

# BillMax Changes from 2.0.8 to 2.1.0

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## Bug Fixes

Ticket	Description
26820	Corrected error that indicated a problem (falsely) with the servdef when updating a service.
26834	Corrected bad SQL in dbck when checking the payhist table's voidtran column.
26843	Modified install scripts so that permission and ownership of /usr/local/billmax/mqueue matches /var/spool/mqueue if it exists. Otherwise default are root, root's group, and mode 711. This change is needed only for BillMax instances that use scripts that reference this alternate mail queue.
26889	Added logic to check the validity of the dates in the closeofday.state, make_statements.state and send_statements.state files.
26891	Removed report_customsql from the src/bin directory. This program was superseded by a program of the same name in src/cgi-bin.
26923	Non-synchronized services did not honor an "invday". More specifically the original service invoice day isn't restored after the invoice date is set to the last day of the month (when the invoice day doesn't exist). This problem is corrected by maintaining a invoice day for the service (column invday).
26936	Modified cpost so that the presence of the card processor specific script is checked prior to execution. This is necessary as the demo package doesn't include these scripts.
26961	Modified service change default for whether or not setup charges are taxable. Value now taken from service definition.
26997	Modified BillMax library so config structures matched that used for the config table schema.
27031	Corrected logic in the charge_online_time function so that it charges correctly when both hourly and peak prices are given.
27118	If a fieldname is removed from a service definition but a constraint remains, an error is encountered since the field is no longer maintained.  Changed constraint check to return immediately if the field name is null in enter_service.cgi and createcust.
27129	Createcust does not populate service fields with default values if the field does not exist in the environment or is null.  Modified _get such that if the field being retrieved is a SERVICE_dnn field and it is blank or VALUE_MISSING is returned from BillMax_GetEnvVar, the defaults from the servdef is used.
27229	Corrected error where on payment page, the allocation list may have an entry checked with a zero amount. This caused SAVE to fail with "0 value allocation".
27250	Corrected usage billing to honor the service 'free' setting. If free is specified, usage will not be billed.
27257	Added constraint on popregion list to ensure a numerical value is entered.
27260	Modified statement generation logic so that it is now possible to generate (and select from the GUI interface) more than one statement a day.
27263	Fixed selection criteria for saved memorized reports. Modified permissions so system admin has access to all reports.

<b>Ticket</b>	<b>Description</b>
27265	Added error variable for service.servdef in the following templates: defaultnewsrvc.tmp, defaultnewuser.tmp, defaultregform.tmp, specialregform.tmp, srvc.tmp. Without the error variables, errors associated with servdefs were not shown.
27270	Modified so that Authorize.Net and LoopBack credit card processing use ccname vs "cf-name, clname".
27273	Modified libwww_install.pl to use the latest versions of the needed Perl modules. Changed ftp command for Linux. Added checks to see if files already exist locally in the working directory.
27278	Modified 'billmax-admin nightly' such that the log file is now initially written in the form 'nightly.YYYY-MM-DD.log' instead of using a temporary name. This prevents problems with finding the log file whenever a crash occurs. Note the log file is now dated with the date of the actual run, not one day following as before.
27279	Corrected bug that caused 'billmax-admin delete -a accountno' to not delete a user when the user contained no services.
27280	Corrected check for whether or not a password was required for customer authentication in the customer interface.
27282	Corrected bug in bmuid that caused some pop data not to be returned to the customer interface client (bmui).
27283	Modified parse_iverify to accept the codes Y, B, C, Q as good transactions.
27285	Fixed incorrect reference to service.prepaid to servdef.prepaid in closeofday.
27286	Added SQL to prevent prepaid services from being charged for usage in closeofday.
27288	Modified hardcopy fee logic (uses account.finactivity) to coordinate charging of fees between closeofday and make_statements. Mostly effects credit card/postal customers whose credit card transactions are rejected.
27289	Modified closeofday to prevent the invoicing of service (using prebilldays) if there is an scheduled changeto prior to the next service period.
27290	Modified closeofday to include suspended services when billing for usage.
27292	Modified createcust to: <ol style="list-style-type: none"> <li>1. Honor SERVICE_dnn defaults if the values aren't supplied.</li> <li>2. Honor the servdef.free setting.</li> <li>3. Set plaintextpass if servdef.useplaintextpass is true.</li> </ol>
27295	Improved make_statements restart logic. Statements can be regenerated from a given date. Summary records already written to the database will not be regenerated. This is accomplished by storing the statement generation date in the batchid column of the payhist summary record.  Also modified to pass the summary record number to the statement program. Previously the date was passed but this is no longer sufficient as more than one statement may exist for a particular day.
27302	Modified enter_account to fix the problem where CSRs with basic write could not create an account.
27303	Modified enter_service, so that free services are always created in OPEN state vs WAIT_FOR_PAYMENT.

<b>Ticket</b>	<b>Description</b>
27307	Modified logic (was in radutil.c, now in datacall.c) so stats are entered before check for overusage and suspension.
27308	Fix bug that caused allocation errors (setting cleardate) between refunds and payments.
27309	Corrected bug that caused another apply lock record to be written whenever a lock could not be obtained.
27310	Modified sales tax retrieval logic to honor tax region start dates correctly.
27311	Corrected buffer allocation issues in cgitools.c. The errors caused some submissions with large amounts of form data to fail.
27315	Modified cpost to detect and use allocvals in the environment when creating a batch file in 'single' mode.
27317	Made the following modifications to Verisign credit card processing: <ol style="list-style-type: none"> <li>1. Corrected misspelling of ORDERFORM.</li> <li>2. Removed refund logic. Refund attempts now flagged as an error.</li> <li>3. Added ECHODATA=FALSE setting.</li> </ol>
27363	Changed user and service templates so that they only show the "switch user" or "switch service" links when a entry is selected.
27368	Fixed generation of the 'wait for payment' report.
27406	Corrected bug that caused usage based free service to be charged for usage whenever the service was close or suspended via the web interface. Also added check to ensure prepaid services aren't charged during service changes.
27412	Changed BillMax_InvoiceService so that free, renewing services will have their invdate updated. This will mean that the service_hook script will need to handle these services if it doesn't already.

# Enhancements

Ticket	Description
26270	Modified datacall processing so that the service lookup works correctly when a service is suspended. New query selects all non closed services.
26465	Fix service page to reflect the number of initial periods dynamically.
26488	Modified machid script so that it now also displays OS (version and architecture).
26915	<p>Added "auto-credit" feature. This feature generates either store credit or refundable amounts (via voids) whenever closing services that have a future enddate.</p> <p>To support this new option, the following column was added to the config table:</p> <ul style="list-style-type: none"> <li>• autocredit</li> </ul>
26935	Modified output of dbck program so that the errors are more easily identified and the output is more concise.
26949	Modified statement generation so that if more than one statement is generated for an account on the same day, those additional statements can be selected and displayed.
26963	Added option to be used in testing that allows the date and time used by BillMax to be set. This does not effect the system's time. See documentation on the SYSTEM STATE list for details.
26975	Added ability to bill for periods where the length is a multiple of a day.
26988	Reformatted memorized report list under Settings/MEMORIZED REPORTS form. Removed query text, added number.
26994	<p>Added ability to specify when usage is calculated, billed and charged. Previously usage processing was done monthly on the service's "invoice day" or the last day of the month if that day didn't exist. See documentations for details.</p> <p>To support these new options, the following columns were added to the service table:</p> <ul style="list-style-type: none"> <li>• invday</li> <li>• nextusagedate</li> </ul> <p>and to the servdef table:</p> <ul style="list-style-type: none"> <li>• usageinvday</li> <li>• usageoptions</li> <li>• usageduration</li> </ul> <p>and to the config table:</p> <ul style="list-style-type: none"> <li>• usageprebilldays</li> <li>• usageepaydays</li> </ul>

Ticket	Description
26995	Modified mkca to accept multiple input files (one per form/template). The new files have a "cat" file extension and are in the new directory /usr/local/billmax/cfg/cgiaction. A single form/template can be processed by itself. Also line continuation characters are now supported.
26996	Modified report_payments so that the sort order for a "checks only" report is 'date', then 'check number', instead of 'date' then 'account'.
27007	Navbar search for account number and service number modified to do a numeric lookup and return the page and not a select list.
27032	<p>Completely overhauled the logic for calculating monthly exemptions on charges. The algorithm now takes into account all "like" charges within the month. "Like" is defined as all servdefs with the same exemption amount or %.</p> <p>To support the enhanced exemption logic the monthlysale table was added.</p>
27036	Made the hist program output html/text/spread sheet capable. On html output, set background color of row according to payhist type. Colors customizable via list histcolors.
27042	<p>Added two new methods for billing usage in tier plans:</p> <ol style="list-style-type: none"> <li>1. Under Bulk Rate Pricing, the billed amount = computed value * tier Price.</li> <li>2. Under Marginal Pricing, the billed amount = (computed value - lower tier "Up to" value) * tier price + lower tier margin price total.</li> </ol> <p>Also calculated values that exceed the last tier now are billed according to the last tier.</p> <p>To support the new methods, the following columns were added to the tier table:</p> <ul style="list-style-type: none"> <li>• margintotal</li> </ul>
27052	<p>Added ability to specify whether or zero amount charges should be printed on a statement. This option is specified at the servdef level.</p> <p>To support this feature, the following column was added to the servdef table:</p> <ul style="list-style-type: none"> <li>• printzerocharge</li> </ul>
27105	<p>billmax-admin now recognizes a variable from billmax.conf named MYSQLD_LOG_ROTATE_FREQUENCY. This variable takes the values of "daily" or "weekly". If the variable is missing, it defaults to the previously behavior of "weekly".</p> <p>The setting of this variable does not affect the interpretation of ISAM_ROTATE.</p> <p>Log rotation will only take effect if BillMax is controlling the MySQL server and the log is accessible as a file on the BillMax system.</p>
27193	Added script ccck.pl to check credit card numbers for validity. The number can be provided on the command line or the user will be prompted if it is missing.
27235	Dropped authentication via mod_auth_mysql. Authentication now done via internal cookie based mechanism. New scheme supports logoff, timeouts, and locking due to maximum number of failed logins being reached. This change removes the dependency of using Apache 1.3.x.
27236	Added option in salestax report to filter by account.

Ticket	Description
27239	<p>Added ability to specify uniqueness of values within a BillMax list apart from any other setting. Previously these two settings were taken from a single value (the listdef's protected column).</p> <p>To support this change, the following columns were added to the listdef table:</p> <ul style="list-style-type: none"><li>• uniqueval</li></ul>
27240	<p>Complete overhaul of auth table to support new cookie based authentication scheme. BillMax user state can be closed denying access but users can no longer be deleted. The latter restriction is due to the fact that BillMax users (for example , the empl column) within the database are now stored as numbers (auth.number). Changes to the auth table support session timeouts and "lock outs" due to login failures.</p> <p>To support these changes, the following columns were added to the auth table.</p> <ul style="list-style-type: none"><li>• number</li><li>• email</li><li>• startdate</li><li>• enddate</li><li>• state</li><li>• lastlogin</li><li>• sessionid</li><li>• lastip</li><li>• ntries</li><li>• lastaccess</li></ul>
27241	<p>Added new table named 'notice'. Presently, notice is used to capture notices, warnings, and errors from the closeofday program. These notices are automatically purged from this table after 15 days by closeofday. This table may be used to store information from other processes in the future.</p>

Ticket	Description
27242	<p>Added the following functionality concerning datacall (radius accounting records).</p> <ul style="list-style-type: none"> <li>• Process 'start' and 'interim' records. Previously only 'stop' records were processed and stored in datacall. "Who is online" reports are now possible. In the event of a NAS crash, any "stranded" (non stopped) records are closed.</li> <li>• Added consideration of radius delay times when determining when a call actually started or ended.</li> <li>• Added retry logic when writing datacall records to the database such that if a record can't be written, the BillMax radius server will make further attempts (via NAS resends) for up to 30 minutes. If, after this time, the record can't be written, it will be written to a "detail" file. Detail files are now comprised of a name including the current date.</li> <li>• Detail files can now be automatically loaded via a billmax-admin nightly process. See documentation on billmax.conf for details.</li> <li>• Added framework necessary for terminating calls. Presently, BillMax will terminate sessions only when 1) the service is recorded in datacall (e.g. uses radius for authentication) and 2) the service goes from open to close or suspended state while a session is active and 3) the radmond daemon is running. In a future release, support for prepaid cards (with time limits) will be added using this framework.</li> </ul> <p>To support these changes, the following columns were added to the datacall table:</p> <ul style="list-style-type: none"> <li>• delaytime</li> <li>• status</li> <li>• job</li> <li>• expires</li> </ul>
27243	<p>Modified all licensing modules to support version 5 licenses. BillMax version 2.1+ requires license version 5. License keys prior to version 5 will not work with BillMax 2.1+.</p> <p>New key format requires specification of IP address as well as machine Id. New format has support for "clusters" (multiple machines).</p>
27244	<p>Added ability to specify with greater granularity when a statement is automatically generated. See the documentation within the virtual company setting for details.</p> <p>To support these changes, the following columns were added to the account table:</p> <ul style="list-style-type: none"> <li>• summarydate</li> <li>• finactivity</li> </ul>
27251	<p>For performance reasons, added a new index for 'service' in the payhist table.</p>
27252	<p>Added empl, entdate, and enttime to the applylock table to be used when troubleshooting errors.</p>
27254	<p>Deleted epinfo table and log2epinfo, caparse programs. These are no longer used by BillMax.</p>

Ticket	Description
27258	Modified menu bar searches. When searching for account, user, or service number a numerical value must be entered. If a match is found the appropriate page is displayed instead of the result list.
27259	Modified the way statements are presented within the BillMax GUI interface. This page is now displayed using a template. This change enables statement rendering via BillMax's new XML statement output and XSLT stylesheets. Default is still ASCII format.
27261	Provided default for epaydate on charge page. Default is current date but a button is provided that sets epaydate to the current date plus the account's epaydays.
27262	Modified initial pages displayed in BillMax such that shtml files are no longer used. The starting page in BillMax is now /usr/local/billmax/html/index.html. The logonav.shtml file is no longer used. The navbar.shtml and main.shtml display is now accomplished via ua.cgi using the navbar.tmp and main.tmp templates respectively. In addition, a new frame (search.tmp) was added to the top of the display. This frame contains the power search option and an icon that can be used to bring up another browser window containing BillMax.
27264	Added system state option that allows more "to" service definitions to be eligible in service changes (except the current definition) regardless of their resource setting. This is activated by setting the newserviceresources item in the BillMax systemstate list.
27267	<p>Added optional files (scripts and templates) for the customer interface. These file demonstrate the "FILLMENU" capability whereby the customer interface menu is drawn and managed by something other than Joust and JavaScript. These files include:</p> <p>In /usr/local/billmax/bin</p> <ul style="list-style-type: none"> <li>• cgimenu</li> <li>• cgimenu_html</li> </ul> <p>and in /usr/local/billmax/html/bmuitemplates</p> <ul style="list-style-type: none"> <li>• index.tmp-html</li> <li>• menu.htm-html</li> <li>• title.htm-html</li> </ul> <p>The "-html" files above replace the like named files (e.g. the name with out "-html") when using the cgimenu_html script.</p>
27268	Provided BillMax start/stop scripts (in /usr/local/billmax/local) to be used whenever the server where BillMax is running is started or stopped. Versions are provided for RedHat, FreeBSD and Solaris. Presently these scripts must be installed manually.
27272	<p>Modified install scripts to detect situation where an install is attempted against a "failed" or incomplete BillMax instance.</p> <p>Modified upgrades to restore local files whenever both the local file and the corresponding install file have the same CVS version but the files are different. This should reduce the amount of local manual modification needed to do an upgrade.</p>

Ticket	Description
27274	<p>Added new feature in radius accounting that allows for the association (mapping) of realms to BillMax resources. This capability is activated via the presence of the billmax.realms file in /usr/local/billmax/radius/raddb.</p> <p>Also added the ability to specify how radius attributes are mapped to BillMax's datacall table. Map is specified in /usr/local/billmax/radius/raddb/billmax.attributes.</p>
27275	<p>Added service_update program. This program is normally only used during upgrades to BillMax 2.1.0. It sets the value of the service's invday and nextusagedate columns.</p> <p>Added create_monthlysales program. This program is normally only used during upgrades to BillMax 2.1.0. It populates the monthlysale table.</p>
27276	<p>Added the radmond program. This program monitors the datacall table and schedules session "kill" jobs where appropriate. It requires a NAS (terminal server) specific kill script.</p>
27277	<p>Modified all programs to display usage information via a single switch (flag): -h</p> <p>All such information is now derived from 'man' pages taken from BillMax's new 2.1.0 documentation set. Internal usage documentation in "source" files has been removed.</p>
27281	<p>Modified usage report so that it is generated in html.</p>
27284	<p>Modified ccparse to:</p> <ol style="list-style-type: none"> <li>1. Detect when it is called by the ccnow process. If so return fatal errors when encountered.</li> <li>2. Added better error handling and messages.</li> <li>3. Added retry logic when a transaction inserted into the database fails.</li> </ol>
27287	<p>Added logic to skip the sending of (tierplan) usage emails when there is no usage.</p>
27291	<p>Modified closeofday to invoice services with an invdate &lt;= the bill date (where the bill date is either the process day in closeofday or the process day+prebilldays).</p> <p>This change will "catch" any missed billings.</p>
27293	<p>Added new database checks and modified some existing checks for BillMax 2.1.0 tables in dbck.</p>
27296	<p>Deleted radutil.c. radutil routines moved to BillMax library, file datacall.c.</p>
27297	<p>Added ability to specify a single account when running report_balcheck.</p>
27299	<p>Added ability to specify a single account when executing report_salestax.</p>
27300	<p>Modified send_statements so that it doesn't try to process the output file as an input file. Added option of printing email statements. In the latter case, the output sent to DataBill for fulfillment services.</p>
27301	<p>Modified statement program so that it prints authcode (if it exists) instead of tendnum when printing credit cards transactions.</p>
27304	<p>Added ability to execute SQL in the report_customsql report that actually updates the database. This option is activated by defining a constant then re-compiling the source. If activated, only system administrators can issue "update" commands.</p>

Ticket	Description
27306	<p>Modified enter_account to:</p> <ol style="list-style-type: none"> <li>1. When setting the enddate at the account level causes the same change for all underlying users and services if all end dates were previously blank.</li> <li>2. When re-opening users because an account was re-open, then only those users with reason REASON_ACCOUNT are opened.</li> <li>3. When re-opening a service because an user was re-open, then only those services with reason REASON_USER are opened.</li> <li>4. Lastly, added some restrictions concerning enddate and state changes at the same time.</li> </ol>
27312	Upgraded version of MYSQL included in the BillMax package. Version is now 4.0.17.
27313	Added masking of sensitive data in credit card processing logs.
27314	Modified cpost/ccparse processing so that the results of the cpost specific script are piped directly to ccparse. This limits the possibility of transactions not being posted. This change results in only two files being written to the log directory per run (vs 3 before).
27316	<p>Modified Authorize.Net processing to:</p> <ol style="list-style-type: none"> <li>1. Set the delimiter and escape characters used so customer supplied values in their profile won't be used.</li> <li>2. Changed ccnum format used in refund from 12341234 to XXXX1234 per new Authorize.Net requirements.</li> <li>3. Discard input records that don't start with either SALE or REFUND.</li> <li>4. Fixed refund error associated with content string.</li> </ol> <p>Changes 1 and 3 also made for other processor specific scripts.</p>
27318	Added check for the combination of prepaid=YES and tierplan selection while setting up a servdef. This isn't allowed.
27357	Added logic to verify data passed to BillMax_StatsSample(). This ensures valid data is input via the enter_stat program. If a defined stype (e.g. stype is used in a tierplan and the tierplan is used by a servdef) is passed then sgroup must refer to a service and the service must have a tierplan associated with it and the sample data must be formatted per the tierplan's direction.
27369	Modified report_memorized to propagate the "Modify Memorized Report" link when called from CREATE MEMORIZED REPORTS.

Ticket	Description
27371	<p>Modified financials so that sales, credits, liabilities, etc. are calculated by month rather than day. Previous reporting had an inconsistency in sales vs. credits.</p> <p>The changes include:</p> <ol style="list-style-type: none"> <li>1. Created methodology to populate the monthlysale table.</li> <li>2. Redid report for exclude unearned income to eliminate rounding issues.</li> <li>3. Added new sales by month report.</li> <li>4. Added new sales by day using monthly records report.</li> <li>5. Added new deferred revenue reports.</li> <li>6. Added tax columns to balancear report.</li> <li>7. Replaced liability column with deferred revenue reports in balancear reports.</li> <li>8. Added new cash based sales report.</li> <li>9. Added new payment allocations to deposit/refunds report.</li> <li>10. Added new deposit charge/deposit refund transaction reports.</li> <li>11. Changed liability report to use new daily algorithm processing.</li> </ol> <p>To support some of these changes, the monthlysale table was added.</p>
27376	<p>Modified make_statements to recognize local statement programs for email, postal, and fax. This may be used to create XML statements for transmission to DataBill. Also printed output and fax output are now separate for the same account.</p>
27377	<p>Added bx_DataBill.pl script to be used as a print filter in statement processing. This filter actually transfers statements to DataBill for fulfillment processing.</p>
27414	<p>Upgraded version of Apache included in the BillMax package. Version is now 2.0.48.</p>