

amdocs**billing**

# **Billing 6.0**

## Release Notes



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# 1. INTRODUCTION

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This chapter lists the changes in Amdocs Billing 6.0. The changes are described in greater detail in the next chapter.

## What's New in this Version

This new release of Amdocs Billing 6.0 includes the following:

- Support for Unified Product Catalog
- GUI Mapping Tool for CM Extract
- Efficient and Customizable Bill Day Processing
  - Parallel Processing (Pipelining)
  - Flexible Flows
  - Improved Usage Error Handling
- Quotation Server, SOR and Billing Ongoing
  - New: Quotation Server
  - SOR Integration
  - Charge Preparation: Improved Scalability & Performance
  - Billing End-of-Day (EOD): Operational Improvements
  - Backdating
  - Resume/Renew Subscriber
- Flexible Bill Frequency
  - Flexible Cycle Frequency
  - Flexible Product Catalog Definitions
  - Flexible Bill Production Frequency
  - Change Cycle or Bill Production Frequency
- Rating Partition Independent of Cycle: Improved Load Balancing
- Billing Operability
  - Improved Reject Information
  - Enhanced Rerun and Undo Functionality
  - Enhanced Bill Redirection (Printing Categories)
  - AMC: View Cycle Progress Dynamically
  - Customer Management Updates: Improved Performance/Scalability

- Billing Configurator Enhancements
  - Complex Entities Subsystem
  - Transaction Listener Subsystem
  - Core Database Updates (Version Management Subsystem)
  - Immediate Non-versioned Updates from Product Catalog
  - Printing Categories (Bill Redirection)
- Discount Enhancement
  - Prorate Bill Day Discounts
  - Discount Item Properties on Credit
- Improved Handling of Changes to Customer Information
  - RC Tax Proration: Consider Customer Information History
  - Improved Performance: Update Customer Information on Ongoing Basis
- Multi-language (Unicode) Support
- Billing Cleanup
- New APIs
- Support for 24x7 Operation

Technical information regarding new functionality is given in the *Technical Changes* chapter.

## Terminology

The table below defines special terms and acronyms that are used in this document.

Term	Description
Allowances	Free units of any type, such as free voice minutes, free SMS messages, or free volume for data transfer. A pricing package might have one or more allowances. More than one allowance can be activated for the same event during rating.
AMC	Amdocs Application Monitoring and Control. This component enables monitoring and manipulation of in-house applications, third-party tools, and network elements. Having no negative impact on system availability and performance, it provides centralized control of all required applications while increasing applications availability via a simple generic GUI.
AR	Amdocs Accounts Receivable. An Amdocs application that maintains customers' account balances by responding to the financial activities of Billing, and by handling payments, adjustments, backouts, fund transfers, and other financial activities.
Audit & Control	Audit and Control monitors the flow of usage information through the different modules in the Amdocs system and provides accurate information to identify leakage or other problems in the flow.



Term	Description
Backdating	Setting the effective date of an activity to a past date.
Bill	A bill includes an invoice with an additional statement that carries forward the customer's account balance from the previous bill. It also specifies each financial transaction that occurred since the previous bill, and concludes with the total balance of the customer's account. The bill requests payment of the total account balance. Unlike an invoice, it is not limited to the charges of the current billing period only.
Billing Arrangement	An entity that receives an invoice or a bill.
Billing Configurator	A user-friendly GUI application that enables individual configuration of the billing behavior according to the needs of each CSP.
Billing Cycle	The period between billings for a given population (the Cycle Population). The term is also used to refer to a given cycle population and its processing.
Charge	A financial activity of a billing document that includes a monetary amount that affects the bill entity balance. A charge may be a credit or a debit.
CM	Customer Management
Cycle Close Date	Identifies the last day of the month on which events, charges, and adjustments are included in the current billing document.
Invoice	An invoice is the billing document type that comprises the charges and credits for services and equipment that the customer has used and purchased during <i>a single billing period</i> . The invoice's <i>payment due</i> relates to the charges from that specific period.
OC	One-Time Charge. These charges are applied only once, as the result of an action on a customer account. An example would be an activation fee charged when registering for a new discount plan. One-time charges can be defined at different levels, e.g., single line, groups of lines.
Offer	An offer, defined in the Product Catalog, is a combination of pricing packages and service packages. This is the unit sellable to the customer. A subscriber has one or more offers assigned to it.
Pay Channel	A specified payment method to which subscriber services can be mapped. A pay channel can be prepaid or postpaid. A pay channel may carry instructions of how it pays for services on a regular basis, e.g., direct debit. A pay channel might also use ad-hoc payments, such as cash payments or vouchers. A prepaid pay channel defines a prepaid balance and all services that share that balance.
Prepaid Statement	The prepaid statement is the billing document that includes information about prepaid charges, grouped by pay channel. The statement also includes all replenishment activities that occurred during the current cycle period.

Term	Description
Product Catalog	An Amdocs application that enables a CSP to define offers, packages, and services for their customers.
Proration	The proportional calculation of charges for a specific timeframe within the billing cycle, rather than for the entire billing cycle. It is also the proportional calculation of credits to be applied when, for example, a subscriber pays in advance for a service and the service is interrupted and provided for the full cycle.
QA	Quality Assurance enables the QA personnel to audit sample bills for accuracy and format.
Quotation Server	The Quotation Server provides quotes for customers who want to know in advance how much a service is going to cost them.
Rating	The component responsible for calculating the rate or charge for a transaction using events, Product Catalog data, and customer data.
RC	Recurring Charge. A charge that is not usage-dependent and is added to the bill periodically, usually every month. For example, Monthly Maintenance.
Service Payer	The entity responsible for paying for the service – this is usually the pay channel related to the billing arrangement for which the document is produced. Since the pay channel has no special meaning in Billing, sometimes Billing considers the billing arrangement as the payer.
Service Receiver	The entity that receives the service for which the customer is debited – usually subscriber or unit's agreement.
SOR	Amdocs Service Order Rating. A tool used for calculating recurring charges (RC) and one-time charge (OC) associated with orders for services and equipment (S&E).
Subscriber	A user with a clear identification that plays a key role. A subscriber carries a clear status (such as active, suspended, cancelled) and is assigned services. The exact semantics of a subscriber may be implementation-dependent. A simple case is a user with a handset, but a subscriber can have multiple SIM cards and multiple numbers. A wireless subscriber may have ISP services as part of the same subscription, or the ISP subscription may be implemented as a separate subscriber.
TRB	<p>The Transaction Broker is the communication mediator between the various customer care and billing functional components, each of which is autonomous and self contained. These components use the Transaction Broker to exchange information between themselves, and with external systems, in the form of XML files.</p> <p>The Transaction Broker supports a Publish/Subscribe model for asynchronous messaging. Components connect to the Transaction Broker either as publishing applications sending transactions, or as subscribing applications receiving transactions.</p>

## Related Documents

Documentation related to Billing 6.0 includes:

- *Product Catalog Release Notes*
- *Customer Management Online Release Notes*



## 2. NEW FUNCTIONS AND ENHANCEMENTS

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This chapter describes the new functions, and enhancements of existing functions, included in Amdocs Billing 6.0.

### Support for Unified Product Catalog

Billing has been enhanced to support the new Unified Product Catalog (UPC). Specific changes to the Billing component include the following:

- Support for OC and RC calculations based on customer-set product parameters defined at the offer level
- Incremental load of sub-release changes
- Support for future versions – a version with a future effective date is stored in the Billing database and activated accordingly
- Support for vertical versions

See *Product Catalog Release Notes* for more information.

### GUI Mapping Tool for CM Extract

Billing now enables the mapping of physical data names (such as CM attribute names) to logical names defined in the Billing Configurator. In addition, there is improved control over the update of customer information arriving via TRB. For more detail, see the sections on the Billing Configurator (Complex Entities and Billing Transaction Listener subsystems) below.

### Efficient and Customizable Bill Day Processing

The following are the main enhancements that have been made to the bill day flow:

- Bill day performance has been improved through parallel processing (pipelining).
- The bill day flow has become more easily customizable (flexible flows).
- Recoverability has been enhanced (in part due to improved error reporting), resulting in improved performance.

#### Parallel Processing (Pipelining)

The bill day flow has been changed to enable independent processes to run in parallel, waiting for other processes only where necessary.

The following are the key areas where parallel processing has been implemented:

- Bill Preparation and Rerating. Entities requiring rerating will be isolated into separate groups. Rerating of these groups will proceed in parallel with Bill Preparation of all other groups. Then, once rerating is complete, Bill Preparation can proceed for the rerated groups.
- Usage extract is started immediately after rerate and in parallel with Bill Preparation
- Bill Preparation and Bill Formatter extracts. BF processes that are not dependent on the Bill Preparation flow (e.g., CM, AR, Reference, Event, and Non-Charge PI extracts) will be run in parallel to it. Generic Billing extracts (and other Bill Preparation-dependent processes), on the other hand, will wait for Bill Preparation to complete before beginning. Division into groups (i.e., group size, number of groups) can be configured separately for the two parallel flows (Bill Preparation and BF extract).

### Flexible Flows

There is now greater discretion in choosing which processes and sub-processes are actually executed in a given flow. The user can choose the mode of operation (which can be modified or customized), which results in the execution of only a subset of all the processes in the flow.

### Improved Usage Error Handling

Usage error handling has been improved in the bill day flow, as follows:

- Interfaces with Rating now provide for separate files for successful and rejected entities.
- This means that processing of successful data can proceed immediately, while only rejected data is sent for reprocessing.

## Quotation Server, SOR and Billing Ongoing

Several improvements have been made to ongoing (non-bill day) processes. They are detailed in the following sections.

### New: Quotation Server

The Quotation Server provides quotes for customers who want to know in advance how much a service is going to cost them. The server operates in synchronous mode, supporting online users who wait for quotations. The processing flow used to calculate the quote is the same as the one used to calculate the charge once the service is purchased.

The following is a list of the main features of the Quotation Server:

- Potential order charge calculation. During the ordering process, the customer can request a quote prior to placing the order. The calculation takes into account all existing customer offers.
- Customer care activity charge calculation. Customers can also obtain quotes on non-order activities (e.g., request bill copy).

- Commitment & penalty calculation. Customers who wish to cancel an existing offer can first learn the extent of their existing commitment to the offer (e.g., number of months remaining). They can also obtain a quote for the penalty they can expect to pay if they complete the cancellation request.
- Immediate charge calculation. The Quotation Server can calculate the charge to a customer who wishes to pay for a service immediately (e.g., by credit card) rather than be billed for it.
- Anonymous customers. The Quotation Server also works for customers not currently in the billing system (e.g., potential customers).
- Activity charge creation. Once the order is actually placed or the customer activity actually performed, a charge is created.
- Flexible charge calculation. The Quotation Server enables flexible charge calculation, in order to fully exploit the PC implementation capabilities. OC/RC calculation can be based on dynamically defined rating events.
- Complex quotes. The Quotation Server enables complex quote calculations originating from multiple or complex business cases (e.g., installation and additional offers in a single request).
- Offer-level parameters may be used to perform quote calculations.

## **SOR Integration**

Actual charge preparation is performed using the same features and algorithms that are used for the Quotation Server (see above), via the same APIs and transactions.

## **Charge Preparation: Improved Scalability & Performance**

The charge preparation flow typically handles a variable stream of activities generated by other components, most notably Customer Management (CM). Several enhancements to scalability and performance make it less susceptible to backlogs during periods of high activity. The following is a brief summary of these improvements:

- Improved performance and configurable scalability.
  - The following daemons have been united into a single, efficient, multi-threaded process: Rate Change Alert Listener (RCA), Billing Transaction Listener (BTL), Preparation for the Non-Usage Rater (PNUR), the Non-Usage rater (NUR), the Charge Analyzer (CA) and RCA and BTL recovery processes.
  - Each sub-process has been converted into a customizable plug-in and they are now grouped together into the Pricing Request Library (PRL).
  - Exit points are used to implement and customize each of the new plug-ins.

- More efficient use of the Transaction Broker (TRB).
  - TRB transactions are now parsed more efficiently (e.g., only once for all plug-ins) and are processed in bulk rather than individually.
  - Error recovery performance has been improved by taking advantage of the Transaction Broker's own error handling mechanism.
  - Information previously extracted from the CM database is now also parsed and retrieved from the TRB transactions.

### Billing End-of-Day (EOD): Operational Improvements

Several operational improvements were made to the Billing End-of-Day flow. The following is a brief summary:

- Bill day now synchronized with ongoing charge preparation. Ongoing billing activities of the day ended must now be processed before bill preparation may begin.
- New cycle creation now synchronized with ongoing. The cycle listener no longer creates new cycles. Rather, it is shut down once the current day's transactions have been processed. New cycles are then created by a separate EOD job prior to the beginning of the new day.
- Customization enabled in change cycle activity. Change cycle requests are no longer handled by the cycle listener. Rather, they are handled by a series of jobs in the EOD flow, which means that they can be customized.
- Bill day initiator can now distinguish between backlogs and rejected transactions in the charge preparation flow. If there are backlogs, the entire population is rejected before bill preparation. If not, only the entities with errors are rejected.

### Backdating

Backdating means supplying an event with an effective date in the past (i.e., prior to the issue date). Billing 6.0 enables backdating to dates in the current cycle. The following are supported:

- Backdating initiated by either CM activities or PC rate changes or version fixes (i.e., RCs due to CM activities; RCs or OCs due to PC changes).
- Rerating of backdated events due to potential interactions with other rates. Thus, backdating is supported even for events with subsequent changes (i.e., where status, agreement parameter, or PC rate changed after the effective date but prior to the issue date).



## Resume/Renew Subscriber

Billing now supports reactivation of a cancelled subscriber. This can be done in one of two ways:

- **Resume.** If reactivation occurs in the same cycle as the cancellation, the subscriber can be resumed. This activity is backdated to immediately following the cancellation. The intended effect is to make it (as much as possible) as though the cancellation never occurred (e.g., expiration dates are removed and penalties due to cancellation are rescinded).
- **Renew.** The renewed subscriber is treated as a new subscriber based on the cancelled subscriber information (including the old subscriber ID, as applied by CM). The renewal activity can be either immediate or backdated.

In addition, pay channels and billing arrangements closed due to cancellation can also be reactivated, provided that this occurs during the same cycle in which they were closed.

For more information, see *Customer Management Online Release Notes*.

## Flexible Bill Frequency

Billing is no longer limited to monthly cycles. Rather, cycle frequencies can be any multiple of a week or month and several cycles may feed into a single bill. The following sections describe these improvements in greater detail.

### Flexible Cycle Frequency

Billing cycle frequencies can now be either:

- Weekly or any multiple thereof
- Monthly or any multiple thereof

While cycles are still assigned to customers in Customer Management, they are now defined using the Billing Configurator. Cycle instances (i.e., the calendar period defining a single occurrence of the cycle) are now managed by Billing and communicated to other components (i.e., Rating and Customer Management) via transactions published by Billing.

### Flexible Product Catalog Definitions (RC Rates)

In previous versions, certain Product Catalog definitions (i.e., RC rates, rating steps, discount packages, and allowances) were assumed to have a monthly frequency. In version 6.0, this frequency has become flexible. However, existing definitions will continue to be treated as monthly.

Recurring charges are defined in the Product Catalog assuming a base frequency, which can be daily, weekly or monthly. This base rate, together with the cycle definition, is used to calculate the charge in one of two ways:

- The base rate is multiplied by the number of months, weeks, or days in the cycle, resulting in a single recurring charge.
- Separate charges are generated for each month, week or day in the cycle.

Note that recurring charges do not need to be generated for each and every cycle. Rather, they can be aggregated and billed once every N cycles, as desired.

### Flexible Bill Production Frequency

Bill production is no longer restricted to once per cycle. Rather, bills may be produced at a frequency of any multiple of the cycle frequency. For example, a customer with a monthly cycle frequency can receive bills only once every three months (i.e., quarterly).

Bill production frequency is defined for the billing arrangement. Thus a customer with a monthly cycle could have two billing arrangements – one for voice calls, which are billed bi-monthly and one for data services, which are billed monthly.

### Change Cycle or Bill Production Frequency

While the change cycle operation is essentially the same as in previous versions, it is important to note the following:

- In addition to changing the cycle close date, the cycle frequency and bill production frequency can also be changed.
- Changes to the cycle frequency can be affected by the bill production frequency, even when the latter remains constant. For example, assume the bill production frequency is 3 (i.e., a bill is produced at the end of every third cycle). Then if the cycle frequency were changed from monthly to bi-monthly, a bill would be produced only once every six months (where it was previously produced once every three months).
- As in previous versions, when a cycle change is requested, the new cycle becomes operative only following the end of the current cycle.
- The interval until the first bill production date is less (but no more than one bill cycle less) than the typical bill production interval.
- RCs are prorated appropriately as a result of any change cycle operation.
- RCs are automatically marked for rerating whenever a change occurs in the cycle frequency or multiplier (the number of months, weeks, or days in the cycle).

### Rating Partition Independent of Cycle: Improved Load Balancing

The cycle ID no longer needs to determine the rating partition. Rather, each customer is assigned a separate Rating Partition ID. The result is that customers belonging to the same cycle can be distributed across different rating machines, leading to better load balancing as well as more efficient change cycle operation.

## Billing Operability

The following subsections describe enhancements to Billing operability.

### Improved Reject Information

Billing 6.0 enables the user to get a better understanding of each reject error and how to resolve it. This is done through an improved description of each error along with a recommendation for action, as well as a facility for reporting on the rejected population.

The following are among the new features:

- Improved error message descriptions, including the addition of dynamic attributes.
- Recommendation for action added to each error message.
- Reports of rejected customers, which can be filtered according to such criteria as error code, error type and process. Each rejection can be displayed along with its recommendation for action.

### Enhanced Rerun and Undo Functionality

Two new features have been added to the rerun functionality to give the user greater control over rerun activity:

- Criteria-based rerun
- Division of rerun flow

In addition, each undo request can be assigned an undo reason, which can then be used as one of the rerun criteria.

#### Criteria-based Rerun

The user can select the rerun population based on any of the following criteria:

- Cycle
- Group
- Error code
- Entity type
- Entity ID
- Process ID
- Undo reason type

#### Division of Rerun Flow

The user can determine which part of the rerun flow will be performed on a given rerun population. The following options are available:

- BLPREP flow only
- BF Extract flow only
- Full (i.e., both BLPREP and BF Extract)

## Enhanced Bill Redirection (Printing Categories)

A configurable subset of the generated bills can now be redirected to multiple destinations (not only to the CSR). This new functionality includes the following features:

- Bills can be assigned (using a set of new APIs) to any of a variety of configurable categories for redirection. They can be assigned manually or automatically (using an exit point).
- A wide variety of destinations are possible, including email addresses, phone numbers (via SMS), network printers, and destinations for special (e.g., international) postal handling.
- Bills can be redirected on a permanent or temporary basis. If temporary, effective and expiration dates can be applied.
- A redirected bill can be marked such that its regular paper bill is suppressed or redirected.

## AMC: View Cycle Progress Dynamically

Dynamic views (Currently Running Flows) have been added to make it easier for users to track the progress of bill day processes and spot potential problems. The following types of data are displayed:

- Progress data. This includes cycle code and description, status, flow description, start time and estimated end time, and various progress indicators (including processing rates), shown both numerically and graphically.
- Error data. Included in the dynamic view is an indication of the number of groups that have been rejected so far.

## Customer Management Updates: Improved Performance/Scalability

Billing is now configured to retrieve customer information on an ongoing basis via the BTL (and TRB). In addition, while some customer information is still retrieved via Customer Management extracts, Billing is now configured to run them on the Customer Management machine (via AMC), rather than on the Billing machine. The extract file is then returned to Billing via Audit & Control.

## Billing Configurator Enhancements

The following subsections describe enhancements to the Billing Configurator.

### Complex Entities Subsystem

A complex entity is a collection of fields related to a specific topic (e.g., taxes) that can be extracted from one or more databases.

A new subsystem has been added to enable the creation and maintenance of complex entities using the Billing Configurator. In previous versions, complex entities were created by manually editing the Billing database. They were then displayed as a read-only list in the Extracts subsystem.

The new subsystem enables the user to:

1. Connect to any of several databases.
2. From each database, choose the desired tables and the fields to extract from each table.
3. Define the data population and the criteria for selecting the records whose fields are to be extracted.

The internal structure of the complex entity is now isolated from the user, which serves to:

- Minimize errors resulting from manual changes to the Billing database.
- Reduce the dependency of the customization layer on the internal structure of the complex entity, easing the upgrade burden when adopting future releases.

## **Transaction Listener Subsystem**

The Billing Configurator now enables full configuration of the Billing Transaction Listener (BTL) to support the update of billing customer entities, customer information and OC/RC calculations based on transaction data received from TRB.

## **Core Database Updates (Version Management Subsystem)**

A new subsystem has been added to manage the distribution and tracking of changes to the core reference tables. It supports two main functions:

- Export (Patch Management). Collect and track database changes into patches, export them as scripts, and package them together with release notes for distribution. Patches are created on the user level, such that different users can create different patches on the same database.
- Import (Load). Import core data versions and patches in a controlled manner. Patches are contingent on the database version and can only be loaded if set criteria are met. The current core version now appears on the title bar of the application.

## **Immediate Non-versioned Updates from Product Catalog**

Non-versioned updates to the Product Catalog (e.g., new charge codes) are now reflected immediately in the Billing database (i.e., even before a new PC version is released). For more information on non-versioned updates, see *Product Catalog Release Notes*.

## **Printing Categories (Bill Redirection)**

Generated bills can now be redirected to multiple destinations, as follows:

- A new set of entity types (Printing Categories) has been added to the Entities subsystem. They are used to create the structures of the printing categories and destinations.
- The printing categories and destinations are implemented in the Extract subsystem. A separate printing category can be added to define each type

of generated bill. Attached to the category is a description of its destination, along with other relevant attributes.

## **Discount Enhancements**

The following subsections describe enhancements to the Discount functionality.

### **Prorate Bill Day Discounts**

Bill day discounts are now prorated to reflect the portion of the billing cycle during which they were effective. The following cases are covered:

- The discount offer becomes operative in the middle of the cycle.
- The discount offer is discontinued during the cycle but the subscriber is still active at bill day. In previous versions, the discount was not applied at all in this case.
- The subscriber is cancelled before bill day. In previous versions, the discount was applied as though it were in effect for the entire cycle.

Proration can be performed for the following types of discounts:

- Flat monetary amount: The discount amount is prorated.
- Tier/step intervals: The tiers are prorated. For example, suppose a 10% discount is applied once the subscriber has reached \$100. Then if the discount applies to half the cycle for a given subscriber, then the discount would be 10% once the subscriber reaches \$50.

### **Discount Item Properties on Credit**

Discount item properties (i.e., the discount offer, item and package) are now attached to the discount credit and can thus be received with the discount charges.

## **Improved Handling of Changes to Customer Information**

The following subsections describe improvements in the handling of changes to customer information.

### **RC Tax Proration: Consider Customer Information History**

When computing tax on recurring charges, the rate may depend on customer information attributes (e.g., the subscriber's district of residence). Billing now considers changes to customer information that occur during the billing cycle and prorates the tax accordingly.

In previous versions, the tax was applied based on the customer information in effect on the cycle close date. The tax proration policy indicator in the Billing Configurator was used to control tax proration based on changes in the tax rate for the district.

In this version, the tax proration policy indicator applies to both changes in tax rate as well as changes in customer information.

## **Improved Performance: Update Customer Information on Ongoing Basis**

Customer information in the Billing database is now updated continually using the Billing Transaction Listener (BTL).

As changes to customer information occur during a billing cycle, they are published periodically as CM transactions. The BTL subscribes to these and uses them to update the Billing database on an ongoing basis. Customer information is then extracted and made available to the invoicing process.

The result of these changes is a significant improvement in bill preparation performance.

## **Multi-language (Unicode) Support**

Data (in the Billing Configurator, Billing APIs, and Billing database) that ultimately appears on the bill or in the interface accessible to the CSR can be in any local language (Unicode).

## **Billing Cleanup**

A tool is now available to perform the following cleanup activities:

- Erase tables or partitions
- Delete temporary files
- Delete log files
- Delete records from a table

The user can configure the minimum age of the data to be deleted.

## **New APIs**

The following APIs are new in this version:

- `deleteCharge` (Charge Service APIs). Deletes an original or correction pending charge (postpaid pay channels only).
- `getCharges` (Document Service APIs). Now retrieves the charges created for a specific service receiver according to flexible cycle information in addition to selection criteria.
- `getCycleListInfo` (Document Service APIs). Retrieves the list of confirmed and unconfirmed cycles in a given date range for a given customer.
- `getDocumentAccumulations` (Document Service APIs). Retrieval of accumulation information for all the charges contained within a document is now based on attribute information (name and value) in addition to document, pay channel and accumulation group IDs.
- `getDocumentCharges` (Document Service APIs). Retrieval of a document's charge information can now be based on charge selection

criteria (e.g., charge code, revenue code – OC/RC/UC, date range), in addition to the document ID.

- Quotation Service APIs. A new set of APIs used to provide quotes for CSP customers who want to know how much a service request is going to cost or whether it holds a commitment (as well as to create order charge requests). It includes two methods:
  - getQuote
  - orderChargeRequest
- setBAIndicators (Billing Arrangement Service APIs). Sets various billing arrangement indicators (i.e., due days, zero balance, document production, itemized tax and printing category).
- setPrintingCategory (Billing Arrangement Service APIs). Sets a permanent or temporary printing category for billing arrangements.

## Support for 24x7 Operation

The Billing APIs and Quotation Server (to reflect pricing changes) now support 24x7 customer management functionality. For more details, see the *Customer Management Online Release Notes*.



## 3. TECHNICAL CHANGES

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This chapter contains detailed technical information about the changes to Amdocs Billing 6.0.

### General Technical Changes

No changes.

### Deprecated APIs

The following methods are declared as deprecated and will be removed in the version following the next version.

Class Name	Method Name	Type	Alternative
<b>BillingArrangementServices</b>	RedirectBill		<b>BillingArrangementServices.setPrintingCategory</b> replaces this API
<b>DocumentServices</b>	GetCharges		New <b>DocumentServices.getCharges</b> API according to the flexible cycle info
<b>DocumentServices</b>	getDocumentAccumulations		New <b>DocumentServices.getDocumentAccumulations</b> has been introduced.
<b>DocumentServices</b>	getDocumentCharges		New <b>DocumentServices.getDocumentCharges</b> has been introduced

## **Third-Party Item Changes**

No changes.

## **Amdocs Infrastructure Changes**

No changes.

## **Configuration Control (CC) Changes**

This section describes the Configuration Control changes in the current version.

### **CC Variables**

No changes.

### **CC Configuration**

No changes.

### **Customized Building Blocks**

No changes.

## **Fixed Local Patches**

No changes.

## **Configuration XML Changes**

No changes.

## Environment Changes

This section describes the environment changes in the current version.

### Environment Variables

No changes.

### Environment Structure

No changes.

## WebLogic File Changes

This section describes the file changes to the WebLogic application server in the current version.

### EJBs and Classes

No changes.

### WebLogic Complementary Files

No changes.

## Database Structure Changes

This section summarizes the changes to the data model in this version.

### Special Database Operations

No changes.

### New Special Synonyms

No changes.

### Database Area Objects

No changes.

### Modified Objects

The following table summarizes data model changes in this version:

Functionality	DB Object Area & GDD BB	Phase	Object Name	Column Name	Change Type	Domain	Field Type	NN	Description	Technical Upgrade Comments
	Ref	3	BL1_TRANSACTION_LISTENER		Remove table					
	Ref	3	BL1_RATE_ALERT_ACT		Remove table					
	App	3	BL1_CHG_TRX_CNTRL		Remove table					
	App	3	BL1_TRX_LISTENER_ERRORS		Remove table					
	Ref	3	BL1_BILL_PROC_REL		Remove table					

## Chapter 3. Technical Changes

Functionality	DB Object Area & GDD BB	Phase	Object Name	Column Name	Change Type	Domain	Field Type	NN	Description	Technical Upgrade Comments
	Ref	2	BL1_TRANSACTION_ACT_REL		New table, see below					
	App	2	BL1_REJECTED_TRX		New table, see below					
	App	2	BL1_RC_RATES	INSERT_ACTIVITY_SEQ	New column	Bl1actseq	NUMBER(12)		The sequence of the activity that inserted the record. A reference to the Activity History table	
	App	2	BL1_RC_RATES	EXPIRE_ACTIVITY_SEQ	New column	Bl1actseq	NUMBER(12)		The sequence of the activity that expired the record. A reference to the Activity History table	
	Ref	2	BL1_RC_ACT_POLICY	ACTIVITY_OBJ_NAME	New column	Bl1attrval	VC(800)		The object name of the implementation in Xml Config	
	Ref	2	BL1_RC_ACT_POLICY	ACTIVITY_ORIGIN	New column	Bl1ORCACTOR	VC(10)		The transaction origin, i.e., CM.	
	Ref	2	BL1_RC_ACT_POLICY	ACTIVITY_ID	Update Column	Bl1CUSTACT	VC(4)		The origin transaction activity ID.	

Functionality	DB Object Area & GDD BB	Phase	Object Name	Column Name	Change Type	Domain	Field Type	NN	Description	Technical Upgrade Comments
	App	2	BL1_CHARGE_REQUEST	ORIGIN_ACTIVITY_SEQ	New column	Bl1actseq	NUMBER(12)		The sequence of the activity that inserted the record. A reference to the Activity History table	
	App	2	BL1_CHARGE_REQUEST	EVENT_TYPE	New column	Bl1eventtp	CHAR(2)		The event type of the Charge Request. VV: OC_ACTIVITY, OC_OFFER_ACTIVATION, OC_OFFER_PENALTY	
	App	2	BL1_BACKDATE_REQUESTS		New table, see below				New table, replacing the Backdate Entities deprecated table	
	App	2	BL1_BACKDATE_ENTITIES		Remove table				Replaced by the Backdate Request	
	Ref	2	BL1_ACTIVITY_STEP		New table, see below					
	App	2	BL1_ACTIVITY_HISTORY		New table, see below				New table	

## Chapter 3. Technical Changes

Functionality	DB Object Area & GDD BB	Phase	Object Name	Column Name	Change Type	Domain	Field Type	NN	Description	Technical Upgrade Comments
	Ref	2	BL1_BILL_PROC_IO		New table, see below				New table	
	Ref	2	BL1_DATA_ELEMENT	DATA_POPULATION	New column	bl1filepop	VARCHAR2 (30)		Identify population orientation of file	
	Ref	2	BL1_DATA_ELEMENT	ALIAS	New column	bl1alias	CHAR (6)		Alias for data file name	
	Ref	2	BL1_DATA_ELEMENT	FILE_FORMAT	New column	bl1filefmt	VARCHAR2 (60)		Identify name of file format	
	Ref	2	BL1_FLOW_MODE		New table, see below				New table	
	Ref	2	BL1_FLOW_DEPENDENCIES		New table, see below				New table	
	App	2	BL1_RUN_REQUEST		New table, see below				New table	
	App	2	BL1_CYCLE_ERRORS	PROCESS_ID	New column	Bl1procid	VARCHAR2 (30)		The process which reported the error	
	App	2	BL1_CYCLE_ERRORS	ERROR_DESCRIPTION	New column	Bl1msgtxt	VARCHAR2 (500)		Detailed error description	
	App	2	BL1_RERUN_SELECT_CRITERIA		New table, see below				New table	
	App	2	BL1_UNDO_TECH_MARK	REASON_CODE	New column	Bl1undorsn	CHAR(2)		Undo reason code	
	App	2	BL1_BLNG_ARRANGEMENT	PERM_PRINTING_CAT	New column	Bl1gencd	VARCHAR2(40)			

Functionality	DB Object Area & GDD BB	Phase	Object Name	Column Name	Change Type	Domain	Field Type	NN	Description	Technical Upgrade Comments
	App		BL1_BLNG_ARRANGEMENT	TEMP_PRINTING_CAT	New column	Bllgencd	VARCHAR2(40)			
	App	2	BL1_BLNG_ARRANGEMENT	TEMP_PRINTING_CAT_EFFECT_DATE	New column	Gn1date	Date(8)			
	App	2	BL1_BLNG_ARRANGEMENT	TEMP_PRINTING_CAT_EXP_DATE	New column	Gn1date	Date(8)			
	App	2	BL1_PRINTING_CATEGORIES		New table, see below					
	App	2	BL1_DOCUMENT	PRINTING_CATEGORY	New column	bllgencd	VARCHAR2(40)			
	App	2	BL1_CYCLE_GROUPS	ROUTE	New column	Bllroute	VARCHAR2 (3)		Identify route of group	
	App	2	BL1_CYCLE_GROUPS	DYNAMIC_ATTRIBUTES	New column	Blldynattr	VARCHAR2 (1000)			
	Ref	2	BL1_PARTITION_DEFINITION		New table, see below				New table that identifies rater machines .	
	App	2	BL1_CYCLE_PAYER_PROFILE	GROUP_ID	New column	Bllgroups eq	NUMBER (9)		Identifies group id of BA	
	Ref	2	BL1_BILL_PROC	FLOW_ID	New column	Bllmapid	VARCHAR2 (6)		Identifies flow	
	Ref	2	BL1_BILL_PROC_IO	FLOW_ID	Remove column	Bllmapid	VARCHAR2 (6)		Identifies flow	



### Chapter 3. Technical Changes

Functionality	DB Object Area & GDD BB	Phase	Object Name	Column Name	Change Type	Domain	Field Type	NN	Description	Technical Upgrade Comments
	Ref	2	BL1_ROUTE		New table, see below				New table that identifies rater machines and A&C configuration	
	Ref	2	BL1_MODE_ROUTE		New table, see below				New table that identifies rater machines and A&C configuration	
	App	2	BL1_EOD_CONTROL		New table, see below				Detect backlogs for RCA and BTL on a certain date, for population validation by Bill Day Initiator	
	Ref	2	BL1_CYCLE_CODE	FREQUENCY	Add column	Bl1cycfreq	CHAR(1)		Cycle frequency	
	Ref	2	BL1_CYCLE_CODE	FREQUENCY_MULTIPLIER	Add column	Bl1mult	NUMBER(2)		Together with frequency, it defines the cycle period	
	Ref	2	BL1_CYCLE_CODE	BILLING_REFERENCE	Add column	Gn1date	DATE		Billing month for a multi monthly frequency or billing week for multi weekly frequency.	
	App	2	BL1_CYCLE_CONTROL	CYCLE_INSTANCE	Add column	Bl1cycinst	NUMBER(2)		Identifies the serial occurrence of the cycle instance in a calendar year	

Functionality	DB Object Area & GDD BB	Phase	Object Name	Column Name	Change Type	Domain	Field Type	NN	Description	Technical Upgrade Comments
	App	2	BL1_RC_RATES	FIRST_CYC_EFF_DATE	Add column	Gn1date	DATE		The close date of the cycle in which the RC was activated	
	App	2	BL1_RC_RATES	LAST_CYC_EXPR_DATE	Add column	Gn1date	DATE		The close date of the cycle in which the RC was expired	
	App	2	BL1_RC_RATES	GENERATION_FREQUENCY	Add column	B11rcfreq	NUMBER(2)		The frequency of bill cycle in which RC is calculated.	
	App	2	BL1_RC_RATES	MULTIPLE_CHG_IND	Add column	Gn1yesnoind	CHAR(1)		Specifies if multiple RC charges should be created, or a single combined charge	
	App	2	BL1_RC_RATES	FREQUENCY	Add column	B11rcfreqtp	CHAR(1)		Combined with the frequency multiplier, it specifies the RC period	
	App	2	BL1_RC_RATES	FREQUENCY_MULTIPLIER	Add column	B11cmult	NUMBER(2)		See FREQUENCY	
	App	2	BL1_CUSTOMER	PARTITION_ID	Add column	B11custpart	VARCHAR(24)		The customer's partition id	
	App	2	BL1_BLNG_ARRANGEMENT	BILL_FREQUENCY	Add column	B11billfreq	NUMBER(2)		The bill production frequency of the BA	
	App	2	BL1_DOCUMNET	BILL_FREQUENCY	Add column	B11billfreq	NUMBER(2)		The bill production frequency of the BA	

### Chapter 3. Technical Changes

Functionality	DB Object Area & GDD BB	Phase	Object Name	Column Name	Change Type	Domain	Field Type	NN	Description	Technical Upgrade Comments
	Ref	3	BL1_CUSTOMER_ACT		New table, see below					
	Ref	3	BL1_CUSTOMER_OFFER_ACT		New table, see below					
	Ref	3	BL1_OFFER_ACT		New table, see below					
	App	3	BL1_CUSTOMER_INFO	CYCLE_SEQ_NO	Remove column				Replaced by effective & expiration dates	
	App	3	BL1_CUSTOMER_INFO	EXTERNAL_ID	Add column	bl1cments eq	NUMBER(12)		The external entity ID.	
	App	3	BL1_CUSTOMER_INFO	EXTERNAL_TYPE	Add column	bl1cmenttp	VARCHAR2(4)		External entity type like 'E' when CM entity or CM resource type when the entity type is subscriber.	
	App	3	BL1_CUSTOMER_INFO	EFFECTIVE_DATE	Add column	gn1date	DATE		Event date	
	App	3	BL1_CUSTOMER_INFO	EXPIRATION_DATE	Add column	gn1date	DATE		Change expiration date	
	REF	3	BL1_CYCLE_CODE	CYC_POPULATION_CODE	New column	B11cycpopcd	CHAR(1)		Cycle population code	

Functionality	DB Object Area & GDD BB	Phase	Object Name	Column Name	Change Type	Domain	Field Type	NN	Description	Technical Upgrade Comments
	App	3	BL1_BLNG_ARRANGEMENT	CREATION_DATE	New column	gn1date	DATE		The BA creation date	
	App	2	BL1_BLNG_ARRANGEMENT	LAST_CYCLE_SEQ_NO	New column	bl1cycseq	NUMBER(9)		The last bill cycle sequence number	
	App	2	BL1_CHARGE_CODE	CLASSIFICATION	New column	B11gencd	VARCHAR2(40)			
	Ref	2	BL1_PATCHES		New table, see below					
	Ref	2	BL1_PATCH_DETAILS		New table, see below					
	Ref	2	All reference tables	BC_INFO	New column	B11bcinfo	VARCHAR2(40)			
	Ref	2	BL1_CYCLE_RUN_POLICY		New table, see below					
	App	3	BL1_BACKDATE_REQUEST	RERATE_START_DATE	Add column	Gn1date	DATE			
	App	3	BL1_SAM_CONTROL		New table, see below					
	App	3	BL1_SAM_CYCLE_REQUEST		New table, see below					
	Ref	3	BL1_CONF_HIERARCHY		New table, see below					

Functionality	DB Object Area & GDD BB	Phase	Object Name	Column Name	Change Type	Domain	Field Type	NN	Description	Technical Upgrade Comments
	Ref	3	BL1_CONF_SECTION_PARRAMS		New table, see below					
	App	3	BL1_PREPAID_STATEMENT	DOCUMENT_SEQ	Remove column					
	App	3	BL1_PREPAID_STATEMENT	CYCLE_SEQ_NO	New column	bl1cycseq	NUMBER (9)			
	Ref	3	BL1_EVENT_HANDLING	PROCESS	New column	Bl1procid	VARCHAR2 (30)			
	App	3	BL1_CYCLE_GROUPS_HISTORY		New table, see below					
	App	3	BL1_HIST_CHARGE_REQUEST		New table, see below					
	App	3	BL1_HIST_RC_RATES		New table, see below					
	App	3	BL1_CYCLE_RUN_STATISTICS		New table, see below					

### Transaction Activity Relation (BL1\_TRANSACTION\_ACT\_REL – New)

#### Description

The Transaction Activity Relation table holds the activities for each transaction handled by the BTL process.

#### Life Cycle

This is a reference table with static data.

**Attributes**

PK	Not Null	Name	Domain Name	Type	Description
#	*	ACTIVITY_ID <small>Activity ID</small>	BL1CUSTACT	Varchar2(4)	A unique transaction ID. Links to the Customer Activity table.
#	*	ACTIVITY_ORIGIN <small>Activity Origin</small>	BL1ORCACTOR	Varchar2(10)	The activity Origin. For example, Customer Management.
#	*	STEP_ID <small>Activity ID</small>	BL1SEQ	Number(9)	The activity step ID.
#	*	STEP_ORDER <small>Activity Order</small>	BL1ACTORD	Number(3)	The order of each activity for each transaction value from 1 to N.
		CP_CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = CONTROL_FLD)
		ACTIVITY_DATA <small>Activity Data</small>	BL1ATTRVAL	Varchar2(800)	Additional data regarding the activity. The information is retrieved from the BL1_XML_CONFIG using schema: "BTLACTDATA".
		BC_INFO <small>Billing Configurator Patch ID</small>	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

**Rejected Transactions (BL1\_REJECTED\_TRX – New)****Description**

The Rejected Transactions table keeps a log of every rejected transaction handled in the Billing Transactions Listener (BTL).

**Life Cycle**

The rejected transactions table accumulates rejected transactions until the TRB operator recycles the rejected transactions. When the recycled transactions are returned to BTL, the successful transactions are deleted from this table.

**Attributes**

PK	Not Null	Name	Domain Name	Type	Description
#	*	CUSTOMER_KEY <small>Customer Key</small>	BL1CUSTKEY	Number(5)	The customer key for the database partitioning.

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PK	Not Null	Name	Domain Name	Type	Description
#	*	TRANSACTION_ID Transaction ID	BL1TRXID	Number(15)	The transaction ID.
		CP_CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = CONTROL_FLD)
	*	CUSTOMER_ID Customer ID	BL1CUST	Number(12)	Identifies the customer of the entity.
		EVENT_DATE Event Date	GN1DATE	Date(8)	The effective date of the transaction. Date Mask: YYYYMMDD
		ENTITY_TYPE Entity Type	BL1CMENFTP	Char(1)	The receiver type. Valid values: Subscriber and Unit Example Values (for BL1CMENFTP): B - BA C - CUSTOMER G - GROUP S - SUBSCRIBER U - UNIT Y - CYCLE
		ENTITY_ID Entity ID	BL1CMENFSEQ	Number(12)	The receiver entity. For a Unit entity this is the unit ID. For a Subscriber entity, this is the Subscriber ID.
		AGREEMENT_ID Agreement ID	BL1AGR	Number(12)	The agreement ID is the Subscriber or Unit ID.
		ERROR_CODE Error Code	BL1ERRCD	Number(9)	The error code. Example Values (for BL1ERRCD): 0 - SUCCESS 1 - GEN_OPEN_FILE 2 - GEN_OPEN_POP_FILE 3 - GEN_DB_INSERT_FAIL 4 - GEN_DB_UPDATE_FAIL 5 - GEN_DB_SELECT_FAIL 7 - ORC_INVALID_EVENT_DATE 8 - ORC_INVALID_CUSTOMER_ID 9 - ORC_INVALID_RECEIVER_ID 10 - ORC_INVALID_RECEIVER_TYPE 11 - ORC_INVALID_PAY_CHANNEL 12 - ORC_INVALID_ACTIVITY_NAME 13 - ORC_INVALID_ACTIVITY_RSN 14 - ORC_INVALID_OFFER_DATA 15 - ORC_INVALID_TRANSACTION_ID

PK	Not Null	Name	Domain Name	Type	Description
					16 - ORC_INVALID_GROUP_ID 17 - ORC_INVALID_REQUEST_ID 18 - ORC_INVALID_DYNAMIC_ATTRIBUTES 19 - ORC_INVALID_BILLING_ACT_MAP 20 - ORC_PRORATION_FAILURE 21 - ORC_EXTRACT_CYCLE_ERROR 22 - ORC_INVALID_POLICY 23 - ORC_INFRA_IO_XML_ERROR 24 - GEXTRACT_ERROR 25 - CHPR_SR_NOT_IN_POP 26 - CHPR_LAST_CRT_DATE_NOT_FOUND 27 - CHPR_ORIGINAL_AMT_NOT_FOUND 28 - CHPR_CHG_REQUEST_INIT_FAIL 29 - CHCR_SR_NOT_IN_POP 30 - CHCR_MISSING_SR_DYN_ATTR 31 - CHCR_DE_FEED 32 - CHCR_CREDITS_GENERATION 33 - CHCR_UNMAPPED_DISCOUNT_CREDITS 34 - CHCR_SP_NOT_IN_POP 35 - CHCR_MISSING_SP_DYN_ATTR 36 - CHCR_VALIDATION_FAIL_SP 37 - CHCR_VALIDATION_FAIL_SR 38 - CHCR_PREPARE_CUST_FOR_DISCOUNT 39 - CHCR_SP_CUST_NOT_FOUND 40 - INVOICE_IO_ERROR 41 - INVOICE_TAX_CODE_NOT_FOUND 42 - INVOICE_TAX_TOTAL_NOT_EXIST 43 - INVOICE_FAIL_CALCUALTE_TAX 44 - DOC_NO_PCN 45 - DOC_NO_PAY_CHANNEL 46 - DOC_ILLEGAL_PMCT_DOCTP 47 - DOC_INVALID_CHARGE_REQUEST 48 - WTDB_ENTITY_FAIL 49 - GEN_WRITE_FILE 50 - GEN_READ_FILE 51 - GEN_CREATE_SEQUENCE 52 - GEN_GENERAL 53 - GEN_NULL_POINTER 54 - ORC_FORMER_FAIL 56 - ORC_INVALID_RECORD_ID 58 - BDI_PREV_RUN_NOT_CONFM 59 - BDI_CUST_ON_HOLD 60 - ORC_NO_OFFERS 61 - ORC_INVALID_NON_RC_RATE_IND 62 - ORC_INVALID_CYCLE_CODE 64 - ORC_INVALID_SUBSCRIBER_ID 65 - ORC_INVALID_EFFECTIVE_DATE 66 - ORC_INVALID_EXPIRATION_DATE



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PK	Not Null	Name	Domain Name	Type	Description
					67 - ORC_INVALID_BUSINESS_ENTITY 68 - ORC_INVALID_OFFER_CURRENCY 69 - RPL_NO_INCREASE_TYPE_IN_BE 70 - RPL_NO_CALC_EXP_DATE_IN_BE 71 - RPL_NO_REDUCE_TYPE_IN_BE 72 - GEN_TRB_PUBLISH_FAIL 73 - RPL_NO_PUBLISH_RPL_IN_BE 74 - GEN_NO_LOGICAL_DATE 75 - BTL_VALUE_NOT_IN_TRANS 76 - BTL_NO_CUSTOMER_IN_CUSTOMER_TB 77 - BTL_UPDATE_DECREASE_WEIGHT 78 - BTL_UPDATE_INCREASE_WEIGHT 79 - BTL_UPDATE_CHANGE_BA 80 - BTL_UPDATE_NEW_CYCLE 81 - BTL_FAIL_SELECT_RELEVANT_CYCLE 82 - BTL_SET_CYCLE_CLOSE_DATE 83 - BTL_NO_BA_IN_BLNG_ARRANGEMENT 84 - BTL_NO_CUST_IN_CUST_TAX_EXMPT 85 - BTL_PCN_EXISTS_IN_PAY_CHANNEL 86 - BTL_NO_PCN_IN_PAY_CHANNEL 87 - BTL_FAILED_OPEN_PCN 88 - GEN_FAILED_TO_COMMIT 89 - BTL_FAILED_TO_UPDATE_BA_EXT_ID 90 - BTL_FAILED_UPDATE_PCN_EXT_ID 91 - BTL_FAILED_TO_PARSE_THE_TRANS 92 - BTL_FAILED_UPDATE_CUST_EXT_ID 93 - BTL_FAILED_TO_CREATE_CUSTOMER 94 - BTL_FAILED_UPDATE_EXPIRE_DATE 95 - BTL_FAIL_UPDATE_CUST_TAX_EXMPT 96 - BTL_FAIL_INSERT_PAYER_CUST_REL 97 - BTL_FAIL_INSERT_TO_BLNG_ARRANG 98 - BTL_FAIL_SELECT_FROM_CUSTOMER 99 - BTL_FAIL_UPDATE_NULL_VALUE 100 - BTL_FAILED_TO_UPDATE_BA_STATUS 101 - BTL_EFF_GREATER_THAN_CLOSE 102 - BTL_CUST_EXIST_IN_CUSTOMER_TB 103 - BTL_BA_EXISTS_IN_BLNG_ARRANGE 104 - BTL_NO_CUST_PARTITION_DIMENT 105 - BTL_FAILED_CREATE_CUST_KEY 106 - INVOICE_CORRECTION_ERR 107 - CHCR_BA_CUST_NOT_CHARGED 108 - UNDO_ENTITY_NOT_FOUND 109 - UNDO_ENTITY_NOT_MEET_REQ 110 - UNDO_CUST_CROSS_DIST 111 - CHPR_ILLEGAL_FREQ 112 - ORC_NUR_REJECT 113 - BTL_FAILED_TO_UPDATE_DUE_DAYS 114 - BTL_FAILED_TO_GET_BA_STATUS

PK	Not Null	Name	Domain Name	Type	Description
					115 - BTL_FAILED_TO_UPDATE_BA_DATE 116 - BTL_BA_STATUS_NOT_SAME_IN_TRX 117 - BTL_FAIL_TO_UPDATE_BLNG_ARRANG 118 - BTL_SELECT_MIN_CODE_PEND_STS 119 - BTL_LOGICAL_GREATER_THAN_CLOSE 120 - BTL_FAIL_SET_CYCLE_CLOSE_DATE 121 - BTL_FAIL_GET_LOGICAL_DATE 122 - BTL_LOGICAL_GREATER_THAN_OLD 123 - BTL_CYCLE_CODE_NOT_THE_SAME 124 - CHCR_CHARGE_CODE_MISSING_SP 125 - CHCR_CHARGE_CODE_MISSING_SR 126 - BTL_CROSS_DIST_ALREADY_EXIST 127 - BTL_CROSS_DIST_DOES_NOT_EXIST 128 - ORC_MISSING_TO_DATE 129 - UNDO_CHARGE_CRE_PAYER_ERR 130 - UNDO_DOCUMENT_PAYER_ERR 131 - UNDO_INVOICING_PAYER_ERR 132 - UNDO_CHARGE_CRE_CUSTOMER_ERR 133 - CONF_RPL_ERROR 134 - CONF_BLNG_ARR_UPDATE_ERR 135 - CONF_CUSTOMER_QUERY_SQL_ERR 136 - CONF_CUST_CYC_UPDATE_ERR 137 - ORC_CUSTOMIZATION_ERROR 138 - INVOICE_FAIL_CURRENCY_EXCHANGE 139 - UNDO_REQ_TYPE_NOT_SUPPORTED 140 - COMM_FORMER_FAIL 141 - COMM_NO_AMOUNT 142 - COMM_NO_PAY_CHANNEL 143 - COMM_MISSING_MANDATORY_FIELD 144 - COMM_NO_DEF_VAL_IN_MANDATORY 145 - COMM_FAIL_GENERATE_SEQUENCE 146 - COMM_FAIL_GET_PAY_CHANNEL 147 - COMM_FAIL_GET_CUSTOMER 148 - COMM_DB_FETCH_FAIL 149 - COMM_FAIL_GET_LOGICAL_DATE 150 - COMM_MISSING_CUST_FOR_SUB 151 - GEN_DB_DELETE_FAIL 152 - CHCR_MISSING_CURRENCY 153 - CHCR_MISSING_PCN 154 - ORC_FAILED_INSERT_RC_RATES 155 - ORC_FAILED_UPDATE_RC_RATES 156 - ORC_FAILED_INSERT_CHG_REQUEST 157 - ORC_FAILED_HANDLE_EXPIRE 158 - FAILED_GET_CUST_PARAMS 159 - CUST_PARAMS_GEXTRACT_ERROR 160 - FAILED_GET_CUST_OFFERS 161 - FAILED_GET_ADDITIONAL_PARAMS 162 - ADDITIONAL_PRMS_GEXT_ERROR

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PK	Not Null	Name	Domain Name	Type	Description
					163 - FAILED_GET_EFF_DATE 164 - FAILED_GET_NEW_CYCLE_CODE 165 - CM_CUSTOMER_GEXTRACT_ERROR 166 - FAILED_GET_CYCLE_CODE 167 - FAILED_GET_PCN 168 - PAYMENT_CATEGORY_GEXT_ERR 169 - FAILED_GET_PAY_CATEGORY 170 - FAILED_GET_AGREEMENT_ID 171 - CUST_OFFERS_GEXTRACT_ERROR 172 - CUST_HISTORY_OFFERS_GEXT_ERROR 173 - FAILED_GET_CM_TRX_ID 174 - FAILED_SET_EFF_DATE_TO_OFFERS 175 - FAILED_GET_RECEIVER_TYPE 176 - BDI_UNDO_REQ 177 - CHCR_MISSING_REC_TYPE 178 - CHCR_MISSING_REC_ID 179 - CHCR_MISSING_EFF_DATE 180 - INV_MISS_BA 181 - INV_FAIL_QA_BA_FLUSH 182 - INV_FAIL_QA_BA_CHECK 183 - INV_FAIL_QA_CI_CHECK 184 - INV_FAIL_QA_INV_CHECK 185 - INV_FAIL_TAX_CALC 186 - INV_ERR_TAX_ROUND 187 - INV_ERR_CHG_ROUND 188 - INV_CHG_ACC_ERROR 189 - INV_FAIL_WRITE_TAX 190 - INV_FAIL_WRITE_TAX_IT 191 - INV_FAIL_WRITE_CHG 192 - INV_FAIL_WRITE_INV 193 - INV_FAIL_WRITE_INV_CHG 194 - INV_FAIL_UPD_STS 195 - INV_FAIL_EXT_CHG 196 - INV_FAIL_WRITE_PP_STMT 197 - INV_FAIL_WRITE_CHG_ACC 198 - INV_END_BA 199 - INV_MISS_PCNS 200 - INV_MISS_CHG_CODE 201 - INV_CORRECTION_ERR 202 - INV_SET_SUB_CTX 203 - INV_SET_BA_CTX 204 - CHG_COD_REF_ERROR 205 - INV_DB_GET_INVOICE 206 - INV_TAX_ACC_ERROR 207 - INV_ACC_ERROR 208 - DOC_FAIL_STMT_AMOUNT 209 - FAIL_SNAPSHOT_CREATE 210 - FAIL_PI_EXTRACT

PK	Not Null	Name	Domain Name	Type	Description
					211 - BTL_UNDEFINED_ACT 212 - ORC_UNDEFINED_ACT 213 - CUST_REJ_OCRC 214 - CUST_REJ_BTL 215 - BA_REJ_BTL 216 - BTL_NO_CHG_IN_CHARGE 217 - BTL_FAIL_INSERT_CHG_ADJ 218 - DOC_NO_PCN_FOR_INV 219 - DOC_AMT_NO_MATCH_AR 220 - GROUP_EXCEPTION_MSG 221 - GROUP_EXCEPTION 222 - ENTITY_EXCEPTION 223 - GEN_TABLE_UPDATE_MSG 224 - INV_FAIL_TAX_PREP 225 - PREP_PARAM_FAIL 226 - NO_POP_FILE 227 - WRONG_PI_EXTRACT 228 - IN_SORT_ERROR 229 - OUT_SORT_ERROR 245 - PNUR_MISS_CONFIG 300 - RERUN_MIS_ENTITY_MSG 301 - AMC_SEND_MSG_ERR 302 - REQUEST_VALIDATION_ERR 303 - UNDO_ENTITY 304 - BTL_FAILED_INSERT_BACKDATE 305 - BTL_FAILED_GET_POR_ELEMENT 309 - INV_FAIL_NON_ITEMIZE_TAX_CALC 310 - INV_FAIL_GET_TAX_ITEM_FOR_UPD 311 - BTL_FAILED_TO_GET_PCN_STATUS 312 - BTL_PCN_STATUS_NOT_SAME_IN_TRX 313 - BTL_FAILED_TO_UPDATE_PCN_DATE 314 - BTL_FAILED_TO_GET_CUST_STATUS 315 - BTL_CST_STATUS_NOT_SAME_IN_TRX 316 - BTL_FAILED_TO_UPDATE_CUST_DATE 317 - BTL_FAILED_TO_UPDATE_BA_FREQ 318 - BTL_NULL_PROCESS_CONTEXT 319 - BTL_FAILED_TO_GET_DL 320 - BTL_FAILED_TO_GET_MD 321 - BTL_TRANSACTION_PARSING_FAILED 322 - BTL_FAILED_TO_GET_BL_CONFIG 323 - BTL_FAIL_GET_CST_PARTITION_DIM 324 - BTL_FAILED_REOPEN_PCN 325 - BTL_FAILED_UPDATE_BA_DOC_TYPE 326 - BTL_FAIL_GET_DYNA_EXTRACT_DEF 327 - BTL_FAIL_GET_DYNA_EXT_IN_PARAM 328 - BTL_DYNA_EXTRACT_INVALID_TYPE 329 - BTL_NO_DYNA_EXTR_IN_PARAM 330 - BTL_FAIL_GET_DB_CONNECTION

PK	Not Null	Name	Domain Name	Type	Description
					331 - BTL_DYNA_EXTR_GEN_ERROR 332 - BTL_DYNA_EXT_PARAMS_PARSE_FAIL 333 - BTL_DYNAMIC_EXTRACT_MISS_TAG 334 - BTL_DYNAMIC_EXTRACT_MISS_ATTR 335 - BTL_PRL_INIT_THREAD_FAILED 336 - BTL_MISSING_TRANSACTION_ORIGIN 337 - BTL_TRANSACTION_NOT_DEFINED 338 - CHCR_NOT_ALL_BA_RCV_PROCESS 339 - BDI_BA_CROSS_CYC_RCV_NOT_PROC 340 - AC_OUTPUT_UPDATE 341 - GEN_MANUAL_ABORT 342 - BACKDT_REQ_NOT_COMPLETE
		CYCLE_CODE Cycle Code	BL1CYCCD	Number(4)	The cycle code.
		CUSTOMER_ACT_SEQ Customer Activity Sequence	BL1SEQ	Number(9)	The activity group ID.
		ERROR_DESCRIPTION Error Description	BL1MSGTXT	Varchar2(1500)	Contains the error message.

### Backdate Requests (BL1\_BACKDATE\_REQUESTS – New)

#### Description

The Backdate Requests table lists the entities that are to be processed during the backdating process.

#### Life Cycle

Records are inserted by the Billing Transactions Listener (BTL) process and removed by the backdating process.

#### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	CUSTOMER_KEY [partitioning column] Customer Key	BL1CUSTKEY	Number(5)	The customer key used for Billing partitioning.
#	*	ENTITY_ID Entity ID	BL1CMNTSEQ	Number(12)	The subscriber or unit ID.

PK	Not Null	Name	Domain Name	Type	Description
#	*	ENTITY_TYPE Entity Type	BL1CMENFTP	Char(1)	The receiver type. Valid values: Subscriber, or Unit Example Values (for BL1CMENFTP): B - BA C - CUSTOMER G - GROUP S - SUBSCRIBER U - UNIT Y - CYCLE
#	*	BACKDATING_DATE Backdating Date	GN1DATE	Date(8)	The effective date of the backdated transaction, as received by the BTL process. Date Mask: YYYYMMDD
		CP_CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = CONTROL_FLD)
		PROCESS_STATUS Process Status	BL1BACKSTS	Char(2)	The process status of the entity. Valid values: PN - Pending OP - On Process CO - Completed OR - Rejected Example Values (for BL1BACKSTS): CO - ORC_COMPLETED OP - ON_PROCESS OR - ORC_REJECTED PN - PENDING
		GROUP_ID Group ID	BL1GROUPSEQ	Number(9)	The group ID to which the backdate request belongs. Inserted as null and updated by the backdating initiator process.
		CUSTOMER_ID Customer ID	BL1CUST	Number(12)	The customer of the receiver.
		ERROR_CODE Error Code	BL1ERRCD	Number(9)	The error code in case of rejection. Example Values (for BL1ERRCD): 0 - SUCCESS 1 - GEN_OPEN_FILE 2 - GEN_OPEN_POP_FILE 3 - GEN_DB_INSERT_FAIL 4 - GEN_DB_UPDATE_FAIL

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PK	Not Null	Name	Domain Name	Type	Description
					5 - GEN_DB_SELECT_FAIL 7 - ORC_INVALID_EVENT_DATE 8 - ORC_INVALID_CUSTOMER_ID 9 - ORC_INVALID_RECEIVER_ID 10 - ORC_INVALID_RECEIVER_TYPE 11 - ORC_INVALID_PAY_CHANNEL 12 - ORC_INVALID_ACTIVITY_NAME 13 - ORC_INVALID_ACTIVITY_RSN 14 - ORC_INVALID_OFFER_DATA 15 - ORC_INVALID_TRANSACTION_ID 16 - ORC_INVALID_GROUP_ID 17 - ORC_INVALID_REQUEST_ID 18 - ORC_INVALID_DYNAMIC_ATTRIBUTES 19 - ORC_INVALID BILLING_ACT_MAP 20 - ORC_PRORATION_FAILURE 21 - ORC_EXTRACT_CYCLE_ERROR 22 - ORC_INVALID_POLICY 23 - ORC_INFRA_IO_XML_ERROR 24 - GEXTRACT_ERROR 25 - CHPR_SR_NOT_IN_POP 26 - CHPR_LAST_CRT_DATE_NOT_FOUND 27 - CHPR_ORIGINAL_AMT_NOT_FOUND 28 - CHPR_CHG_REQUEST_INIT_FAIL 29 - CHCR_SR_NOT_IN_POP 30 - CHCR_MISSING_SR_DYN_ATTR 31 - CHCR_DE_FEED 32 - CHCR_CREDITS_GENERATION 33 - CHCR_UNMAPPED_DISCOUNT_CREDITS 34 - CHCR_SP_NOT_IN_POP 35 - CHCR_MISSING_SP_DYN_ATTR 36 - CHCR_VALIDATION_FAIL_SP 37 - CHCR_VALIDATION_FAIL_SR 38 - CHCR_PREPARE_CUST_FOR_DISCOUNT 39 - CHCR_SP_CUST_NOT_FOUND 40 - INVOICE_IO_ERROR 41 - INVOICE_TAX_CODE_NOT_FOUND 42 - INVOICE_TAX_TOTAL_NOT_EXIST 43 - INVOICE_FAIL_CALCUALTE_TAX 44 - DOC_NO_PCN 45 - DOC_NO_PAY_CHANNEL 46 - DOC_ILLEGAL_PMCT_DOCTP 47 - DOC_INVALID_CHARGE_REQUEST 48 - WTDB_ENTITY_FAIL 49 - GEN_WRITE_FILE 50 - GEN_READ_FILE 51 - GEN_CREATE_SEQUENCE 52 - GEN_GENERAL 53 - GEN_NULL_POINTER

PK	Not Null	Name	Domain Name	Type	Description
					54 - ORC_FORMER_FAIL 56 - ORC_INVALID_RECORD_ID 58 - BDI_PREV_RUN_NOT_CONFM 59 - BDI_CUST_ON_HOLD 60 - ORC_NO_OFFERS 61 - ORC_INVALID_NON_RC_RATE_IND 62 - ORC_INVALID_CYCLE_CODE 64 - ORC_INVALID_SUBSCRIBER_ID 65 - ORC_INVALID_EFFECTIVE_DATE 66 - ORC_INVALID_EXPIRATION_DATE 67 - ORC_INVALID_BUSINESS_ENTITY 68 - ORC_INVALID_OFFER_CURRENCY 69 - RPL_NO_INCREASE_TYPE_IN_BE 70 - RPL_NO_CALC_EXP_DATE_IN_BE 71 - RPL_NO_REDUCE_TYPE_IN_BE 72 - GEN_TRB_PUBLISH_FAIL 73 - RPL_NO_PUBLISH_RPL_IN_BE 74 - GEN_NO_LOGICAL_DATE 75 - BTL_VALUE_NOT_IN_TRANS 76 - BTL_NO_CUSTOMER_IN_CUSTOMER_TB 77 - BTL_UPDATE_DECREASE_WEIGHT 78 - BTL_UPDATE_INCREASE_WEIGHT 79 - BTL_UPDATE_CHANGE_BA 80 - BTL_UPDATE_NEW_CYCLE 81 - BTL_FAIL_SELECT_RELEVANT_CYCLE 82 - BTL_SET_CYCLE_CLOSE_DATE 83 - BTL_NO_BA_IN_BLNG_ARRANGEMENT 84 - BTL_NO_CUST_IN_CUST_TAX_EXMPT 85 - BTL_PCN_EXISTS_IN_PAY_CHANNEL 86 - BTL_NO_PCN_IN_PAY_CHANNEL 87 - BTL_FAILED_OPEN_PCN 88 - GEN_FAILED_TO_COMMIT 89 - BTL_FAILED_TO_UPDATE_BA_EXT_ID 90 - BTL_FAILED_UPDATE_PCN_EXT_ID 91 - BTL_FAILED_TO_PARSE_THE_TRANS 92 - BTL_FAILED_UPDATE_CUST_EXT_ID 93 - BTL_FAILED_TO_CREATE_CUSTOMER 94 - BTL_FAILED_UPDATE_EXPIRE_DATE 95 - BTL_FAIL_UPDATE_CUST_TAX_EXMPT 96 - BTL_FAIL_INSERT_PAYER_CUST_REL 97 - BTL_FAIL_INSERT_TO_BLNG_ARRANG 98 - BTL_FAIL_SELECT_FROM_CUSTOMER 99 - BTL_FAIL_UPDATE_NULL_VALUE 100 - BTL_FAILED_TO_UPDATE_BA_STATUS 101 - BTL_EFF_GREATER_THAN_CLOSE 102 - BTL_CUST_EXIST_IN_CUSTOMER_TB 103 - BTL_BA_EXISTS_IN_BLNG_ARRANGE 104 - BTL_NO_CUST_PARTITION_DIMENT



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PK	Not Null	Name	Domain Name	Type	Description
					105 - BTL_FAILED_CREATE_CUST_KEY 106 - INVOICE_CORRECTION_ERR 107 - CHCR_BA_CUST_NOT_CHARGED 108 - UNDO_ENTITY_NOT_FOUND 109 - UNDO_ENTITY_NOT_MEET_REQ 110 - UNDO_CUST_CROSS_DIST 111 - CHPR_ILLEGAL_FREQ 112 - ORC_NUR_REJECT 113 - BTL_FAILED_TO_UPDATE_DUE_DAYS 114 - BTL_FAILED_TO_GET_BA_STATUS 115 - BTL_FAILED_TO_UPDATE_BA_DATE 116 - BTL_BA_STATUS_NOT_SAME_IN_TRX 117 - BTL_FAIL_TO_UPDATE_BLNG_ARRANG 118 - BTL_SELECT_MIN_CODE_PEND_STS 119 - BTL_LOGICAL_GREATER_THAN_CLOSE 120 - BTL_FAIL_SET_CYCLE_CLOSE_DATE 121 - BTL_FAIL_GET_LOGICAL_DATE 122 - BTL_LOGICAL_GREATER_THAN_OLD 123 - BTL_CYCLE_CODE_NOT_THE_SAME 124 - CHCR_CHARGE_CODE_MISSING_SP 125 - CHCR_CHARGE_CODE_MISSING_SR 126 - BTL_CROSS_DIST_ALREADY_EXIST 127 - BTL_CROSS_DIST_DOES_NOT_EXIST 128 - ORC_MISSING_TO_DATE 129 - UNDO_CHARGE_CRE_PAYER_ERR 130 - UNDO_DOCUMENT_PAYER_ERR 131 - UNDO_INVOICING_PAYER_ERR 132 - UNDO_CHARGE_CRE_CUSTOMER_ERR 133 - CONF_RPL_ERROR 134 - CONF_BLNG_ARR_UPDATE_ERR 135 - CONF_CUSTOMER_QUERY_SQL_ERR 136 - CONF_CUST_CYC_UPDATE_ERR 137 - ORC_CUSTOMIZATION_ERROR 138 - INVOICE_FAIL_CURRENCY_EXCHANGE 139 - UNDO_REQ_TYPE_NOT_SUPPORTED 140 - COMM_FORMER_FAIL 141 - COMM_NO_AMOUNT 142 - COMM_NO_PAY_CHANNEL 143 - COMM_MISSING_MANDATORY_FIELD 144 - COMM_NO_DEF_VAL_IN_MANDATORY 145 - COMM_FAIL_GENERATE_SEQUENCE 146 - COMM_FAIL_GET_PAY_CHANNEL 147 - COMM_FAIL_GET_CUSTOMER 148 - COMM_DB_FETCH_FAIL 149 - COMM_FAIL_GET_LOGICAL_DATE 150 - COMM_MISSING_CUST_FOR_SUB 151 - GEN_DB_DELETE_FAIL 152 - CHCR_MISSING_CURRENCY

PK	Not Null	Name	Domain Name	Type	Description
					153 - CHCR_MISSING_PCN 154 - ORC_FAILED_INSERT_RC_RATES 155 - ORC_FAILED_UPDATE_RC_RATES 156 - ORC_FAILED_INSERT_CHG_REQUEST 157 - ORC_FAILED_HANDLE_EXPIRE 158 - FAILED_GET_CUST_PARAMS 159 - CUST_PARAMS_GEXTRACT_ERROR 160 - FAILED_GET_CUST_OFFERS 161 - FAILED_GET_ADDITIONAL_PARAMS 162 - ADDITIONAL_PRMS_GEXT_ERROR 163 - FAILED_GET_EFF_DATE 164 - FAILED_GET_NEW_CYCLE_CODE 165 - CM_CUSTOMER_GEXTRACT_ERROR 166 - FAILED_GET_CYCLE_CODE 167 - FAILED_GET_PCN 168 - PAYMENT_CATEGORY_GEXT_ERR 169 - FAILED_GET_PAY_CATEGORY 170 - FAILED_GET_AGREEMENT_ID 171 - CUST_OFFERS_GEXTRACT_ERROR 172 - CUST_HISTORY_OFFERS_GEXT_ERROR 173 - FAILD_GET_CM_TRX_ID 174 - FAILED_SET_EFF_DATE_TO_OFFERS 175 - FAILED_GET_RECEIVER_TYPE 176 - BDI_UNDO_REQ 177 - CHCR_MISSING_REC_TYPE 178 - CHCR_MISSING_REC_ID 179 - CHCR_MISSING_EFF_DATE 180 - INV_MISS_BA 181 - INV_FAIL_QA_BA_FLUSH 182 - INV_FAIL_QA_BA_CHECK 183 - INV_FAIL_QA_CI_CHECK 184 - INV_FAIL_QA_INV_CHECK 185 - INV_FAIL_TAX_CALC 186 - INV_ERR_TAX_ROUND 187 - INV_ERR_CHG_ROUND 188 - INV_CHG_ACC_ERROR 189 - INV_FAIL_WRITE_TAX 190 - INV_FAIL_WRITE_TAX_IT 191 - INV_FAIL_WRITE_CHG 192 - INV_FAIL_WRITE_INV 193 - INV_FAIL_WRITE_INV_CHG 194 - INV_FAIL_UPD_STS 195 - INV_FAIL_EXT_CHG 196 - INV_FAIL_WRITE_PP_STMT 197 - INV_FAIL_WRITE_CHG_ACC 198 - INV_END_BA 199 - INV_MISS_PCNS 200 - INV_MISS_CHG_CODE

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PK	Not Null	Name	Domain Name	Type	Description
					201 - INV_CORRECTION_ERR 202 - INV_SET_SUB_CTX 203 - INV_SET_BA_CTX 204 - CHG_COD_REF_ERROR 205 - INV_DB_GET_INVOICE 206 - INV_TAX_ACC_ERROR 207 - INV_ACC_ERROR 208 - DOC_FAIL_STMT_AMOUNT 209 - FAIL_SNAPSHOT_CREATE 210 - FAIL_PI_EXTRACT 211 - BTL_UNDEFINED_ACT 212 - ORC_UNDEFINED_ACT 213 - CUST_REJ_OCRC 214 - CUST_REJ_BTL 215 - BA_REJ_BTL 216 - BTL_NO_CHG_IN_CHARGE 217 - BTL_FAIL_INSERT_CHG_ADJ 218 - DOC_NO_PCN_FOR_INV 219 - DOC_AMT_NO_MATCH_AR 220 - GROUP_EXCEPTION_MSG 221 - GROUP_EXCEPTION 222 - ENTITY_EXCEPTION 223 - GEN_TABLE_UPDATE_MSG 224 - INV_FAIL_TAX_PREP 225 - PREP_PARAM_FAIL 226 - NO_POP_FILE 227 - WRONG_PI_EXTRACT 228 - IN_SORT_ERROR 229 - OUT_SORT_ERROR 245 - PNUR_MISS_CONFIG 300 - RERUN_MIS_ENTITY_MSG 301 - AMC_SEND_MSG_ERR 302 - REQUEST_VALIDATION_ERR 303 - UNDO_ENTITY 304 - BTL_FAILED_INSERT_BACKDATE 305 - BTL_FAILED_GET_POR_ELEMENT 309 - INV_FAIL_NON_ITEMIZE_TAX_CALC 310 - INV_FAIL_GET_TAX_ITEM_FOR_UPD 311 - BTL_FAILED_TO_GET_PCN_STATUS 312 - BTL_PCN_STATUS_NOT_SAME_IN_TRX 313 - BTL_FAILED_TO_UPDATE_PCN_DATE 314 - BTL_FAILED_TO_GET_CUST_STATUS 315 - BTL_CST_STATUS_NOT_SAME_IN_TRX 316 - BTL_FAILED_TO_UPDATE_CUST_DATE 317 - BTL_FAILED_TO_UPDATE_BA_FREQ 318 - BTL_NULL_PROCESS_CONTEXT 319 - BTL_FAILED_TO_GET_DL 320 - BTL_FAILED_TO_GET_MD

PK	Not Null	Name	Domain Name	Type	Description
					321 - BTL_TRANSACTION_PARSING_FAILED 322 - BTL_FAILED_TO_GET_BL_CONFIG 323 - BTL_FAIL_GET_CST_PARTITION_DIM 324 - BTL_FAILED_REOPEN_PCN 325 - BTL_FAILED_UPDATE_BA_DOC_TYPE 326 - BTL_FAIL_GET_DYNA_EXTRACT_DEF 327 - BTL_FAIL_GET_DYNA_EXT_IN_PARAM 328 - BTL_DYNA_EXTRACT_INVALID_TYPE 329 - BTL_NO_DYNA_EXTR_IN_PARAM 330 - BTL_FAIL_GET_DB_CONNECTION 331 - BTL_DYNA_EXTR_GEN_ERROR 332 - BTL_DYNA_EXT_PARAMS_PARSE_FAIL 333 - BTL_DYNAMIC_EXTRACT_MISS_TAG 334 - BTL_DYNAMIC_EXTRACT_MISS_ATTR 335 - BTL_PRL_INIT_THREAD_FAILED 336 - BTL_MISSING_TRANSACTION_ORIGIN 337 - BTL_TRANSACTION_NOT_DEFINED 338 - CHCR_NOT_ALL_BA_RCV_PROCESS 339 - BDI_BA_CROSS_CYC_RCV_NOT_PROC 340 - AC_OUTPUT_UPDATE 341 - GEN_MANUAL_ABORT 342 - BACKDT_REQ_NOT_COMPLETE
		RERATE_START_DATE Rerate Start Date	GN1DATE	Date(8)	The calculated effective date from which the process is to start. Date Mask: YYYYMMDD

## Activity Step (BL1\_ACTIVITY\_STEP – New)

### Description

The Activity Step table holds the activities description and implementation handled by the Billing Transactions Listener (BTL) process.

### Life Cycle

This is a reference table with static data.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	STEP_ID Step ID	BL1SEQ	Number(9)	A unique step ID.

PK	Not Null	Name	Domain Name	Type	Description
		CP_CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = CONTROL_FLD)
	*	CATEGORY Category	BL1ACTCAT	Varchar2(32)	The activity category.
		STEP_NAME Step Name	BL1ORCACT	Varchar2(25)	The step name.
		DESCRIPTION Description	BL1DESC	Varchar2(180)	Description of the activity.
	*	ACTIVITY_IMPL Activity Implementation	BL1ATTRVAL	Varchar2(800)	The activity implementation using the shared library generated from the BL1_XML_CONFIG, where the relevant transaction implementation class resides. For each transaction, an implementation class must be created.
		BC_INFO Billing Configurator Patch ID	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

### Activity History (BL1\_ACTIVITY\_HISTORY – New)

#### Description

The Activity History table contains the transactions handled by the Billing Transactions Listener.

#### Life Cycle

The entries are created by the BTL when subscribed. They are cleaned according to the backdating restrictions.

#### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	CUSTOMER_KEY [partitioning column] Customer Key	BL1CUSTKEY	Number(5)	The customer key is used for partitioning Billing tables.
#	*	ACTIVITY_SEQ Activity Sequence	BL1ACTSEQ	Number(12)	A unique sequence for the activity.

PK	Not Null	Name	Domain Name	Type	Description
		<i>CP_CONTROL_FLD</i>		<i>Partial Table</i>	<i>Several fields that are automatically included with this table. (Partial Name = CONTROL_FLD)</i>
	*	ENTITY_ID Entity ID	BL1CMENSEQ	Number(12)	The receiver ID.
	*	ENTITY_TYPE Entity Type	BL1CMENFTP	Char(1)	The receiver type. Valid values: Subscriber or Unit Example Values (for BL1CMENFTP): B - BA C - CUSTOMER G - GROUP S - SUBSCRIBER U - UNIT Y - CYCLE
	*	ACTIVITY_ID Activity Name	BL1CUSTACT	Varchar2(4)	The activity name published by external application on the Transaction Broker.
	*	ACTIVITY_ORIGIN Activity Origin	BL1ORCACTOR	Varchar2(10)	The application that published the event.
	*	ACTIVITY_DATE Activity Date	GN1DATETIME	Date(14)	The effective date of the event. Date Mask: YYYYMMDDHH24MISS
		CUSTOMER_ID Customer ID	BL1CUST	Number(12)	The customer ID of the receiver.
		DYNAMIC_ATTRIBUTES Dynamic Attributes	BL1DYNATRV	Varchar2(4000)	Dynamic attributes of the event.
		TRANSACTION_ID Transaction ID	BL1TRXID	Number(15)	The TRB transaction ID.

## Bill Process IO (BL1\_BILL\_PROC\_IO – New)

### Description

The Bill Process IO table describes the input or output of each process in a specific route.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	ROUTE Route	BL1ROUTE	Varchar2(10)	Identifies route within a flow. Example Values (for BL1ROUTE): EXT - BILL_FORMATTER_EXTRACT PRP - PREPARATION
#	*	PROCESS Process ID	BL1PROCID	Varchar2(30)	Identifies a process within a flow.
#	*	DATA_ELEMENT Data Element	BL1FLALIAS	Varchar2(10)	Identifies the file sent or received by flow.
#	*	IO_TYPE IO Type	BL1IOTP	Char(1)	Indicates whether the file is input or output. Example Values (for BL1IOTP): I - INPUT O - OUTPUT
		BL1_CONTROL_FIELD		Partial Table	Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)
		MAPPER_NAME Mapper Name	BL1CONFNAME	Varchar2(60)	Identifies the name of the mapper used to read input or output file.
		DATATYPE Datatype Name	BL1CONFNAME	Varchar2(60)	Identifies the data type used to store record of file.
		BC_INFO Billing Configurator Patch ID	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

## Billing Flows Run Modes (BL1\_FLOW\_MODE – New)

### Description

The Billing Flows Run Modes table maintains the available run modes for running a flow.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	FLOW_ID Flow ID	BL1MAPID	Varchar2(6)	Identifies the flow. Example Values (for BL1MAPID): 24X7 - 24X7 BLCONF - CONFIRMATION BLEXT - BILL_FORMATTER_EXTRACT BLPREP - PREPARATION BLQA - QA BLUNDO - UNDO
#	*	RUN_MODE Run Mode	BL1RNMODE	Varchar2(15)	The run mode.
		<i>BL1_CONTROL_FIELD</i>		<i>Partial Table</i>	<i>Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)</i>
		PARAMETERS Parameters	BL1CONFNAME	Varchar2(60)	The flow run mode parameters. The parameters are in XML format and reside in the BL1_XML_CONFIG table.
	*	DESCRIPTION Description	BL1DESC	Varchar2(180)	The description of the flow run mode.
		GRAPH Graph	BL1GRAPH	Blob(1000)	Holds the flow graph. Used by Billing Configurator to display the run mode.
		BC_INFO Billing Configurator Patch ID	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.



## Billing Flows Dependencies (BL1\_FLOW\_DEPENDENCIES – New)

### Description

The Billing Flows Dependencies table holds the run dependencies between flows.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	FLOW_ID Flow ID	BL1MAPID	Varchar2(6)	The flow number. Example Values (for BL1MAPID): 24X7 - 24X7 BLCONF - CONFIRMATION BLEXT - BILL_FORMATTER_EXTRACT BLPREP - PREPARATION BLQA - QA BLUNDO - UNDO
#	*	RUN_MODE Run Mode	BL1RNMODE	Varchar2(15)	The run mode number.
		<i>BL1_CONTROL_FIELD</i>		<i>Partial Table</i>	<i>Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)</i>
#	*	DEP_FLOW_ID Dependent Flow ID	BL1MAPID	Varchar2(6)	The dependent flow number. Example Values (for BL1MAPID): 24X7 - 24X7 BLCONF - CONFIRMATION BLEXT - BILL_FORMATTER_EXTRACT BLPREP - PREPARATION BLQA - QA BLUNDO - UNDO
#	*	DEP_MODE Dependent Run Mode	BL1RNMODE	Varchar2(15)	The dependent run mode number.
		BC_INFO Billing Configurator Patch ID	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

## Run Request (BL1\_RUN\_REQUEST – New)

### Description

The Run Request table holds processing requests, mainly for cycles.

### Life Cycle

This table is created by the AMC operator.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	REQUEST_ID Request ID	BL1SEQ	Number(9)	Uniquely identifies the request number.
	*	FLOW_ID Flow ID	BL1MAPID	Varchar2(6)	The flow number. Example Values (for BL1MAPID): 24X7 - 24X7 BLCONF - CONFIRMATION BLEXT - BILL_FORMATTER_EXTRACT BLPREP - PREPARATION BLQA - QA BLUNDO - UNDO
	*	RUN_MODE Run Mode	BL1RNMODE	Varchar2(15)	The run mode of the flow.
		<i>CP_BL1_CONTROL_FIELD</i>		<i>Partial Table</i>	<i>Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)</i>
	*	POPULATION_TYPE Population Type	BL1POPTP	Char(3)	The population type. Valid values: CYC - Cycle Example Values (for BL1POPTP): CYC - CYCLE
	*	POPULATION_ID Population ID	BL1SEQ	Number(9)	The population ID. For example, if the population type is "cycle", then the population ID is the cycle code.

PK	Not Null	Name	Domain Name	Type	Description
	*	STATUS Status	BL1RQSTS	Char(2)	The run status. Valid values: RQ - Request initiated IP - Invoked process PN - Pending AF - Abort fail RN - Running FN - Finished Example Values (for BL1RQSTS): AF - ABORT_FAIL FN - FINISHED IP - INVOKED_PROCESS PN - PENDING RN - RUNNING RQ - REQUEST
		START_DATE Start Date	GN1DATE	Date(8)	Start of the run. Date Mask: YYYYMMDD
		END_DATE End Date	GN1DATE	Date(8)	End of the run. Date Mask: YYYYMMDD

### Rerun Selection Criteria (BL1\_RERUN\_SELECT\_CRITERIA – New)

#### Description

The Rerun Selection Criteria table holds cycle rerun requests created by the AMC operator.

#### Life Cycle

This table is created by the AMC operator, when the operator selects to perform rerun on a specific cycle.

**Attributes**

PK	Not Null	Name	Domain Name	Type	Description
#	*	REQUEST_ID Request ID	BL1REQID	Number(12)	Uniquely identifies the rerun request number.
#	*	CYCLE_SEQ_NO Cycle Sequence Number	BL1CYCSEQ	Number(9)	Unique identifier of the actual cycle of the rerun request.
		<i>BL1_CONTROL_FLD</i>		<i>Partial Table</i>	<i>Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)</i>
#	*	CRITERIA_NAME Rerun Criteria Name	BL1RERUNCRI	Varchar2(30)	The rerun criteria name. Example Values (for BL1RERUNCRI): ALL_CYCLE - ALL_CYCLE BA_NO - BA_NO CUSTOMER_NO - CUSTOMER_NO ERROR_CODE - ERROR_CODE GROUP_ID - GROUP_ID PROCESS_ID - PROCESS_ID UNDO_REASON - UNDO_REASON
	*	CRITERIA_VALUE Rerun Criteria Value	BL1CONFNAME	Varchar2(60)	The rerun criteria value.

**Printing Category Destination (BL1\_PRINTING\_CAT\_DEST – New)****Description**

The Printing Category Destination table maintains all printing categories defined in the system. It defines the attributes for each category code and destination.

**Attributes**

PK	Not Null	Name	Domain Name	Type	Description
#	*	DESTINATION_CODE Destination Code	BL1DESTCD	Varchar2(10)	The printing category destination code.
#	*	CATEGORY_CODE Category Code	BL1GENCD	Varchar2(40)	A unique identifier of the printing category.

PK	Not Null	Name	Domain Name	Type	Description
	*	DESTINATION_TYPE <small>Destination Type</small>	BL1DESTTP	Varchar2(10)	The printing category destination type.
		DESTINATION_ATTR <small>Destination Attributes</small>	BL1DYNATRV	Varchar2(4000)	The printing category destination attributes. The attributes are separated by commas. The relevant attributes and their order are determined according to the Printing Category definition in the reference area.
		<i>BL1_CONTROL_FIELD</i>		<i>Partial Table</i>	<i>Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)</i>
		BC_INFO <small>Billing Configurator Patch ID</small>	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

### Partition Definition (BL1\_PARTITION\_DEFINITION – New)

#### Description

The Partition Definition table maintains all Rater partitions. The table is synchronized from the Rater area by the RTS process.

#### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	PARTITION_ID <small>Partition ID</small>	GN1CUSTPART	Number(4)	Identifies the partition ID.
		<i>CONTROL_FLD</i>		<i>Partial Table</i>	<i>Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)</i>
		PARTITION_TYPE <small>Partition Type</small>	BL1PARTYPE	Char(1)	The partition type. Valid values: R - Regular O - Outcollect Example Values (for BL1PARTYPE): O - OUTCOLLECT R - REGULAR

PK	Not Null	Name	Domain Name	Type	Description
		PARTITION_DESC Partition Description	DESCRIPTION	Varchar2(255)	The partition description.
	*	HOST Host	BL1HOST	Varchar2(25)	The machine where the partition resides.

## Billing Routes (BL1\_ROUTE – New)

### Description

The Billing Routes table maintains route attributes. Flow initiators use this table to determine how to divide the population groups. A mode of a flow must have at least one route that is of type Basic Group. This indicates to the Initiator the main group in the flow. It also allows to routes to be prioritized.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	ROUTE Route ID	BL1ROUTE	Varchar2(10)	Identifies the route ID. Example Values (for BL1ROUTE): EXT - BILL_FORMATTER_EXTRACT PRP - PREPARATION
		CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)
		TYPE Type	BL1ROUTETP	Char(1)	Indicates whether the files are at the cycle level or group level. Valid values: B - Basic Group G - Group C - Cycle Example Values (for BL1ROUTETP): B - BASIC_GROUP C - CYCLE G - GROUP

PK	Not Null	Name	Domain Name	Type	Description
		PRIORITY Priority	BL1PRIOR	Number(5)	Route priority processing. Valid values: 0 - HIGHEST 1 - HIGH 2 - MEDIUM 3 - LOW 4 - LOWEST Example Values (for BL1PRIOR): 0 - HIGHEST 1 - HIGH 2 - MEDIUM 3 - LOW 4 - LOWEST
		DESCRIPTION Description	BL1DESC	Varchar2(180)	The route description.
		BC_INFO Billing Configurator Patch ID	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

## Billing Run Mode Routes (BL1\_MODE\_ROUTE – New)

### Description

The Billing Run Mode Routes table associates routes to a specific flow and mode.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	FLOW_ID Flow ID	BL1MAPID	Varchar2(6)	The flow number. Example Values (for BL1MAPID): 24X7 - 24X7 BLCONF - CONFIRMATION BLEXT - BILL_FORMATTER_EXTRACT BLPREP - PREPARATION BLQA - QA BLUNDO - UNDO

PK	Not Null	Name	Domain Name	Type	Description
#	*	RUN_MODE Run Mode	BL1RNMODE	Varchar2(15)	The run mode number.
#	*	ROUTE Route ID	BL1ROUTE	Varchar2(10)	The route number. Example Values (for BL1ROUTE): EXT - BILL_FORMATTER_EXTRACT PRP - PREPARATION
		CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)
		GROUPING_TYPE Grouping Type	BL1GROUP	Varchar2(60)	The grouping type. Example Values (for BL1GROUP): APPROXIMATE_GROUP_NUMBER - APPROX_GROUP_NUM APPROXIMATE_WEIGHT - APPROX_WEIGHT FIX_GROUP_NUMBER - FIX_GROUP_NUM FIX_WEIGHT - FIX_WEIGHT
		GROUPING_SIZE Grouping Size	BL1GROUPSEQ	Number(9)	The grouping size.
		MAIN_ROUTE_IND Main Route Indicator	GN1YESNOIND	Char(1)	Indicator for a main route. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR
		BC_INFO Billing Configurator Patch ID	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

## Billing EOD Control (BL1\_EOD\_CONTROL – New)

### Description

The Billing EOD Control table holds entries for the Billing Transactions Listener (BTL) daemon. It holds the last date for which the BTL completed acquiring all transactions from TRB, thus making it possible to detect cases of backlogs. The Billing Transactions Listener updates the table with the logical date at EOD before it goes down.

### Life Cycle

The Billing Transactions Listener updates the table with the logical date at EOD before it goes down.



### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	PROCESS_ID Process ID	BL1PROCID	Varchar2(30)	Identifies the process ID.
		CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)
	*	EFFECTIVE_DATE Effective Date	GN1DATE	Date(8)	The process status effective date. Date Mask: YYYYMMDD
	*	STATUS Process Status	BL1PROCSTS	Char(4)	Identifies the process status. Example Values (for BL1PROCSTS): DOWN - PROC_DOWN GETD - PROC_GET_DOWN UP - PROC_UP

## Customer Activities (BL1\_CUSTOMER\_ACT – New)

### Description

The Customer Activities table includes all customer activities that are not specific to a specific offer instance. For each activity the table defines what event type will be used and whether to calculate the RC of the customer relevant offer instances.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	CUSTOMER_ACT_SEQ Customer Activity ID	BL1SEQ	Number(9)	A unique identifier of the activity.
	*	ACTIVITY_ID Activity ID	BL1CUSTACT	Varchar2(4)	Identifies the activity ID.
	*	ACTIVITY_ORIGIN Activity Origin	BL1ORCACTOR	Varchar2(10)	The activity origin.
		ACT_DESCRIPTION Activity Description	BL1DESC	Varchar2(180)	The activity description.
	*	REASON_CODE Activity Reason Code	BL1ACTRSNCD	Varchar2(25)	The activity reason code.

PK	Not Null	Name	Domain Name	Type	Description
		REASON_DESCRIPTION Reason Description	BL1DESC	Varchar2(180)	The activity reason description.
	*	CHARGE_CODE Charge Code	BL1CHGCD	Varchar2(25)	The charge code.
		OC_EVENT_TYPE OC Event Type	BL1EVENTP	Varchar2(255)	The event type name as defined in PC.
		SERVICE_FILTER Service Filter	BL1SRVFLT	Varchar2(20)	The service filter value associated with this activity.
	*	RC_INDICATION RC Indicator	GN1YESNOIND	Char(1)	Indicates whether to send an RC event with this activity. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR
	*	OC_INDICATION OC Indicator	GN1YESNOIND	Char(1)	Indicates whether to send an OC event with this activity. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR
		RC_UPDATE_DATE_IND RC Update Date Indicator	GN1YESNOIND	Char(1)	Indicates whether to send the RC to the next step, even if it has not been rated. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR

## Customer Offer Activities (BL1\_CUSTOMER\_OFFER\_ACT – New)

### Description

The Customer Offer Activities table is used to associate customer activities with offer-related activities.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	CUSTOMER_ACT_SEQ Customer Activity Sequence	BL1SEQ	Number(9)	The customer activity sequence.
#	*	OFFER_ACTIVITY_ID Offer Activity ID	BL1OFFERACT	Number(9)	The offer activity ID.

PK	Not Null	Name	Domain Name	Type	Description
		SEND_WITH_CA_IND Send with Customer Activity Indication	GN1YESNOIND	Char(1)	Indicates whether to send offer instances with the offer-related activity when sending the event associated with the customer activity. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR
		SEND_OFFER_OC_IND Send with Offer Activity Indication	GN1YESNOIND	Char(1)	Indicates whether to send the offer instances associated with the offer-related activity when the quote request contains the customer activity. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR

### Offer Activity (BL1\_OFFER\_ACT – New)

#### Description

The Offer Activity table includes all the offer-related activities. For each activity, the table defines the service filter value that is relevant whenever an OC event is used.

#### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	OFFER_ACTIVITY_ID Offer Activity ID	BL1OFFERACT	Number(9)	The offer activity identifier.
	*	ACTIVITY_NAME Activity Name	BL1ORCACT	Varchar2(25)	The offer activity name.
	*	SEND_WITH_RC_IND Send With RC Indicator	GN1YESNOIND	Char(1)	Indicates whether to send an RC event with this activity. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR
		SERVICE_FILTER Service Filter	BL1SRVFLT	Varchar2(20)	The service filter value associated with this activity.
		OC_EVENT_TYPE OC Event Type	BL1EVENTP	Varchar2(255)	The OC event type name as defined in the Product Catalog.

## Version Information (BL1\_PATCHES – New)

### Description

The Version Information table maintains all Billing released patches.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	PATCH_ID Patch ID	BL1GENCD	Varchar2(40)	The patch ID. The patch ID is generated from the combination of patch sequence number, user name, and database instance.
		CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)
		PATCH_FILE Patch File	GN1BLOB	Blob(1000)	A zipped file that contains the patch data.
		OPEN_INDICATOR Open Version Indicator	GN1YESNOIND	Char(1)	Indicates whether the version is open or closed. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR
	*	CORE_INDICATOR Core Version Indicator	GN1YESNOIND	Char(1)	Indicates whether this version is a core version or a customization. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR
		DESCRIPTION_FILE Version Description	GN1CLOB	Clob(1000)	The description of the version in XML file.
		PATCH_SEQUENCE_ID Patch Sequence Number	GNPAGENUM	Number(9)	The patch sequence number.
		USER_NAME User Name	BL1GENCD	Varchar2(40)	The user that created the patch.
		BC_INFO Billing Configurator Patch ID	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

### Version Information Detail (BL1\_PATCH\_DETAILS – New)

#### Description

The Version Information Detail table maintains the SQL statements for the version.

#### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	PATCH_DETAILS_SEQ <small>Patch Sequence Number</small>	GNPAGENUM	Number(9)	The patch sequence number.
		CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)
		TRANSACTION_DETAILS <small>Transaction Details</small>	GN1CLOB	Clob(1000)	The SQL statements of the version.
		TRANSACTION_BLOB <small>Transaction BLOB</small>	GN1BLOB	Blob(1000)	Used for maintaining BLOB files.
		TRANSACTION_CLOB <small>Transaction CLOB</small>	GN1CLOB	Clob(1000)	Used for maintaining BLOB files.
		BC_INFO <small>Billing Configurator Patch ID</small>	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

### Cycle Run Policy (BL1\_CYCLE\_RUN\_POLICY – New)

#### Description

The Cycle Run Policy defines the cycle run options according to the cycle status, flow, and mode.

#### Life Cycle

The cycle run entry is created by the Cycle Listener.

## Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	CYCLE_CODE Cycle Code	BL1CYCCD	Number(4)	The cycle code.
#	*	CYCLE_STATUS Cycle Status	BL1CYCSTS	Char(2)	<p>The cycle status.</p> <p>Example Values (for BL1CYCSTS):</p> <p>AQ - AUDIT_QA_RESULTS            CL - CLOSED            CM - COMPLETED            CN - CONFIRMED            CR - CHANGE_CYCLE_RUNNING            DR - LOCKED_AND_RUN            II - INITIATOR_INIT            LC - LOCK_REQUEST            LD - LOCKED            LP - LOCK_REQUEST_IN_PROGRESS            LR - LOCK_AND_RUN_REQUEST            NW - NEW            PN - PENDING            PR - PROCESSED-WITH-REJECTS            PS - PROCESSED            QA - READY_FOR_QA            RD - READY            RI - REQUEST_INITIATOR            RJ - REJECT            RN - RUNNING            RP - LOCK_AND_RUN_IN_PROGRESS            RQ - RUNNING_QA            RR - READY-FOR-RERUN            RU - RUNNING_UNDO_CONFIRM            UC - READY_FOR_UNDO_CONFIRM</p>
#	*	FLOW_ID Flow ID	BL1MAPID	Varchar2(6)	<p>The flow number.</p> <p>Example Values (for BL1MAPID):</p> <p>24X7 - 24X7            BLCONF - CONFIRMATION            BLEXT - BILL_FORMATTER_EXTRACT            BLPREP - PREPARATION            BLQA - QA            BLUNDO - UNDO</p>
#	*	RUN_MODE Run Mode	BL1RNMODE	Varchar2(15)	Identifies the run mode.

PK	Not Null	Name	Domain Name	Type	Description
		CP_BL1_CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = CONTROL_FLD)
		BC_INFO Billing Configurator Patch ID	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

### Split and Merge Control (BL1\_SAM\_CONTROL – New)

#### Description

The Split And Merge table contains the file details of the SAM process.

#### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	SAM_SEQ_NO SAM Sequence Number	BL1SAMSEQ	Number(9)	An internal sequence for specifying groups of files that relate to the same billing group.
#	*	PERIOD_KEY [partitioning column] Period Key	BL1PRDKEY	Number(5)	Period key used for partitioning billing tables.
		CP_CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = CONTROL_FLD)
	*	SOURCE_ID Source ID	BL1SRCID	Varchar2(10)	The sending process ID.
	*	CYCLE_SEQ_NO Cycle Sequence Number	BL1CYCSEQ	Number(9)	Uniquely identifies the cycle.
		BL_GROUP Billing Group	BL1DATAGRP	Varchar2(64)	The relevant Billing group ID.
		RATER_GROUP Rater Group	BL1DATAGRP	Varchar2(64)	The Rater group ID.
		DATA_ELEMENT Data Element	BL1FLALIAS	Varchar2(10)	The file entity.

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PK	Not Null	Name	Domain Name	Type	Description
		ROUTE Route	BL1ROUTE	Varchar2(10)	The route ID. Example Values (for BL1ROUTE): EXT - BILL_FORMATTER_EXTRACT PRP - PREPARATION
		FILE_PATH File Path	BL1FILEPATH	Varchar2(512)	The full file path.
		FILE_NAME File Name	BL1FLNAME	Varchar2(100)	The file name.
		FILE_RECORDS File Records	BL1COUNTER	Number(5)	The number of records in the files.
		STATUS Status	BL1CCPRCSTS	Varchar2(2)	The request status. Example Values (for BL1CCPRCSTS): CO - COMPLETE OP - ON-PROCESS PN - PENDING RE - RERUN RJ - REJECTED
		ERROR_CODE Error Code	BL1ERRCD	Number(9)	The error code if an error occurred in SAM. Example Values (for BL1ERRCD): 0 - SUCCESS 1 - GEN_OPEN_FILE 2 - GEN_OPEN_POP_FILE 3 - GEN_DB_INSERT_FAIL 4 - GEN_DB_UPDATE_FAIL 5 - GEN_DB_SELECT_FAIL 7 - ORC_INVALID_EVENT_DATE 8 - ORC_INVALID_CUSTOMER_ID 9 - ORC_INVALID_RECEIVER_ID 10 - ORC_INVALID_RECEIVER_TYPE 11 - ORC_INVALID_PAY_CHANNEL 12 - ORC_INVALID_ACTIVITY_NAME 13 - ORC_INVALID_ACTIVITY_RSN 14 - ORC_INVALID_OFFER_DATA 15 - ORC_INVALID_TRANSACTION_ID 16 - ORC_INVALID_GROUP_ID 17 - ORC_INVALID_REQUEST_ID 18 - ORC_INVALID_DYNAMIC_ATTRIBUTES 19 - ORC_INVALID_BILLING_ACT_MAP 20 - ORC_PRORATION_FAILURE 21 - ORC_EXTRACT_CYCLE_ERROR 22 - ORC_INVALID_POLICY 23 - ORC_INFRA_IO_XML_ERROR



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PK	Not Null	Name	Domain Name	Type	Description
					24 - GEXTRACT_ERROR 25 - CHPR_SR_NOT_IN_POP 26 - CHPR_LAST_CRT_DATE_NOT_FOUND 27 - CHPR_ORIGINAL_AMT_NOT_FOUND 28 - CHPR_CHG_REQUEST_INIT_FAIL 29 - CHCR_SR_NOT_IN_POP 30 - CHCR_MISSING_SR_DYN_ATTR 31 - CHCR_DE_FEED 32 - CHCR_CREDITS_GENERATION 33 - CHCR_UNMAPPED_DISCOUNT_CREDITS 34 - CHCR_SP_NOT_IN_POP 35 - CHCR_MISSING_SP_DYN_ATTR 36 - CHCR_VALIDATION_FAIL_SP 37 - CHCR_VALIDATION_FAIL_SR 38 - CHCR_PREPARE_CUST_FOR_DISCOUNT 39 - CHCR_SP_CUST_NOT_FOUND 40 - INVOICE_IO_ERROR 41 - INVOICE_TAX_CODE_NOT_FOUND 42 - INVOICE_TAX_TOTAL_NOT_EXIST 43 - INVOICE_FAIL_CALCUALTE_TAX 44 - DOC_NO_PCN 45 - DOC_NO_PAY_CHANNEL 46 - DOC_ILLEGAL_PMCT_DOCTP 47 - DOC_INVALID_CHARGE_REQUEST 48 - WTDB_ENTITY_FAIL 49 - GEN_WRITE_FILE 50 - GEN_READ_FILE 51 - GEN_CREATE_SEQUENCE 52 - GEN_GENERAL 53 - GEN_NULL_POINTER 54 - ORC_FORMER_FAIL 56 - ORC_INVALID_RECORD_ID 58 - BDI_PREV_RUN_NOT_CONFM 59 - BDI_CUST_ON_HOLD 60 - ORC_NO_OFFERS 61 - ORC_INVALID_NON_RC_RATE_IND 62 - ORC_INVALID_CYCLE_CODE 64 - ORC_INVALID_SUBSCRIBER_ID 65 - ORC_INVALID_EFFECTIVE_DATE 66 - ORC_INVALID_EXPIRATION_DATE 67 - ORC_INVALID_BUSINESS_ENTITY 68 - ORC_INVALID_OFFER_CURRENCY 69 - RPL_NO_INCREASE_TYPE_IN_BE 70 - RPL_NO_CALC_EXP_DATE_IN_BE 71 - RPL_NO_REDUCE_TYPE_IN_BE 72 - GEN_TRB_PUBLISH_FAIL 73 - RPL_NO_PUBLISH_RPL_IN_BE 74 - GEN_NO_LOGICAL_DATE

PK	Not Null	Name	Domain Name	Type	Description
					75 - BTL_VALUE_NOT_IN_TRANS 76 - BTL_NO_CUSTOMER_IN_CUSTOMER_TB 77 - BTL_UPDATE_DECREASE_WEIGHT 78 - BTL_UPDATE_INCREASE_WEIGHT 79 - BTL_UPDATE_CHANGE_BA 80 - BTL_UPDATE_NEW_CYCLE 81 - BTL_FAIL_SELECT_RELEVANT_CYCLE 82 - BTL_SET_CYCLE_CLOSE_DATE 83 - BTL_NO_BA_IN_BLNG_ARRANGEMENT 84 - BTL_NO_CUST_IN_CUST_TAX_EXMPT 85 - BTL_PCN_EXISTS_IN_PAY_CHANNEL 86 - BTL_NO_PCN_IN_PAY_CHANNEL 87 - BTL_FAILED_OPEN_PCN 88 - GEN_FAILED_TO_COMMIT 89 - BTL_FAILED_TO_UPDATE_BA_EXT_ID 90 - BTL_FAILED_UPDATE_PCN_EXT_ID 91 - BTL_FAILED_TO_PARSE_THE_TRANS 92 - BTL_FAILED_UPDATE_CUST_EXT_ID 93 - BTL_FAILED_TO_CREATE_CUSTOMER 94 - BTL_FAILED_UPDATE_EXPIRE_DATE 95 - BTL_FAIL_UPDATE_CUST_TAX_EXMPT 96 - BTL_FAIL_INSERT_PAYER_CUST_REL 97 - BTL_FAIL_INSERT_TO_BLNG_ARRANG 98 - BTL_FAIL_SELECT_FROM_CUSTOMER 99 - BTL_FAIL_UPDATE_NULL_VALUE 100 - BTL_FAILED_TO_UPDATE_BA_STATUS 101 - BTL_EFF_GREATER_THAN_CLOSE 102 - BTL_CUST_EXIST_IN_CUSTOMER_TB 103 - BTL_BA_EXISTS_IN_BLNG_ARRANGE 104 - BTL_NO_CUST_PARTITION_DIMENT 105 - BTL_FAILED_CREATE_CUST_KEY 106 - INVOICE_CORRECTION_ERR 107 - CHCR_BA_CUST_NOT_CHARGED 108 - UNDO_ENTITY_NOT_FOUND 109 - UNDO_ENTITY_NOT_MEET_REQ 110 - UNDO_CUST_CROSS_DIST 111 - CHPR_ILLEGAL_FREQ 112 - ORC_NUR_REJECT 113 - BTL_FAILED_TO_UPDATE_DUE_DAYS 114 - BTL_FAILED_TO_GET_BA_STATUS 115 - BTL_FAILED_TO_UPDATE_BA_DATE 116 - BTL_BA_STATUS_NOT_SAME_IN_TRX 117 - BTL_FAIL_TO_UPDATE_BLNG_ARRANG 118 - BTL_SELECT_MIN_CODE_PEND_STS 119 - BTL_LOGICAL_GREATER_THAN_CLOSE 120 - BTL_FAIL_SET_CYCLE_CLOSE_DATE 121 - BTL_FAIL_GET_LOGICAL_DATE 122 - BTL_LOGICAL_GREATER_THAN_OLD

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PK	Not Null	Name	Domain Name	Type	Description
					123 - BTL_CYCLE_CODE_NOT_THE_SAME 124 - CHCR_CHARGE_CODE_MISSING_SP 125 - CHCR_CHARGE_CODE_MISSING_SR 126 - BTL_CROSS_DIST_ALREADY_EXIST 127 - BTL_CROSS_DIST_DOES_NOT_EXIST 128 - ORC_MISSING_TO_DATE 129 - UNDO_CHARGE_CRE_PAYER_ERR 130 - UNDO_DOCUMENT_PAYER_ERR 131 - UNDO_INVOICING_PAYER_ERR 132 - UNDO_CHARGE_CRE_CUSTOMER_ERR 133 - CONF_RPL_ERROR 134 - CONF_BLNG_ARR_UPDATE_ERR 135 - CONF_CUSTOMER_QUERY_SQL_ERR 136 - CONF_CUST_CYC_UPDATE_ERR 137 - ORC_CUSTOMIZATION_ERROR 138 - INVOICE_FAIL_CURRENCY_EXCHANGE 139 - UNDO_REQ_TYPE_NOT_SUPPORTED 140 - COMM_FORMER_FAIL 141 - COMM_NO_AMOUNT 142 - COMM_NO_PAY_CHANNEL 143 - COMM_MISSING_MANDATORY_FIELD 144 - COMM_NO_DEF_VAL_IN_MANDATORY 145 - COMM_FAIL_GENERATE_SEQUENCE 146 - COMM_FAIL_GET_PAY_CHANNEL 147 - COMM_FAIL_GET_CUSTOMER 148 - COMM_DB_FETCH_FAIL 149 - COMM_FAIL_GET_LOGICAL_DATE 150 - COMM_MISSING_CUST_FOR_SUB 151 - GEN_DB_DELETE_FAIL 152 - CHCR_MISSING_CURRENCY 153 - CHCR_MISSING_PCN 154 - ORC_FAILED_INSERT_RC_RATES 155 - ORC_FAILED_UPDATE_RC_RATES 156 - ORC_FAILED_INSERT_CHG_REQUEST 157 - ORC_FAILED_HANDLE_EXPIRE 158 - FAILED_GET_CUST_PARAMS 159 - CUST_PARAMS_GEXTRACT_ERROR 160 - FAILED_GET_CUST_OFFERS 161 - FAILED_GET_ADDITIONAL_PARAMS 162 - ADDITIONAL_PRMS_GEXT_ERROR 163 - FAILED_GET_EFF_DATE 164 - FAILED_GET_NEW_CYCLE_CODE 165 - CM_CUSTOMER_GEXTRACT_ERROR 166 - FAILED_GET_CYCLE_CODE 167 - FAILED_GET_PCN 168 - PAYMENT_CATEGORY_GEXT_ERR 169 - FAILED_GET_PAY_CATEGORY 170 - FAILED_GET_AGREEMENT_ID

PK	Not Null	Name	Domain Name	Type	Description
					171 - CUST_OFFERS_GEXTRACT_ERROR 172 - CUST_HISTORY_OFFERS_GEXT_ERROR 173 - FAILED_GET_CM_TRX_ID 174 - FAILED_SET_EFF_DATE_TO_OFFERS 175 - FAILED_GET_RECEIVER_TYPE 176 - BDI_UNDO_REQ 177 - CHCR_MISSING_REC_TYPE 178 - CHCR_MISSING_REC_ID 179 - CHCR_MISSING_EFF_DATE 180 - INV_MISS_BA 181 - INV_FAIL_QA_BA_FLUSH 182 - INV_FAIL_QA_BA_CHECK 183 - INV_FAIL_QA_CI_CHECK 184 - INV_FAIL_QA_INV_CHECK 185 - INV_FAIL_TAX_CALC 186 - INV_ERR_TAX_ROUND 187 - INV_ERR_CHG_ROUND 188 - INV_CHG_ACC_ERROR 189 - INV_FAIL_WRITE_TAX 190 - INV_FAIL_WRITE_TAX_IT 191 - INV_FAIL_WRITE_CHG 192 - INV_FAIL_WRITE_INV 193 - INV_FAIL_WRITE_INV_CHG 194 - INV_FAIL_UPD_STS 195 - INV_FAIL_EXT_CHG 196 - INV_FAIL_WRITE_PP_STMT 197 - INV_FAIL_WRITE_CHG_ACC 198 - INV_END_BA 199 - INV_MISS_PCNS 200 - INV_MISS_CHG_CODE 201 - INV_CORRECTION_ERR 202 - INV_SET_SUB_CTX 203 - INV_SET_BA_CTX 204 - CHG_COD_REF_ERROR 205 - INV_DB_GET_INVOICE 206 - INV_TAX_ACC_ERROR 207 - INV_ACC_ERROR 208 - DOC_FAIL_STMT_AMOUNT 209 - FAIL_SNAPSHOT_CREATE 210 - FAIL_PI_EXTRACT 211 - BTL_UNDEFINED_ACT 212 - ORC_UNDEFINED_ACT 213 - CUST_REJ_OCRC 214 - CUST_REJ_BTL 215 - BA_REJ_BTL 216 - BTL_NO_CHG_IN_CHARGE 217 - BTL_FAIL_INSERT_CHG_ADJ 218 - DOC_NO_PCN_FOR_INV

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PK	Not Null	Name	Domain Name	Type	Description
					219 - DOC_AMT_NO_MATCH_AR 220 - GROUP_EXCEPTION_MSG 221 - GROUP_EXCEPTION 222 - ENTITY_EXCEPTION 223 - GEN_TABLE_UPDATE_MSG 224 - INV_FAIL_TAX_PREP 225 - PREP_PARAM_FAIL 226 - NO_POP_FILE 227 - WRONG_PI_EXTRACT 228 - IN_SORT_ERROR 229 - OUT_SORT_ERROR 245 - PNUR_MISS_CONFIG 300 - RERUN_MIS_ENTITY_MSG 301 - AMC_SEND_MSG_ERR 302 - REQUEST_VALIDATION_ERR 303 - UNDO_ENTITY 304 - BTL_FAILED_INSERT_BACKDATE 305 - BTL_FAILED_GET_POR_ELEMENT 309 - INV_FAIL_NON_ITEMIZE_TAX_CALC 310 - INV_FAIL_GET_TAX_ITEM_FOR_UPD 311 - BTL_FAILED_TO_GET_PCN_STATUS 312 - BTL_PCN_STATUS_NOT_SAME_IN_TRX 313 - BTL_FAILED_TO_UPDATE_PCN_DATE 314 - BTL_FAILED_TO_GET_CUST_STATUS 315 - BTL_CST_STATUS_NOT_SAME_IN_TRX 316 - BTL_FAILED_TO_UPDATE_CUST_DATE 317 - BTL_FAILED_TO_UPDATE_BA_FREQ 318 - BTL_NULL_PROCESS_CONTEXT 319 - BTL_FAILED_TO_GET_DL 320 - BTL_FAILED_TO_GET_MD 321 - BTL_TRANSACTION_PARSING_FAILED 322 - BTL_FAILED_TO_GET_BL_CONFIG 323 - BTL_FAIL_GET_CST_PARTITION_DIM 324 - BTL_FAILED_REOPEN_PCN 325 - BTL_FAILED_UPDATE_BA_DOC_TYPE 326 - BTL_FAIL_GET_DYNA_EXTRACT_DEF 327 - BTL_FAIL_GET_DYNA_EXT_IN_PARAM 328 - BTL_DYNA_EXTRACT_INVALID_TYPE 329 - BTL_NO_DYNA_EXTR_IN_PARAM 330 - BTL_FAIL_GET_DB_CONNECTION 331 - BTL_DYNA_EXTR_GEN_ERROR 332 - BTL_DYNA_EXT_PARAMS_PARSE_FAIL 333 - BTL_DYNAMIC_EXTRACT_MISS_TAG 334 - BTL_DYNAMIC_EXTRACT_MISS_ATTR 335 - BTL_PRL_INIT_THREAD_FAILED 336 - BTL_MISSING_TRANSACTION_ORIGIN 337 - BTL_TRANSACTION_NOT_DEFINED 338 - CHCR_NOT_ALL_BA_RCV_PROCESS

PK	Not Null	Name	Domain Name	Type	Description
					339 - BDI_BA_CROSS_CYC_RCV_NOT_PROC 340 - AC_OUTPUT_UPDATE 341 - GEN_MANUAL_ABORT 342 - BACKDT_REQ_NOT_COMPLETE
		ERROR_DESCRIPTION Error Description	BL1MSGTXT	Varchar2(1500)	The error description.

## Split and Merge Cycle Request (BL1\_SAM\_CYCLE\_REQUEST – New)

### Description

The Split And Merge (SAM) Cycle Request table contains the requests received from the Request Listener and the related cycle sequences.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	PERIOD_KEY	BL1PRDKEY	Number(5)	The period key of the cycle.
#	*	REQUEST_SEQ_NO	BL1SEQ	Number(9)	The request sequence number.
#	*	CYCLE_SEQ_NO	BL1CYCCD	Number(4)	The cycle sequence number.

## Section Parameters Hierarchy (BL1\_CONF\_HIERARCHY – New)

### Description

The Section Parameters Hierarchy table represents the billing processes parameters hierarchy. It enables process parameters to be defined in a hierarchy structure.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	PROCESS_NAME Process Name	BL1NAME	Char(32)	The process name.
#	*	PROCESS_GROUP Process Group	BL1GENFLD	Varchar2(256)	The process group.
		CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)
		DESCRIPTION Description	BL1DESC	Varchar2(180)	Description of the process hierarchy.
		BC_INFO Billing Configurator Patch ID	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

## Section Parameters (BL1\_CONF\_SECTION\_PARAMS – New)

### Description

The Section Parameters table represents all the sections used by Billing processes and all the parameters inside each section. It also defines the default value for the parameters. A parameter belongs to a private or a shared configuration, depending on the parameter class value.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	PARAM_CLASS Parameter Class	BL1NAME	Char(32)	The parameter class.
#	*	SECTION_NAME Section Name	BL1GENFLD	Varchar2(256)	The section name.
#	*	PARAM_NAME Parameter Name	BL1GENFLD	Varchar2(256)	The parameter name.
		CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)

PK	Not Null	Name	Domain Name	Type	Description
		DESCRIPTION Description	BL1DESC	Varchar2(180)	Description of the parameter.
		PARAM_VALUE Parameter Value	GN1CLOB	Clob(1000)	The parameter value.
		PARAM_TYPE Parameter Type	BL1GENFLD	Varchar2(256)	The parameter type.
#	*	CUSTOM_LEVEL Custom Level	BL1CYCCD	Number(4)	The parameter custom level. Level 1 is used by the core layer.
		BC_INFO Billing Configurator Patch ID	BL1BCINFO	Varchar2(40)	The last Billing Configurator patch version ID that was updated.

## Cycle Groups History (BL1\_CYCLE\_GROUPS\_HISTORY – New)

### Description

The Cycle Groups History table holds information about groups according to history cycle sequence number and flow. This table is used for gathering statistics on cycle runs.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	CYCLE_SEQ_NO Cycle Sequence Number	BL1CYCSEQ	Number(9)	Uniquely identifies the cycle.
#	*	FLOW_ID Flow ID	BL1MAPID	Varchar2(6)	The flow ID. Example Values (for BL1MAPID): 24X7 - 24X7 BLCONF - CONFIRMATION BLEXT - BILL_FORMATTER_EXTRACT BLPREP - PREPARATION BLQA - QA BLUNDO - UNDO
#	*	ROUTE Route ID	BL1ROUTE	Varchar2(10)	Identifies the route ID within a flow. Example Values (for BL1ROUTE): EXT - BILL_FORMATTER_EXTRACT PRP - PREPARATION



PK	Not Null	Name	Domain Name	Type	Description
#	*	GROUP_ID Group ID	BL1GROUPSEQ	Number(9)	Unique group ID for flow, route, and cycle sequence numbers.
		CP_CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = CONTROL_FLD)
		STATUS Status	BL1GRPSTS	Varchar2(3)	The group status. Example Values (for BL1GRPSTS): ABT - ABORT FIN - FINISH REJ - REJECTED ST - START
		DYNAMIC_ATTRIBUTES Dynamic Attributes	BL1DYNATTR	Clob(1000)	The group dynamic attributes.

### History Charge Request (BL1\_HIST\_CHARGE\_REQUEST – New)

#### Description

The History Charge Request table maintains pending charges that were changed or removed from the Charge Request table. Usually, One-Time charges are created in this table.

#### Life Cycle

Created by the backdating process.

#### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	CUSTOMER_KEY [partitioning column] Customer Key	BL1CUSTKEY	Number(5)	Customer key used for partitioning billing tables.
#	*	REQUEST_SEQ_NO Request Sequence Number	BL1CHGSEQ	Number(12)	Unique identifier of the charge.
#	*	CORRECTION_SEQ_NO Correction Sequence Number	BL1COUNTER	Number(5)	A unique identifier of the correction to the charge. The same charge can have more than one correction.

PK	Not Null	Name	Domain Name	Type	Description
		CP_BL1_CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = CONTROL_FLD)
		CHARGE_TYPE Charge Type	BL1ACTV	Varchar2(3)	The type of charge. Valid values: Debit or Credit Example Values (for BL1ACTV): CRD - CREDIT DBT - DEBIT
		PAY_CHANNEL_NO Pay Channel Number	BL1PCN	Number(12)	The identifier of the pay channel to which the charge is associated.
	*	CHARGE_CODE Charge Code	BL1CHGCD	Varchar2(25)	The charge code is the main characteristic of the charge. The dynamic attributes are filled according to the charge type. Each charge type is to have a set of attributes for each charge of the same charge type. The list of relevant attributes is defined in the reference area.
		EFFECTIVE_DATE Effective Date	GN1DATE	Date(8)	Date the charge becomes effective. Date Mask: YYYYMMDD
		AMOUNT_CURRENCY Amount Currency	BL1CURR	Varchar2(3)	The currency of the charge amount.
	*	AMOUNT Amount	BL1AMOUNT	UDT-amount(25,9)	The amount of the charge.
		SERVICE_RECEIVER_TYPE Service Receiver Type	BL1CMEN TPP	Char(1)	Identifies the type of the receiver of the charge. It can be the billing arrangement, customer, account, or subscriber. Example Values (for BL1CMEN TPP): B - BA C - CUSTOMER G - GROUP S - SUBSCRIBER U - UNIT Y - CYCLE
		SERVICE_RECEIVER_ID Service Receiver ID	BL1CMEN TSEQ	Number(12)	The identifier of the charge receiver. For example, if the service receiver type is Subscriber, the service receiver ID is the subscriber ID.

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PK	Not Null	Name	Domain Name	Type	Description
		RECEIVER_CUSTOMER Receiver Customer	BL1CUST	Number(12)	Customer of the service receiver.
		OFFER Offer	BL1OFFER	Number(15)	Offer according to which the charge was calculated.
		OFFER_ITEM Offer Item	BL1OFFERITM	Number(15)	Offer item according to which the charge was calculated.
		OFFER_INSTANCE Offer Instance	BL1OFFERINS	Number(9)	Uniquely identifies the offer given to the subscriber. The subscriber can have the same offer effective in different periods of the cycle or the same offer effective more than once for allowance offers (free events).
		CHARGE_ORIGIN Charge Origin	BL1CHGORG	Varchar2(2)	The process or application that created the charge. Example Values (for BL1CHGORG): AR - AR CC - CHARGE-CALCULATOR CM - CM DE - DISCOUNT DO - DOCUMENTATION IN - INVOICING MC - M-COMMERCE ML - MANUAL RA - RATER
		BA_NO Billing Arrangement Number	BL1BA	Number(12)	The identifier of the billing arrangement to which this charge belongs.
		WAIVING_IND Waiving Indicator	GN1YESNOIND	Char(1)	Indicates whether the current request is to be waived. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR
		DYNAMIC_ATTRIBUTE Dynamic Attribute	BL1DYNATRV	Varchar2(4000)	A list of attributes according to the charge type. The attributes are separated by commas. The relevant attributes and their order are determined according to the charge type definition in the reference area.
		ORIGIN_ACTIVITY_SEQ Originating Activity ID	BL1ACTSEQ	Number(12)	The sequence of the activity that created the charge request. A reference to the Activity History table.

PK	Not Null	Name	Domain Name	Type	Description
		EVENT_TYPE Event Type	BL1EVENTTP	Char(2)	The event type of the charge request. Example Values (for BL1EVENTTP): OA - OC_OFFER_ACTIVATION OC - OC_ACTIVITY OP - OC_OFFER_PENALTY RC - RC_EVENT
		BACKDATE_PROCESS_DATE Backdate Process Date	GN1DATE	Date(8)	The date of the backdate process. Date Mask: YYYYMMDD

## History RC Rates (BL1\_HIST\_RC\_RATES – New)

### Description

The History RC Rates table maintains all the rates for recurring charges in the system. The table is not is use.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	CUSTOMER_KEY [partitioning column] Customer Key	BL1CUSTKEY	Number(5)	The customer key used for partitioning billing tables.
#	*	RC_RATE_SEQ_NO Recurring Charge Rate Sequence Number	BL1RCRATENO	Number(9)	
		CP_BL1_CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = CONTROL_FLD)
		CHARGE_CODE Charge Code	BL1CHGCD	Varchar2(25)	The charge code is the main characteristic of the charge. The dynamic attributes are filled according to the charge type. Each charge type is to have a set of attributes for each charge of the same charge type. The list of relevant attributes is defined in the reference area.
		EFFECTIVE_DATE Effective Date	GN1DATE	Date(8)	Effective date of the rate. Date Mask: YYYYMMDD

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PK	Not Null	Name	Domain Name	Type	Description
		EXPIRATION_DATE Expiration Date	GN1DATE	Date(8)	Expiration date of the rate. NULL value implies no expiration date. Date Mask: YYYYMMDD
		AMOUNT_CURRENCY Amount Currency	BL1CURR	Varchar2(3)	The currency unit of the charge amount.
		AMOUNT Amount	BL1AMOUNT	UDT-amount(25,9)	The charge amount.
		MANUAL_OVERRIDE_AMOUNT Manual Override Amount	BL1AMOUNT	UDT-amount(25,9)	In cases where the agreement gets a special RC rate, this field indicates the rate.
		SERVICE_RECEIVER_TYPE Service Receiver Type	BL1CMEN TPP	Char(1)	Identifies the type of receiver of the charge. Valid values: Billing Arrangement Customer Account Subscriber Example Values (for BL1CMEN TPP): B - BA C - CUSTOMER G - GROUP S - SUBSCRIBER U - UNIT Y - CYCLE
		SERVICE_RECEIVER_ID Service Receiver ID	BL1CMEN TSEQ	Number(12)	The identifier of the charge receiver. For example, if the service receiver type is Subscriber, then the service receiver ID is the subscriber ID.
		RECEIVER_CUSTOMER Receiver Customer	BL1CUST	Number(12)	The Customer ID to which the receiver belongs.
		PAY_CHANNEL_NO Pay Channel Number	BL1PCN	Number(12)	The pay channel.
		OFFER Offer	BL1OFFER	Number(15)	The offer according to which the charge was calculated.

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PK	Not Null	Name	Domain Name	Type	Description
		OFFER_INSTANCE Offer Instance	BL1OFFERINS	Number(9)	Uniquely identifies the offer given to the subscriber. The subscriber can have the same offer effective in different periods of the cycle or the same offer effective more than one time for allowance offers (free events).
		OFFER_ITEM Offer Item	BL1OFFERITM	Number(15)	The offer item according to which the charge was calculated.
		DATE_DEPENDED_IND Date Dependent Indicator	GN1YESNOIND	Char(1)	Indicates whether the RC is date sensitive, and therefore needs to be extracted from the Rater every cycle at the bill day. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR
		PRORATION_IND Proration Indicator	BL1PRORIND	Char(1)	Indicates whether proration needs to be done for the rate. Example Values (for BL1PRORIND): N - NOT-PRORATED P - PRORATED
		RC_TYPE Recurring Charge Type	BL1ADVARRCD	Char(1)	Indicates whether the recurring charge needs to be calculated in Advance or in Arrears. Example Values (for BL1ADVARRCD): C - CLOSE-CYCLE D - ADVANCE R - ARREAR
		CYCLE_CODE Cycle Code	BL1CYCCD	Number(4)	The cycle code in which the service receiver participates. Each RC Rate record refers to a specific cycle code.
		RC_FREQUENCY RC Frequency	BL1RCFREQ	Number(2)	The number of cycle periods for which the RC is to be charged.
		AGREEMENT_NO Agreement Number	BL1AGR	Number(12)	Identifies the agreement ID (subscriber or unit agreement).
		FIRST_CYC_MONTH First Cycle Month	GN1MONTH	Number(2)	The first billing cycle month to which this record belongs.
		LAST_CYC_MONTH Last Cycle Month	GN1MONTH	Number(2)	The last billing cycle month to which this record belongs. Populated when an entry is being expired.

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PK	Not Null	Name	Domain Name	Type	Description
		PP_IND Price Plan Indicator	GN1YESNOIND	Char(1)	Indicates whether the current offer is a price plan. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR
		DYNAMIC_ATTRIBUTES Dynamic Attributes	BL1DYNATRV	Varchar2(4000)	A list of attributes according to the charge type. The attributes are separated by commas. The relevant attributes and their order are determined according to the charge type definition in the reference area.
		INSERT_ACTIVITY_SEQ Insert Activity ID	BL1ACTSEQ	Number(12)	The sequence of the activity that inserted the RC rate. A reference to the Activity History table.
		EXPIRE_ACTIVITY_SEQ Expire Activity ID	BL1ACTSEQ	Number(12)	The sequence of the activity that expired the RC rate. A reference to the Activity History table.
		FIRST_CYC_EFF_DATE First Cycle Effective Date	GN1DATE	Date(8)	The close date of the cycle in which the RC was activated. Date Mask: YYYYMMDD
		LAST_CYC_EXPR_DATE Last Cycle Effective Date	GN1DATE	Date(8)	The close date of the cycle in which the RC was expired. Date Mask: YYYYMMDD
		GENERATION_FREQUENCY Generation Frequency	BL1RCFREQ	Number(2)	A number indicating per how many cycle instances for which to generate the RC charge. This attribute is identical to the existing RC frequency attribute, which is also maintained on the BL1_RC_FREQ_CREATION table.
		MULTIPLE_CHG_IND Multiple Charges Indicator	GN1YESNOIND	Char(1)	Indicates whether to create multiple charges or a single combined charge when the cycle frequency contains multiple instances of the RC frequency. Example Values (for GN1YESNOIND): N - NO_INDICATOR Y - YES_INDICATOR

PK	Not Null	Name	Domain Name	Type	Description
	*	FREQUENCY Frequency	BL1RCFREQTP	Char(1)	The RC frequency. Valid values: D - Day W - Week M - Month Example Values (for BL1RCFREQTP): D - DAY M - MONTHLY W - WEEKLY
	*	FREQUENCY_MULTIPLIER Frequency Multiplier	BL1MULT	Number(2)	A positive number used as a multiplier of the frequency.
		BACKDATE_PROCESS_DATE Backdate Process Date	GN1DATE	Date(8)	The date of the backdating process. Date Mask: YYYYMMDD

## Cycle Run Statistics (BL1\_CYCLE\_RUN\_STATISTICS – New)

### Description

The Cycle Run Statistics table stores the run statistics for the cycle flows. It maintains the run statistics for customer, subscriber, group and billing arrangement.

### Attributes

PK	Not Null	Name	Domain Name	Type	Description
#	*	CYCLE_SEQ_NO Cycle Sequence Number	BL1CYCSEQ	Number(9)	A unique identifier of the cycle.
#	*	START_TIME Start Time	GN1DATE	Date(8)	The cycle run start time. Date Mask: YYYYMMDD
#	*	END_TIME End Time	GN1DATE	Date(8)	The cycle run end time. Date Mask: YYYYMMDD
		CONTROL_FLD		Partial Table	Several fields that are automatically included with this table. (Partial Name = BL1_CONTROL_FLD)



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PK	Not Null	Name	Domain Name	Type	Description
	*	FLOW_ID Flow ID	BL1MAPID	Varchar2(6)	The flow number. Example Values (for BL1MAPID): 24X7 - 24X7 BLCONF - CONFIRMATION BLEXT - BILL_FORMATTER_EXTRACT BLPREP - PREPARATION BLQA - QA BLUNDO - UNDO
#	*	ROUTE Route ID	BL1ROUTE	Varchar2(10)	The route number. Example Values (for BL1ROUTE): EXT - BILL_FORMATTER_EXTRACT PRP - PREPARATION
		CUST_AVG Average Customer Run	BL1AVGTM	Number(9,3)	The average customer run in a cycle.
		SUB_AVG Average Subscriber Run	BL1AVGTM	Number(9,3)	The average subscriber run in a cycle.
		BA_AVG Average Billing Arrangement Run	BL1AVGTM	Number(9,3)	The average billing arrangement run in a cycle.
		GROUP_AVG Average Group Run	BL1AVGTM	Number(9,3)	The average group run in a cycle.
		SUB_TOTAL Total Number of Subscribers	BL1TOTCONT	Number(9)	The total number of subscribers in a cycle.
		CUST_TOTAL Total Number of Customers	BL1TOTCONT	Number(9)	The total number of customers in a cycle.
		BA_TOTAL Total Number of Billing Arrangements.	BL1TOTCONT	Number(9)	The total number of billing arrangements in a cycle.
		GROUP_TOTAL Total Number of Groups	BL1TOTCONT	Number(9)	The total number of groups in the cycle.

## New Entity Sizing

No changes.

## Database Extract

No changes.

## Domains

The following table summarizes the changes to domains in this version:

Functionality	Domain Name	Change Type	GDD BB	Domain Type	Valid Values	Change Description
	BL1DESC	Change size	Gblgdd	VC(180)		Enlarge the domain from VC(60) to VC(180)
	BL1EXTID	Change size	Gblgdd	VC(300)		Enlarge the domain from VC(100) to VC(300)
	BL1MKTNAME	Change size	Gblgdd	VC(90)		Enlarge the domain from VC(30) to VC(90)
	BL1BEURL	Change size	Gblgdd	VC(800)		Enlarge the domain from VC(400) to VC(800)
	BL1ATTRVAL	Change size	Gblgdd	VC(800)		Enlarge the domain from VC(256) to VC(800)
	BL1TAXREF	Change size	Gblgdd	VC(75)		Enlarge the domain from VC(25) to VC(75)
	BL1INVNO	Change size	Gblgdd	VC(180)		Enlarge the domain from VC(60) to VC(180)
	BL1MSGTXT	Change size	Gblgdd	VC(1500)		Enlarge the domain from VC(500) to VC(1500)
	BL1ERRTP	Add valid value	Gblgdd	CHAR	MANUAL – M	Add valid value: MANUAL - M

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Functionality	Domain Name	Change Type	GDD BB	Domain Type	Valid Values	Change Description
	BL1ACTSEQ	New domain	Gblgdd	NUMBER(12)		New domain, for activity history table
	BL1EVENTTP	New domain	Gblgdd	CHAR(2)	OC_ACTIVITY – OC OC_OFFER_ACTIVATI ON – OA OC_OFFER_PENALTY – OP RC_EVENT – RC	New domain for Charge Request table
	BL1ACTCAT	New domain	Gblgdd	VC(32)		New domain for Activity Step table
	BL1BACKSTS	New domain	Gblgdd	CHAR(2)	PENDING – PN ON_PROCESS– OP ORC_COMPLETED– CO ORC_REJECTED – OR	New domain for Backdate Request table
	BL1ACTORD	New domain	Gblgdd	NUMBER(3)		New domain for Transaction Activity Relation table
	Bl1route	New domain	Gblgdd	VARCHAR2(3)		New Domain that Identifies route of flow
	Bl1routectr	New domain	Gblgdd	VARCHAR2 (24)	I - Input, O - Output	New Domain that Identifies routing criteria
	Bl1iotp	New domain	Gblgdd	CHAR (1)		New Domain that Identifies parameter type
	Bl1rnmode	New domain	Gblgdd	VARCHAR2 (15)	S - SEND, R - RECEIVE	New Domain that Identifies run mode of flow
	Bl1evact	New domain	Gblgdd	CHAR (1)		New Domain that Identifies event action

Functionality	Domain Name	Change Type	GDD BB	Domain Type	Valid Values	Change Description
	Bllpoptp	New domain	Gblgdd	CHAR (3)		New Domain that Identifies population type
	Bllrqsts	New domain	Gblgdd	CHAR (2)	RQ - Request, IP – Invoked Process, AF – Abort Fail, FN - Finished	New Domain that Identifies run status of request
	Bllevent	New domain	Gblgdd	VARCHAR2(30)	START_CYCLE END_CYCLE START_GROUP END_GROUP START_BILL_RUN END_BILL_RUN START DOWN	New Domain that Identifies event type.
	Bllgrouppt	New domain	Gblgdd	CHAR(1)	D -DISTRIBUTION S -SINGLE R -RERATE T -RERATE_DISTRIB	group type
	Bllerrtp	Change valid values	gblgdd	CHAR(1)	E – Error I – Information M – Manual	Error type
	Bllundorsn	New domain	gblgdd	CHAR(2)	NP – Not Specified	Undo reason

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Functionality	Domain Name	Change Type	GDD BB	Domain Type	Valid Values	Change Description
	Bllreruncr	New domain	gblgdd	VARCHAR2(30)	ERROR_TYPE PROCESS_ID GROUP_ID ENTITY_TYPE ENTITY_ID	Rerun criteria
	Blldesttp	New domain	gblgdd	VARCHAR2(10)		destination code.
	Blldestcd	New domain	gblgdd	VARCHAR2(10)		Destination type.
	Bllschema	Add valid values	gblgdd	VARCHAR2(30)	DB_CONSTRAINTS IMPLEMENTATIONS	
	Bllroute	Add valid values	gblgdd	CHAR (3)	PRP – PREPARATION EXT - BILL_FORMATT ER_EXTRACT	
	Bllroutetp	New domain	gblgdd	CHAR(1)	C – CYCLE G – GROUP B – BASIC GROUP	Route TYPE.
	Bllprior	New domain	gblgdd	NUMBER(5)	<u>0 - HIGHEST</u> <u>1 – HIGH</u> <u>2 – MEDIUM</u> <u>3 – LOW</u> <u>4 – LOWEST</u>	PROIRITY
	Bllroutectr	New domain	gblgdd	VARCHAR2(24)		Route criteria.

Functionality	Domain Name	Change Type	GDD BB	Domain Type	Valid Values	Change Description
	Bllprocsts	New domain	gblgdd	CHAR(4)	UP - PROC_UP DOWN - PROC_DOWN GETD- PROC_GET_DOWN	indicate BTL's status
	Bllprocname	Add valid value.	gblgdd	VARCHAR2(20)	BTL_PROC_NAME BTL	Billing process name.
	BllCycfreq	New domain	gblgdd	CHAR(1)	<b>W</b> – Weekly <b>M</b> – Monthly	Cycle frequency
	Bllmult	New domain	gblgdd	NUMBER(2)		Cycle frequency multiplier
	Bllcycinst	New domain	gblgdd	NUMBER(2)		Cycle instance
	Bllrefreqtp	New domain	gblgdd	CHAR(1)	<b>W</b> – Weekly <b>M</b> – Monthly <b>D</b> – Day	RC frequency type
	Bllcustpart	New domain	gblgdd	VARCHAR(24)		Customer partition
	Bllbillfreq	New domain	gblgdd	NUMBER(2)		Bill production frequency
	Bllsrvflt	New domain	Gblgdd	VC(20)		Service Filter
	Bllofferact	New domain	Gblgdd	NUMBER(9)		Offer Activity
	Blleventp	New domain	Gblgdd	VC(255)		Event type
	Bllcustact	New domain	Gblgdd	NUMBER(9)		Customer activity

Functionality	Domain Name	Change Type	GDD BB	Domain Type	Valid Values	Change Description
	Bllcycpopcd	New domain	Gblgdd	CHAR(1)		Cycle population code.
	Blldataent	Add valid values	Gblgdd	Varchar2(30)	VV_PARTITIONS - "RATER_KEY" VV_PERIOD_KEYS - "PRDKY"	Data entity
	Bllgrouppt	Add valid values	Gblgdd	Char(1)	VV_REGULAR - 'G'	Group type.
	Bllschema	Add valid values	Gblgdd	VarChar(40)	VV_RUN_PARAMS	
	Blpoptp	change valid value	Gblgdd	Char(3)	From CYC to CYCLE	
	Bllrqst	Add valid values	Gblgdd	VarChar(10)	RUNNING(RN) PENDING(PN)	
	Bllbcinfo	New domain	Gblgdd	VarChar(40)		

## Data Changes

This section describes the data changes in the current version.

### Reference Data

No changes.

### Application Data

No changes.

## Security Data

No changes.

## Operational Data

No changes.

## TASK Connect Tables

The following table summarizes the changes to the Task Connect tables in this version:

Functionality	Task Name	Change Type	Connection code	Session arg	Domain	Description
New connect code for Quotation server	OP1J2EESERVER	New	BLQ0000ENV	BL1		HOST and PORT connection details for Quotation server.



## TimesTen Changes

No changes.

## Operational Job Definition Changes

The following tables summarize all the Operational jobs that are new or changed in this version.

### Operational Jobs

No changes.

### Operational Parameter Tables

No changes.

### Job Dependencies

No changes.

### By-Request Jobs

No changes.