C2M.v2.7.CCB – MDM

4.2.2.3 Manage Item Charges

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ORACLE®

Contents

Brief Description

Business Process: **4.2.2.3 C2M.CCB-MDM.Manage Item Charges Using Bill Determinants**
Process Type: **Sub Process**
Parent Process: **4.2.2 C2M.CCB-MDM.Manage Bill**
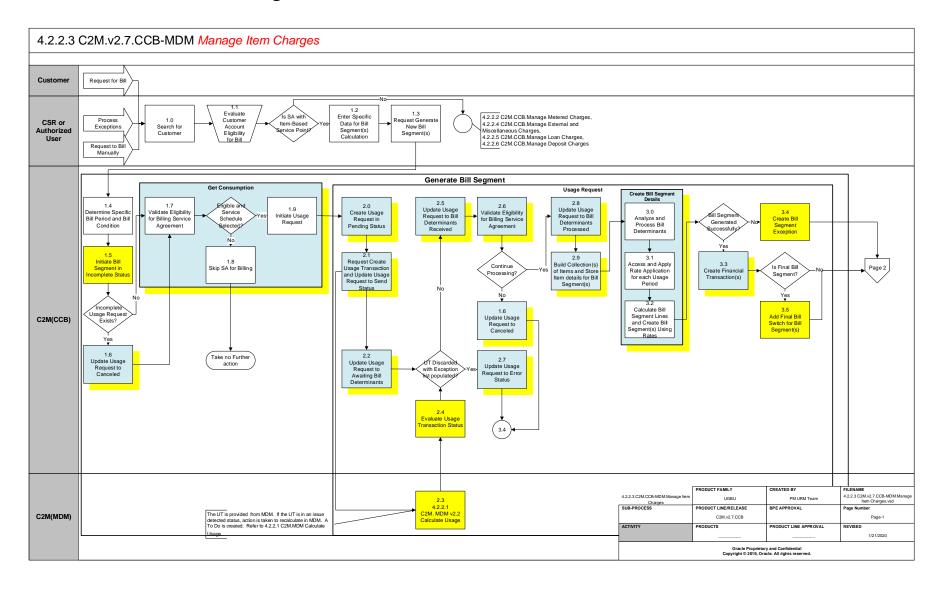**Sibling Processes:**   **4.2.2.2 C2M.CCB-MDM.Manage Meter Charges, 4.2.2.4 C2M.CCB-MDM.Manage External and Miscellaneous Charges, 4.2.2.5 C2M.CCB-MDM.Manage Loan Charges, 4.2.2.6C2M.CCB-MDM. Manage Deposit Charges, 4.2.2.8 C2M.CCB-MDM.Manage Billing Disputes, 4.2.2.9 C2M.CCB-MDM.Manage Billing Inquires, 4.2.2.10a C2M.CCB-MDM.Manage Budget Billing, 4.2.2.10b C2M.CCB-MDM.Manage Monitored and Unmonitored Non-Billed Budget Billing, 4.2.2.12 C2M.CCB-MDM.Manage Payment Arrangement Charges**

This process describes Billing for Item-based services. Utility Companies may charge for some equipment – badged and non-badged items installed on Service Points Premises due to various reasons. When such an item(s) is installed Utility Company expects to get paid for these items usage.

The Billing process evaluates the type and amount (if multiple items are installed), applies appropriate rates and generates Bill(s). Most bills are produced in a Batch Billing process. However, the CSR or Authorized User can create Bills manually if required. If a Bill is generated, but contains error(s) the CSR or Authorized User has the ability to modify the Bill or Bill Segment.

As soon as a Bill is created, the Company makes it available for the Customer, and every person linked to the Customer's Account who requires a copy of the Bill.

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4.2.2.3 C2M.v2.7.CCB-MDM *Manage Item Charges*

	PRODUCT FAMILY	CREATED BY	FILENAME
4.2.2.3 C2M.CCB-MDM.Manage Item Charges	UGBU	PM URM Team	4.2.2.3 C2M.v2.7.CCB-MDM.Manage Item Charges.vsd
SUB-PROCESS	PRODUCT LINE/RELEASE	BPE APPROVAL	Page Number
	C2M.v2.7.CCB		Page-1
ACTIVITY	PRODUCTS	PRODUCT LINE APPROVAL	REVISED
	_____	_____	1/21/2020

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4.2.2.3 C2M.v2.7.CCB–MDM *Manage Item Charges*

Customer

CSR or Authorized User

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Page 4

3.6 Review Bill Segment(s)

Bill Segment Frozen? — Yes

No

Freeze Bill Segment? — No — UT Creation Encountered Issue(s)? — No

Yes

3.7 Request Freeze Bill Segment(s)

2.3 4.2.2.1 C2M.MDM v2.2 Calculate Usage (Error Processing)

Delete Bill Segment

One Bill Segment (Item-Based Service) Exists? — No — 4.1 Request Delete Specific Bill Segment(s)

Yes

3.9 Request Delete Bill

Rebill Bill Segment

Requires Rebill? — No

Yes — 4.4 Request Rebill Bill Segment(s)

Undo Rebill Bill Segment(s)? — No — 3.6

Yes

4.6 Request Undo Rebill Bill Segment(s)

Cancel Bill Segment

Requires Cancel Bill Segment(s)? — Yes

4.8 Request Cancel Frozen Segment(s)

Undo Bill Segment(s) Cancel? — No — 5.2 Request Finalize Cancel Bill Segment(s)

Yes

5.0 Request Undo Cancel Bill Segment(s)

Add Bill Message(s)? — No — Page 3

Yes

5.4 Request Add Bill Message(s)

C2M(CCB)

4.0 Delete Bill

4.2 Delete Bill Segment(s)

4.5 Update Bill Segment(s) to Pending Cancel, Generate New Bill Segment(s)

4.7 Delete New Segment(s),Return Original Segment(s) to Frozen

4.9 Update Bill Segment(s) to Pending Cancel

5.1 Return Original Bill Segment(s) to Frozen

5.3 Update Bill Segment(s) to Canceled

5.5 Add Bill Message(s)

Freeze Bill Segment

3.8 Freeze Bill Segment(s)

Bill Segment Frozen Successfully? — Yes — Page 3

No

3.6

Usage Request in BD Processed Status? — No — Still Requires Bill Item-Based Service? — No — Take No Further Action

Yes

1.6 Update Usage Request to Canceled

4.3 Unlink Usage Request from Deleted Bill Segment

Yes — Page 1 1.1

The User determines next course of action, new bill, rebill, cancel

4.2.2.3 C2M.CCB-MDM.Manage Item Charges	**PRODUCT FAMILY** UGBU	**CREATED BY** PM URM Team	**FILENAME** 4.2.2.3 C2M.v2.7.CCB-MDM.Manage Item Charges.vsd
SUB-PROCESS	**PRODUCT LINE/RELEASE** C2M.v2.7.CCB	**BPE APPROVAL**	**Page Number** Page-2
ACTIVITY	**PRODUCTS** _____	**PRODUCT LINE APPROVAL** _____	**REVISED** 1/21/2020

C2M(MDM)

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4.2.2.3 C2M.v2.7.CCB-MDM *Manage Item Charges*

PROCESS	PRODUCT FAMILY	CREATED BY	FILENAME
4.2.2.2 C2M.CCB.Manage Meter Charges	UGBU	PM URM Team	4.2.2.3 C2M.v2.7.CCB-MDM.Manage Item Charges.vsd
SUB-PROCESS	PRODUCT LINE/RELEASE	BPE APPROVAL	Page Number
	C2M.v2.7.CCB		Page 3
ACTIVITY	PRODUCTS	PRODUCT LINE APPROVAL	REVISED
	CC&B and MDM	_____	1/21/2020

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4.2.2.3 C2M.v2.7.CCB-MDM *Manage Item Charges*

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4.2.2.3 C2M.v2.7.CCB-MDM *Manage Item Charges*

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4.2.2.3 C2M.v2.7.CCB-MDM *Manage Item Charges*

Customer	
CSR or Authorized User	
C2M(CCB)	

CSR or Authorized User lane:

- 8.9 Evaluate and Perform Analysis
- 9.0 Resolve Issue
- Requires Rebill?
- No → 9.2 Request Complete To Do
- 8.9 Evaluate and Perform Analysis
- 9.0 Resolve Issue
- Requires Complete Bill?
- No → 9.2 Request Complete To Do

C2M(CCB) lane:

- 9.1 Update Data
- 9.3 Complete To Do Entry
- Refer to Rebill steps Page 2 and then return to complete To Do
- Take No Further Action
- 9.1 Update Data
- 9.3 Complete To Do Entry
- Refer to Complete steps on Page 3 and then return to complete To Do
- Take No Further Action

- Schedule Bill Segment To Do Error Process
- Page 1
- Page 4
- Page 5

TO DO Bill Segment Error Process
- 8.7 Identify Bill Segments in Error Status
- Create To Do? — Yes → 8.8 Create Bill Segment Error To Do
- No → Take No Further Action
- If a To Do is not created it will be placed on an exception table. A To Do may be suppressed based on To Do Configuration

- Schedule Bill To Do Error Process
- Page 5

TO DO Bill Error Process
- 9.4 Identify Bills in Error Status
- Create To Do? — Yes → 9.5 Create Bill Error To Do
- No → Take No Further Action
- If a To Do is not created it will be placed on an exception table. A To Do may be suppressed based on To Do Configuration

PROCESS	PRODUCT FAMILY	CREATED BY	FILENAME
4.2.2.3 C2M.CCB.Manage Item Charges	UGBU	PM URM Team	VisioDocument
SUB-PROCESS	PRODUCT LINE/RELEASE	BPE APPROVAL	Page Number
	C2M.v2.7.CCB		Page-6
ACTIVITY	PRODUCTS	PRODUCT LINE APPROVAL	REVISED
			1/21/2020

Detail Business Process Model Description

1.0 Search for Customer

Actor/Role: CSR or Authorized User

Description:

Upon receipt of request or inquiry for Billing, or while processing billing exceptions, the CSR or Authorized User accesses Control Central Search to locate the customer in C2M(CCB).

Configuration required Y   **Entities to Configure:**

Installation Options

1.1 Evaluate Customer Account Eligibility for Bill

Actor/Role: CSR or Authorized User

Description:

C2M(CCB) provides the CSR or Authorized User with valuable insight and overall analysis of the Customer's financial situation. The CSR or Authorized User evaluates the Customer's Account. Account Financial History, Premise and Service Agreement Billing History, Credit Rating, and Credit and Collection History may be reviewed. In addition, the 360 view provides Service Point and Usage Subscription details. Control Central Alerts and other Dashboard information assists the CSR or Authorized User in determining eligibility for adding new Bill or any rebilling based on established business rules.

Configuration required Y   **Entities to Configure:**

Installation Options

1.2 Enter Specific Data for Bill Segment(s) Calculation

Actor/Role: CSR or Authorized User

Description:

If the CSR or Authorized User identifies a need to create a Bill for the customer, the CSR or Authorized User provides information about the Billing period for the bill to be created. The CSR or Authorized User must specify a Cutoff Date or Use Schedule to determine the end date of each Bill Segment Bill period. The Accounting Date defaults to current date however the CSR or Authorized User may change this date based on established business rules.

1.3 Request Generate New Bill Segment(s)
Actor/Role: CSR or Authorized User
Description:
The Manual billing process consists of several steps. The first step is to request system to calculate and create the Bill and Bill Segment. The CSR or Authorized User requests to generate a new online Bill. This online Bill may contain one or more segments. If only one Service Agreement exists for the Account, then only one Bill Segment is created.

Note: The "Generate" function is used when creating a new Bill, Bill Segment, or re-generating an existing freezable or error segment.   A deleted Bill Segment may be generated again once information is changed.

Customizable Process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.
Configuration required Y	**Entities to Configure:**	Bill Cycle

1.4 Determine Specific Bill Period and Bill Condition   Group: Generate Bill Segment
Actor/Role: C2M(CCB)
Description:
C2M(CCB) determines the Bill Period boundaries.

Bill segments produced for a service agreement have two time periods:
- The bill segment period. The bill segment period defines the entire period of time covered by a bill segment's charges.
- The consumption period. The consumption period defines the period of time used to calculate the number of days for daily charges.

Bill Segment Start date:
- If this is the initial Bill Segment for the Service Agreement, the start date is set to the start date of the Service Agreement
- If this is not the initial Bill Segment for the Service Agreement, the start date is the previous Bill Segment's end date.
Bill Segment End Date
- If this is the last (final) Bill Segment for the Service Agreement, the end date is the Service Agreement's end date
- If this is not the last (final) Bill Segment for the Service Agreement, the Billing Option selected by the Authorized User determines how the end data is set. When Billing Option of Use Cutoff Date is selected, the end date is the specified Cutoff Date. When Billing Option of Use Schedule is selected, the end date is determined by available measurement data based on the Service Agreement's Service Point's measurement cycle.

The consumption period almost always starts one day after the bill segment period. The only time this true is the first bill segment that's produced for a new service agreement. This is because different utilities count the first day of a new service agreement differently than others. This is controlled by configuration of SA Type Initial Start Date Option.

The consumption period always ends on the bill segment's end date

The bill condition is noted on the Usage Request.   Valid bill conditions are: initial, interim or final.

<u>Note</u>: The system ignores Service Points that are not billable, disconnected before the Bill period started, or are yet to be connected as of the Bill end date.

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y	**Entities to Configure:**	Bill Cycle
		Frequency
		Bill Segment Type and associated algorithms
		Rates
		SA Types

[1.5](#) Initiate Bill Segment in Incomplete Status   **Group: Generate Bill Segment**
                                                            Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
C2M(CCB) initiates the bill in an incomplete status.   Typically, this status is not viewable to the authorized user in an online scenario.   In a specific exception process, the user may create a Bill and make use of functionality to save a bill segment in incomplete status.   In this exception process, the user will be able to view the bill segment.

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

1.6 Update Usage Request to Canceled   **Group: Generate Bill Segment**
                                                           Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
C2M(CCB) checks if there is a pending Usage Request linked to the bill being processed (for online it implies that a user is regenerating the bill segment). If found, the existing usage request is canceled. If Update Usage Request to Canceled, from online billing, that usage request is in incomplete status and a new usage request needs to be initiated.

Process Plug-in enabled N	**Available Algorithm(s):**	Note: There are currently no base algorithms available for this Business Object plug-in spot.

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

1.7 Validate Eligibility for Billing Service Agreement   **Group: Get Consumption**
                                                                     Group: Generate Bill Segment
                                                                     Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
The C2M(CCB) Bill Segment Type Get Consumption algorithm has specific logic for service agreements that require bill determinants from MDM.

The system checks if the SA should be skipped from billing by checking the MDM Next Scheduled Read Date characteristic on the Service Agreement. If this date is populated and is in the future, the SA will be skipped from billing.

Process Plug-in enabled Y	**Available Algorithm(s):**	C1-BSGC-USG - This Bill Segment Type Get Consumption algorithm should only be specified on bill segment types used for service agreements that require bill determinants from MDM.

Customizable process N   **Process Name**

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

1.8 Skip SA for Billing   **Group: Get Consumption**
                                                          Group: Generate Bill Segment
                                                          Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
The C2M(CCB) Bill Segment Type Get Consumption algorithm's logic is used for service agreements that require bill determinants from MDM.

The system checks if the SA should be skipped from billing by checking the MDM Next Scheduled Read Date characteristic on the Service Agreement. If this date is populated and is in the future, the SA will be skipped from billing.

Process Plug-in enabled Y   **Available Algorithm(s):**

C1-BSGC-USG - This Bill Segment Type Get Consumption algorithm should only be specified on bill segment types used for service agreements that require bill determinants from MDM.

Customizable process N   **Process Name**

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

1.9 Initiate Usage Request   **Group: Get Consumption**
                                                          Group: Generate Bill Segment
                                                          Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
The C2M(CCB) Bill Segment Type Get Consumption algorithm's logic is used for service agreements that require bill determinants from MDM. This logic initiates the Usage Request. If the Service Agreement is not skipped for billing, the usage request business object is initiated.

Process Plug-in enabled Y   **Available Algorithm(s):**

C1-BSGC-USG -   This Bill Segment Type Get Consumption algorithm should only be specified on

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		bill segment types used for service agreements that require bill determinants from MDM.
Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

2.0 Create Usage Request in 'Pending' Status   **Group: Usage Request**
                                                          Group: Generate Bill Segment
                                                          Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
C2M(CCB) creates a new Usage Request to be linked to the current bill segment being created or reprocessed.

Process Plug-in enabled Y	**Available Algorithm(s):**	F1-TRN-DF-NS - Generic Business Object Status Monitor - This algorithm type transitions business object current state to the input Next Status or to the status related to the input Next Transition Condition.
Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.
Business Object Y	**Business Object**	The Parent Business Object as well as the two associated Child Business Objects are listed here for applicable Usage Request Statuses. Algorithms defined in the Business Object are shown at the applicable lifecycle status. Separate Business Objects are defined for Batch Billing (cyclical) and Online (non-cyclical).
		X1-UsageRequest - Usage Request - This business object defines the behavior of a usage request.
		X1-UsageRequestCyclical – Cyclical Billing Usage Request - This business object defines the behavior

of a usage request created from the cyclical or batch billing process.
X1-UsageRequestNonCyclical – Non-Cyclical Billing Usage Request - This business object defines the behavior of a usage request created from non-cyclical or online bill generation.

2.1 Request Create Usage Transaction and Update Usage Request to Send Status   **Group: Batch Billing**
Group: Generate Bill Segment
Group: Usage Request

Actor/Role: C2M(CCB)
Description:
The Usage Request information is provided for MDM to create the Usage Transaction.   The Usage Request is updated to a Send Status.

Process Plug-in enabled Y **Available Algorithm(s):**	
	F1-TRN-DF-NS - Generic Business Object Status Monitor - This algorithm transitions business object current state to the input Next Status or to the status related to the input Next Transition Condition.
	X1-SENDUSGR – This algorithm creates usage transaction.

Customizable process N **Process Name**	
	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

2.2 Update Usage Request to Awaiting Bill Determinants   **Group: Batch Billing**
Group: Generate Bill Segment
Group: Usage Request

Actor/Role: C2M(CCB)
Description:
C2M(CCB) waits for the usage to be processed by C2M(MDM) and transitions the Usage Request to 'Awaiting Bill Determinants' status and monitors for next status.

Process Plug-in enabled Y   **Available Algorithm(s):**

X1-UPDURFRUT - This algorithm updates the usage request based on the response of the MDM Usage Transaction.

> F1-TRN-DF-NS - Generic Business Object Status Monitor - This algorithm transitions business object current state to the input Next Status or to the status related to the input Next Transition Condition.

2.3 4.2.2.1 C2M.MDM v2.2 Calculate Usage   **Group: Batch Billing**
                                                     Group: Generate Bill Segment

Actor/Role: C2M(MDM)
Description:
C2M(MDM) processes the usage request from C2M(CCB) and calculates the usage for use in billing. If the Usage Transaction is in an 'Issue Detected' status, a To Do is created and action is taken to recalculate in MDM. **Refer to 4.2.2.1 C2M.MDM. Calculate Usage for calculation logic.**

2.4 Evaluate Usage Transaction Status   **Group: Batch Billing**
                                                     Group: Generate Bill Segment
                                                     Group: Usage Request

Actor/Role: C2M(MDM)
Description:
C2M(CCB) evaluates the Usage Transaction from C2M(MDM and determines the next status to transition the Usage Request.

Customizable process N   Process Name

> BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

2.5 Update Usage Request to Bill Determinants Received   **Group: Batch Billing**
                                                             Group: Generate Bill Segment
                                                             Group: Usage Request

Actor/Role: C2M(CCB)
Description:
If no exceptions were encountered and C2M(MDM) has successfully returned a calculated usage, C2M(CCB) sets the status of the Usage Request to 'Bill Determinants Received'.

Note: A "summary" account refers to an account with service agreements related to more than one premise. If these premises are linked to service points that span different measurement cycle routes scheduled for reading on different dates, there's no guarantee that all the account's SAs will be billed at the same time.

Process Plug-in enabled Y   **Available Algorithm(s):**

F1-TRN-DF-NS - Generic Business Object Status Monitor - This algorithm transitions business object current state to the input Next Status or to the status related to the input Next Transition Condition.
C1-CURUBSKSA This algorithm processes skip information from the usage response. If the usage response indicates that a usage request's SA should be skipped, this algorithm performs the following: - Update next read date schedule on SA characteristic. - Update bill segment exception indicating that usage request was canceled because SA was skipped. - Cancel the usage request. An SA may be skipped from billing if it belongs to a summary billed account (i.e. an account with SAs that cover multiple premises). If the premises are linked to SPs that span different measurement cycle routes scheduled for reading on different dates, there is no guarantee that all the account's SAs will be billed at the same time. If MDM detects that one of the account's SAs should be skipped, it returns this information along with the next read date schedule as part of the usage response.
C1-CHK-MBDAY This algorithm checks if the minimum bill days of the SA Type of the SA related to the non-closing usage request is violated. If it is violated, the usage request will be canceled, the SA Skip flag of the usage request will be set to true, and the bill segment exception will be updated with an error message indicating the reason for skipping the SA.

Customizable process N   **Process Name**

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

2.6 Validate Eligibility for Billing Service Agreement   **Group: Batch Billing**
                           Group: Generate Bill Segment
                           Group: Usage Request

Actor/Role: C2M(CCB)
Description:
C2M(CCB) determines if the Usage Request is eligible to transition to the next status. The process also checks for sub usage requests. In this state, C2M(CCB) checks if the SA should be skipped for billing, due to Summary billing and if the minimum number of days have been reached for billing.

Process Plug-in enabled Y **Available Algorithm(s):**

See algorithm descriptions from process Update Usage Request to Bill Determinants Received above If the usage response indicates that a usage request's SA should be skipped, this algorithm performs the following:

Customizable process N
Process Name

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

2.7 Update Usage Request to Error Status   **Group: Batch Billing**
                           Group: Generate Bill Segment
                           Group: Usage Request

Actor/Role: C2M
Description:
C2M(CCB) updates the Usage Request to Error status if the Usage Transaction cannot be provided, is discarded and an exception list is populated. If an error is encountered, this will trigger a creation of the bill segment exception.

Process Plug-in enabled N **Available Algorithm(s):**

Note: There are currently no base algorithms available for this Business Object plug-in spot.

Customizable process N   **Process Name**

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

2.8 Update Usage Request to Bill Determinants Processed **Group: Batch Billing**
                           Group: Generate Bill Segment
                           Group: Usage Request

Actor/Role: C2M(CCB)

Description:
C2M(CCB) updates the usage request with status of 'Bill Determinants Processed' if the usage transaction was not skipped in C2M(MDM) and is not in error.

Process Plug-in enabled N   **Available Algorithm(s):**

Note: There are currently no base algorithms available for this Business Object plug in spot.

Customizable process N   **Process Name**

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

2.9 Build Collection(s) of Items and Store Item details for Bill Segment(s)   **Group: Batch Billing**
Group: Generate Bill Segment
Group: Usage Request

Actor/Role: C2M(CCB)
Description:
The Bill Determinant (item) information and service quantity(s) are copied from the usage request to the bill segment item.

Customizable process N   **Process Name**

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

3.0 Analyze and Process Bill Determinants   **Group: Generate Bill Segment**
Group: Create Bill Segment Details
Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
The Bill Determinant (item) information is passed along to analyze and process the bill determinant information and prepare for calculating the bill segment details.

Process Plug-in enabled Y   **Available Algorithm(s):**

C1-BSBS-UR - This bill segment creation algorithm creates a bill segment for a service agreement that requires bill determinants

Customizable process N	Process Name	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

3.1 Access and Apply Rate Application for each Usage Period　　　　　　　**Group: Generate Bill Segment**
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Group: Create Bill Segment Details
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
This bill segment creation algorithm creates a bill segment for a service agreement that requires bill determinants from a meter data management system.

The algorithm finds the usage request linked to the bill segment in the bill determinants received state. It retrieves the usage period's list that contains an entry for each usage period that MDM calculated bill determinants for. Rate application is called for each entry in the usage period list; the usage period and bill determinants are passed to rate application.

Note the following about the resultant bill segment:
- A separate bill segment calculation header is created for each usage period in the list. Each calculation header reflects the consumption period used
- Both the usage period and the SP usage period list entries will be stored as 'Service Quantity' records in the bill segment Calculation/Audit Usage Details.
- The usage period returned by MDM is also captured on the bill segment.
- If any reads details are found on the usage request, these are stored as 'Calculation/Audit Read Details' records.
- After all usage period list entries have been processed; the system accumulates the bill determinants and stores these in the bill segment SQ collection for informational purposes.

Process Plug-in enabled Y	Available Algorithm(s):	C1-BSBS-UR - This bill segment creation algorithm creates a bill segment for a service agreement that requires bill determinants

Customizable process N	Process Name	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y	Entities to Configure:	
		Rates
Note:
- The following calculation rules have an indicator on whether to be executed only once for the entire

usage period or for every usage period: Apply To, - Summary, Calculate Service Quantity. - The Calculate Usage Days Derive Value algorithm has an option whether to return the number of days based on consumption/per usage period or the total usage consumption period.
SA Type
Bill Segment Type

3.2 **Calculate Bill Segment Lines and Create Bill Segment(s) Using Rates**   **Group: Generate Bill Segment**
                                                                                        Group: Create Bill Segment Details
                                                                                        Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
C2M(CCB) passes the consumption information to rates to calculate the Bill Segment.   Depending on the rate engine used, either the Calculation Groups/Calculation rules or the Rate Components are used to build the Bill Segment calculation lines..

Note the following about the resultant bill segment:
- A separate bill segment calculation header is created for each usage period in the list. Each calculation header reflects the consumption period used
- Both the usage period and the SP usage period list entries will be stored as 'Service Quantity' records in the bill segment Calculation/Audit Usage Details.
- The usage period returned by MDM is also captured on the bill segment.
- If any reads details are found on the usage request, these are stored as 'Calculation/Audit Read Details' records.
- After all usage period list entries have been processed; the system accumulates the bill determinants and stores these in the bill segment SQ collection for informational purposes.

Process Plug-in enabled Y	**Available Algorithm(s):**	C1-BSBS-UR - This bill segment creation algorithm creates a bill segment for a service agreement that requires bill determinants
Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.
Configuration required Y	**Entities to Configure:**	Rates, Calculation Groups/Calculation Rules or Rate Components with associated Rate Related Algorithms.

3.3 Create Financial Transaction(s)   **Group: Generate Bill Segment**
                                                     Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
C2M(CCB) creates the associated financial details related to the Bill Segment.   The Financial Transaction contains the financial effects of the Bill Segment on the Service Agreement's current and payoff balances and on the General Ledger.

Process Plug-in enabled Y   **Available Algorithm(s):**

> BSBF-BA - This Bill Segment financial transaction algorithm creates a financial transaction for a Bill Segment where: - Payoff amount = Bill amount - Current amount = Bill amount / zero / recurring charge amount
> BSBF-CU - This bill segment financial transaction algorithm creates a financial transaction for a bill segment where: - Payoff amount = 0 - Current amount = 0 - The general ledger is affected. Distribution codes are taken from the bill lines (typically these GL accounts are credited) and the SA type (typically this GL account is debited).
> C1-C0-GL - This bill segment financial transaction algorithm creates a financial transaction for a bill segment where:- Payoff amount = bill amount - Current amount = 0- The general ledger is affected
> C1-C0-NOGL - This bill segment financial transaction algorithm creates a financial transaction for a bill segment where:- Payoff amount = bill amount - Current amount = 0- The general ledger is not affected.
> CI_BSGFTDIST - Payoff Amt = Bill Amt / Current Amt = Amt Due (Checks bill segment CLOB for GL details)

Customizable process N   **Process Name**

> BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required N   **Entities to Configure:**

Bill Segment Type

3.4 Create Bill Segment Exception   **Group: Batch Billing**
                                                          Group: Generate Bill Segment
                                                          Group: Freeze Bill Segment

Actor/Role: C2M(CCB)
Description:
If a freezable or frozen Bill Segment cannot be created, C2M(CCB) creates a Bill Segment in "error" status with a message that can be analyzed by a CSR or Authorized User.   Typically, errors are caused by missing or incomplete data.   The error may be reviewed when first created or left when Batch Billing and the bill window is open and the system looks for the missing data.   Data may be changed before Batch Billing next runs.   When the Batch Billing process next runs, it deletes all "error" Bill Segment(s) and attempts to recreate them. It continues this throughout the Bill window. If a Bill Segment(s) is still in error at the end of the Bill window, a user must intervene and fix them. If the Bill Segment(s) is still in error when the cycle's next window opens, a Bill error is generated by batch Billing.

Customizable process N   **Process Name**

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.
TD-BSERR – This process creates a To Do entry for every bill segment that's in error.
TD-BIERR – This process creates a To Do entry for every bill that's in error.

Configuration required N   **Entities to Configure:**

To Do Role(s) for base TD-BSERR and TD-BIERR To Do Types

3.5 Add Final Bill Switch for Bill Segment(s)   **Group: Generate Bill Segment**
                                                           Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
If this is the final Bill Segment for this Service Agreement, it is marked as a closing Bill Segment.
Note: The Service Agreement must be stopped for this switch to be turned on.

Customizable process N   **Process Name**

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required N	**Entities to Configure:**	Installation Options – Final Bill Threshold

3.6 Review Bill Segment(s)
Actor/Role: CSR or Authorized User
Description:
If the bill was created online (rather than by the batch process), the CSR or Authorized User reviews the Bill Segment for accuracy and determines the next action.   The CSR or Authorized User decides if billing process could be continued, Bill Segment is incorrect, or created by mistake and needs to be deleted, rebilled, or canceled

3.7 Request Freeze Bill Segment(s)
Actor/Role: CSR or Authorized User
Description:
If the CSR or Authorized User does not identify a problem and decides to continue the Billing process, he/she requests to Freeze the Bill Segment(s).

3.8 Freeze Bill Segment(s)   **Group: Freeze Bill Segment**
                                                          Group Batch Billing

Actor/Role: C2M(CCB)
Description:
The Bill Segment(s) and associated Financial Transaction are frozen in C2M(CCB). The Bill Freeze Option on the Installation Options controls when a Service Agreement's balance and General Ledger is affected by the Bill Segment and must be configured to meet the organization's accounting practices.

Manual Process- Process is initiated by CSR or Authorized User when they request to Freeze Bill Segments created for Service Agreement.
Automated Process-This is a component of Batch Billing process and gets executed as a part of scheduled batch billing process that runs periodically. Functionality is the same as described in the Manual process.

Process Plug-in enabled Y	**Available Algorithm(s):**	BSFZ-EMPTY - This is a Customer Class Bill Segment freeze/cancel algorithm

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y	**Entities to Configure:**	Installation Options – Bill Freeze Options

3.9 Request Delete Bill   **Group: Delete Bill Segment**

Actor/Role: CSR or Authorized User

Description:

During the review process, it is determined the Bill Segment was created incorrectly or by mistake.   The CSR or Authorized User requests to delete the Bill or Bill Segment.   When a Bill has only one Bill segment, the Bill and the corresponding segment are deleted at the Bill level.

Note: The Bill can be deleted prior to completion when Bill Segments are Freezable or in Error status.

4.0 Delete Bill   **Group: Delete Bill Segment**

Actor/Role: C2M(CCB)

Description:

The Bill is deleted in C2M(CCB) and the financial record is removed from the database.   There is no financial impact to the Customer's Account related to the deleted Bill and Bill Segments.

4.1 Request Delete Specific Bill Segment(s)   **Group: Delete Bill Segment**

Actor/Role: CSR or Authorized User

Description:

The CSR or Authorized User determines specific Bill Segment(s) associated with a given Bill require deletion and requests to delete the Bill Segment(s).

4.2 Delete Bill Segment(s)   **Group: Delete Bill Segment**

Actor/Role: C2M(CCB)

Description:

The specific Bill Segments are deleted in C2M(CCB) and the financial records are removed from the database.   There is no financial impact to the Customer's Account related to the deleted Bill Segments.

4.3 Unlink Usage Request from Deleted Bill Segment

Actor/Role: C2M(CCB)

Description:

C2M(CCB) unlinks the usage request linked to the bill segment that is being deleted.

4.4 Request Rebill Bill Segment(s)   **Group: Rebill Bill Segment**

Actor/Role: CSR or Authorized User

Description:

If more information is available, or there is further review or investigation, the CSR or Authorized User now determines a need to Rebill the Bill Segment(s).   If the problem identified in the frozen Bill Segment has been resolved, the CSR or Authorized User requests to Cancel and Rebill the Bill Segment(s).

Configuration required Y   Entities to Configure

Bill Cancel Reasons

4.5 Update Bill Segment(s) to Pending Cancel, Generate New Bill Segment(s)
                                          Group: Rebill Bill Segment

Actor/Role: C2M(CCB)
Description:
The original Bill Segment(s) are updated to Pending Cancel, and new Bill Segment(s) created.   New unfrozen Financial Transactions are associated with the new freezable Bill Segment.

Configuration required Y   Entities to Configure:

Bill Cancel Reasons

4.6 Request Undo Rebill Bill Segment(s)   Group: Rebill Bill Segment
Actor/Role: CSR or Authorized User
Description:
The CSR or Authorized User determines not to freeze the new Bill Segment(s).   If the undo function is used, the newly generated segment is deleted.

4.7 Delete New Segment(s) and Return Original Bill Segment(s) to Frozen
                                          Group: Rebill Bill Segment

Actor/Role: C2M(CCB)
Description:
C2M(CCB) deletes the newly generated segment and returns the original bill segment to frozen. There are no impacts to Financial Transactions.

4.8 Request Cancel Frozen Segment(s)   Group: Cancel Bill Segment
Actor/Role: CSR or Authorized User
Description:
The Bill Segment(s) may need to be canceled and not created again.   The CSR or Authorized User initiates the Cancel function.

Configuration required Y   Entities to Configure:

Bill Cancel Reasons

4.9 Update Bill Segment(s) to Pending Cancel   Group: Cancel Bill Segment
Actor/Role: C2M(CCB)
Description:
C2M(CCB) updates the bill segment to pending cancel. The CSR or Authorized User then reviews the bill segment input.

Configuration required Y   **Entities to Configure:** | Bill Cancel Reason |

5.0 Request Undo Cancel Bill Segment(s)   Group: Cancel Bill Segment
Actor/Role: CSR or Authorized User
Description:
The CSR or Authorized User has the option to undo the pending Cancel Bill Segment(s).   Prior to the cancellation the CSR or Authorized User determines the Bill Segment(s) should not be canceled, and uses the Undo function.

Configuration required Y   **Entities to Configure:** | Bill Cancel Reasons |

5.1 Return Original Bill Segment(s) to Frozen   Group: Cancel Bill Segment
Actor/Role: C2M(CCB)
Description:
The original Bill Segment(s) are returned to Frozen in C2M(CCB). There is no impact to financial transactions. The Billing process could be resumed.

5.2 Request Finalize Cancel Bill Segment(s)   Group: Cancel Bill Segment
Actor/Role: CSR
Description:
The CSR or Authorized User confirms the cancellation of Bill Segment(s).

Configuration required Y   **Entities to Configure:** | Bill Cancel Reasons |

5.3 Update Bill Segment(s) to Canceled   Group: Cancel Bill Segment
Actor/Role: C2M
Description:
The existing Bill Segment(s) are updated to Canceled status in C2M(CCB). If a Bill Segment is cancelled, another Financial Transaction is created to reverse the original Financial Transaction. The cancellation Financial Transaction appears on the next Bill produced for the account as a Bill correction.

Process Plug-in enabled Y   **Available Algorithm(s):** | C1-PR-FT-CAN – This Customer Class FT Freeze algorithm is used to prevent cancellation of an FT where Freeze Date/Time is on or before the Conversion Date/Time. |

5.4 Request Add Bill Message(s)
Actor/Role: CSR or Authorized User
Description:
The CSR or Authorized User may add Service Agreement related Bill Messages for a given frozen Bill Segment(s). The CSR or Authorized User may also add Bill Messages at the Account Level.   The CSR or Authorized User adds these Bill Messages for an online Bill.

Configuration required Y   **Entities to Configure:**

Bill Messages

5.5 Add Bill Message(s)
Actor/Role: C2M
Description:
The Bill Message is added in C2M(CCB).

5.6 Request Complete Bill
Actor/Role: CSR or Authorized User
Description:
When the CSR or Authorized User are satisfied with the Frozen Bill Segment(s) they initiate the Complete Bill function.

5.7 Apply Criteria for Completion   **Group: Pre-Bill Completion**
                                                                                Group: Batch Billing
Actor/Role: C2M
Description:
Bill Completion is the last and one of the most critical components of the Billing process.   The system completes the Bill and it's ready for extract and print. C2M(CCB) uses Pre-Bill Completion algorithms.   Based on the requirements, the configured algorithms can delete Bill Segments in error, create Bill messages for the deleted segments, and create a To Do entry.

Manual Process: Based on configuration, additional Bill Messages can be added
Automated Process: (Batch billing) if required, such algorithms can:
Delete Bill Segments in error, create Bill Messages for deleted Bill Segments, and create a To Do entry
Delete bill certain type of Financial Transactions linked to the bill, for example, if only payments exist for newly created bill.
Skip Bill Completion Action dependent on bill segment status. Additional available pre-bill completion algorithms are listed here.

Process Plug-in enabled Y   **Available Algorithm(s):**

DEL BSEG –This SA Type pre-bill completion algorithm deletes bill segments that are in Error if: 1) the bill is not in Error, 2) the bill is being completed in batch, and 3) the process date

matches the bill cycle window end date 4) at least one other frozen bill segment exists that is not in Error.

When a bill segment is deleted, this algorithm also creates a To Do entry (using the To Do Type and To Do Role (if specified) and adds a Bill Message to the bill.

CPBC-DB - This Customer Class pre-bill completion algorithm determines to delete a bill if it only contains frozen financial transactions of given types

C1-CHKBLELIG - This Customer Class pre-bill completion algorithm checks if all Bill Segments on the Bill are Freezable, Frozen or Cancelled. If not, return Skip Bill Completion Action.

C1-CPBC-TAXT – This Customer Class pre-bill completion algorithm accumulates and compares a bill's tax amount to the threshold amount and regenerates bill segments as necessary to take the threshold into consideration. If a bill's accumulated tax amount is less than the tax threshold amount, then taxes should not be charged.

C1-CSB-EBC - This algorithm skips completion of a bill until the bill cycle schedule end date. This is only done if the account linked to the bill has a characteristic that matches the Summary Billing Characteristic Type and Characteristic Value parameters defined.

| **Customizable process N** | **Process Name** | BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User. |

Configuration required   Y   Entities to Configure:

To Do Type
To Do Role
Bill Message
SA Type
Customer Class

5.8 Create Bill Message   **Group: Pre-Bill Completion**
                                                                 Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
C2M(CCB) creates a bill message for the given bill when a bill segment is deleted.   The Bill Message code is a parameter for the following algorithm.

Process Plug-in enabled Y   Available Algorithm(s):

DEL-BSEG –This Bill pre-completion algorithm deletes Bill Segments that are in Error

Customizable process N   Process Name

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

5.9 Create Bill Messages Based on Configuration   **Group: Bill Completion**
                                                                 Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
C2M(CCB) can also automatically add - Bill Messages during Bill completion. Bill Messages come from a variety of sources:
- Account Bill Messages
- Customer Class Bill Messages
- Service Agreement related Messages that are linked to Bill Segments
- Rate Schedule Bill Messages
- Service Provider Bill Messages
- Meter Reader Remark Bill Messages
- Ad hoc Messages by CSR or Authorized User
- Custom Background Processes and Algorithm Bill Messages

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y	**Entities to Configure:**	Customer Class Bill Messages
		Rate Schedule Bill Messages
		Account and Service Agreement Bill Messages

6.0 Keep Credit on Excess Credit SA   **Group: Bill Completion**
                                                          Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
Unless specifically configured as noted in process Apply Credit to SA(s), C2M(CCB) keeps any excess credit on an Excess Credit SA.

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

6.1 Apply Credit to SA(s)   **Group: Bill Completion**
                                                          Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
When specifically defined, C2M(CCB) can transfer an existing credit on an Excess Credit SA to other SA's.   Refer to 4.3.1.1 C2M.CCB Manage Payments. Note: An Excess Credit SA Type may be configured as a one-time charge SA Type, and automatically stopped, or may be allowed to stay in an Active Status for future transactions.

Note: Additional bill completion algorithms are also listed here.

Process Plug-in enabled Y	**Available Algorithm(s):**	C2M-CR-XFER - This SA Type bill completion algorithm will transfer the balance of a credit SA to other SAs linked to the account.

C1-SUP-PR-BL - This Customer Class bill completion algorithm checks if the current bill being completed is for an account that has already been final billed in a previous run. If the account has

been final billed, and if the current bill is not the final bill, the bill routings of the current bill will be reset.
C1-CN-BRT – This Customer Class bill completion algorithm suppresses bill routings for credit notes.
C1-CN-RADJ – This customer class bill completion algorithm reverses adjustments for a bill when a credit note is being created and completed for that bill.
C1-CAPBILLMN – This SA Type Bill Completion algorithm creates an entry to bill characteristic to capture the bill month.
C1-CREPPBBM – This SA Type Bill Completion algorithm creates a bill message for prepaid service agreements.
C1-PYOF-DBT – This SA Type Bill Completion algorithm checks the input credit SA's balance. If the balance amount is a credit, it looks for all frozen payments linked to this SA. These frozen payments are used to pay-off the account's outstanding debt via payment transfer.

Customizable process N	Process Name	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y	Entities to Configure:	SA Type
		Transfer Adjustment Type

6.2 Add Adjustments, Payments, and Bill Corrections to Affect Bill Amount

<div align="center">

Group: Bill Completion
Group: Batch Billing
</div>

Actor/Role: C2M(CCB)

Description:

During Bill Completion C2M(CCB) adds Adjustments, Payments or Bill corrections not included in the previous Bills to the newly created Bill.

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

6.3 Determine Due Date, Late Payment Charge Date, and Credit Review Date

                                Group: Bill Completion
                                Group: Batch Billing

Actor/Role: C2M(CCB)
Description:

During Bill Completion, the Due Date, Late Payment Charge Date, and next Credit Review Date are determined and made available as information for the Bill and Account.

Process Plug-in enabled Y	**Available Algorithm(s):**	DUE DT OVRD – This override bill due date algorithm may override a bill's due date.

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y	**Entities to Configure:**	Customer Class - Due Date, LPC Eligibility, Late Payment Charge Grace Days

6.4 4.3.2.5a C2M.CCB Manage Late Payment Charge

                                Group: Bill Completion
                                Group: Batch Billing

Actor/Role: C2M(CCB)
Description:

Accounts that are eligible for Late Payment Charges have charges calculated after the LPC grace days. Refer to 4.3.2.5a C2M.CCB Manage Late Payment Charge.

6.5 4.3.1.1d C2M.CCB Manage Autopay

                                Group: Bill Completion
                                Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
An <u>Autopay</u> payment may be created during Bill Completion. Refer to 4.3.1.1d C2M.CCB Manage Autopay.

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

6.6 **4.3.2.2 C2M.CCB Manage Severance Process**   **Group: Bill Completion**
                                                                                      Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
The status of a Severance Process can change due to Bill Completion. For example, an excess credit may be transferred to a utility SA that is currently covered by a severance process. Refer to 4.3.2.2 C2M.CCB Manage Severance Process.

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

6.7 **4.3.2.5 C2M CCB Manage Write Off Uncollectible Receivables**   **Group: Bill Completion**
                                                                                                                  Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
The status of a Write Off Process or Write Off SA can change due to Bill Completion. For example, an excess credit may be transferred to a utility SA that is currently covered by a Write Off Process. Refer to 4.3.2.5 C2M.CCB Write Off Uncollectible Receivables.

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

6.8 **Create Additional Required Bill Message(s)**   **Group: Post Bill Completion**
                                                                                        Group: Batch Billing

Actor/Role: C2M(CCB)
Description:

C2M(CCB) can perform various post Bill completion activities.   Additional custom Bill Message(s) can be added to the specific bill.
Note: Post completion activity allows for adding various custom functionality based on business rules to impact/modify the bill overall. Available post completion bill algorithms are shown here.

Process Plug-in enabled Y	**Available Algorithm(s):**	
		C1-CN-ADNB – This Customer Class post bill completion algorithm recreates adjustments after a credit note is completed. This algorithm is only applicable to credit notes.
		C1-CR-BLRVWS - This Customer Class post bill completion algorithm creates a bill review record if a bill has financial transactions with FT GL lines that reference a distribution code with an accounting method of either 'Bill Due Date' or 'Earlier of Bill Due Date and Payment Date'. The Bill Review Batch Job is C1-BLRVW.

Customizable process N	**Process Name**	
		BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y	**Entities to Configure:**	
		Customer Class
		Bill Message

6.9 Update Bill with Completion Details   **Group: Post Bill Completion**
                                                                              Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
All Bill completion details are now updated in C2M(CCB) including any post bill completion messages.

Customizable process N	**Process Name**	
		BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

7.0 Review Bill
Actor/Role: CSR or Authorized User

Description:

If the bill was created by a CSR or Authorized User rather than the batch process, the CSR or Authorized User evaluates the Account and reviews the Bill for accuracy.   The Bill may not be in a Complete status.   Some data may be missing or has incomplete information.   At times, it may be necessary to reopen the most recent Bill.   Possibly a payment or adjustment was not included in the original Bill.   A Bill Segment may need rebilling and changes reflected in a new Bill.

7.1 Make Necessary Changes for Bill

Actor/Role: CSR or Authorized User

Description:

During Bill Completion, information may be missing or incomplete.   One example is the mailing address may be missing.   The CSR or Authorized User reviews and resolves the error, enters correct data, and completes the Bill as needed.

7.2 Update Information

Actor/Role: C2M

Description:

C2M(CCB) updates bill information as needed.

7.3 Request Reopen Bill

Actor/Role: CSR or Authorized User

Description:

After reviewing the CSR or Authorized User determines to reopen a Bill for the Customer's account.

7.4 Update Current Bill to Reopen

Actor/Role: C2M

Description:

The current Bill is reopened in C2M(CCB) and available for applicable changes.

7.5 Request Changes to Impact Balance

Actor/Role: CSR or Authorized User

Description:

Based on investigation and established business rules, the CSR or Authorized User requests various changes that impact the balance. Typically, these changes can be: creation of a new Bill Segment, Rebill of a Bill Segment, Cancellation of a Bill Segment, Creation of a Payment or Adjustment, or Cancellation of a Payment or Adjustment.

7.6 Update Balance

Actor/Role: C2M(CCB)

Description:

The financial balance is updated in C2M(CCB).

7.7 Evaluate Bill Routing
Actor/Role: C2M(CCB)
Description:
As C2M(CCB) prepares the bill for the customer, the Bill Routing for the customer is checked to determine the routing method used to deliver the bill to the customer. The Bill Routing Type is defined on the customer's Account record.

Customizable process Y	**Process Name**	Bill Print Extract

Configuration required Y	**Entities to Configure:**	Bill Route Type
		Lookup - Bill Routing Method

7.8 Extract Bill for E-Bill
Actor/Role: C2M(CCB)
Description:
C2M(CCB) prepares required information for alternate delivery of the bill for the customer.   This could be through text messaging, web presentation, email, or other communicated presentation.   This is custom processing based on individual client needs.

Process Plug-in enabled Y	**Available Algorithm(s):**	BLEX-EX - This Bill Route Type Bill extract algorithm constructs the records that contain the information that appears on a printed Bill for Documaker.
		C1-BLEX-XML- This Bill Route Type extract algorithm create XML bill extract records for Documaker.
		C1-BLEX-BIP - This Bill Route Type extract algorithm schedules report job in BI Publisher to generate Bill Reports in range.
		C1-BLEX-CR - This Bill Route Type extract algorithm prepares the report information needed to create a Bill using a Reporting Engine

Configuration required Y	**Entities to Configure:**	Bill Route Type
		Lookup - Bill Routing Method

7.9 Prepare and Send E-Bill to Customer

Actor/Role: C2M(CCB)
Description:
C2M(CCB) prepares required information for alternate delivery through some custom processing.   This is a placeholder for any alternate method of bill delivery. This is custom processing based on individual client needs.

Customizable process Y   **Process Name**

Custom Extract for Bill Delivery

8.0 Extract Bill for Postal Delivery
Actor/Role: C2M(CCB)
Description:
C2M(CCB) prepares required billing data and makes the data available for Document Management applications (Documaker and BI Publisher). Note: An additional custom process may be created to interface with any other Document Management Software as needed.

Process Plug-in enabled Y   **Available Algorithm(s):**

BLEX-EX - This Bill Route Type Bill extract algorithm constructs the records that contain the information that appears on a printed Bill for Documaker.
C1-BLEX-XML- This Bill Route Type extract algorithm create XML bill extract records for Documaker.
C1-BLEX-BIP - This Bill Route Type extract algorithm schedules report job in BI Publisher to generate Bill Reports in range.
C1-BLEX-CR - This Bill Route Type extract algorithm prepares the report information needed to create a Bill using a Reporting Engine

Customizable process N   **Process Name**

POSTROUT – CIPBXBLB

Customizable process Y   **Process Name**

Custom Extract Process

Configuration required Y   **Entities to Configure:**

Bill Route Type
Lookup - Bill Routing Method

8.1 Prepare and Send Bill to Customer
Actor/Role: Document Management Software
Description:

Document Management Software reads and process bill information produced by C2M(CCB).   It prints actual bills or prepare bills in another format (e-mail, PDF online format, short message service (SMS)). The bill is made available for the Customer.   This is custom processing based on individual client needs.

8.2 Receives Bill

Actor/Role: Customer
Description:
The Customer receives the Bill.

Configuration required Y	**Entities to Configure:**	Bill Route Type

8.3 Select Accounts for Open Bill Cycles   Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
For the open bill period, C2M(CCB) selects all accounts to be billed by looking at the account's bill cycle.

Customizable Process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y	**Entities to Configure:**	Bill Cycle

8.4 Check Eligibility for Batch Billing   Group: Batch Billing

Actor/Role: C2M(CCB)
Description:
C2M(CCB) verifies that the account is eligible to be billed.

C1-SKIPACCCB – This Customer Class bill eligibility algorithm stops processing an account during batch billing if a completed bill exists for the current bill cycle schedule.
C1-SKIPINACC - This Customer Class bill eligibility algorithm stops processing an "inactive" account if all the following conditions are true: - There are no billable service agreements

Process Plug-in enabled Y **Available Algorithm(s):**

- There are no FTs eligible for sweeping onto the bill - There are no temporary account messages to be swept onto the bill

Customizable Process N **Process Name**

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.   Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y **Entities to Configure:**

Customer Class

8.5 Determine Bill Period, Consumption Period **Group: Batch Billing**

Actor/Role: C2M(CCB)

Description:

C2M(CCB) determines the Bill Period boundary, and next determines the Consumption Period boundary.

Bill segments produced for a service agreement have two time periods:
- The bill segment period. The bill segment period defines the entire period of time covered by a bill segment's charges.
- The consumption period. The consumption period defines the period of time used to calculate the number of days for daily charges.

Bill Segment Start date:
- If this is the initial Bill Segment for the Service Agreement, the start date is set to the start date of the Service Agreement
- If this is not the initial Bill Segment for the Service Agreement, the start date is the previous Bill Segment's end date.

Bill Segment End Date
- If this is the last (final) Bill Segment for the Service Agreement, the end date is the Service Agreement's end date
- If this is not the last (final) Bill Segment for the Service Agreement, the Billing Option selected by the Authorized User determines how the end data is set. When Billing Option of Use Cutoff Date is selected, the end date is the specified Cutoff Date. When Billing Option of Use Schedule is selected, the end date is determined by available measurement data based on the Service Agreement's Service Point's measurement cycle.

The consumption period almost always starts one day after the bill segment period. The only time this true is the first bill segment that's produced for a new service agreement. This is because different utilities count the first day of a new service agreement differently than others. This is controlled by configuration of SA Type Initial Start Date Option.

The consumption period always ends on the bill segment's end date

The bill condition is noted on the Usage Request.   Valid bill conditions are: initial, interim or final.

<u>Note</u>: The system ignores Service Points that are not billable, disconnected before the Bill period started, or are yet to be connected as of the Bill end date.

Customizable Process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y	**Entities to Configure:**	Bill Cycle
		Frequency
		Bill Segment Type and associated algorithms
		Rates
		SA Types

8.6 Create Bill Exceptions   Group: Batch Billing
Actor/Role: C2M(CCB)
Description:
C2M(CCB) identifies Bills in an error status.   They are placed in an exception table and can be made available as To Do entries.   If C2M(CCB) determines the bill cannot be completed, a bill exception is created for review by a CSR or Authorized User.   For example, if the customer's mailing address is not defined, the corresponding bill cannot be completed.

Customizable process N	**Process Name**	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

8.7 Identify Bill Segments in Error Status   Group: TO DO Bill Segment Error Process
Actor/Role: C2M(CCB)
Description:
C2M(CCB) identifies Bill Segments in error status. C2M(CCB) can create a To Do Entry for every Bill Segment in error status.

Customizable process N   **Process Name**

TD-BSERR- This background process creates a To Do entry for every Bill Segment that's in error.

Configuration required Y   **Entities to Configure:**

To Do Role (s) for base TD-BSERR To Do Type

8.8 Create Bill Segment Error To Do   Group: TO DO Bill Segment Error Process
Actor/Role: C2M(CCB)
Description:
C2M(CCB) can create a To Do Entry for every Bill Segment in error status.   The To Do functionality allows for online review by a user or group of users.   To Do Lists summarize and total entries for different To Do Types.   Status of To Do Entries is available for evaluation.

Customizable process N   **Process Name**

TD-BSERR- This background process creates a To Do entry for every Bill Segment that's in error.

Configuration required Y   **Entities to Configure:**

To Do Role
To Do Type

8.9 Evaluate and Perform Analysis
Actor/Role: CSR or Authorized User
Description:
The CSR or Authorized User will review the Bill Segment error and supporting information in C2M. Service Point, Device (Meter) and Read historical information, Device (Meter) Configuration, Activity History, Account, Service Agreement, and Billing History are some of the areas reviewed. Typically errors are caused by missing or incomplete information.   Based on established business rules, the CSR or Authorized User investigates viable solutions or workarounds for the missing or incomplete information.

9.0 Resolve Issue
Actor/Role: CSR or Authorized User
Description:
The CSR or Authorized User resolves the error and enters information into C2M.

9.1 Update Data
Actor/Role: C2M(CCB)
Description:
Information required for resolution is updated in C2M

9.2 Request Complete To Do
Actor/Role: CSR or Authorized User

Description:
The CSR or Authorized User marks the To Do Entry as complete and requests completion of the To Do Entry.   The CSR or Authorized User may add comments or a log entry for future reference.   Note: Completed To Do entries are typically purged after a defined period of time.

9.3 Complete To Do Entry
Actor/Role: C2M
Description:
The To Do Entry is updated to Complete Status in C2M

9.4 Identify Bills in Error Status   **Group: TO DO Bill Error Process**
Actor/Role: C2M
Description:
C2M(CCB) identifies Bills in an error status. If C2M(CCB) determines the bill cannot be completed, a bill exception is created for review by a CSR or Authorized User.   An associated To Do can be created. For example, if the customer's mailing address is not defined, the corresponding bill cannot be completed.

Customizable process N	**Process Name**	TD-BIERR - This background process creates a To Do entry for every Bill that's in error.
Configuration required Y	**Entities to Configure:**	To Do Role(s) for base TD-BIERR To Do Type

9.5 Create Bill Error To Do   **Group: TO DO Bill Error Process**
Actor/Role: C2M(CCB)
Description:
C2M(CCB) can create a To Do Entry for every Bill in error status.   The To Do functionality allows for online review by a user or group of users.   To Do Lists summarize and total entries for different To Do Types.   Status of To Do Entries is available for evaluation.

Customizable process N	**Process Name**	TD-BIERR - This background process creates a To Do entry for every Bill that's in error.
Configuration required Y	**Entities to Configure:**	To Do Role(s) for base TD-BIERR To Do Type

Test Documentation related to the Current Process

ID	Document Name	Test Type

Document Control

Change Record

Date	Author	Version	Change Reference
6/8/09	Colleen King	Draft	No Previous Document
8/31/09	Colleen King		After Review
9/1/09	Colleen King		After Review
9/2/09	Colleen King		After Review
9/3/09	Colleen King		After Review
10/21/10	Geir Hedman		Updated Title and Content page
12/05/10	Sarit Cohen		Display Bill Info update, Tech update
2/9/11	Geir Hedman		Updated Document and Visio
3/25/2011	Conrad Pinili		Updated Document – Process Plug-Ins
10/3/2013	Becky Ray		Updated for v2.4
10/5/2013	Galina Polonsky		Reviewed, Approved
08/28/15	Jane Cuenco Tan		Updated Document and Visio
09/09/2015	Galina Polonsky		Reviewed, Approved
11/20/2017	Jeffrey Young		Updates for C2M item billing using usage request functionality
12/18/2017	Galina Polonsky		Reviewed, Approved
1/3/2018	Colleen King		Update Document and Visio
08/15/2018	Debby Phelps		Update Document and Visio for SP1
09/15/2018	Galina Polonsky		Reviewed, Approved
6/3/2019	Satya Kalavala		Updated format for v2.7
1/21/2020	Antonio Napoli		Changed Filename, Process name as per URM formatting in this document and Visio

Attachments:

Bill Item

Bill Item.doc

Bill Segment

Bill Segment
Item.doc

Multi Cancel/Rebill

Multi-Cancel
Rebill.doc

Admin Menu/Installation Options/Control Central Alerts

Installation Options
Control Central Alert.

Admin Menu/Installation Options/Billing

Admin Menu
Installation Options B

Control Central Search

Control Central
Search.doc

Dashboard

Dashboard.doc

Rate Algorithms / Entities to Configure

Rate
Algorithm-Configurati

Account/AutoPay

Account-Autopay.do
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