and support packages that must be installed on each of the virtual server instances. Specific version of system utilities, patches and development frameworks have been included where possible.

DHOHCGOLAPPIS21 DHOHCGOLAPPIS22 DHOHCGOLAPP01 DHOHCGOLAPP02	DHSEAPPHIP21 DHSEAPPHIP22 DHSEAPPHIP01 DHSEAPPHIP02	DHOHCGOLBIZIS21 DHOHCGOLBIZIS22 DHOHCGOLBIZIP01 DHOHCGOLBIZIP02	DHOHCGOLSQLIS21 DHOHCGOLSQLIS22 DHOHCGOLSQLIS23 DHOHCGOLSQLIS24 DHOHCGOLSQLIP01 DHOHCGOLSQLIP02 DHOHCGOLSQLIP03 DHOHCGOLSQLIP04
Windows Server 2003 R2 Standard Edition x 64 SP2	Windows Server 2003 R2 Standard Edition x 64 SP2	Windows Server 2003 R2 Standard Edition x 64 SP2	Windows Server 2003 R2 Standard Edition x 64 SP2
Microsoft Internet Information Services (IIS) 6.0	Microsoft Internet Information Services (IIS) 6.0	Microsoft Internet Information Services (IIS) 6.0	SQL Server 2008 x 64 with Service Pack 1
Microsoft Management Console (MMC) 3.0	Microsoft Management Console (MMC) 3.0	Windows SharePoint Services 3.0	SQL Server 2008 Reporting Services
Microsoft .NET Framework 1.1	Microsoft .NET Framework 1.1	Microsoft Visual Studio 2008	SQL Server 2008 Analysis Services
Microsoft .NET Framework 2.0	Microsoft .NET Framework 2.0	SQL Server Client Tools	SQL Server Notification Services 2.0 with Service Pack 1
Microsoft .NET Framework 3.0/3.5	Microsoft .NET Framework 3.0/3.5	SQL Server Analysis Services	SQL Server 2008 Integration Services

DHOHCGOLAPPIS21 DHOHCGOLAPPIS22 DHOHCGOLAPPIP01 DHOHCGOLAPPIP02	DHSEAPPHIP21 DHSEAPPHIP22 DHSEAPPHIP01 DHSEAPPHIP02	DHOHCGOLBIZIS21 DHOHCGOLBIZIS22 DHOHCGOLBIZIP01 DHOHCGOLBIZIP02	DHOHCGOLSQLIS21 DHOHCGOLSQLIS22 DHOHCGOLSQLIS23 DHOHCGOLSQLIS24 DHOHCGOLSQLIP01 DHOHCGOLSQLIP02 DHOHCGOLSQLIP03 DHOHCGOLSQLIP04
Microsoft Message Queuing Service (MSMQ)	Edifecs XEngine	Microsoft Office Excel 2007	Microsoft Management Console (MMC) 3.0
Windows SharePoint Services 3.0	JRE 6 x64	Microsoft Office InfoPath 2007	Microsoft .NET Framework 1.1
		Microsoft .NET Framework 1.1	Microsoft .NET Framework 2.0
		Microsoft .NET Framework 2.0	Microsoft .NET Framework 3.0/3.5
		Microsoft .NET Framework 3.0/3.5	SQLXML 3.0 with Service Pack 3
		Microsoft Visual Studio 2008 Service Pack 1	SQLXML 4.0 with Service Pack 1
		Microsoft Data Access Components (MDAC) 2.8 Service Pack 1	
		SQLXML 4.0	
		Microsoft XML Core Services (MSXML) 6.0	
		Microsoft Office Web Components 11	
		ADO.NET 9.0, 10.0	
		Microsoft Management Console (MMC) 3.0	
		Internet Explorer 7.0	
		ASP.NET 2.0	
		Visual C#	
		MS Document Explorer 2008 and KB953196 Patch	
		Enterprise Single Sign-On Server	

10.2.2.1

Network Configuration

The virtualized staging and production environments can be described through a traditional physical network model. Virtual systems will appear within the network the same as within the physical system, and the same architecture constraints and requirements will be enforced.

A variety of network protocols are required to be supported between the server instances in the environments, including:

- HTTP
- SFTP
- SQL

Within each environment unrestricted network access is required between the core individual server instances.

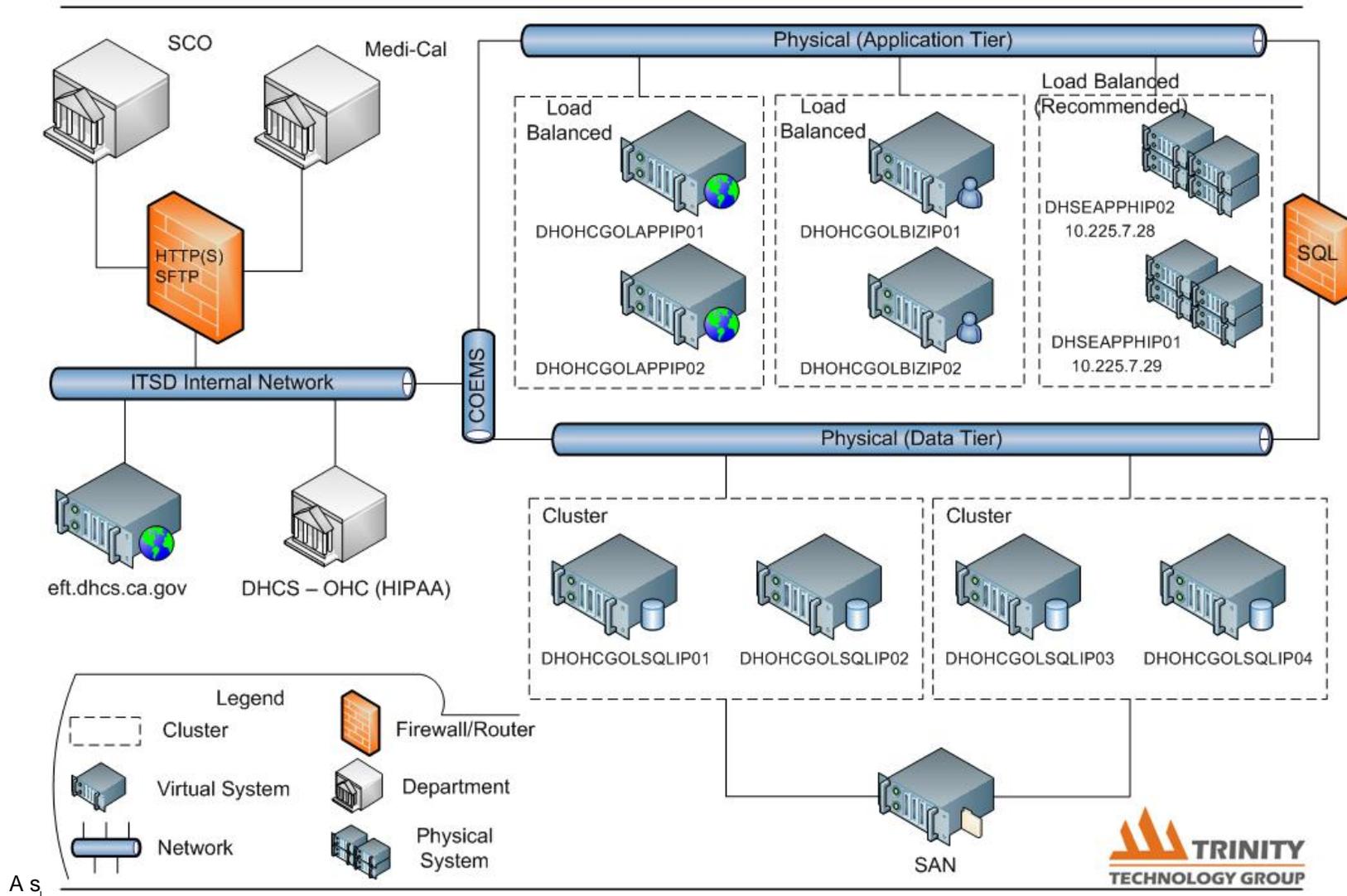
Security credential authentication and permission management relies on an Active Directory within each environment. Authentication will be enforced by the DHCS intranet Active Directory, as the 820 Phase 2 system is a trusted application and will not be accessed directly by entities outside of DHCS. Forms-based authentication is to be used for access to web-based interfaces hosted on the web servers, with authentication managed through the intranet AD domain.

In support of the traditional 3-tier design identified in ITSD standards, three tiers of platforms, UI, Application and Database are to be used in the development and test environment. For simplicity of construction and configuration of the environments, all BizTalk, XEngine, web servers will exist on the same (v)LAN segment. The SQL Server databases can exist on a separate (v)LAN segment, although it may not be necessary to do so since the 820 Phase 2 systems is a trusted application. The system performs data intensive calculations on beneficiary history and stores much of the data in cache while performing the calculations. If the SQL servers are to be placed on a separate (v)LAN segment, it is recommended that communication not go through a firewall. Packet inspection has the potential to degrade performance and increase latency.

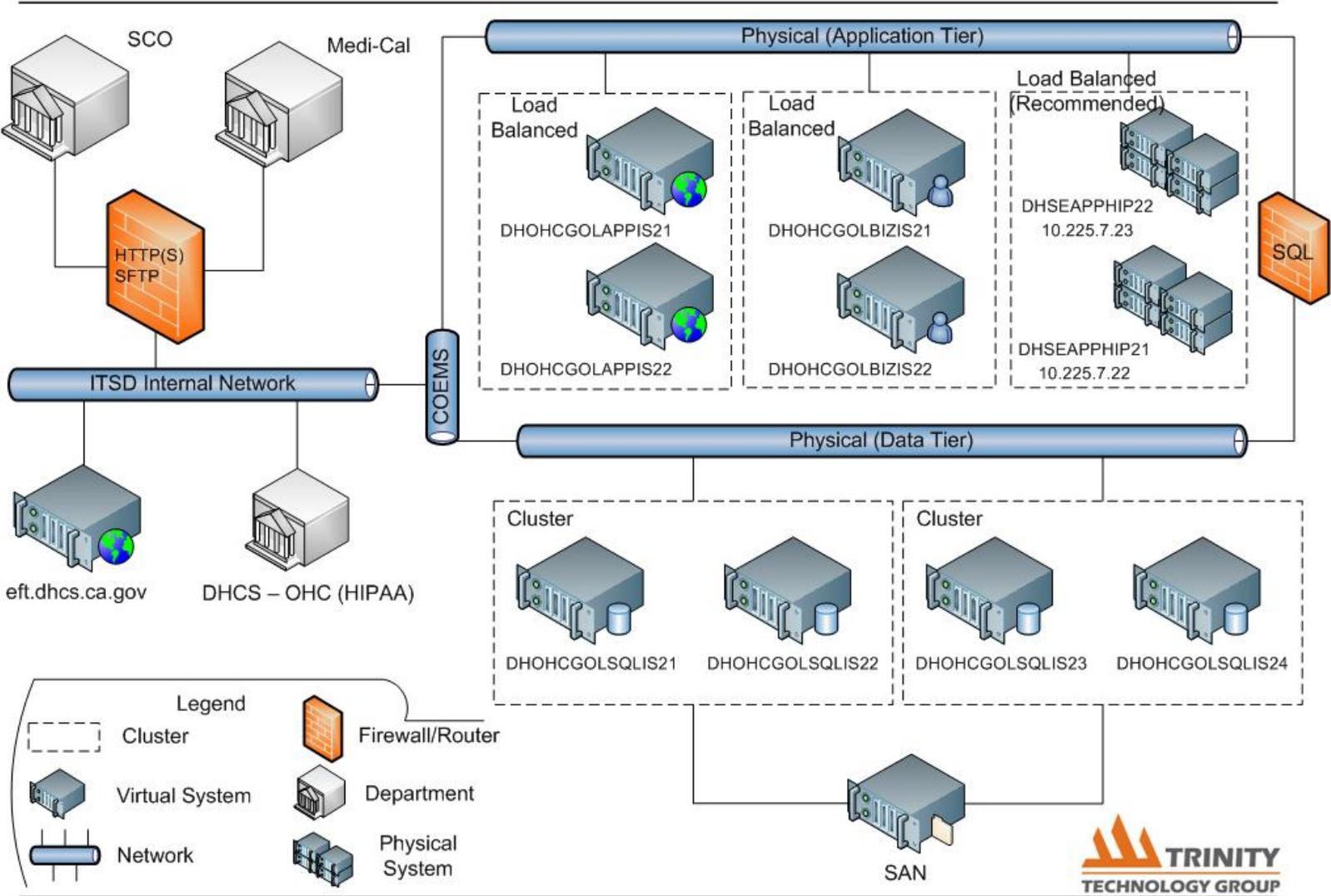
Ports that will need to be open between server instances in the environments include (if the servers are on different subnets):

- 22030 – between the application servers and SQL servers
- 22030 – between the BizTalk Servers and the SQL servers
- 5000-5020 - between the BizTalk Servers and the SQL servers
- 23 - between the BizTalk Servers and the SFTP server

Production System Architecture



Staging System Architecture



Other System Requirements

Multiple 820 Phase 2 system interfaces require the use of an SFTP server to exchange files with external system. ITSD provides an SFTP server offer with the GlobalScape software. The same SFTP host is used for all environments, with separate user accounts configured to secure access across environments.

The following table identifies the other systems supporting the staging and production environments

Environment	Server Name	Role
Staging	eft.dhcs.ca.gov	GlobalScape SFTP Server
Production	eft.dhcs.ca.gov	GlobalScape SFTP Server

Physical System Requirements

Sixteen of the Staging and Production system instances required for the environments are allocated across three physical servers. DHCS-ITSD does not have host servers to support the virtual server instances in the COEMS environment. Four physical server instances will be reused. The physical servers host XEngine server, there is only one active staging server and one active production server. It is recommended that the staging and production servers that are used as back-up servers, have licensed versions of XEngine server installed, and that they are load balanced with the existing XEngine servers.

The VMWare host configuration relies on the availability of a SAN and FBA connectivity for the servers indicated. Approximately 9.8 TB of accessible disk space is required on the SAN to host the virtual server instances for production and staging. Physical servers are assumed to have local hard disks of adequate size to provide the space listed in either a RAID 1, 5, 6, or 10 configurations.

Conservative calculation estimates of required SQL Server storage follow:

- 4.5 million beneficiaries * ~150 bytes = ~ 675MB raw data table size for Capitation
- Direct copies from the CAP13REC: 4.5million * 36 * 13 rows * ~ 100 bytes / row = ~ 210GB
- 4MB archived invoices as blobs * 36 * 50 rows = ~ 8GB for invoice archival
- Auditing: Estimating 100 changes / day + 10 changes per invoice gives 10MB for auditing
Payment History: 1000 payments * 36 months, plus estimates for table storage gives 10MB
Invoice / Contract Report Storage: 1000 rows per month = ~ 40MB

Total ~ 250 GB operational data

Logging (double the size) ~ 500 GB

Utilizing virtualization requires that VMWare ESX Server is used as the "base" operating system for the servers described above. ESX Server provides a more efficient utilization of hardware resources across the physical hardware.

Server Name	Server Model	# CPU Cores	RAM (GB)	Hard Drive Space
DHOHCGOLESXIP01	Dell Poweredge R900	4 Quad Core	128	292

Server Name	Server Model	# CPU Cores	RAM (GB)	Hard Drive Space
DHOHCGOLESXIP02	Dell Poweredge R900	4 Quad Core	128	292
DHOHCGOLESXIP03	Dell Poweredge R900	4 Quad Core	128	292
DHOHCGOLUTLIP01	Dell R710	2 Quad Core	16	584
DHOHCGOLSANIP01	Dell EqualLogic PS6000X	N/A	N/A	6.4 TB
DHOHCGOLSANIP02	Dell EqualLogic PS6000X	N/A	N/A	6.4 TB

The following servers will host the VM Ware virtual server instances:

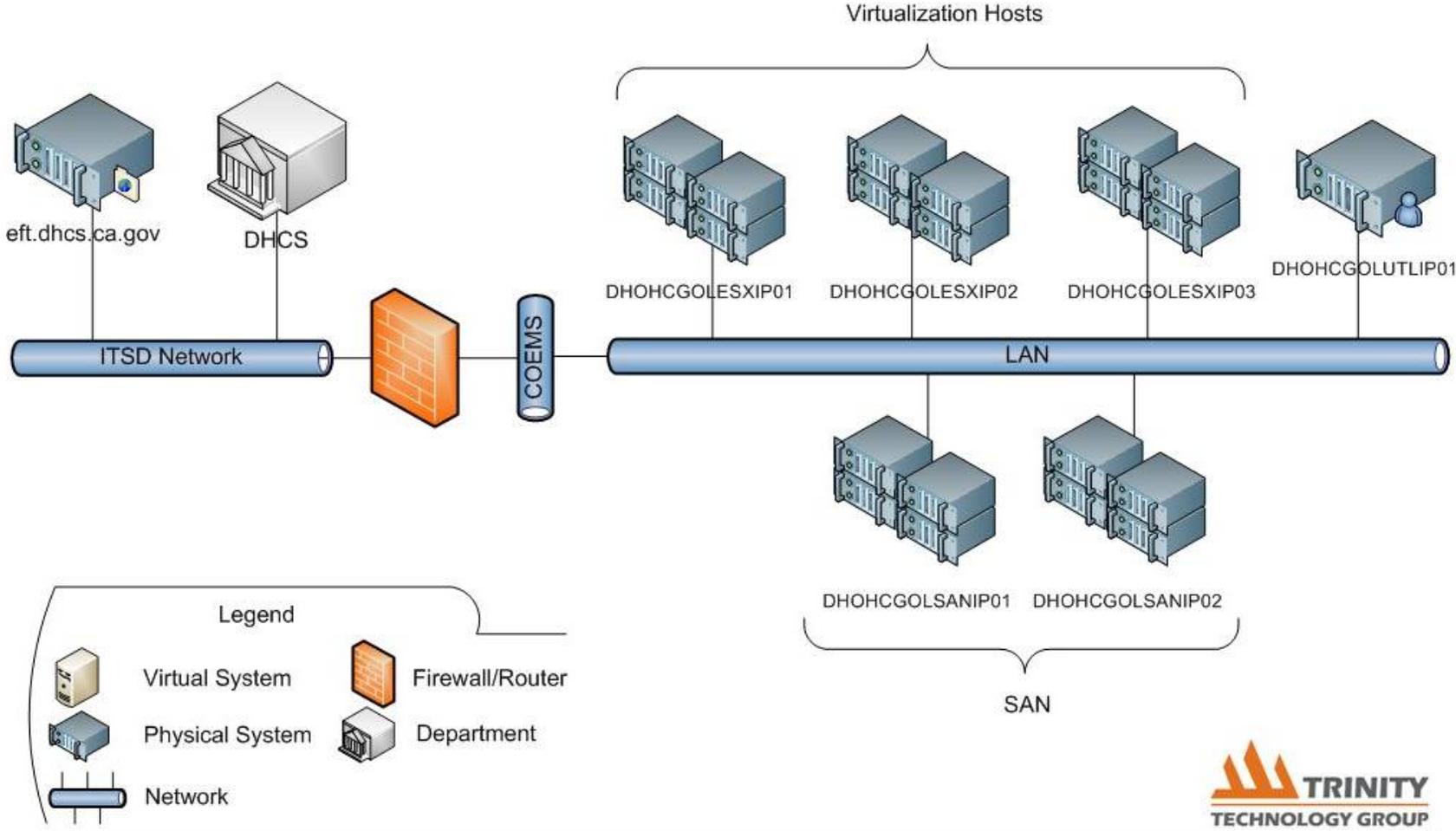
- DHOHCGOLESXIP01
- DHOHCGOLESXIP02
- DHOHCGOLESXIP03

The DHOHCGOLUTLIP01 server will be used to manage the VM Ware ESX servers.

The following servers will form the SAN:

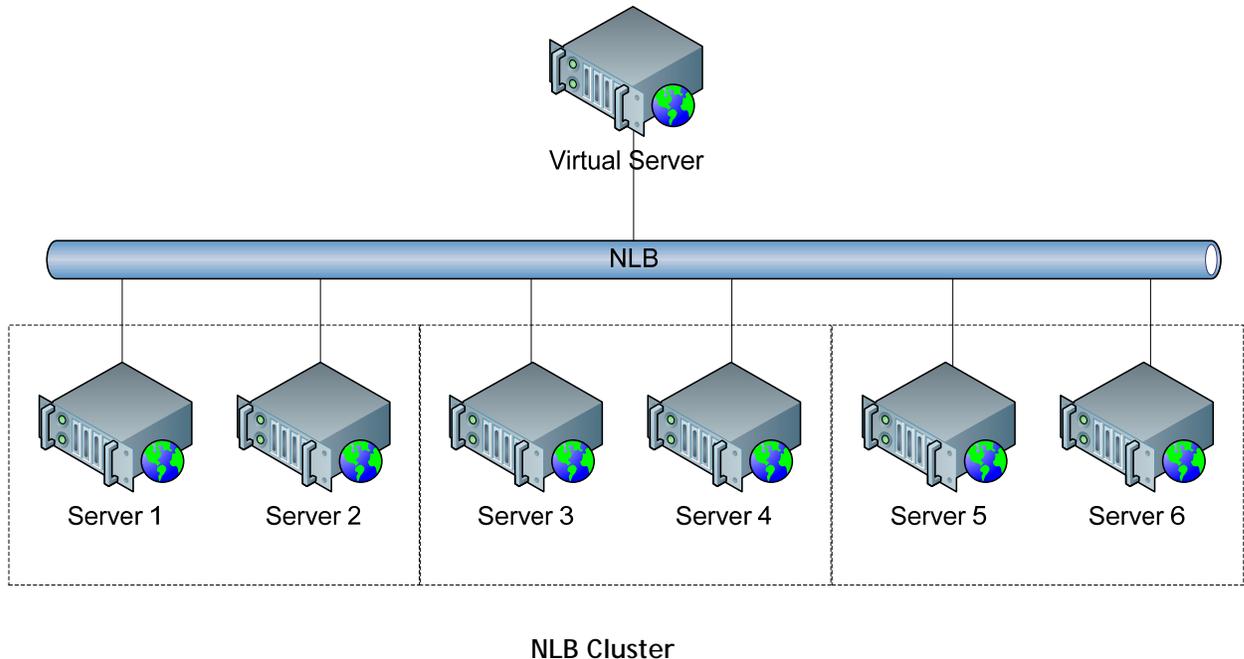
- DHOHCGOLSANIP01
- DHOHCGOLSANIP02

Physical Server Architecture



10.3 Scalability, Load Balancing & Redundancy

The implementation of the 820 Phase 2 project will take advantage of Microsoft Network Load Balancing Services (NLB) to allow the system to scale without the traditional incremental penalty imposed on growing systems. Since NLB is a naturally load-balanced solution, allowing new hardware or virtual server instances to be added transparently to the current implementation and providing a full-factor increase in system performance. NLB presents a virtual computer, with a single DNS and IP that systems or users connect to, while NLB distributes processes across the servers in the NLB cluster.



10.3.1 IIS

All web services and the web site can be deployed across the scalable web farm. NLB clustering is an active/active configuration, all servers act in unison as a single virtual server. Processes are distributed across servers using a distributed clustering technique.

10.3.2 SQL Server / Reporting Services

SQL Server clustering will be used to remove a single point of failure from the data persistence layer. SQL clustering is an active/passive configuration, one server acts as the host while the other is reserved for a failover. All data is stored on the SAN, so there is little chance for data loss.

Again, since the Production and Staging servers will be virtualized there is an option to deploy two less SQL servers into the environments. By using the VMware and vSphere product stack single SQL database instances can be configured for high availability and redundancy.

Microsoft recommends separating SQL data and log files onto their own disk volumes on the SAN. Having the volumes separate also removes the risk of losing both files if the volume fails. The SQL server should also be configured to disable the automatic shrinking of the database. When SQL server shrinks a database it automatically de-allocates disk space and can leave unallocated disk space on the NTFS file system in fragments.

10.3.3 XEngine

The XEngine Servers can be deployed across the scalable application farm. NLB clustering is an active/active configuration, all servers act in unison as a single virtual server. Processes are distributed across servers using a distributed.

The XEngine Servers are not currently configured in a cluster; it is recommended that they are clustered, as multiple systems will be utilizing them.

10.3.4 BizTalk

Load balancing can be achieved through either hardware or software. Individual BizTalk components can be deployed across one or more physical system while remaining logically transparent to the rest of the system. Further redundancy or load balancing can be achieved with the use a hardware based load balancing to distribute incoming transactions to more than one receiving server.

In the case of the 820 Phase 2 system, it is recommended that the BizTalk servers utilize Microsoft NLB clustering. The BizTalk components will be deployed in a single application, removing the complexity of distributing multiple applications across BizTalk servers. The NLB cluster will distribute 820 Phase 2 BizTalk load equally to the two servers.

10.4 Security and Recovery

The 820 Phase 2 system processes and stores Personal Health Information (PHI) data and at the same time allows authenticated users access to that data. The two primary security issues that are addressed by the 820 Phase 2 system include prevention of data loss, and prevention of malicious use of the 820 Phase 2 system.

Data loss prevention is addressed through having a regularly conducted backup system. Malicious use prevention is addressed through password protection, firewalls, and authentication logic.

10.4.1 System Security

The 820 Phase 2 system utilizes authentication, authorization, and access and application level security. It complies with all applicable Department security policies and requirements as well as those specified in the ISO/SR1 (Information Systems Security Requirements for Projects) document.

The system includes following security components:

- Network Security
- DMZ and Domain
- Web application security (Active Directory and Security roles)
- SFTP support

Network Security:

Security credential authentication and permission management relies on an Active Directory within each environment and the intranet security model across environments and departments. Forms-based authentication is used for access to internal facing web-based interfaces hosted on the web servers, with authentication managed through the intranet AD domain.

DMZ and Domain:

The 820 Phase 2 system is located behind the DMZ (Demilitarized Zone) which adds an additional layer of security to the network location of the system. DMZ is a physical sub network that contains and exposes only the SFTP interfaces of 820 Phase 2 system to the outside-untrusted network. The external parties only have access to the SFTP folders in the DMZ, rather than the whole domain where 820 Phase 2 database and application reside.

Web application security:

Users gain access to the 820 Phase 2 website by possessing a valid Active Directory credential. The user enters their username and password combination and submits the form to gain their credential. The username and password are validated against the Active Directory system maintained in DHCS's intranet. The 820 Phase 2 system will not retain any username or password information. Users that successfully gain access via the login screen will be granted access to the website based on the security roles they are associated with in the 820 Phase 2 system. Security roles are only maintained in 820 Phase 2, and do not rely on Active Directory once the username and password have been authenticated.

Managing user security in the 820 Phase 2 website is achieved through an administration GUI screen, where users may be added, removed, and assigned different security roles. When a new user is added to the application a corresponding entry in Active Directory must also be present.

SFTP Support:

820 Phase 2 system uses the SFTP (Secure File Transfer Protocol) to communicate with MEDS file interface partner. SFTP in 820 Phase 2 system is utilized as a security network protocol that provides MEDS file exchange functionality. This security layer will prevent eavesdropping and tampering of MEDS exchange data.

External systems also pickup files from folder locations on the SFTP server.

10.4.2 Backup and Recovery

It is necessary to have regularly conducted backups and execute required data and software backups, to ensure the ability to quickly resume normal operations in case of disasters, failures of storage media, or corruption of data. Also backup data needs to be tested regularly to ensure the validity.

ITSD department will decide on which media the backup data will be stored. Whether that is magnetic tape, hard disk, optical disk or remote backup, it will be their decision. The standard ISO Operational Recovery Plan (ORP) draft will be completed for review by the ISO group and will be included as part of the Maintenance and Administration Document. The ORP Strategy document is a standard document used to guide the recovery from disaster or isolated hardware failures.

Following components need to be included in the backup of the 820 Phase 2 application:

- 820 Phase 2 database

- BizTalk database
- XEngine configuration database
- SFTP adapter database
- Image of 820 Phase 2 business application server slice
- Image of 820 Phase 2 application server slice
- Image of 820 Phase 2 XEngine server
- Companion Guide
- 820 Phase 2 transaction files

As the staging and production environment are virtualized, VM Ware has a set tools and the capacity to be used as part of the Backup and Recovery strategy. Prior to any code deployment or patch to a virtual server a snapshot of the server should be taken to guard against an unforeseen system change making the 820 Phase 2 system inoperable.

Appendix A - Data Dictionary

10.5 Table Details

The following subsections describe, in detail, each set of properties for each table in the database. These properties include collation, schema, columns, indexes and foreign keys.

10.5.1 Table TB_ADJUSTMENT

The TB_ADJUSTMENT table provides details of Health Care Plan-Level adjustments within each Contract.

10.5.1.1 Properties

The following table describes the table level properties for the table TB_ADJUSTMENT.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

10.5.1.2 Columns

The following table describes the columns in the table TB_ADJUSTMENT.

Name	Data Type	Allow Nulls	Description
Adjustment_Id	int identity	False	Unique Key of TB_ADJUSTMENT
Amount	money	False	Amount of the Adjustment
Reason	varchar(256)	True	An explanation stating the reason for the adjustment that has been made
Effective_Date_From	date	False	Adjustment Effective Date From
Effective_Date_To	date	False	Adjustment Effective Date To
Adjustment_Type_Id	int	False	Type of the Adjustment

Name	Data Type	Allow Nulls	Description
Check_Number	varchar(32)	True	Check Number if Adjustment includes a Check
Check_Date	datetime	True	Date of Check if Adjustment includes a Check
Contract_Plan_Code_Id	int	False	Contract/Health Care Plan receiving the Adjustment
Invoice_Type_Id	smallint	True	The type of the invoice receiving the adjustment

10.5.1.3 Indexes

The following table describes the indexes on the table TB_ADJUSTMENT.

Name	Columns	Unique	Clustered
pkc_TB_ADJUSTMENT_Adjustment_Id	Adjustment_Id	True	True
ixn_TB_ADJUSTMENT_Adjustment_Type_Id	Adjustment_Type_Id	False	False
ixn_TB_ADJUSTMENT_Contract_Plan_Code_Id	Contract_Plan_Code_Id	False	False

10.5.1.4 Foreign Keys

The following table describes the foreign keys on the table TB_ADJUSTMENT.

Name	Column	Foreign Table	Foreign Column
FK_TB_ADJUSTMENT_TYPE_Adjustment_Type_Id_TO_TB_ADJUSTMENT_Adjustment_Type_Id	Adjustment_Type_Id	TB_ADJUSTMENT_TYPE	Adjustment_Type_Id
FK_TB_CONTRACT_PLAN_CODE_Contract_Plan_Code_Id_TO_TB_ADJUSTMENT_Contract_Plan_Code_Id	Contract_Plan_Code_Id	TB_CONTRACT_PLAN_CODE	Contract_Plan_Code_Id
FK_TB_INVOICE_TYPE_Invoice_Type_Id_TO_TB_ADJUSTMENT_Invoice_Type_Id	Invoice_Type_Id	TB_INVOICE_TYPE	Invoice_Type_Id

10.5.2 Table TB_ADJUSTMENT_TYPE

The TB_ADJUSTMENT_TYPE table is a reference table detailing what is the type of the adjustment.

◆ Properties

The following table describes the table level properties for the table TB_ADJUSTMENT_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_ADJUSTMENT_TYPE.

Name	Data Type	Allow Nulls	Description
Adjustment_Type_Id	smallint	False	Unique Key of TB_ADJUSTMENT_TYPE
Name	varchar(128)	False	The reason for and/or nature of an adjustment
Withhold_Percentage	decimal(5,2)	True	Percentage of Withholding for adjustments requiring percentage adjustments

◆ Indexes

The following table describes the indexes on the table TB_ADJUSTMENT_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_ADJUSTMENT_TYPE__Adjustment_Type_Id	Adjustment_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_ADJUSTMENT_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_ADJUSTMENT_TYPE__Adjustment_Type_Id_TO_TB_ADJUSTMENT__Adjustment_Type_Id	Adjustment_Type_Id	TB_ADJUSTMENT	Adjustment_Type_Id

10.5.3 Table TB_AID_CODE

The TB_AID_CODE table is a join table to determine what aid codes are in what aid codes group per contract.

◆ Properties

The following table describes the table level properties for the table TB_AID_CODE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_AID_CODE.

Name	Data Type	Allow Nulls	Description
Aid_Code_Type_Id	smallint	False	Partial Unique Key Referencing the Aid Code Reference Table
Aid_Code_Group_Id	int	False	Partial Unique Key Referencing the Aid Code Group Reference Table

◆ Indexes

The following table describes the indexes on the table TB_AID_CODE.

Name	Columns	Unique	Clustered
pkc_TB_AID_CODE__Aid_Code_Type_Id__Aid_Code_Group_Id	Aid_Code_Type_Id Aid_Code_Group_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_AID_CODE.

Name	Column	Foreign Table	Foreign Column
FK_TB_AID_CODE_GROUP__Aid_Code_Group_Id__TO_TB_AID_CODE__Aid_Code_Id	Aid_Code_Group_Id	TB_AID_CODE_GRO UP	Aid_Code_Group_Id
FK_TB_AID_CODE_TYPE__Aid_Code_Type_Id__TO_TB_AID_CODE__Aid_Code_Type_Id	Aid_Code_Type_Id	TB_AID_CODE_TYPE	And_Code_Type_Id

10.5.4 Table TB_AID_CODE_GROUP

The TB_AID_CODE_GROUP is a join table showing what aid code groups are eligible within a contract, and also records effective dates for rates.

◆ Properties

The following table describes the table level properties for the table TB_AID_CODE_GROUP.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_AID_CODE_GROUP.

Name	Data Type	Allow Nulls	Description
Aid_Code_Group_Id	int identity	False	Unique Key of TB_AID_CODE_GROUP
Contract_Plan_Code_Id	int	False	The Contract / Plan Code this Aid Code Group Falls Under
Aid_Code_Group_Type_Id	smallint	False	The Aid Code Group Name, the collection of aid codes under the same payment rate category
Rate_Effective_Date_From	date	True	The starting date of the Service Months for which payments are made
Rate_Effective_Date_To	date	True	The ending date of the Service Month for which payments are made. If null, the rate remains effective until either the 'Rate_Effective_Date_From' of the next rate or the Contract 'Effective_Date_To' date, whichever date is first

◆ Indexes

The following table describes the indexes on the table TB_AID_CODE_GROUP.

Name	Columns	Unique	Clustered
pkc_TB_AID_CODE_GROUP__Aid_Code_Group_Id	Aid_Code_Group_Id	True	True
ixn_TB_AID_CODE_GROUP__Aid_Code_Group_Type_Id	Aid_Code_Group_Type_Id	False	False
ixn_TB_AID_CODE_GROUP__Contract_Plan_Code_Id	Contract_Plan_Code_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_AID_CODE_GROUP.

Name	Column	Foreign Table	Foreign Column
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Name	Column	Foreign Table	Foreign Column
FK_TB_AID_CODE_GROUP_TYPE_Aid_Code_Group_Type_Id_TO_TB_AID_CODE_GROUP_Aid_Code_Group_Type_Id	Aid_Code_Group_Type_Id	TB_AID_CODE_GROUP_TYPE	Aid_Code_Group_Type_Id
FK_TB_CONTRACT_PLAN_CODE_Contract_Plan_Code_Id_TO_TB_AID_CODE_GROUP_Contract_Plan_Code_Id	Contract_Plan_Code_Id	TB_CONTRACT_PLAN_CODE	Contract_Plan_Code_Id
FK_TB_AID_CODE_GROUP_Aid_Code_Group_Id_TO_TB_AID_CODE_Aid_Code_Id	Aid_Code_Group_Id	TB_AID_CODE	Aid_Code_Group_Id
FK_TB_AID_CODE_GROUP_Aid_Code_Group_Id_TO_TB_PLAN_CODE_ON_PAYMENT_TYPE_Aid_Code_Group_Id	Aid_Code_Group_Id	TB_PLAN_CODE_ON_PAYMENT_TYPE	Aid_Code_Group_Id

10.5.5 Table TB_AID_CODE_GROUP_TYPE

The TB_AID_CODE_GROUP_TYPE table is a reference table of all Aid Code Group names.

◆ Properties

The following table describes the table level properties for the table TB_AID_CODE_GROUP_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_AID_CODE_GROUP_TYPE.

Name	Data Type	Allow Nulls	Description
Aid_Code_Group_Type_Id	smallint	False	Unique Key of TB_AID_CODE_GROUP_TYPE
Aid_Code_Group_Name	varchar(64)	False	Name of the collection of aid codes under the same payment rate category

◆ Indexes

The following table describes the indexes on the table TB_AID_CODE_GROUP_TYPE.

Name	Columns	Unique	Clustered
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Name	Columns	Unique	Clustered
pkc_TB_AID_CODE_GROUP_TYPE__Aid_Code_Group_Type_Id	Aid_Code_Group_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_AID_CODE_GROUP_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_AID_CODE_GROUP_TYPE__Aid_Code_Group_Type_Id__TO__TB_INVOICE_DETAIL__Aid_Code_Group_Type_Id	Aid_Code_Group_Type_Id	TB_INVOICE_DETAIL	Aid_Code_Group_Type_Id
FK_TB_AID_CODE_GROUP_TYPE__Aid_Code_Group_Type_Id__TO__TB_AID_CODE_GROUP__Aid_Code_Group_Type_Id	Aid_Code_Group_Type_Id	TB_AID_CODE_GROUP	Aid_Code_Group_Type_Id

10.5.6 Table TB_AID_CODE_TYPE

The TB_AID_CODE_TYPE table is a reference table of all aid codes used in MEDS.

◆ Properties

The following table describes the table level properties for the table TB_AID_CODE_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_AID_CODE_TYPE.

Name	Data Type	Allow Nulls	Description
Aid_Code_Type_Id	smallint	False	Unique Key of TB_AID_CODE_TYPE

Name	Data Type	Allow Nulls	Description
Aid_Code	char(2)	False	The aid code used to bill for services through the Medi-Cal claims processing systems and for other non Medi-Cal programs that need to verify eligibility through Eligibility Verification System (EVS). This is used to determine beneficiary eligibility and payment rates.
Aid_Code_Name	varchar(128)	False	The Name of the Aid Code
Description	varchar(1024)	True	Additional Aid Code Description Details
Funding_Type	smallint	True	Funding of the Aid Code

◆ Indexes

The following table describes the indexes on the table TB_AID_CODE_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_AID_CODE_TYPE__Aid_Code_Type_Id	Aid_Code_Type_Id	True	True
ixn_TB_AID_CODE_TYPE__Aid_Code	Aid_Code	True	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_AID_CODE_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_AID_CODE_TYPE__Aid_Code_Type_Id__TO__TB_AID_CODE__Aid_Code_Type_Id	Aid_Code_Type_Id	TB_AID_CODE	Aid_Code_Type_Id
FK_TB_FUNDING_TYPE__Funding_Type_Id__TO__TB_AID_CODE_TYPE__Funding_Type_Id	Funding_Type_Id	TB_FUNDING_TYPE	Funding_Type_Id
FK_TB_AID_CODE_TYPE__Aid_Code_Type_Id__TO__TB_INVOICE_DETAIL__Aid_Code_Type_Id	Aid_Code_Type_Id	TB_INVOICE_DETAIL	Aid_Code_Type_Id

10.5.7 Table TB_BENE_RISK_FACTOR

The TB_BENE_RISK_FACTOR table provides a version-able risk factor for all beneficiaries in Managed Care.

◆ Properties

The following table describes the table level properties for the table TB_BENE_RISK_FACTOR.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_BENE_RISK_FACTOR.

Name	Data Type	Allow Nulls	Description
Bene_Risk_Factor_Id	int identity	False	Unique Key of TB_BENE_RISK_FACTOR
Risk_Factor	decimal(7,4)	False	A number that represents a beneficiary's likelihood of developing an illness. This number is determined by MMCD based on analysis of the beneficiary's physical and behavioral health factors. (defaults to 1.000)
Beneficiary_Id	int	False	Beneficiary that the Risk Factor is associated with
Audit_User	varchar(128)	False	Audit Field to denote who was the user to change the record. Can be System User.
Last_Modified	datetime	False	Last Modified Time of Risk Factor. Defaults to Current Date.

◆ Indexes

The following table describes the indexes on the table TB_BENE_RISK_FACTOR.

Name	Columns	Unique	Clustered
pkc_TB_BENE_RISK_FACTOR__Bene_Risk_Factor_Id	Bene_Risk_Factor_Id	True	True
ixn_TB_BENE_RISK_FACTOR__Beneficiary_Id	Beneficiary_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_BENE_RISK_FACTOR.

Name	Column	Foreign Table	Foreign Column
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Name	Column	Foreign Table	Foreign Column
FK_TB_BENEFICIARY_Beneficiary_Id_TO_TB_BENE_RISK_FACTOR_Beneficiary_Id	Beneficiary_Id	TB_BENEFICIARY	Beneficiary_Id

10.5.8 Table TB_BENE_SUPPLEMENTAL_INFO

The TB_BENE_SUPPLEMENTAL_INFO is a join table denoting Beneficiary Eligibility for Supplemental Aid.

◆ Properties

The following table describes the table level properties for the table TB_BENE_SUPPLEMENTAL_INFO.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_BENE_SUPPLEMENTAL_INFO.

Name	Data Type	Allow Nulls	Description
Bene_Supplemental_Info_Id	int identity	False	Unique Key of TB_BENE_SUPPLEMENTAL_INFO
Beneficiary_Id	int	False	Beneficiary that has the supplemental aid.
Supplemental_Aid_Type_Id	smallint	False	Supplemental Aid that Beneficiary is eligible for.
Effective_Date_From	date	True	Effective Date of Beneficiary eligibility for Supplemental Aid
Effective_Date_To	date	True	End Effective Date of Beneficiary eligibility for Supplemental Aid
Delivery_Date	date	True	Delivery Date of Beneficiary Supplemental Aid (used in Maternity Only)
Diagnosis_Date	date	True	Date of Diagnosis of Supplemental Aid (used in AIDS only)
Audit_User	varchar(128)	False	Audit field to denote who was the last user to create / modify the supplemental record.

Name	Data Type	Allow Nulls	Description
Diagnosis	varchar(128)	False	Additional Diagnosis Information of Beneficiary Supplemental Aid.
Audit_Date	datetime	False	Audit Date is the date of last change to the Beneficiary Supplemental Information

◆ Indexes

The following table describes the indexes on the table TB_BENE_SUPPLEMENTAL_INFO.

Name	Columns	Unique	Clustered
pkc_TB_BENE_SUPPLEMENTAL_INFO__Beneficiary_Supplemental_Info_Id	Supplemental_Info_Id	True	True
ixn_TB_BENE_SUPPLEMENTAL_INFO__Beneficiary_Id	Beneficiary_Id	False	False
ixn_TB_BENE_SUPPLEMENTAL_INFO__Supplemental_Aid_Type_Id	Supplemental_Aid_Type_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_BENE_SUPPLEMENTAL_INFO.

Name	Column	Foreign Table	Foreign Column
FK_TB_BENEFICIARY__Beneficiary_Id_TO_TB_BENE_SUPPLEMENTAL_INFO__Beneficiary_Id	Beneficiary_Id	TB_BENEFICIARY	Beneficiary_Id
FK_TB_SUPPLEMENTAL_AID_TYPE__Supplemental_Aid_Type_Id_TO_TB_BENE_SUPPLEMENTAL_INFO__Supplemental_Aid_Type_Id	Supplemental_Aid_Type_Id	TB_SUPPLEMENTAL_AID_TYPE	Supplemental_Aid_Type_Id

10.5.9 Table TB_BENEFICIARY

The TB_BENEFICIARY table holds reference information for both Managed and Non-Managed Care.

◆ Properties

The following table describes the table level properties for the table TB_BENEFICIARY.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_BENEFICIARY.

Name	Data Type	Allow Nulls	Description
Beneficiary_Id	int identity	False	Unique Key of TB_BENEFICIARY
CIN	char(9)	False	Unique Client Identification Number assigned by MEDS to each Beneficiary (CIN can be present for both Managed and Non-Managed Care)
Name_Last	varchar(64)	False	Beneficiary Last Name
Name_First	varchar(64)	False	Beneficiary First Name
Name_Middle_Initial	char(1)	True	Beneficiary Middle Initial if given
Date_Of_Birth	date	True	Beneficiary Date of Birth (is null for unborn beneficiary)
Date_Of_Death	date	True	Deceased Beneficiary Date of Death
Gender_Code	char(1)	True	MEDS-Assigned Gender Code (F/M/U) of Beneficiary
Alien_Code	char(1)	True	MEDS-assigned Alien Code of Beneficiary
Date_Death_Posted	date	True	Date Death Posted to MEDS of Deceased Beneficiary
Last_Modified	datetime	True	MEDS-assigned Last Modified Date of Beneficiary Information
Ethnicity_Code	char(1)	True	MEDS-assigned Ethnic Code of Beneficiary
Audit_User	varchar(128)	False	Audit field to denote who was the last user to create / modify the beneficiary record. Can be System User.
Nonmanaged_Beneficiary	bit	True	Flag is '1' when Beneficiary is in Non-Managed Care, otherwise is null when Beneficiary is created through the Capitation Process.

◆ Indexes

The following table describes the indexes on the table TB_BENEFICIARY.

Name	Columns	Unique	Clustered
pkn_TB_BENEFICIARY__Beneficiary_Id	Beneficiary_Id	True	False
ixn_TB_BENEFICIARY_CIN	CIN, Nonmanaged_Beneficiary	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_BENEFICIARY.

Name	Column	Foreign Table	Foreign Column
FK_TB_BENEFICIARY_Beneficiary_Id_TO_TB_BENE_SUPPLEMENTAL_INFO_Beneficiary_Id	Beneficiary_Id	TB_BENE_SUPPLEMENTAL_INFO	Beneficiary_Id
FK_TB_BENEFICIARY_Beneficiary_Id_TO_TB_BENEFICIARY_NONMANAGED_CARE_Beneficiary_Id	Beneficiary_Id	TB_BENEFICIARY_NONMANAGED_CARE	Beneficiary_Id
FK_TB_BENEFICIARY_Beneficiary_Id_TO_TB_BENE_RISK_FACTOR_Beneficiary_Id	Beneficiary_Id	TB_BENE_RISK_FACTOR	Beneficiary_Id
FK_TB_BENEFICIARY_Beneficiary_Id_TO_TB_INVOICE_DETAIL_Beneficiary_Id	Beneficiary_Id	TB_INVOICE_DETAIL	Beneficiary_Id

10.5.10 Table TB_BENEFICIARY_ADJUSTMENT

The TB_BENEFICIARY_ADJUSTMENT table provides for Non-Managed care-related adjustments at the Beneficiary Level.

◆ Properties

The following table describes the table level properties for the table TB_BENEFICIARY_ADJUSTMENT.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_BENEFICIARY_ADJUSTMENT.

Name	Data Type	Allow Nulls	Description
Beneficiary_Adjustment_Id	int identity	False	Unique Key of TB_BENEFICIARY_ADJUSTMENT
Adjustment_Amount	smallmoney	False	Amount of the Adjustment
Adjustment_Reason	varchar(256)	True	The reason for an adjustment
Audit_User	varchar(128)	False	Audit field to denote who was the user to create an adjustment

Name	Data Type	Allow Nulls	Description
Check_Number	varchar(32)	True	Check Number if Adjustment includes a Check
Check_Date	date	True	Date of Check if Adjustment includes a Check
Premium_Payment_From	date	True	For Premium Payments, duration of Premium Payment (From)
Premium_Payment_To	date	True	For Premium Payments, duration of Premium Payment (To)
Beneficiary_Nonmanaged_Care_Id	int	False	Beneficiary Enrollment in Non-Managed Care Identifier

◆ Indexes

The following table describes the indexes on the table TB_BENEFICIARY_ADJUSTMENT.

Name	Columns	Unique	Clustered
pkc_TB_BENEFICIARY_ADJUSTMENT__Beneficiary_Adjustment_Id	Beneficiary_Adjustment_Id	True	True
ixn_TB_BENEFICIARY_ADJUSTMENT__Beneficiary_Nonmanaged_Care_Id	Beneficiary_Nonmanaged_Care_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_BENEFICIARY_ADJUSTMENT.

Name	Column	Foreign Table	Foreign Column
FK_TB_BENEFICIARY_NONMANAGED_CARE__Beneficiary_Nonmanaged_Care_Id_TO_TB_BENEFICIARY_ADJUSTMENT__Beneficiary_Nonmanaged_Care_Id	Beneficiary_Nonmanaged_Care_Id	TB_BENEFICIARY_NONMANAGED_CARE	Beneficiary_Nonmanaged_Care_Id

1. Table TB_BENEFICIARY_NONMANAGED_CARE

The TB_BENEFICIARY_NONMANAGED_CARE table provides supplemental beneficiary information when a Beneficiary is enrolled in Non-Managed Care.

◆ Properties

The following table describes the table level properties for the table TB_BENEFICIARY_NONMANAGED_CARE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_BENEFICIARY_NONMANAGED_CARE.

Name	Data Type	Allow Nulls	Description
Beneficiary_Nonmanaged_Care_Id	int identity	False	Unique Key of TB_BENEFICIARY_NONMANAGED_CARE
Beneficiary_Id	int	False	Non-managed beneficiary that is enrolled in non-managed care
Case_Id	varchar(64)	True	Beneficiary Identification code used by the HIPP unit in their internal case management Access Database. Users will enter Case ID into the 820 Phase 2 system to be used on HIPP, BCCTP and GHPP invoices
Nonmanaged_Program_Type_Id	smallint	False	Name of the non-managed program beneficiary is enrolled in
Case_Status	varchar(32)	False	HIPP, BCCTP and GHPP cases will be active or terminated. The case status determines whether invoices will be generated only for beneficiaries whose case status is 'Active'.
Case_Termination_Date	date	True	Date of case termination for HIPP, BCCTP, and GHPP beneficiaries. After this date, the beneficiary is no longer eligible for HIPP unit payments for beneficiary Premium Payments.
Audit_User	varchar(128)	False	Audit field to denote who was the user to create non-managed beneficiary information.
Policy_Number	varchar(32)	True	The Policy Number of the Beneficiary under Non-Managed care.

◆ Indexes

The following table describes the indexes on the table TB_BENEFICIARY_NONMANAGED_CARE.

Name	Columns	Unique	Clustered
pkc_TB_BENEFICIARY_NONMANAGED_CARE_Beneficiary_Nonmanaged_Care_Id	Beneficiary_Nonmanaged_Care_Id	True	True
ixn_TB_BENEFICIARY_NONMANAGED_CARE_Beneficiary_Id	Beneficiary_Id	True	False
ixn_TB_BENEFICIARY_NONMANAGED_CARE_Nonmanaged_Program_Type_Id	Nonmanaged_Program_Type_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_BENEFICIARY_NONMANAGED_CARE.

Name	Column	Foreign Table	Foreign Column
FK_TB_BENEFICIARY_Beneficiary_Id_TO_TB_BENEFICIARY_NONMANAGED_CARE_Beneficiary_Id	Beneficiary_Id	TB_BENEFICIARY	Beneficiary_Id
FK_TB_NONMANAGED_PROGRAM_TYPE_Nonmanaged_Program_Type_Id_TO_TB_BENEFICIARY_NONMANAGED_CARE_Nonmanaged_Program_Type_Id	Nonmanaged_Program_Type_Id	TB_NONMANAGED_PROGRAM_TYPE	Nonmanaged_Program_Type_Id
FK_TB_BENEFICIARY_NONMANAGED_CARE_Beneficiary_Nonmanaged_Care_Id_TO_TB_NONMANAGED_COVERAGE_Beneficiary_Nonmanaged_Care_Id	Beneficiary_Nonmanaged_Care_Id	TB_NONMANAGED_COVERAGE	Beneficiary_Nonmanaged_Care_Id
FK_TB_BENEFICIARY_NONMANAGED_CARE_Beneficiary_Nonmanaged_Care_Id_TO_TB_BENEFICIARY_ADJUSTMENT_Beneficiary_Nonmanaged_Care_Id	Beneficiary_Nonmanaged_Care_Id	TB_BENEFICIARY_ADJUSTMENT	Beneficiary_Nonmanaged_Care_Id

10.5.11 Table TB_CONTRACT

The TB_CONTRACT table provides high level contract details and contract change history.

◆ Properties

The following table describes the table level properties for the table TB_CONTRACT.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_CONTRACT.

Name	Data Type	Allow Nulls	Description
Contract_Id	int identity	False	Unique Key of TB_CONTRACT

Name	Data Type	Allow Nulls	Description
Contract_Type_Id	smallint	False	The type of the contract for managed care
Contract_Number	varchar(32)	False	The unique number assigned to a contract
Contract_Change_Type_Id	smallint	True	Most Recent Type of Change to a Contract
Contract_Version	int	False	Unique incrementing number assigned per contract number that increments with each contract change
Effective_Date_From	date	False	The effective date of a contract (start date)
Effective_Date_To	Date	False	The effective date of a contract (end date)
Encumbrance_Amount	money	False	An allocation of a set dollar amount towards a contract. Encumbrances may be made via a contract or amendment. (Never via a Change Order).
Audit_User	varchar(128)	False	Audit field to denote who was the user to create / change a contract
Comment	varchar(512)	True	Additional comments for when a comment is created / changed
Amendment_Num	varchar(32)	True	The number assigned to a contract amendment
Change_Order_Num	varchar(32)	True	The number assigned to the contract change order
Index	varchar(32)	True	A number used by DHCS accounting. This must appear on all MMCD and HIPP/BCCTP invoices. For MMCD, this number is entered on the user interface per contract. For HIPP, this number is fixed for all invoices produced by the HIPP unit.
Object	varchar(32)	True	Value entered in contract management (for MMCD) and populated on the invoices. For HIPP, this is a fixed value for all invoices.
PCA	varchar(32)	True	Number included in all MMCD and HIPP invoice headers, used by accounting
Advance_Payment	bit	True	Is an advance payment on this contract
Advance_Date_From	datetime	True	Advance Payment Date Effective From
Advance_Date_To	datetime	True	Advance Payment Date Effective To

Name	Data Type	Allow Nulls	Description
Override_Recoupment_Cutoff	bit	True	Manual override performed in contract management. Overrides the Maximum Recoupment rule and distributes payments over an user-specified recoupment duration.
Recoupment_Duration	varchar(64)	True	The length of time (in months) across which a recovery of funds (recoupment) may be distributed
Policy_Num	varchar(64)	True	Associates a Contract with a Policy Number

◆ Indexes

The following table describes the indexes on the table TB_CONTRACT.

Name	Columns	Unique	Clustered
pkc_TB_CONTRACT__Contract_Id	Contract_Id	True	True
ixn_TB_CONTRACT__Contract_Type_Id	Contract_Type_Id	False	False
ixn_TB_CONTRACT__Contract_Number	Contract_Number	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_CONTRACT.

Name	Column	Foreign Table	Foreign Column
FK_TB_CONTRACT_TYPE__Contract_Type_Id__TO__TB_CONTRACT__Contract_Type_Id	Contract_Type_Id	TB_CONTRACT_TYPE	Contract_Type_Id
FK_TB_CONTRACT__Contract_Id__TO__TB_CONTRACT_PLAN_CODE__Contract_Id	Contract_Id	TB_CONTRACT_PLAN_CODE	Contract_Id
FK_TB_CONTRACT__Contract_Id__TO__TB_CONTRACT_FUNDING__Contract_Id	Contract_Id	TB_CONTRACT_FUNDING	Contract_Id
FK_TB_CONTRACT__Contract_Id__TO__TB_VENDOR_INFO__Contract_Id	Contract_Id	TB_VENDOR_INFO	Contract_Id
FK_TB_CONTRACT_CHANGE_TYPE__Contract_Change_Type_Id__TO__TB_CONTRACT__Contract_Change_Type_Id	Contract_Change_Type_Id	TB_CONTRACT_CHANGE_TYPE	Contract_Change_Type_Id

10.5.12 Table TB_CONTRACT_CHANGE_TYPE

The TB_CONTRACT_CHANGE_TYPE table will enumerate all the possible change types to a contract (Original, Change Order, and Amendment).

◆ Properties

The following table describes the table level properties for the table TB_CONTRACT_CHANGE_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_CONTRACT_CHANGE_TYPE.

Name	Data Type	Allow Nulls	Description
Contract_Change_Type_Id	smallint identity	False	Unique Key of TB_CONTRACT_CHANGE_TYPE
Contract_Change_Type_Name	varchar(64)	False	What is the type of change to the contract

◆ Indexes

The following table describes the indexes on the table TB_CONTRACT_CHANGE_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_CONTRACT_CHANGE_TYPE_Contract_Change_Type_Id	Contract_Change_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_CONTRACT_CHANGE_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_CONTRACT_CHANGE_TYPE_Contract_Change_Type_Id_TB_CONTRACT_Contract_Change_Type_Id	Contract_Change_Type_Id	TB_CONTRACT	Contract_Change_Type_Id

10.5.13 Table TB_CONTRACT_FUNDING

The TB_CONTRACT_FUNDING table provides details of the division of funding within a contract.

◆ Properties

The following table describes the table level properties for the table TB_CONTRACT_FUNDING.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_CONTRACT_FUNDING.

Name	Data Type	Allow Nulls	Description
Contract_Funding_Id	int identity	False	Unique Key of TB_CONTRACT_FUNDING
Contract_Id	int	False	The Contract that has a funding division
Funding_Amount	money	False	The amount that the Payment Type receives from the Contract
Audit_User	varchar(128)	False	Audit field to denote who was the user to create / change contract funding
Contract_Funding_Type_Id	smallint	False	The Entity who is in charge of this particular funding

◆ Indexes

The following table describes the indexes on the table TB_CONTRACT_FUNDING.

Name	Columns	Unique	Clustered
pkc_TB_CONTRACT_FUNDING__Contract_Funding_Id	Contract_Funding_Id	True	True
ixn_TB_CONTRACT_FUNDING__Contract_Id	Contract_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_CONTRACT_FUNDING.

Name	Column	Foreign Table	Foreign Column
FK_TB_CONTRACT__Contract_Id__TO__TB_CONTRACT_FUNDING__Contract_Id	Contract_Id	TB_CONTRACT	Contract_Id

Name	Column	Foreign Table	Foreign Column
FK_TB_CONTRACT_FUNDING_TYPE_Contract_Funding_Type_Id__TO_TB_CONTRACT_FUNDING__Contract_Funding_Type_Id	Contract_Funding_Type_Id	TB_CONTRACT_FUNDING_TYPE	Contract_Funding_Type_Id

10.5.14 Table TB_CONTRACT_FUNDING_TYPE

The TB_CONTRACT_FUNDING_TYPE is a reference table enumerating the funding breakdown of the encumbrance of the contract.

◆ Properties

The following table describes the table level properties for the table TB_CONTRACT_FUNDING.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_CONTRACT_FUNDING.

Name	Data Type	Allow Nulls	Description
Contract_Funding_Id	smallint	False	Unique Key of TB_CONTRACT_FUNDING_TYPE
Contract_Funding_Name	varchar(128)	False	The Name of the Contract Funding Entity

◆ Indexes

The following table describes the indexes on the table TB_CONTRACT_FUNDING.

Name	Columns	Unique	Clustered
pkc_TB_CONTRACT_FUNDING_TYPE_Contract_Funding_Type_Id	Contract_Funding_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_CONTRACT_FUNDING.

Name	Column	Foreign Table	Foreign Column
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Name	Column	Foreign Table	Foreign Column
FK_TB_CONTRACT_FUNDING_TY PE_Contract_Funding_Type_Id__ TO_TB_CONTRACT_FUNDING__ Contract_Funding_Type_Id	Contract_Funding_Type e_Id	TB_CONTRACT_FUN DING	Contract_Funding_Type _Id

10.5.15 Table TB_CONTRACT_PLAN_CODE

The TB_CONTRACT_PLAN_CODE table is a join table that shows the HCP's enrolled within a contract, and any potential waiver eligibility that the HCP might be under.

◆ Properties

The following table describes the table level properties for the table TB_CONTRACT_PLAN_CODE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_CONTRACT_PLAN_CODE.

Name	Data Type	Allow Nulls	Description
Contract_Plan_Code_Id	int identity	False	Unique Key of TB_CONTRACT_PLAN_CODE
Contract_Id	int	False	The contract under which this represents values
Health_Plan_Code_Id	smallint	False	The health care plan enrolled within the contract

◆ Indexes

The following table describes the indexes on the table TB_CONTRACT_PLAN_CODE.

Name	Columns	Unique	Clustered
pkc_TB_CONTRACT_PLAN_CODE__Contract _Plan_Code_Id	Contract_Plan_Code_Id	True	True
ixn_TB_CONTRACT_PLAN_CODE__Contract _Id_Health_Care_Plan_Type_Id	Contract_Id, Health_Care_Plan_Type_ Id	True	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_CONTRACT_PLAN_CODE.

Name	Column	Foreign Table	Foreign Column
FK_TB_HEALTH_CARE_PLAN_TY PE_Health_Care_Plan_Type_Id_ TO_TB_CONTRACT_PLAN_CODE _Health_Care_Plan_Type_Id	Health_Care_Plan_Ty pe_Id	TB_HEALTH_CARE_ PLAN_TYPE	Health_Care_Plan_Typ e_Id
FK_TB_CONTRACT_Contract_Id_ TO_TB_CONTRACT_PLAN_COD E_Contract_Id	Contract_Id	TB_CONTRACT	Contract_Id
FK_TB_CONTRACT_PLAN_CODE_ _Contract_Plan_Code_Id_TO_TB _AID_CODE_GROUP_Contract_Pi an_Code_Id	Contract_Plan_Code_I d	TB_AID_CODE_GRO UP	Contract_Plan_Code_Id
FK_TB_CONTRACT_PLAN_CODE_ _Contract_Plan_Code_Id_TO_TB _CONTRACT_PLAN_SUPPLEMEN TAL_INFO_Contract_Plan_Code_I d	Contract_Plan_Code_I d	TB_CONTRACT_PLA N_SUPPLEMENTAL_I NFO	Contract_Plan_Code_Id
FK_TB_CONTRACT_PLAN_CODE_ _Contract_Plan_Code_Id_TO_TB _ADJUSTMENT_Contract_Plan_C ode_Id	Contract_Plan_Code_I d	TB_ADJUSTMENT	Contract_Plan_Code_Id

10.5.16 Table TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO

The TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO table is the join table showing Contract-Health Plan Eligibility for Supplemental Aid and the accompanying rates.

◆ Properties

The following table describes the table level properties for the table TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO.

Name	Data Type	Allow Nulls	Description
Contract_Plan_Supplem ental_Info_Id	int identity	False	Unique Key of TB_CONTRACT_PLAN_SUPPLE MENTAL_INFO

Name	Data Type	Allow Nulls	Description
Supplemental_Aid_Type_Id	smallint	False	Supplemental Aid eligible under contract
Contract_Plan_Code_Id	int	False	Contract / HCP eligible for supplemental aid
Payment_Type_Id	smallint	False	Payment Type under which rates fall
Effective_Date_From	date	False	Beginning Effective Date of Supplemental Eligibility
Effective_Date_To	date	False	End Effective Date of Supplemental Eligibility
Rate	smallmoney	False	Rate charged for Supplemental Program

◆ Indexes

The following table describes the indexes on the table TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO.

Name	Columns	Unique	Clustered
pkc_TB_ADJUSTMENT_Adjustment_Id	Adjustment_Id	True	True
ixn_TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO_Supplemental_Aid_Type_Id	Supplemental_Aid_Type_Id	False	False
ixn_TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO_Contract_Plan_Code_Id	Contract_Plan_Code_Id	False	False
ixn_TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO_Payment_Type_Id	Payment_Type_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO.

Name	Column	Foreign Table	Foreign Column
FK_TB_SUPPLEMENTAL_AID_TYPE_Supplemental_Aid_Type_Id_TO_TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO_Supplemental_Aid_Type_Id	Supplemental_Aid_Type_Id	TB_SUPPLEMENTAL_AID_TYPE	Supplemental_Aid_Type_Id
FK_TB_CONTRACT_PLAN_CODE_Contract_Plan_Code_Id_TO_TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO_Contract_Plan_Code_Id	Contract_Plan_Code_Id	TB_CONTRACT_PLAN_CODE	Contract_Plan_Code_Id
TB_PAYMENT_TYPE_Payment_Type_Id_TO_TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO_Payment_Type_Id	Payment_Type_Id	TB_PAYMENT_TYPE	Payment_Type_Id

2. Table TB_CONTRACT_TYPE

The TB_CONTRACT_TYPE table provides reference details as to what is the type of the contract.

◆ Properties

The following table describes the table level properties for the table TB_CONTRACT_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_CONTRACT_TYPE.

Name	Data Type	Allow Nulls	Description
Contract_Type_Id	int	False	Unique Key of TB_CONTRACT_TYPE
Contract_Type_Name	varchar(128)	False	Description Details of the Contract Name

◆ Indexes

The following table describes the indexes on the table TB_CONTRACT_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_CONTRACT_TYPE__Contract_Type_Id	Contract_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_CONTRACT_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_CONTRACT_TYPE__Contract_Type_Id__TO__TB_CONTRACT__Contract_Type_Id	Contract_Type_Id	TB_CONTRACT	Contract_Type_Id
FK_TB_CONTRACT_TYPE__Contract_Type_Id__TO__TB_INVOICE_TYPE__Contract_Type_Id	Contract_Type_Id	TB_INVOICE_TYPE	Contract_Type_Id

3. Table TB_COUNTY_CODE_TYPE

The TB_COUNTY_CODE_TYPE table provides reference details of county code numbers and the counties given each number.

◆ Properties

The following table describes the table level properties for the table TB_COUNTY_CODE_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_COUNTY_CODE_TYPE.

Name	Data Type	Allow Nulls	Description
County_Code_Type_Id	smallint	False	Unique Key of TB_COUNTY_CODE_TYPE
County_Code	char(2)	False	Two-Digit Number that uniquely identifies a county
County_Name	varchar(32)	False	Name of a County in California

◆ Indexes

The following table describes the indexes on the table TB_COUNTY_CODE_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_COUNTY_CODE_TYPE__County_Code_Type_Id	County_Code_Type_Id	True	True
ixn_TB_COUNTY_CODE_TYPE__County_Code	County_Code	True	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_COUNTY_CODE_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_COUNTY_CODE_TYPE__County_Code_Type_Id_TO_TB_HEALTH_CARE_PLAN_TYPE__County_Code_Type_Id	County_Code_Type_Id	TB_HEALTH_CARE_PLAN_TYPE	County_Code_Type_Id

10.5.17 Table TB_DATABASE_UPDATE_SCRIPT

The TB_DATABASE_UPDATE_SCRIPT table is a table required by ITSD to audit DML and DDL Changes to the OHC820 Database.

◆ Properties

The following table describes the table level properties for the table TB_DATABASE_UPDATE_SCRIPT.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_DATABASE_UPDATE_SCRIPT.

Name	Data Type	Allow Nulls	Description
Database_Update_Script_Id	int identity	False	Unique Key of TB_DATABASE_UPDATE_SCRIPT
Applied_Date_Time	datetime	False	Time of Script Update
Script_Name	varchar(900)	False	Name of Script Deployed
Long_Description	varchar(2000)	False	Long Description details of database update script deployed

◆ Indexes

The following table describes the indexes on the table TB_DATABASE_UPDATE_SCRIPT.

Name	Columns	Unique	Clustered
pkc_TB_DATABASE_UPDATE_SCRIPT__Database_Update_Script_Id	Database_Update_Script_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_DATABASE_UPDATE_SCRIPT.

Name	Column	Foreign Table	Foreign Column

4. Table TB_ETHNICITY_CODE_TYPE

The TB_ETHNICITY_CODE_TYPE table is a reference table enumerating all valid ethnicity codes that come from the MEDS system.

◆ Properties

The following table describes the table level properties for the table TB_ETHNICITY_CODE_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_ETHNICITY_CODE_TYPE.

Name	Data Type	Allow Nulls	Description
Ethnicity_Code	char(1)	False	Single Character Code that Uniquely Identifies an Ethnicity Code
Ethnicity_Code_Name	varchar(128)	False	Description of the Ethnicity Code quoted from MEDS Manual

◆ Indexes

The following table describes the indexes on the table TB_ETHNICITY_CODE_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_ETHNICITY_CODE_TYPE__Ethnicity_Code	Ethnicity_Code	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_ETHNICITY_CODE_TYPE.

Name	Column	Foreign Table	Foreign Column

10.5.18 Table TB_FUNDING_TYPE

The TB_FUNDING_TYPE table is a reference table that will show additional funding breakdowns per aid code groups.

◆ Properties

The following table describes the table level properties for the table TB_FUNDING_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_FUNDING_TYPE.

Name	Data Type	Allow Nulls	Description
Funding_Type_Id	smallint	False	Unique Key of TB_FUNDING_TYPE
Funding_Type	varchar(64)	False	Name of the Funding Type
SGF_Percentage	decimal(6,3)	False	State General Funding Percentage Breakdown
FFP_Percentage	decimal(6,3)	False	Federal Funding Participation Percentage Breakdown
Additional_Funding_Percentage	decimal(6,3)	True	Additional Federal Funding beyond FFP Percentage

◆ Indexes

The following table describes the indexes on the table TB_FUNDING_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_FUNDING_TYPE__Funding_Type_Id	Funding_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_FUNDING_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_FUNDING_TYPE__Funding_Type_Id__TO__TB_AID_CODE_TYPE__Funding_Type_Id	Funding_Type_Id	TB_AID_CODE_TYPE	Funding_Type_Id

10.5.19 Table TB_GENDER_CODE_TYPE

The TB_GENDER_CODE_TYPE table is a reference table to hold all possible Gender Codes from MEDS.

◆ Properties

The following table describes the table level properties for the table TB_ETHNICITY_CODE_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_ETHNICITY_CODE_TYPE.

Name	Data Type	Allow Nulls	Description
Gender_Code	char(1)	False	Single Character Code that defines a gender
Gender_Code_Name	varchar(128)	False	Description of the Gender Code quoted from MEDS Manual

◆ Indexes

The following table describes the indexes on the table TB_GENDER_CODE_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_GENDER_CODE_TYPE__Gender_Code	Gender_Code	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_GENDER_CODE_TYPE.

Name	Column	Foreign Table	Foreign Column

10.5.20 Table TB_HEALTH_CARE_PLAN_TYPE

The TB_HEALTH_CARE_PLAN_TYPE table is a reference table that will store all Health Care Plan (HCP) numbers and names, and additional reference information about the HCP.

◆ Properties

The following table describes the table level properties for the table TB_HEALTH_CARE_PLAN_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_HEALTH_CARE_PLAN_TYPE.

Name	Data Type	Allow Nulls	Description
Health_Care_Plan_Type_Id	smallint	False	Unique Key of TB_HEALTH_CARE_PLAN_TYPE
County_Code_Type_Id	smallint	False	County in which HCP is located
Health_Care_Plan_Code	char(3)	False	A Unique three-digit number representing a Health Care Plan
Health_Care_PlanName	varchar(128)	False	Name of the HCP
Vendor_Type_Id	smallint	False	Managed Care Plan name of the HCP
Model_Type_Id	smallint	False	Model Type of the HCP
Notes	varchar(255)	True	Additional HCP-level notes

◆ Indexes

The following table describes the indexes on the table TB_HEALTH_CARE_PLAN_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_HEALTH_CARE_PLAN_TYPE_Health_Care_Plan_Type_Id	Health_Care_Plan_Type_Id	True	True
ixn_TB_HEALTH_CARE_PLAN_TYPE_Health_Care_Plan_Code	Health_Care_Plan_Code	True	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_HEALTH_CARE_PLAN_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_COUNTY_CODE_TYPE_County_Code_Type_Id_TO_TB_HEALTH_CARE_PLAN_TYPE_County_Code_Type_Id	County_Code_Type_Id	TB_COUNTY_CODE_TYPE	County_Code_Type_Id

Name	Column	Foreign Table	Foreign Column
FK_TB_VENDOR_TYPE_Vendor_Type_Id_TO_TB_HEALTH_CARE_PLAN_TYPE_Vendor_Type_Id	Vendor_Type_Id	TB_VENDOR_TYPE	Vendor_Type_Id
FK_TB_MODEL_TYPE_Model_Type_Id_TO_TB_HEALTH_CARE_PLAN_TYPE_Model_Type_Id	Model_Type_Id	TB_MODEL_TYPE	Model_Type_Id
FK_TB_HEALTH_CARE_PLAN_TYPE_Health_Care_Plan_Type_Id_TO_TB_WAIVER_TYPE_Health_Care_Plan_Type_Id	Health_Care_Plan_Type_Id	TB_WAIVER_TYPE	Health_Care_Plan_Type_Id
FK_TB_HEALTH_CARE_PLAN_TYPE_Health_Care_Plan_Type_Id_TO_TB_CONTRACT_PLAN_CODE_Health_Care_Plan_Type_Id	Health_Care_Plan_Type_Id	TB_CONTRACT_PLAN_CODE	Health_Care_Plan_Type_Id
FK_TB_HEALTH_CARE_PLAN_TYPE_Health_Care_Plan_Type_Id_TO_TB_INVOICE_DETAIL_Health_Care_Plan_Type_Id	Health_Care_Plan_Type_Id	TB_VOICE_DETAIL	Health_Care_Plan_Type_Id

10.5.21 Table TB_INVOICE

The TB_INVOICE table holds all invoice information, a physical copy of the invoice, and all invoice-related information received in the CMS64 and CD102 files.

◆ Properties

The following table describes the table level properties for the table TB_INVOICE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_INVOICE.

Name	Data Type	Allow Nulls	Description
Invoice_Id	int identity	False	Unique Key of TB_INVOICE
Invoice_Number	bigint	True	Unique, system-generated consecutive number of the approved invoice
Creation_Date	datetime	False	Timestamp invoice was created
Capitation_Month	date	False	Capitation Day and Month of the Invoice

Name	Data Type	Allow Nulls	Description
Invoice_Amount	money	True	Actual Amount on the Finalized Invoice
Invoice_Archive_Location	varchar(1024)	True	Name / Path to the location of the Archived Invoice
Payment_Date	datetime	True	Date Invoice was paid (from CMS64)
Fiscal_Year	varchar(9)	True	Fiscal Year of Payment (from CMS64)
Sequence_Number	varchar(16)	True	CMS64 Sequence Number of the Invoice
Claim_Schedule_Number	varchar(20)	True	Claim Schedule Number assigned to the invoice from accounting (from CMS64)
Warrant_Id	int	True	Check Warrant Number from CD102 File to the Invoice
Invoice_Type_Id	smallint	False	The type of the invoice
Contract_Plan_Code_Id	int	False	The contract details under which this invoice falls
Warrant_Number	bigint	True	Calculated Warrant Number to the Invoice

◆ Indexes

The following table describes the indexes on the table TB_INVOICE.

Name	Columns	Unique	Clustered
pkc_TB_INVOICE__Invoice_Id	Invoice_Id	True	True
ixn_TB_INVOICE__Warrant_Id	Warrant_Id	False	False
ixn_TB_INVOICE__Invoice_Number	Invoice_Number	False	False
ixn_TB_INVOICE__Claim_Schedule_Number	Claim_Schedule_Number	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_INVOICE.

Name	Column	Foreign Table	Foreign Column
FK_TB_INVOICE_TYPE__Invoice_Type_Id_TO_TB_INVOICE__Invoice_Type_Id	Invoice_Type_Id	TB_INVOICE_TYPE	Invoice_Type_Id
FK_TB_WARRANT__Warrant_Id_TO_TB_INVOICE__Warrant_Id	Warrant_Id	TB_WARRANT	Warrant_Id
FK_TB_INVOICE__Invoice_Id_TO_TB_INVOICE_STATUS__Invoice_Id	Invoice_Id	TB_INVOICE_STATUS	Invoice_Id

Name	Column	Foreign Table	Foreign Column
FK_TB_INVOICE_Invoice_Id_TO_TB_INVOICE_DETAILS_Invoice_Id	Invoice_Id	TB_INVOICE_DETAILS	Invoice_Id
FK_TB_CONTRACT_PLAN_CODE_Contract_Plan_Code_Id_TO_TB_INVOICE_Contract_Plan_Code_Id	Contract_Plan_Code_Id	TB_CONTRACT_PLAN_CODE	Contract_Plan_Code_Id

10.5.22 Table TB_INVOICE_CHANGE_TYPE

The TB_INVOICE_CHANGE_TYPE table is a reference Table to hold all possible values for change type in the TB_INVOICE_DETAIL Table.

◆ Properties

The following table describes the table level properties for the table TB_INVOICE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	Dbo

◆ Columns

The following table describes the columns in the table TB_INVOICE_CHANGE_TYPE.

Name	Data Type	Allow Nulls	Description
Change_Type	char(1)	False	Single Character Key that uniquely defines TB_INVOICE_CHANGE_TYPE
Change_Type_Name	varchar(128)	False	Description of Invoice Change

◆ Indexes

The following table describes the indexes on the table TB_INVOICE_CHANGE_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_INVOICE_CHANGE_TYPE_Change_Type	Change_Type	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_INVOICE_CHANGE_TYPE.

Name	Column	Foreign Table	Foreign Column

10.5.23 Table TB_INVOICE_DETAIL

The TB_INVOICE_DETAIL table holds all monthly beneficiary capitation data and all resulting invoice payment details.

◆ Properties

The following table describes the table level properties for the table TB_INVOICE_DETAIL.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_INVOICE_DETAIL.

Name	Data Type	Allow Nulls	Description
Beneficiary_Id	int	False	Beneficiary for which these invoice details apply
Invoice_Id	int	False	Invoice under which beneficiary is paid
Service_Month	date	False	The month of service in which these changes are effective
Aid_Code_Group_Type_Id	smallint	False	Aid code group under which beneficiary is eligible
Aid_Code_Type_Id	int	False	Aid code under which beneficiary is eligible
Health_Care_Plan_Type_Id	int	False	Health Care Plan under which beneficiary is enrolled
Amount	smallmoney	False	Amount to be Paid to Beneficiary in Capitation Period
Rate	smallmoney	False	Rate at which Beneficiary is paid in capitation period
Change_Type	char(1)	False	Change Type is Enumerated Value to say Invoice Change Type ('N' for New Month, 'R' for Rate Change, 'E' for Elig Change)

◆ Indexes

The following table describes the indexes on the table TB_INVOICE_DETAIL.

Name	Columns	Unique	Clustered
pkc_TB_INVOICE_DETAIL_Beneficiary_Id_Invoice_Id_Change_Type_Effective_Month	Beneficiary_Id, Invoice_Id, Change_Type, Effective_Month	True	True
ixn_TB_INVOICE_DETAIL_Aid_Code_Group_Type_Id	Aid_Code_Group_Type_Id	False	False
ixn_TB_INVOICE_DETAIL_Aid_Code_Type_Id	Aid_Code_Type_Id	False	False
ixn_TB_INVOICE_DETAIL_Effective_Month	Effective_Month	False	False
ixn_TB_INVOICE_DETAIL_Health_Care_Plan_Type_Id	Health_Care_Plan_Type_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_INVOICE_DETAIL.

Name	Column	Foreign Table	Foreign Column
FK_TB_INVOICE_Invoice_Id_TO_TB_INVOICE_DETAILS_Invoice_Id	Invoice_Id	TB_INVOICE	Invoice_Id
FK_TB_AID_CODE_TYPE_Aid Code_Type_Id_TO_TB_INVOICE_DETAIL_Aid_Code_Type_Id	Aid_Code_Type_Id	TB_AID_CODE_TYPE	Aid_Code_Type_Id
FK_TB_AID_CODE_GROUP_TYPE_Aid_Code_Group_Type_Id_TO_TB_INVOICE_DETAIL_Aid_Code_Group_Type_Id	Aid_Code_Group_Type_Id	TB_AID_CODE_GROUP_TYPE	Aid_Code_Group_Type_Id
FK_TB_HEALTH_CARE_PLAN_TYPE_Health_Care_Plan_Type_Id_TO_TB_INVOICE_DETAIL_Health_Care_Plan_Type_Id	Health_Care_Plan_Type_Id	TB_HEALTH_CARE_PLAN_TYPE_ID	Health_Care_Plan_Type_Id
FK_TB_BENEFICIARY_Beneficiary_Id_TO_TB_INVOICE_DETAIL_Beneficiary_Id	Beneficiary_Id	TB_BENEFICIARY	Beneficiary_Id
FK_TB_PAYMENT_TYPE_Payment_Type_Id_TO_TB_INVOICE_DETAILS_Payment_Type_Id	TB_PAYMENT_TYPE	Payment_Type_Id	TB_PAYMENT_TYPE

10.5.24 Table TB_INVOICE_STATUS

The TB_INVOICE_STATUS table will hold the status lifecycle of all invoices processed.

◆ Properties

The following table describes the table level properties for the table TB_INVOICE_STATUS.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_INVOICE_STATUS.

Name	Data Type	Allow Nulls	Description
Invoice_Status_Id	int identity	False	Unique Key of TB_INVOICE_STATUS
Invoice_Id	int	False	Invoice receiving the status
Status_Date	datetime	False	Timestamp of the invoice status
Audit_User	varchar(128)	False	Audit field to denote who was the last user to create invoice status. Can be System User.
Status_Type_Id	smallint	False	Status of the Invoice
Comments	varchar(1024)	True	Additional Comments on the Invoice Status

◆ Indexes

The following table describes the indexes on the table TB_INVOICE_STATUS.

Name	Columns	Unique	Clustered
pkc_TB_INVOICE_STATUS__Invoice_Status_Id	Invoice_Status_Id	True	True
ixn_TB_INVOICE_STATUS__Invoice_Id_Status_Type_Id	Invoice_Id, Status_Type_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_INVOICE_STATUS.

Name	Column	Foreign Table	Foreign Column
FK_TB_INVOICE__Invoice_Id_TO__TB_INVOICE_STATUS__Invoice_Id	Invoice_Id	TB_INVOICE	Invoice_Id
FK_TB_STATUS_TYPE__Status_Type_Id_TO__TB_INVOICE_STATUS__Status_Type_Id	Status_Type_Id	TB_STATUS_TYPE	Status_Type_Id

10.5.25 Table TB_INVOICE_TYPE

The TB_INVOICE_TYPE table contains the various possible reference types of invoices.

◆ Properties

The following table describes the table level properties for the table TB_INVOICE_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_INVOICE_TYPE.

Name	Data Type	Allow Nulls	Description
Invoice_Type_Id	smallint	False	Unique Key of TB_INVOICE_TYPE
Invoice_Type_Name	varchar(128)	False	Synonymous with Payment Type. An invoice is generated per contract, per HCP, per State Fiscal Year, and per Payment Type.
Contract_Type_Id	smallint	False	The Invoice's Contract Type
Payment_Type_Id	smallint	False	The Payment Method Used for the invoice
Supplemental_Aid_Type_Id	smallint	True	The Supplemental Aid Type of the Invoice for Supplemental Invoices
Healthy_Families_Type	bit	False	Flag to determine if Invoice is a Healthy-Family Specific Invoice
Nonmanaged_Program_Type_Id	smallint	True	Name of Nonmanaged Care Program for Nonmanaged Invoices
Single_Beneficiary_Invoice_Type	bit	False	For Nonmanaged Care Invoices, Flag to determine if Invoice is to a Single Beneficiary

◆ Indexes

The following table describes the indexes on the table TB_INVOICE_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_INVOICE_TYPE__Invoice_Type_Id	Invoice_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_INVOICE_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_INVOICE_TYPE_Invoice_Type_Id_TO_TB_INVOICE_Invoice_Type_Id	Invoice_Type_Id	TB_INVOICE	Invoice_Type_Id
FK_TB_CONTRACT_TYPE_Contract_Type_Id_TO_TB_INVOICE_TYPE_Contract_Type_Id	Contract_Type_Id	TB_CONTRACT_TYPE	Contract_Type_Id
FK_TB_SUPPLEMENTAL_AID_TYPE_Supplemental_Aid_Type_Id_TO_TB_INVOICE_TYPE_Supplemental_Aid_Type_Id	Supplemental_Aid_Type_Id	TB_SUPPLEMENTAL_AID_TYPE	Supplemental_Aid_Type_Id
FK_TB_INVOICE_TYPE_Invoice_Type_Id_TO_TB_ADJUSTMENT_Invoice_Type_Id	Invoice_Type_Id	TB_ADJUSTMENT	Invoice_Type_Id
FK_TB_PAYMENT_TYPE_Payment_Type_Id_TO_TB_INVOICE_TYPE_Payment_Type_Id	Payment_Type_Id	TB_PAYMENT_TYPE	Payment_Type_Id
FK_TB_NONMANAGED_PROGRAM_TYPE_Nonmanaged_Program_Type_Id_TO_TB_INVOICE_TYPE_Nonmanaged_Program_Type_Id	Nonmanaged_Program_Type_Id	TB_NONMANAGED_PROGRAM_TYPE	Nonmanaged_Program_Type_Id

10.5.26 Table TB_MODEL_TYPE

The TB_MODEL_TYPE is a reference table to hold details about the Model / Sub-Model Type of a HCP. If a HCP has both a model and a sub-model, the FK constraint will be from TB_HEALTH_CARE_PLAN_TYPE to TB_MODEL_TYPE for the sub-model, then the sub-model will have a self-referential FK constraint to a parent model type.

◆ Properties

The following table describes the table level properties for the table TB_MODEL_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_MODEL_TYPE.

Name	Data Type	Allow Nulls	Description
Model_Type_Id	smallint	False	Unique Key of TB_MODEL_TYPE

Name	Data Type	Allow Nulls	Description
Model_Name	varchar(128)	False	Name of the Model/Sub-Model Type
Dental_Flag	bit	False	For dental models and sub-models, this flag is '1', else this flag is '0'
Primary_Model_Type_Id	smallint	True	If entry is a sub-model type, this value will refer to the Model_Type_Id of the regular Model Type

◆ Indexes

The following table describes the indexes on the table TB_MODEL_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_MODEL_TYPE__Model_Type_Id	Model_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_MODEL_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_MODEL_TYPE__Primary_Model_Type_Id_TO_TB_MODEL_TYPE__Model_Type_Id	Primary_Model_Type_Id	TB_MODEL_TYPE	Model_Type_Id
FK_TB_MODEL_TYPE__Model_Type_Id_TO_TB_HEALTH_CARE_PLAN_TYPE__Model_Type_Id	Model_Type_Id	TB_HEALTH_CARE_PLAN_TYPE	Model_Type_Id

10.5.27 Table TB_NONMANAGED_COVERAGE

The TB_NONMANAGED_COVERAGE gives coverage information for beneficiaries enrolled in a non-managed care program.

◆ Properties

The following table describes the table level properties for the table TB_NONMANAGED_COVERAGE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_NONMANAGED_COVERAGE.

Name	Data Type	Allow Nulls	Description
Nonmanaged_Coverage_Id	int identity	False	Unique Key of TB_NONMANAGED_COVERAGE
Vendor_Info_Id	int	False	Vendor who is responsible for the non-managed coverage
Beneficiary_Nonmanaged_Care_Id	int	False	Beneficiary who is enrolled in the non-managed plan
Nonmanaged_Coverage_Type_Id	smallint	False	The type of non-managed coverage – Medical, Dental, or Vision
Group_Number	varchar(32)	True	Insurance Group Number
Policy_Number	varchar(32)	True	The policy number of the beneficiary enrolled in non-managed care coverage
Policy_Start_Date	date	True	The date on which a beneficiary's insurance policy becomes effective. A beneficiary's policy must be effective in order for a premium payment to be made.
Policy_Stop_Date	date	True	The final date on which a beneficiary's insurance policy is effective. A beneficiary's policy must be effective in order for a premium payment to be made.
Premium_Due_Date	date	True	The Date when a beneficiary's Premium Payment is due
Premium_Amount	money	True	The Payment Amount due per a beneficiary's insurance policy
Payment_Frequency	varchar(32)	True	Used to determine how often the payment will be made
Monthly_Premium_Amount	money	True	System calculates monthly payment amount based on Premium Amount and Payment Frequency

◆ Indexes

The following table describes the indexes on the table TB_NONMANAGED_COVERAGE.

Name	Columns	Unique	Clustered
pkc_TB_NONMANAGED_COVERAGE_Nonmanaged_Coverage_Id	Nonmanaged_Coverage_Id	True	True
ixn_TB_NONMANAGED_COVERAGE_Vendor_Info_Id	Vendor_Info_Id	False	False
ixn_TB_NONMANAGED_COVERAGE_Beneficiary_Nonmanaged_Care_Id	Beneficiary_Nonmanaged_Care_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_NONMANAGED_COVERAGE.

Name	Column	Foreign Table	Foreign Column
FK_TB_BENEFICIARY_NONMANAGED_CARE_Beneficiary_Nonmanaged_Care_Id_TO_TB_NONMANAGED_COVERAGE_Beneficiary_Nonmanaged_Care_Id	Beneficiary_Nonmanaged_Care_Id	TB_BENEFICIARY_NONMANAGED_CARE	Beneficiary_Nonmanaged_Care_Id
FK_TB_NONMANAGED_COVERAGE_TYPE_Nonmanaged_Coverage_Type_Id_TO_TB_NONMANAGED_COVERAGE_Nonmanaged_Coverage_Type_Id	Nonmanaged_Coverage_Type_Id	TB_NONMANAGED_COVERAGE_TYPE	Nonmanaged_Coverage_Type_Id
FK_TB_VENDOR_INFO_Vendor_Info_Id_TO_TB_NONMANAGED_COVERAGE_Vendor_Info_Id	Vendor_Info_Id	TB_VENDOR_INFO	Vendor_Info_Id

10.5.28 Table TB_NONMANAGED_COVERAGE_TYPE

The TB_NONMANAGED_COVERAGE_TYPE is a small reference table to hold all the non-managed care coverage types.

◆ Properties

The following table describes the table level properties for the table TB_NONMANAGED_COVERAGE_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_NONMANAGED_COVERAGE_TYPE.

Name	Data Type	Allow Nulls	Description
Nonmanaged_Coverage_Type_Id	smallint	False	Unique Key of TB_NONMANAGED_COVERAGE_TYPE
Coverage_Name	varchar(64)	False	Name of the Coverage (Medical, Dental, or Vision)

◆ Indexes

The following table describes the indexes on the table TB_NONMANAGED_COVERAGE_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_NONMANAGED_COVERAGE_TYPE_Nonmanaged_Coverage_Type_Id	Nonmanaged_Coverage_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_NONMANAGED_COVERAGE_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_NONMANAGED_COVERAGE_TYPE_Nonmanaged_Coverage_Type_Id_TO_TB_NONMANAGED_COVERAGE_Nonmanaged_Coverage_Type_Id	Nonmanaged_Coverage_Type_Id	TB_NONMANAGED_COVERAGE	Nonmanaged_Coverage_Type_Id
FK_TB_NONMANAGED_COVERAGE_TYPE_Nonmanaged_Coverage_Type_Id_TO_TB_NONMANAGED_VENDOR_COVERAGE_Nonmanaged_Coverage_Type_Id	Nonmanaged_Coverage_Type_Id	TB_NONMANAGED_VENDOR_COVERAGE	Nonmanaged_Coverage_Type_Id

10.5.29 Table TB_NONMANAGED_PROGRAM_TYPE

The TB_NONMANAGED_PROGRAM_TYPE is a reference table to hold the names of the non-managed care program types (HIPP / BCCTP).

◆ Properties

The following table describes the table level properties for the table TB_NONMANAGED_PROGRAM_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_NONMANAGED_PROGRAM_TYPE.

Name	Data Type	Allow Nulls	Description
Nonmanaged_Program_Type_Id	smallint	False	Unique Key of TB_NONMANAGED_PROGRAM_TYPE

Name	Data Type	Allow Nulls	Description
Nonmanaged_Program_Name	varchar(128)	False	Name of the Non-managed care program

◆ Indexes

The following table describes the indexes on the table TB_NONMANAGED_PROGRAM_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_NONMANAGED_PROGRAM_TYPE__Nonmanaged_Program_Type_Id	Nonmanaged_Program_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_NONMANAGED_PROGRAM_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_NONMANAGED_PROGRA M_TYPE_Nonmanaged_Program Type_Id_TO_TB_BENEFICIARY_ NONMANAGED_CARE_Nonmana ged_Program_Type_Id	Nonmanaged_Program_Type_Id	TB_BENEFICIARY_N ONMANAGED_CARE	Nonmanaged_Program_Type_Id
FK_TB_NONMANAGED_PROGRA M_TYPE_Nonmanaged_Program Type_Id_TO_TB_INVOICE_TYPE _Nonmanaged_Program_Type_Id	Nonmanaged_Program_Type_Id	TB_NONMANAGED_ PROGRAM_TYPE	Nonmanaged_Program_Type_Id

10.5.30 Table TB_NONMANAGED_VENDOR_COVERAGE

The TB_NONMANAGED_VENDOR_COVERAGE table is a join table to establish the eligibility of coverage types for Non-Managed Care Vendors.

◆ Properties

The following table describes the table level properties for the table TB_NONMANAGED_VENDOR_COVERAGE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_NONMANAGED_VENDOR_COVERAGE.

Name	Data Type	Allow Nulls	Description
Nonmanaged_Coverage_Type_Id	smallint	False	Partial Unique Key referencing the Non-managed Coverage Type Reference Table
Vendor_Info_Id	int	False	Partial Unique Key referencing the Vendor Info Table

◆ Indexes

The following table describes the indexes on the table TB_NONMANAGED_VENDOR_COVERAGE.

Name	Columns	Unique	Clustered
pkc_TB_NONMANAGED_VENDOR_COVERAGE__Nonmanaged_Coverage_Type_Id__Vendor_Info_Id	Nonmanaged_Coverage_Type_Id, Vendor_Info_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_NONMANAGED_VENDOR_COVERAGE.

Name	Column	Foreign Table	Foreign Column
FK_TB_NONMANAGED_COVERAGE_TYPE__Nonmanaged_Coverage_Type_Id__TO__TB_NONMANAGED_VENDOR_COVERAGE__Nonmanaged_Coverage_Type_Id	Nonmanaged_Coverage_Type_Id	TB_NONMANAGED_COVERAGE_TYPE	Nonmanaged_Coverage_Type_Id
FK_TB_VENDOR_INFO__Vendor_Info_Id__TO__TB_NONMANAGED_VENDOR_COVERAGE__Nonmanaged_Vendor_Coverage_Id	Vendor_Info_Id	TB_VENDOR_INFO	Vendor_Info_Id

10.5.31 Table TB_PAYMENT_TYPE

The TB_PAYMENT_TYPE table is a reference table responsible for holding all the various types of payment types possible.

◆ Properties

The following table describes the table level properties for the table TB_PAYMENT_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_PAYMENT_TYPE.

Name	Data Type	Allow Nulls	Description
Payment_Type_Id	smallint	False	Unique Key of TB_PAYMENT_TYPE
Payment_Type	varchar(64)	False	The method use to pay a plan , distinguished by multiple factors, including funding sources, number of months included, and type of eligibility

◆ Indexes

The following table describes the indexes on the table TB_PAYMENT_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_PAYMENT_TYPE_Payment_Type_Id	Payment_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_PAYMENT_TYPE.

Name	Column	Foreign Table	Foreign Column
TB_PAYMENT_TYPE_Payment_Type_Id_TO_TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO_Payment_Type_Id	Payment_Type_Id	TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO	Payment_Type_Id
FK_TB_PAYMENT_TYPE_Payment_Type_Id_TO_TB_PLAN_CODE_ON_PAYMENT_TYPE_Payment_Type_Id	Payment_Type_Id	TB_PLAN_CODE_ON_PAYMENT_TYPE	Payment_Type_Id
FK_TB_PAYMENT_TYPE_Payment_Type_Id_TO_TB_INVOICE_TYPE_Payment_Type_Id	Payment_Type_Id	TB_INVOICE_TYPE	Payment_Type_Id
FK_TB_PAYMENT_TYPE_Payment_Type_Id_TO_TB_INVOICE_DETAILS_Payment_Type_Id	Payment_Type_Id	TB_INVOICE_DETAILS	Payment_Type_Id

10.5.32 Table TB_PLAN_CODE_ON_PAYMENT_TYPE

The TB_PLAN_CODE_ON_PAYMENT_TYPE is a join table showing eligibility and rates for aid code groups on payment types.

◆ Properties

The following table describes the table level properties for the table TB_PLAN_CODE_ON_PAYMENT_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_PLAN_CODE_ON_PAYMENT_TYPE.

Name	Data Type	Allow Nulls	Description
Plan_Code_On_Payment_Type_Id	int identity	False	Unique Key of TB_PLAN_CODE_ON_PAYMENT_TYPE
Aid_Code_Group_Id	int	False	The Aid Code Group for a defined contract
Payment_Type_Id	smallint	False	The payment type receiving this rate
Rate	smallmoney	False	The rate to be paid for this aid code group on this contract

◆ Indexes

The following table describes the indexes on the table TB_PLAN_CODE_ON_PAYMENT_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_PLAN_CODE_ON_PAYMENT_TYPE_Plan_Code_On_Payment_Type_Id	Plan_Code_On_Payment_Type_Id	True	True
ixn_TB_PLAN_CODE_ON_PAYMENT_TYPE_Aid_Code_Group_Id_Payment_Type_Id	Aid_Code_Group_Id, Payment_Type_Id	True	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_PLAN_CODE_ON_PAYMENT_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_AID_CODE_GROUP_Aid_Code_Group_Id_TO_TB_PLAN_CODE_ON_PAYMENT_TYPE_Aid_Code_Group_Id	Aid_Code_Group_Id	TB_AID_CODE_GROUP	Aid_Code_Group_Id
FK_TB_PAYMENT_TYPE_Payment_Type_Id_TO_TB_PLAN_CODE_ON_PAYMENT_TYPE_Payment_Type_Id	Payment_Type_Id	TB_PAYMENT_TYPE	Payment_Type_Id

10.5.33 Table TB_STAGING_BENEFICIARY

The TB_STAGING_BENEFICIARY table is a staging table that will only hold temporary staging data as part of the capitation data loading process.

◆ Properties

The following table describes the table level properties for the table TB_STAGING_BENEFICIARY.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_STAGING_BENEFICIARY.

Name	Data Type	Allow Nulls	Description
Staging_Beneficiary_Id	bigint identity	False	Unique Key of TB_STAGING_BENEFICIARY
Client_Index_Number	char(9)	False	Representation of Client Index Number from Capitation File
Meds_Renewal_Date	char(6)	False	Representation of MEDS Renewal Date from Capitation File
Last_Name	char(20)	False	Representation of Last Name from Capitation File
First_Name	char(15)	False	Representation of First Name from Capitation File
Middle_Initial	char(1)	True	Representation of Middle Initial from Capitation File
Date_Of_Birth_St	char(8)	True	Representation of Date of Birth from Capitation File
Date_Of_Death_St	char(8)	True	Representation of Date of Death from Capitation File
Death_Posted_Date_St	char(8)	True	Representation of Date Death Posted from Capitation File
Alien_Indicator	char(1)	True	Representation of Alien Indicator from Capitation File
Ethnic_Code	char(1)	True	Representation of Ethnic Code from Capitation File
Gender	char(1)	True	Representation of Gender from Capitation File
Last_Modified_Date	char(8)	True	Representation of Last Modified Date from Capitation File

◆ Indexes

The following table describes the indexes on the table TB_STAGING_BENEFICIARY. Note, the indexes are considered temporary as they are often dropped and re-built as a part of the bulk load process.

Name	Columns	Unique	Clustered
pkc_TB_STAGING_BENEFICIARY__Staging_Beneficiary_Id	Staging_Beneficiary_Id	True	True
IXN_TB_STAGING_BENEFICIARY__Client_Index_Number	Client_Index_Number	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_STAGING_BENEFICIARY.

Name	Column	Foreign Table	Foreign Column
FK_TB_STAGING_BENEFICIARY__Staging_Beneficiary_Id_TO_TB_STAGING_MONTHLY_INFO__Staging_Beneficiary_Id	Staging_Beneficiary_Id	TB_STAGING_MONTHLY_INFO	Staging_Beneficiary_Id

10.5.34 Table TB_STAGING_MONTHLY_INFO

The TB_STAGING_MONTHLY_INFO table is a staging table that will only hold temporary staging data as part of the capitation data loading process.

◆ Properties

The following table describes the table level properties for the table TB_STAGING_MONTHLY_INFO.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_STAGING_MONTHLY_INFO.

Name	Data Type	Allow Nulls	Description
Staging_Monthly_Info_Id	bigint identity	False	Unique Key of TB_STAGING_MONTHLY_INFO
Staging_Beneficiary_Id	bigint	False	Foreign Key (Non-Constraint) of Staging Monthly Info to Staging Beneficiary Table

Name	Data Type	Allow Nulls	Description
Monthly_Offset	tinyint	False	Offset of monthly information for a beneficiary, counted from 0 to 12
HCP_Plan1	char(3)	True	Representation of HCP Plan 1 from Capitation File
HCP_Status1	char(2)	True	Representation of HCP Status 1 from Capitation File
HCP_Aid1	char(2)	True	Representation of HCP Aid 1 from Capitation File
HCP_Plan2	char(3)	True	Representation of HCP Plan 2 from Capitation File
HCP_Status2	char(2)	True	Representation of HCP Status 2 from Capitation File
HCP_Aid2	char(2)	True	Representation of HCP Aid 2 from Capitation File
HCP_Plan3	char(3)	True	Representation of HCP Plan 3 from Capitation File
HCP_Status3	char(2)	True	Representation of HCP Status 3 from Capitation File
HCP_Aid3	char(2)	True	Representation of HCP Aid 3 from Capitation File
HCP_Plan4	char(3)	True	Representation of HCP Plan 4 from Capitation File
HCP_Status4	char(2)	True	Representation of HCP Status 4 from Capitation File
HCP_Aid4	char(2)	True	Representation of HCP Aid 4 from Capitation File
HCP_Plan5	char(3)	True	Representation of HCP Plan 5 from Capitation File
HCP_Status5	char(2)	True	Representation of HCP Status 5 from Capitation File
HCP_Aid5	char(2)	True	Representation of HCP Aid 5 from Capitation File
Medicare_PartA	char(1)	True	Representation of HCP Medicare Part A from Capitation File
Medicare_PartB	char(1)	True	Representation of HCP Medicare Part B from Capitation File
Medicare_PartD	char(1)	True	Representation of HCP Medicare Part D from Capitation File

◆ Indexes

The following table describes the indexes on the table TB_STAGING_MONTHLY_INFO. Note, the indexes are considered temporary as they are often dropped and re-built as a part of the bulk load process.

Name	Columns	Unique	Clustered
pkc_TB_STAGING_MONTHLY_INFO__Staging_Monthly_Info_Id	Staging_Monthly_Info_Id	True	True

Name	Columns	Unique	Clustered
IXN_TB_STAGING_MONTHLY_INFO__Staging_Beneficiary_Id	Staging_Beneficiary_Id Monthly_Offset	False	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_STAGING_MONTHLY_INFO.

Name	Column	Foreign Table	Foreign Column
FK_TB_STAGING_BENEFICIARY__Staging_Beneficiary_Id__TO__TB_STAGING_MONTHLY_INFO__Staging_Beneficiary_Id	Staging_Beneficiary_Id	TB_STAGING_BENEFICIARY	Staging_Beneficiary_Id

5. Table TB_STATUS_TYPE

The TB_STATUS_TYPE table is a reference table holding the values of all possible status types.

◆ Properties

The following table describes the table level properties for the table TB_STATUS_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_STATUS_TYPE.

Name	Data Type	Allow Nulls	Description
Status_Type_Id	smallint	False	Unique Key of TB_STATUS_TYPE
Status_Name	varchar(128)	False	Descriptive Phrase of a Status
Date_Created	datetime	False	Creation Date of the Status
Date_Deleted	datetime	True	For Unused Statuses, deleted date of the status type
Audit_User	varchar(128)	False	User who created the Status Type
Managed_Care	bit	False	Flag to determine if status is possible for Managed Care
Nonmanaged_Care	bit	False	Flag to determine if status is possible for Nonmanaged Care

◆ Indexes

The following table describes the indexes on the table TB_STATUS_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_STATUS_TYPE__Status_Type_Id	Status_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_STATUS_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_STATUS_TYPE__Status_Type_Id_TO_TB_INVOICE_STATUS__Status_Type_Id	Status_Type_Id	TB_INVOICE_STATUS	Status_Type_Id

10.5.35 Table TB_SUPPLEMENTAL_AID_TYPE

The TB_SUPPLEMENTAL_AID_TYPE table is a reference table that enumerates all supplemental aid types.

◆ Properties

The following table describes the table level properties for the table TB_SUPPLEMENTAL_AID_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	Dbo

◆ Columns

The following table describes the columns in the table TB_SUPPLEMENTAL_AID_TYPE.

Name	Data Type	Allow Nulls	Description
Supplemental_Aid_Type_Id	smallint	False	Unique Key of TB_SUPPLEMENTAL_AID_TYPE
Supplemental_Aid_Name	varchar(64)	False	Name of the Supplemental Aid
Beneficiary_Eligible_Flag	bit	True	TBD, related to beneficiaries being eligible for supplemental aid

◆ Indexes

The following table describes the indexes on the table TB_SUPPLEMENTAL_AID_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_SUPPLEMENTAL_AID_TYPE__Supplemental_Aid_Type_Id	Supplemental_Aid_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_SUPPLEMENTAL_AID_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_SUPPLEMENTAL_AID_TYPE__Supplemental_Aid_Type_Id__TO_TB_BENE_SUPPLEMENTAL_INFO__Supplemental_Aid_Type_Id	Supplemental_Aid_Type_Id	TB_BENE_SUPPLEMENTAL_INFO	Supplemental_Aid_Type_Id
FK_TB_SUPPLEMENTAL_AID_TYPE__Supplemental_Aid_Type_Id__TO_TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO__Supplemental_Aid_Type_Id	Supplemental_Aid_Type_Id	TB_CONTRACT_PLAN_SUPPLEMENTAL_INFO	Supplemental_Aid_Type_Id
FK_TB_SUPPLEMENTAL_AID_TYPE__Supplemental_Aid_Type_Id__TO_TB_INVOICE_TYPE__Supplemental_Aid_Type_Id	Supplemental_Aid_Type_Id	TB_INVOICE_TYPE	Supplemental_Aid_Type_Id

10.5.36 Table TB_VENDOR_INFO

The TB_VENDOR_INFO table holds additional vendor-specific information for vendors to be paid in the 820 invoice.

◆ Properties

The following table describes the table level properties for the table TB_VENDOR_INFO.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_VENDOR_INFO.

Name	Data Type	Allow Nulls	Description
Vendor_Info_Id	int identity	False	Unique Key of TB_VENDOR_INFO

Name	Data Type	Allow Nulls	Description
Address	varchar(128)	False	Primary Vendor Address
City	varchar(64)	False	Primary Vendor City
Zip	varchar(9)	False	Primary Vendor Zip Code
State	varchar(2)	True	Primary Vendor State Abbreviation
Contract_Manager_Name_First	varchar(64)	True	Vendor Contract Manager First Name
Contract_Manager_Name_Last	varchar(64)	True	Vendor Contract Manager Last Name
Contract_Manager_Phone	varchar(20)	True	Vendor Contract Manager Phone Number
Other_Address	varchar(128)	True	Secondary Contact Address
Other_City	varchar(64)	True	Secondary Contact City
Other_Zip	varchar(9)	True	Secondary Contact Zip Code
Other_State	varchar(2)	True	Secondary Contact State
Other_Contract_Manager_Name_First	varchar(64)	True	Secondary Contract First Name of Contract Manager
Other_Contract_Manager_Name_Last	varchar(64)	True	Secondary Contract Last Name of Contract Manager
Other_Contract_Manager_Phone	varchar(20)	True	Secondary Contract Phone Number of Contract Manager
Vendor_Code	varchar(16)	False	Unique alphanumeric ID assigned per contract by Accounting Division
Contract_Id	int	False	Contract to which this vendor info applies
EIN	varchar(9)	True	Federal Taxpayer EIN for the Vendor
Organization_Name	varchar(128)	True	Name of the Vendor Organization
Nonmanaged_Vendor_Type	varchar(64)	True	HIPP, BCCTP and GHPP vendors may be an Insurance Company, an Insurance Carrier, an Employer, a Beneficiary Representative, or a Beneficiary
Nonmanaged_Vendor_Status	bit	True	HIPP, BCCTP and GHPP vendors will have a status of Active or Terminated (Represented as '1' or '0')
Payment_Type	varchar(64)	True	Payment Type information for Non-managed care vendor
Name_First	varchar(64)	True	First Name for Non-managed care vendor
Name_Last	varchar(64)	True	Last Name for Non-managed care vendor

◆ Indexes

The following table describes the indexes on the table TB_VENDOR_INFO.

Name	Columns	Unique	Clustered
pkc_TB_VENDOR_INFO__Vender_Info_Id	Vendor_Info_Id	True	True
ixn_TB_VENDOR_INFO__Contract_Id	Contract_Id	True	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_VENDOR_INFO.

Name	Column	Foreign Table	Foreign Column
FK_TB_CONTRACT__Contract_Id__TO_TB_VENDOR_INFO__Contract_Id	Contract_Id	TB_CONTRACT	Contract_Id

10.5.37 Table TB_VENDOR_TYPE

The TB_VENDOR_TYPE table is a reference table to hold the names of all managed care companies enrolled in managed care.

◆ Properties

The following table describes the table level properties for the table TB_VENDOR_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_VENDOR_TYPE.

Name	Data Type	Allow Nulls	Description
Vendor_Type_Id	smallint	False	Unique Key of TB_VENDOR_TYPE
EIN	varchar(9)	True	Federal Taxpayer EIN
Vendor_Type_Name	varchar(128)	False	Managed Care Company Name

◆ Indexes

The following table describes the indexes on the table TB_VENDOR_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_VENDOR_TYPE__Vendor_Type_Id	Vendor_Type_Id	True	True

◆ Foreign Keys

The following table describes the foreign keys on the table TB_VENDOR_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_VENDOR_TYPE__Vendor_Type_Id_TO_TB_HEALTH_CARE_PLAN_TYPE__Vendor_Type_Id	Vendor_Type_Id	TB_HEALTH_CARE_PLAN_TYPE	Vendor_Type_Id

10.5.38 Table TB_WAIVER_TYPE

The TB_WAIVER_TYPE is a reference table to hold waiver information and how they relate to health care plans.

◆ Properties

The following table describes the table level properties for the table TB_WAIVER_TYPE.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_WAIVER_TYPE.

Name	Data Type	Allow Nulls	Description
Waiver_Type_Id	int identity	False	Unique Key of TB_WAIVER_TYPE
Waiver_Name	varchar(128)	False	Name of the Waiver Program

Name	Data Type	Allow Nulls	Description
Waiver_Number	varchar(32)	False	Number of the waiver. Waiver Number = Standard 1915(b) Waiver coding system: a) State Code; b) Two-digit waiver number; c) R+Two-digit waiver renewal number (changes upon renewal, approx. 2 years); and d) Two-digit consecutive waiver year (changes each July).
Effective_Date_From	date	False	Waiver Effective Date
Effective_Date_To	date	True	Waiver Effective Termination Date
Waiver_Percentage	decimal(6,3)	False	The percentage of the population covered under a State's waiver program. This percentage is annually recalculated by FAU.
Health_Care_Plan_Type_Id	smallint	False	The Health Care Plan to which this Waiver applies

◆ Indexes

The following table describes the indexes on the table TB_WAIVER_TYPE.

Name	Columns	Unique	Clustered
pkc_TB_WAIVER_TYPE__Waiver_Type_Id	Waiver_Type_Id	True	True
ixn_TB_WAIVER_TYPE__Health_Care_Plan_Type_Id	Health_Care_Plan_Type_Id	False	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_WAIVER_TYPE.

Name	Column	Foreign Table	Foreign Column
FK_TB_HEALTH_CARE_PLAN_TYPE__Health_Care_Plan_Type_Id__TO_TB_WAIVER_TYPE__Health_Care_Plan_Type_Id	Health_Care_Plan_Type_Id	TB_HEALTH_CARE_PLAN_TYPE	Health_Care_Plan_Type_Id

10.5.39 Table TB_WARRANT

The TB_WARRANT table holds warrant information from the CD102 file.

◆ Properties

The following table describes the table level properties for the table TB_WARRANT.

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Schema	dbo

◆ Columns

The following table describes the columns in the table TB_WARRANT.

Name	Data Type	Allow Nulls	Description
Warrant_Id	int identity	False	Unique Key of TB_WARRANT
Claim_Schedule_Number	varchar(20)	False	Claim Schedule Number assigned to the invoice from accounting (from CD102)
Warrant_Number_Begin	bigint	False	Beginning Warrant Number assigned to claim schedule
Warrant_Number_End	bigint	False	End Warrant Number assigned to claim schedule
Warrant_Date	date	False	The Date of the Warrant
Warrant_Amount	money	False	The Total Amount on the Warrant

◆ Indexes

The following table describes the indexes on the table TB_WARRANT.

Name	Columns	Unique	Clustered
pkc_TB_WARRANT__Warrant_Id	Warrant_Id	True	True
ixn_TB_WARRANT__Claim_Schedule_Number	Claim_Schedule_Number	True	False

◆ Foreign Keys

The following table describes the foreign keys on the table TB_WARRANT.

Name	Column	Foreign Table	Foreign Column
FK_TB_WARRANT__Warrant_Id__TO_TB_INVOICE__Warrant_Id	Warrant_Id	TB_INVOICE	Warrant_Id

10.6 User Permissions

The following subsections describe the different usage scenarios and associated user permissions required to successfully implement the 820 Phase 2 database design.

10.6.1 Extraction / Transformation / Loading (ETL)

The following permissions are required in order to execute either SQL XML Bulk Load or SQL Server Integration Services:

- CONNECT
- ALTER
 - For each schema associated with a table associated with ETL
- CREATE TABLE
 - For each table associated with ETL
- INSERT
 - For each table associated with ETL
- UPDATE
 - For each table associated with ETL
- SELECT
 - For each table associated with ETL

10.6.2 Business Processing

The following permissions are required in order to conduct regular system business processing:

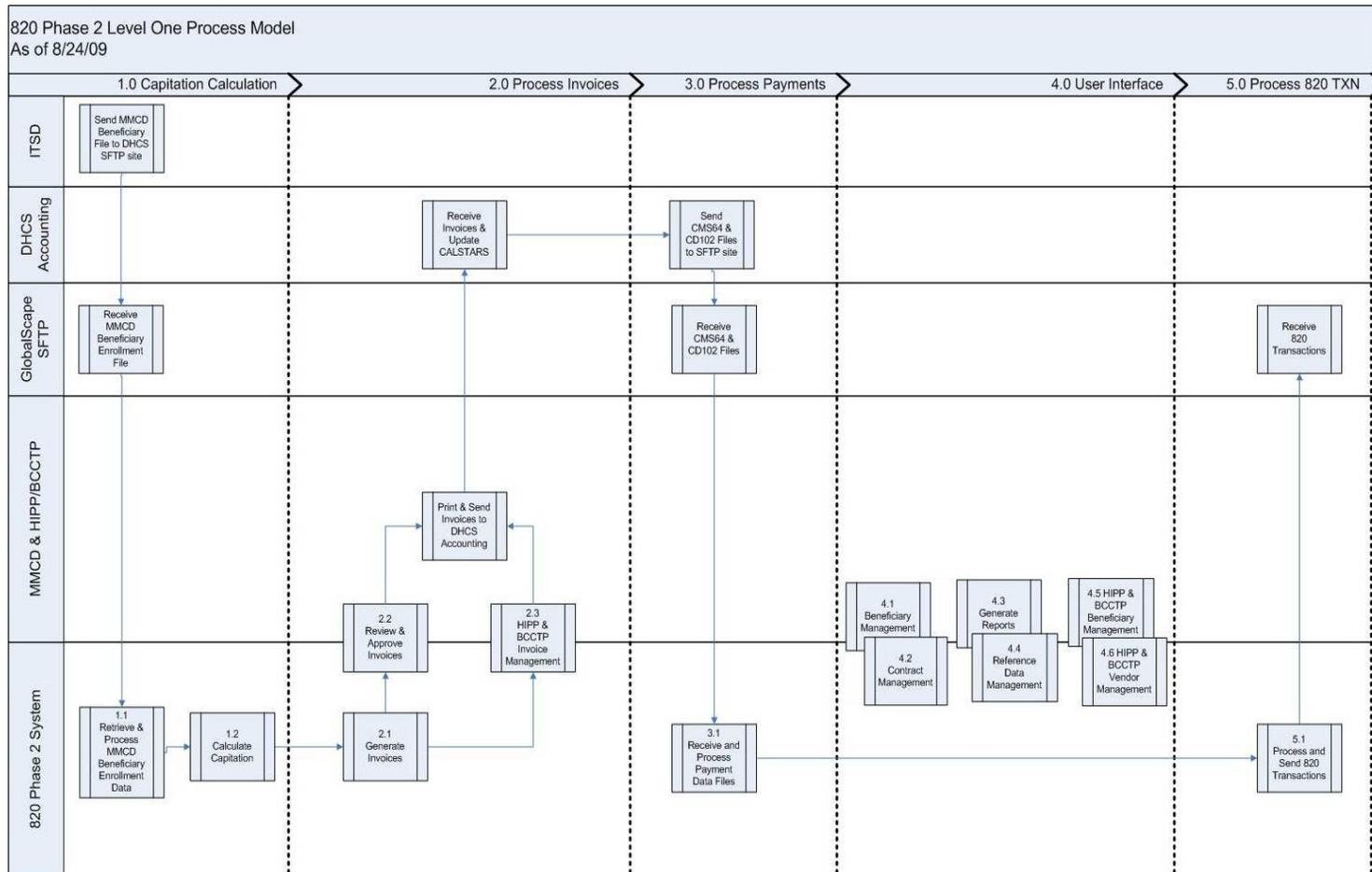
- CONNECT
- EXECUTE
 - On each stored procedure used in the database

10.6.3 Reporting

The following permissions are required in order to conduct regular system business processing:

- CONNECT
- EXECUTE
 - On each stored procedure used in reporting

Appendix B - Process Model



Design Specifications						
Comment #	Reviewer Initials	Page	Section	Issues/Concerns	Resolution (to be completed by Vendor)	State Response
1	WL			Will file layouts for input files be included so that we know what data is being brought into the system?	The details for the input files are contained in Use cases 1.1 & 3.1	Okay
2	WL			Will there be back-ups of input files and if so, how long do they need to be retained? The may be instances where data in the database may need to be recreated from the input files, so they should be retained for an appropriate time period.	All MMCD, CMS64, CD102 Files will be locally stored for 36 months, will be locally archived in archive files for 72 months, then will be stored on appropriate backup medium beyond 72 months.	Okay
3	WL			Will there be front-end edits run against the input files to determine if fields are missing or invalid or files are duplicate files?	Front End Edits will be testing for validity of input files. Missing fields will be reported as a front end error. Empty fields will be reported as a processing error. Because files can be re-dropped to re-process entries, duplicate files are ignored by the system, but will enter processing.	Okay
4	WL	46	9	Will there be an error table for the error conditions?	Error conditions are incorporated in code. Error code table will be added to M&A plan.	Okay- add to M&A plan
5	WL	131	Appendix A	Shouldn't size, valid values, field formats (e.g. date format is MMDDYYYY), and calculations (if a field is calculated) be included in the data dictionary?	The data fields in the data dictionary follow SQL Data Types and do include size when appropriate. For a detailed description of SQL Data Types, information can be found on the MSDN web site at http://msdn.microsoft.com/en-us/library/ms187752(SQL.90).aspx .	Okay
1	AS	8 & 9	2.1 & 2.2	In the Level 1 Context Diagram and the Level 2 Context Diagram the word "Vendor" should be changed to something more descriptive such as "Health Plan" or "Payment Recipient"	Change from Vendor to Payment Recipient will be made.	Okay
2	AS	14 et al	4.1	"It will provide calculations on a beneficiary level." Descriptions throughout the design specifications mention calculations. Where are the actual calculations stored? They need to be documented somehow so that they can be reviewed at a later date if nec	All calculations are performed at runtime so the calculations are not saved anywhere. However, results of calculation are saved in tb_invoice, tb_invoice_detail tables. Calculation of each invoice and storage of calculation results have been covered in InvoiceManagement.doc.	Okay
3	AS	21, 24	5.1.1	Various descriptions mention archiving and files that will be archived. Where exactly will archived files be stored and for how long? What is the process for retrieving an archived file or document? Page 24 has another callout to the "predetermined archiv	The process of retrieving archived files will be addressed in the Maintenance and Administration plan. Archive process needs to be defined by DHCS.	Okay
4	AS	24	5.2.1	Exception: Invoices Do Not Match - exceptions are reported to the system administrator. Who is the system administrator and is this the person(s) that the Capitation Unit wants to perform the review?	When invoices don't match, an error will be reported as status on the invoice. The Capitation Unit will be able to see the error on the user interface on the Invoice screen.	Okay- add to M&A plan
5	AS	108	10.1.4	User Platform - Vendor should clarify the minimum version of Adobe Reader and Microsoft Office that is compatible with CapMan as has been done with Internet Explorer 6.0+. Actually, the minimum version required for all software applications should be cons	Updated document to include reference to Information Technology Hardware and Software Standards and supported software versions.	Okay
6	AS	107	10.1.3	Analyst Platform - non-standard software is required. What will be done if the non-standard software is not approved?	From the list of approved software (Information Technology Hardware and Software Standards), SpecBuilder is the only software product that is not a listed standard. However, TR 0616 mandates the use of SpecBuilder.	Okay
7	AS	26	5.4	More details on the SFTP interface are needed.	The details for the SFTP interface are contained in Use case 1.1	Okay

8	AS	28, 112, 129	5.4.1 and 10.4.1	Page 28 states "All 820 files are sent to the SFTP interface where they are then forwarded to the corresponding recipients." Are the files actually forwarded or simply put on the SFTP server in a repository for pickup? It would seem from page 112 that Pla	The details for the SFTP interface are contained in Use case 1.1. The scope of responsibility of the 820 Phase 2 system ends with the delivery of the 820 EDI transactions to the SFTP server.	Okay
9	AS	98,189	9.22.1 and 10.6	Where in the design specifications does it outline the levels of user access? There are various points in the document that describe that users need appropriate roles and rights, for example to run reports, but I couldn't find anything that outlined the	Microsoft's Membership Providers will be used to handle user access.	Okay
10	CC	62	10.1.1	Is BizTalk Server 2009 supported by ITSD. Version 2004 and 2006 had been used in the past but need to confirm they will support the latest Microsoft version.	BizTalk 2009 server is supported by ITSD.	Okay
11	CC		10.4	ITSD policy requires password changes on a routine basis (every 90 days, I think). How are password changes on the SFTP services going to be coordinated with outside groups (e.g. MEDS interface partner, etc.) that need to write to these accounts?	The SFTP account for the MEDS interface will be set to not expire, following ITSD's practice of system to system communication. The Maintenance and Administration Plan (TR-0628) will address password changes.	Okay
12	CC		10.4	The Security Section does not provide a detailed look at the threat model for the system and how each threat is being addressed. For example, the security section is missing a discussion of the use of HTTPS protocol within the different environments. The use and details of methods used to encrypt the network communications (certificates, authorities, etc.) is needed.	The 820 Phase 2 application is located behind the DMZ in the DHCS intranet and not exposed to the extranet. Users are authenticated against the DHCS intranet active directory and are required to be listed on the LDAP server. Since the application is behind the firewall HTTPS is not required.	Okay
13	CC		10.4	The security section is missing a discussion on the security accounts for the servers (impersonation policy, SQL login accounts, database roles, security protocol between servers such as IPSEC etc.) How are these security assets protected? What are the ITSD policies that need to be met? Who will be responsible for changing server security credentials? etc.?	The SQL server security is dictated by DHCS ITSD standards. SQL server accounts are allocated and assigned by ITSD to projects.	Okay
14	CC	6	1	The Use Case - Design Specification Traceability Matrix does not have sufficient detail to be support traceability back to specific requirements (functional and technical)	The design specification is based of the requirements document, so the traceability should reflect that. Each sub-section in the Business Object section also traces what sections were used in the Requirements document.	Okay
15	CC	8	2.2	In diagrams, the component 'User Interface' does not make sense. A user interface is a design concept rather than a system component. In discussions, it was indicated that component was actually CAPMAN. The diagrams should represent that for clarity.	Since a majority of system workflow is centered around the user interface, Trinity Technology Group recommends leaving the 'User Interface' in the context diagram.	Okay

16	CC			The document is lacking in details on Error and Exception Handling. A document detailing design to this level should include a discussion on the specifics of this important topic. Details are needed on the methods, mechanisms and processes used to perform exception handling at every level of the application (BIZTALK, ASP.NET, SQL SERVER, etc.) A list of all error messages should be included as an appendix and should include details on what each message means and how to diagnose or correct the errors.	Exceptions based on the use cases have been incorporated into section 6. Add exception conditions to M&A plan	Okay- add to M&A plan
17	CC			The document is lacking in details on auditing and logging processes. Details are needed on the frequency and format of logs. Details on the format and content of each log should be provided.	Log details will be provided in the Maintenance and Administration Plan	Okay- add to M&A plan
18	CC			The document is lacking in details on the standards compliances required and how the system will meet these standards. For example, there is no discussion on coding standards/guidelines/conventions, code comment policy, module development standards, use of object oriented programming standards, design patterns, etc. More detail is needed to enable proper validation of the source code and conformance checking can be completed.	The 820 Phase 2 application must adhere to the published ITSD coding standards. The standards documents are: WAA Addendum for WCF and WWF.doc, ITSD BizTalk Application Standards DRAFT.doc, Database Coding Standard and Guideline.doc, and CDHS Web Application Architecture V5.doc.	Okay
19	CC		9	It is noted within Section 9 in numerous places that "the page is ADA compliant and conforms to the ADA standards". There is no design considerations mentioned or details on how "ADA standards" are met. ADA compliance and accessibility standards are a very complex subject involving levels of accessibility being met by any application. No system is simply ADA compliant - there are agreed upon levels of accessibility that a system will meet. More detail on the standards being met and the processes used to conform to those standards are needed.	Updated the document to include the Watch Fire Web XM tool that ITSD uses to check web sites for ADA compliance. URL: http://dhssaccots03/WatchfireWebXm/FolderExplorer.aspx?fid=54	Okay
19	CC	38	7	The document is lacking in detail on the patterns and practices to be used when constructing the system. The section does mention use of the Microsoft Entity Framework for the Data Objects but there is limited design for the solution architecture in general. I would expect to see a section detailing how the solution will be structured - files and folders, projects and solutions, details on tiers and separation of functionality (business rules, edits, logging, exception handling, etc.), module cohesion/coupling, module reuse, data persistence, object oriented programming usage, design patterns, Microsoft Patterns and Practices, etc.	Section six indicates that the application is designed and developed utilizing Object Oriented Design methodologies, the section has also been updated to include greater detail regarding the design of the objects. The M&A plan will include a tree structure for the source code file management.	Okay- add to M&A plan
20	CC		10.2	Still not clear on the use/requirement for Microsoft InfoPath 2007 on the BizTalk servers. No discussion provided.	Microsoft InfoPath 2007 is a prerequisite for BizTalk installation.	Okay
21	CC		6	Issues with Section 6 and level of detail have been communicated and are being worked by vendor.	Details have been added to section 6.	Okay

22	GR	23,24	5.2.1	System enters an exception state if invoice information is incomplete for unpaid invoices in the 820 Phase 2 system. The exception is reported to the system administrator and the orchestration instance is suspended awaiting further review. Diagram shows intervention required. How is the intervention going to be handled? Is there a user interface?	When invoices don't match, an error will be reported as status on the invoice. The Capitation Unit will be able to see the error on the user interface on the Invoice screen. Add exception conditions to M&A plan	Okay- add to M&A plan
23	GR	31	6.1.1.1	If the number of warrants associated with the Claim Schedule Number does not equal the number of unique vendor codes for the all invoices within the Claim Schedule, then system updates the status of all invoices to "CD102 Payment Error". System generates the following payment error notification for each invoice with status of CD102 Payment Error: "CD102 Payment Error – Number of Warrants [##] on CD102 for Claim Schedule Number [##] is not equal to Number of Vendors [##] for the Claim Schedule in System. User must enter a payment error adjustment." How is a payment error adjustment going to help if the dollar amount is correct? How can the number of warrants be synced up with the number of unique vendor codes?	When entered, this adjustment balances the warrant amount to the invoice amount and generates a new invoice to make up for the difference (the amount that was either overpaid or underpaid). The range of warrants coming in on the CD102 file with the schedule number will be matched with the schedule number from the CMS64 file. The CMS64 file will then contain the vendor codes.	Okay- add to M&A plan
24	GR	57	6.5.1.1	If an 820 transaction does not pass SNIP validations, system halts processing of the transaction and posts SNIP Error Report. System logs an error for System Administrator. How will these errors be resolved? Is there a UI? This section is also numbered in correctly in document (1.1.1.1)	Since the 820 system creates the EDI file, this will mean that there is an application error that needs to be resolved. The BizTalk orchestration that creates the EDI file will then have to be restarted (by an administrator).	Okay- add to M&A plan
25	GR			The documents list several automated processes that are halted due to an error occurring. How are these processes re-started? Is there sometype of cleanup that is going to need to occur before restart of a process?	Biztalk allows a process to restart through its administration tool. No cleanup has to happen after an error.	Okay- add to M&A plan