

WAREHOUSE MANAGEMENT SYSTEM

Third Party Logistic Service Billing Module

PROPRIETARY and CONFIDENTIAL

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Last Updated: 12 December 2015

Note: This document is written based on the Enterprise version of CRiSTAL Warehouse Management System. Some of the functionality described may not be available in the other versions.

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PREFACE

This manual is written for CRiSTAL Warehouse Management System Release 5.399

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This document aims to provide the users with an administrator guide. However, it is not meant as a substitution to the comprehensive training that is conducted as part of the implementation process.

Neither is this meant as a SOP (standard operation procedures) to any organisation.

For an overall understanding of CRiSTAL Warehouse Management System, please contact your implementation consultant for assistance or contact CRiSTAL Solutions Pte Ltd at:

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Revision History

S No	Reversion	Date	Description
1.	2015.001	10 Jun 2015	Build 5.399.833.005 and later The change may be applied to selected sites on request. Change to PLANNED storage charges calculation – to base on Receipt Date updated in Receipt Master instead of Receipt Location \ Pallet History
2.	2015.002	12 Dec 2015	Elaborate on storage charges by Location's storage type.



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1. INTRODUCTION

The 3PL Service Billing is designed as a separate module to the CRiSTAL Warehouse Management System and is available as part of the ENTERPRISE edition which is packaged as a 3PL warehouse management system

As methods of charging a client for the service performed is as varied as the number of people who conceptualise them, the system is designed as a configurable module which allows new calculation to be added without the need to change the front end – namely the VB program.

However, there are a number of terminologies and controls used which would have to adhere to in order to simplify the billing structure.

This document is written as a user guide and will not dive too much into detail.

However, the methods of calculation of the service will be briefly touched on to provide the user a basic understanding of the available Calculation methods.

It is anticipated that the users have a good understanding of the tasks and services performed in a warehouse before attempting to explore the module.

A good knowledge of logistics services and charges are also expected of the person who is tasked to configure the billing charges.

A fair bits of trial and error is expected in the configuration in order to achieve the results.

But as with any system, the Billing Module is designed to facilitate intensive computations that are routine and standardized.

New calculation method when make available will be provided with write-up to explain the logic.

One of the key concepts adopted in the design is that Storage is considered as a service function and therefore the treatment of it would very much similar to other services such handling and palletising.

1.1. Type of Services

Broadly, the services provided by a 3PL operation are being classified into following Service Type:

- 1. Adhoc
- 2. Fixed
- 3. System (derivable)
- 4. Storage
- 5. Transport Available from 5.398 Build 659

Adhoc services are defined as services that are provided on demand or adhoc basis. These services are therefore need to be captured or recorded as and when they occurred. Examples are container devanning and vanning (un-stuffing and stuffing).

Fixed or flat services are services that are provided on a fixed fee per week, month... basis.

System derivable services are services such as handling in (receiving) and handling out (picking / delivery). These services can be derived for the routine tasks that are performed in the warehouses, namely, check-in, putaway, picking, transfers, replenishment, etc.

Other System derivable chargeable services include by receipt, receipt lines, sales order, delivery order, order lines, delivery trip...

Note: The Calculation Methods for Services are Receipt Type agnostic except for those that are specifically so named (designed) – RETURN (which filter for RETURNS receipt type) and NRTN (for receipt types other than RETURNS)

Storage is the stock keeping or warehousing function that the 3PL operator provides in keeping or storing of the stock or inventory on behalf of the clients.

Transport is transport services that are provided by the warehouse that are independent of the warehousing services. This service is in a way similar to Adhoc but usually does not have standard charges. This is summarized from the Transport Orders entry. The amount billable is the total of each transport order.



1.2. Warehouse Tasks and Logistic Services

In CRiSTAL WMS, the basic activities that the warehouse operation performs are defined as Warehouse Tasks.

These basic tasks are

- 1. Check-in
- 2. Putaway
- 3. Picking
- 4. Pallet Relocation

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- 5. Item Relocation
- 6. Replenishment of pickfaces
- 7. Despatch delivery to customers
- 8. Stock Adjustment
- 9. Item Re-labelling (change of attributes)
- 10. Quality Hold
- 11. Quality Release
- 12. Owner Transfer
- 13. Kitting
- 14. De-kitting

These are also known as movements or movement types.

There are many other logistic activities that are performed in the warehouses such as palletising, labelling, shrink-wrapping, repackaging, etc.

However, these activities can be associated with and derived from one or more of the basic warehouse tasks.

For examples, palletising can be associated with Check-in, Putaway or Picking. The warehouse tasks need to be performed before or after performing the palletising.

1.3. The 3PL Service Billing Module Flowchart





1.4. Limitation

Due to constant changes and variations to billing charges computation conjured to meet competition, users is cautioned that while CRISTAL services billing module is highly flexible, it is not possible to fulfil all requirements at all times.

Customisations and enhancements thus regularly required to meet new requirements.

1.5. Warning

Billing Computation is a highly computation intensive functions / processes. Users are advised to run billing computation during off-peal operational period as overall system performance is likely to be affected when billing computation is in progress.



2. SETTING UP THE BILLING COMPANY

The 3PL Billing Module is designed to facilitate future development and enhancement as and when new method or needs arise. Company Profiles is intended as the set up for the billing company. This enables sites implemented CRISTAL WMS to function as a 4PL operation in that it can bill on behalf of other 3PL that utilised its facilities to service their customers.

Each of these companies is defined as the Billing Entity in the 3PL Service Billing Module.

CRiSTAL Warehous	se Management System (5.398.0 B	uild 687)			
System Favorites Ing Remote Warehouse Pas	uiry Operations Import/Export Stock asenger Control Administration Develop	Management Services E ment	Billing Reports Bas	sic Accounting Custo	omer Service
System Favorites Ing Remote Warehouse Page Company Profile / List of Companies Company ID Name CSPL CRIST TSD TSD	uiry Operations Import/Export Stock segnegr Control Administration Develop Maintenance	Management Services E mment Company Code CSPL EAN Company Code Company Address Busness Registration G Company Name	Profile Tax Rate Trade Partners	Contacts Contacts Miscellaneous LDF Attributes	Coor - F6 Coor - F6 Find - F7 Save - F8 Phtt - F10 Preview - F11
		CRISTAL Solutions Pte Lt	d ddress 26 Hillside Drive #01-01		X Delete - F9
		State C Telephone 6289 7838 Remarks	Fax Number	*ostal Code 548945 	
Current: Default Artivin ID	Company Profile Maintenance	CRISTAL	frm3SBCompany	Database: cristalwine	Return - F12

To set up the billing entity or Company Profiles

- 1. Input the Company Code
- 2. Enter the EAN Company Code, if available
- 3. Input the company Name and other available
- 4. Click Save
 - a. This save the Company Information

Remote Warehous	e Passenger Control Administration Dev ofile Maintenance	velopment	bining Repurts bas		
Company Pr List of Company Company ID CosPL TSD	offile Maintenance s Name CRISTAL Solutions Pte Ltd TSD	Company Code CSPL EAN Company Code Contacts Contacts Contact Person Daniel LEE Job Tide Principal Email dise@@cristalsolutions.com DID Number Remarks	Profile Tax Rate Trade Partners Job Title Principal Birthday Spouse Nam	Contacts Miscelaneous UDF Attributes	Corr - F0 Corr - F0 Seve - F0 Perverw - F10 Corr - F0 Deteo - F9
	[[Return - F12

- 5. Select Contacts
- 6. Input Contact Person and other available data
- 7. Click Save

- a. The contact information is saved
- 8. Select Miscellaneous

System Favorite Remote Warehour	rehouse Management System (5.398.0 s Inquiry Operations Import/Export Sta se Passenger Control Administration Develo	Build 687) ck Management Services B opment	3illing Reports Bas	ic Accounting Custor	ner Service
👂 Company Pr	ofile Maintenance				
List of Compani	es	Company Code	Profile	Contacts	Clear - F6
Company ID	Name	CSPL	Tax Rate	Miscellaneous	Find - F7
CSPL	CRiSTAL Solutions Pte Ltd	EAN Company Code	Trade Partners	LIDE Attributes	Save - F8
TSD	TSD	Miscellaneous Trading Currency R SGD C	eferences Group		Print - F10
					X Delete - FS
		Logo Hiename		-	E
					Return - F12
Current: Default Admin ID	Company Profile Maintenance	CRISTAL	frm3SBCompany	Database: cristalivms	

- a. Specify the trading currency that is used by the entity
- b. Specify the document Reference (Sequence) Group that the company will use
- c. And Save
- 9. To update the Company Logo
 - a. Specify the logo file in Logo Filename full path and file name
 - i. Only GIF and BMP is accepted
 - b. Click the save button beside the combo box.
- 10. Select Tax Rate (if applicable used in Accounts Receivable interface)

CRISTAL War System Favorite Remote Warehous	rehouse Management System (5.398.) s Inquiry Operations Import/Export S se Passenger Control Administration Devi	0 Build 687) tock Management Serv elopment	rices Billing Reports B	Basic Accounting Custo	omer Service
P Company Pr	ofile Maintenance				3 0
List of Companie	25	Company Code	Profile	Contacts	Clear - F6
Company ID	Name	CSPL	Tay Rate	Miscellaneous	Find - F7
CSPL	CRISTAL Solutions Pte Ltd	EAN Company Cod	Trade Partners	LIDE Attributes	Save - F8
TSD	TSD	Tax Rates			
		Tax Type	Vaid From	Tax Bate	Print - F10
		GST	2008-11-29	7	D. Preview - F11
					×
		Tax Type	Vald From 2008-11-29	Tax Rate	Return - F12
Current: Default Admin ID	Company Profile Maintenance	CRISTAL	frm35BCompany	Database: cristalwms	

- a. Select the Tax Type (Define in System Configuration | UDF Parameters)
- b. Input the Valid From date
- c. Specify the Tax Rate
- 11. Select Trade Partners
 - a. This is for the Basic Accounting module



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Company I	Profile Maintenance						Clear
ist of Compa	nies	Company Cod	le	Profile	Cor	ntacts	
Company ID	Name	CSPL		Tax Rate	Miscel	laneous	Find -
CSPL	CRISTAL Solutions Pte Ltd	EAN Company	/ Code				
TSD	TSD			I rade Partners	UDF A	Attributes	Save
		Trade Partners	5				E
		Partner ID	Name			Partner	D
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		CANON HI-T	CANON H	I-TECH (THAILAND) LT	D	AR	
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				C 1 00-1 1 1 1			
		ERC001	Euraco Fin	efood Pte Ltd		AR	
		ERC001 HGC	Euraco Hin HGC	efood Pte Ltd		AR	
		ERC001 HGC MPO	Euraco Hin HGC MPO ASIA	CO., LTD		AR AR AR	
		ERC001 HGC MPO PUMA	Euraco Hin HGC MPO ASIA PUMA	CO., LTD		AR AR AR AR	
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- b. The trade partners' date are maintained in Entity Profiles
- c. To add new partner, select them from the popup window and specify and Save
 - i. Partnership Type AR, AP or AR.AP
 - ii. Payment Term
 - iii. Default Currency
- d. To update select from the grid box, amend accordingly and Save
- 12. Select UDF Attributes
 - a. This is designed to enable use of customised Debit and Credit Notes templates

CRISTAL Warehouse Mana System Favorites Inquiry Remote Warehouse Passen	gement System (5.396.2 Build 189) Operations Import / Export Sto ger Control Administration Devel	ck Management lopment	Services Billing	Reports	Basic Accounting	Customer Serv	ice
Company Configuration Pa Clent CSPL CSPL CRE Client Control Parameter Mscelaneous Parameters	rameters TAL Solutions Pte Ltd s Description Report Template - Credit Note Report Template - Debt Note		Param Value				Cear-F6 ØÅ Find-F7 Save-F8 Priet-F10 Priet-F9 Delete-F9
	Parameter	Description Report Template	e - Credit Note				
	Parameter Value				• N		Ē
Current: Default Admin ID	Company Configuration Daramatare		PRISTAL	freel I	Enerameter	Database: cristala	Return - F12

b. Select the required document and click the Down Arrow in the Parameter Value to select the required templates



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- c. Select the template and click 'Open'
 - i. The file name will b e transferred to the Parameter Value
- d. Click 'Update'
- 13. To create the next billing entity, select Profiles and click Clear
- 14. Repeat step 1 to 9



3. SETTING UP THE BILLING MODULE

Before the Billing module can be deployed, a number of parameters need to be set up need to be defined. Some of these parameters are pre-defined. Requirement specific to a site are to be defined the users.

3.1. Pre-Defined Parameters

The pre-defined parameters are:

- 1. Billing Period
- 2. Billing Method
- 3. Calculation Method
- 4. Transaction Date Type

a. Actual

- i. This is based on *create_date* of warehouse tasks in the *movements_history* table, when applicable
 - The rationale for using *create date* instead of *last_update* is to circumvent issue of tasks being generated at month end and activities, completed and confirmed, spanned over to next month. This is to avoid some task being billed in one month and balance in the next.
- b. Planned (Scheduled)

Updated 10 Jun 2015 – DL: Data source change in Build 833 to overcome computed stock balance discrepancy

- i. Inbound, the transaction date is based on Receipt Date specified in Receipt Master
 - This change is made to overcome discrepancy issue in stock balance calculation that arise when users change the Receipt Date in Receipt Master after receipt have been checked in and confirmed.
 - However, administrators are cautioned that this will pose an issue in situation when users change the Receipt Date IN or OUT of a Billing Period – which will result in Inflated or Deflated storage charge respectively.
- ii. Outbound, the transaction is based on Delivery Date in the Sales Order.
 - However in the event that the Delivery Date specified is before the Receipt Date, the transaction date will be default to DATE DESPATCHED – updated in Sales Order when the delivery order for a sales order is printed
- 5. Grade Type
 - a. Bonded
 - b. Non-Bonded
- 6. Minimum Charge Options
 - a. The options at which level minimum charge is applied
 - i. Bill Ref-Date
 - ii. Bill Reference
 - This is handled at report level. Customised template will be required
 - iii. Billing Code



- iv. Billing Group
 - This is handled at report level. Customised template will be required
- v. Billing Line
- 7. Free Days Options
 - a. NA
 - b. 1st N Days
 - i. 1st N days logic is to allow free storage if the stock of a receipt is issued within the defined N days.
 - ii. If Client did not have the stock issued within 1st N days, then storage charges will apply from the days of receipt.
 - c. N Days
 - i. N Days vary from 1st N days in that storage charge will apply N days after the receipt date (anniversary).
- 8. Rate Method
 - a. Effective
 - b. Stepped
- 9. Step / Min Charge Option
 - a. Bill Reference Date
 - b. Bill Reference
 - c. Bill Code
 - d. Bill Group
 - e. Bill Line
 - i. Only this method is effective for auto-create of debit note from Billable Service Maintenance
- 10. Pro Rate Option
 - a. This is applicable when the billing period is MONTHLY
 - b. Options are
 - i. NA
 - ii. Days
 - iii. Half-Month
 - That is if the period billable is less than half month, half month charge is applied

3.1.1. Billing Period

The values of Billing Period are:

- 1. Daily
 - a. Noted that when computing charges on Daily, considerable resources is utilised as the computation is very intensive. Overall system performance is likely to be affected. Users are advised to run this during off-peak hours.
- 2. Weekly
- 3. Monthly
- 4. Aweekly Anniversary week of Receipt Date



- 5. Amonthly Anniversary month of Receipt Date¹
- 6. UDF99 user defined period
 - a. The prefix UDF indicate to the system that it is a user defined period
 - b. The last 2 characters must be numeric and is the number of days

For other non-calendar period, please consult the vendor.

3.1.2. Billing Method

The values of Billing Method are

- 1. LOOSE lowest unit of measurement (UOM) of item
- 2. WHOLE one level above the lowest UOM
- 3. PALLET the highest level in the UOM hierarchy
- 4. VOLUME calculated at next whole quantity for the specified calculation method
 - a. Measured in M3 (cubic meter)
- 5. WEIGHT calculated at the next whole quantity for the specified calculation method
 - a. Measured in MTON (metric tonne)
- 6. REVENUE TON whichever is higher of VOLUME and WEIGHT
 - a. Measured in RTON (revenue tonne)
- 7. LOCATION the location used or occupied by the item
 - a. Measured in number of locations LOCATION
 - b. This is enhanced in Build 394 to enable warehouse to charge different type of storage system such as bins, racks, shelf...
- 8. PALLET
- 9. ORDERLINE
- 10. RECEIPT
- 11. DELIVERY

3.1.3. Calculation Method²

The calculation methods are grouped into Service and Storage.

3.1.3.1. Service

The Service calculation methods are strictly on Accrued basis

- 1. SERVICE_LOOSE
- 2. SERVICE_WHOLE
- 3. SERVICE_PALLET
- 4. SERVICE_NONSTD
 - a. This method is enhanced to handle billing by various UOM Please see Appendix for details
 - b. Method is also enhanced in 5.398 to handle billing by Receipt Type
- 5. SERVICE_DELIVERY

² See Appendix for more details



¹ The anniversary month of 31 Jan is either 28 Feb or 29 Feb depending whether it is a leap year. Anniversary month of 31 March are 30 Apr, 31 May, 30 Jun...

- a. This option is enhanced in Build 818 to incorporate the function of the following existing Calculation Method
 - i. SERVICE_ORDERLINE
- b. It is being enhanced for billing of specific Order Type, if specified.
- c. For UOM option, it includes the following
 - i. UNIT
 - Sum of quantity delivered in lowest UOM
 - ii. VOLUME
 - as computed/recorded in Delivery Order
 - This is computed from the Pallet History dimension which is a snapshot of the UOM defined in Product Master at time of Receipt Check In
 - iii. WEIGHT

•

- as computed/recorded in Delivery Order
 - This is computed from the Pallet History dimension which is a snapshot of the UOM defined in Product Master at time of Receipt Check In
- iv. ITEM
 - Distinct Product ID count
- v. LINE_DO
 - Number of delivery order lines
- vi. LINE_SO
 - Number of (delivered) sales order line
- vii. CLT_REF
 - Distinct count of Document (customer) Reference
- viii. ORDER
 - Distinct count of Sales Orders
- ix. DO_NO
 - Distinct count of Delivery Orders
- x. TRIP
 - Distinct of Load Summary (Reference)
- 6. SERVICE_RECEIPT
 - a. This option is enhanced in Build 818 to incorporate the function of the following existing Calculation Method
 - i. SERVICE_ASN_ORDERLINE
 - ii. SERVICE_NON-RETURN_RECEIPT
 - iii. SERVICE_NON-RETURN_RECEIPT_ORDERLINE
 - iv. SERVICE_RECEIPT_ORDERLINE
 - v. SERVICE_RETURN_RECEIPT
 - vi. SERVICE_RETURN_RECEIPT_ITEM
 - vii. SERVICE_RETURN_RECEIPT_ORDERLINE



- b. It is being enhanced for billing of specific Order Type, if specified.
- c. For UOM option, it includes the following
 - i. ORDER (redundant for backward compatibility)
 - Distinct count receipt number
 - ii. RECEIPT
 - Distinct count of receipt number
 - iii. LINE
 - Distinct count of receipt lines
 - iv. ORDERLINE (redundant for backward compatibility)
 - Distinct count of receipt lines
 - v. LINE_ASN

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- Distinct count of ASN lines (received)
- vi. ITEM
 - Distinct count of Product ID received
- vii. ITEM-COLOR
 - Distinct of Product ID Item Color
- viii. UNIT
 - Sum of quantity received in lowest UOM
 - ix. VOLUME
 - x. WEIGHT
 - Sum of UNIT weight of product received

3.1.3.2. Storage

The calculation methods are group into Accrued, Advanced and Anniversary The methods available for each group are:

- 1. Accrued
 - a. ACCURRED_STORAGE_LOCATION
 - b. ACCURRED_STORAGE_LOOSE
 - c. ACCURRED_STORAGE_NONSTD
 - d. ACCURRED_STORAGE_PALLET
 - e. ACCURRED_STORAGE_PHY_PALLET
 - f. ACCURRED_STORAGE_WHOLE
- 2. Advanced
 - a. ADVANCED_STORAGE_LOCATION
 - b. ADVANCED_STORAGE_LOOSE
 - c. ADVANCED_STORAGE_NONSTD
 - d. ADVANCED_STORAGE_PALLET
 - e. ADVANCED_STORAGE_PHY_PALLET
 - f. ADVANCED_STORAGE_WHOLE
- 3. Anniversary
 - a. ANNIVERSARY_STORAGE_LOCATION
 - b. ANNIVERSARY_STORAGE_LOOSE



- c. ANNIVERSARY_STORAGE_NONSTD
- d. ANNIVERSARY_STORAGE_PALLET
- e. ANNIVERSARY_STORAGE_PHY_PALLET
- f. ANNIVERSARY_STORAGE_WHOLE
- 4. Average
 - a. AVERAGE_STORAGE_LOCATION
 - b. AVERAGE_STORAGE_LOOSE
 - c. AVERAGE_STORAGE_PALLET
 - d. AVERAGE_STORAGE_PHY_PALLET
 - e. AVERAGE_STORAGE_WHOLE
- 5. Maximum Pallet

a. MAXIMUM_STORAGE_PALLET

- 6. Straight
 - a. STRAIGHT_STORAGE_LOCATION
 - b. STRAIGHT_STORAGE_LOOSE
 - c. STRAIGHT_STORAGE_PALLET
 - d. STRAIGHT_STORAGE_PHY_PALLET
 - e. STRAIGHT_STORAGE_WHOLE

3.1.3.3. Method Availability

The calculation methods that are available depend on the combination of Billing Period and Billing Method.

3.1.3.4. Storage Charges By Zone Locations

Enhancement in Build 828

This enhancement is applicable to all STORAGE LOCATION option – Accrual, Advanced, Anniversary, Average and Straight.

In this enhancement, rate storage charges can be based on the zone a location in assigned to.

This allows users to group locations of different height and charge different rate.

CRISTAL Warehouse Management System (5.399.053 Build 828) Stehn Eventes Index Operations Innon/ Format Stock Management Services Balance Services Database Control Administration																
Se Billable Services Definition											New					
Billable Servi	ces - Row an	e select	able on	ly when Se	rvice Detail	frame is ac	tive							Company		F6
Line Service	e Type	Line No	Biling G	iroup I	Bill Code	Descriptio	'n			Biling Period	Billing Method	UOM	Ser	CSPL	•	Find F7
Billing Group	_	1	GENER.	AL I	HANDLING IN	Handling	In			MONTHLY	LOOSE		ę	Quotation Ref	-	Save
GENERAL		2	GENER.	AL I	HANDLING OL	T Handing	Out			WEEKLY	DELIVERY	ORDER	5	0000008	-	
POLINE ONE	-	3	GENEF	RAL	STORAGE_A	4B Storage	Ambiance	•		MONTHLY	LOCATION	RACKS	S	Client	_	Print F10
Billing Code		7	GENER.	AL I	OCAL_DELIVE	R γ Local Del	very			WEEKLY	DELIVERY	ORDER	ŝ	UNITED	-	
STORAGE_AM	SIANCE 🔳	8	DG		CONTAINER	Container	· Vanning /	Stuffing		DAILY	CONTAINER		ę	Date		F11
Billing Methor	±	10	GENER.	AL I	DOCUMENTAT	IC Documer	ntation			DAILY	DELIVERY	ORDER	ŝ	4 /07/2007	•	Delete
LOCATION	•	11	GENER.	AL :	STORAGE_REC	EII Storage (Charges (R	sceipt)		DAILY	LOOSE		ŝ	Status		() F9
Billing Period		12	GENER.	AL I	CONTAINER 2	ONTAINER 20 Continer Stuffing / Unstuffing 20 ft			DAILY				ACTIVE	_		
MONTHLY	•	13	GENER.	AL (CUSTOM_PERI	MI' Customs	Permit			DAILY	RECEIPT		ŝ		1	
Trx Date Type	,	14	GENER.	AL I	BG_USE	Bank Gua	arantee Use	9		DAILY	LOOSE		ç	Header		
ACTUAL	•	15	GENER.	AL (CONTAINER 4	0 Vanning a	and devann	ing of Container	40 ft		UNIT	CONTAINER		Terms		
C Surcharge		16	GENER	AL :	SHRINKWRAP	Shrinkwra	opina			MONTHLY	RECEIPT	UNIT	 	Details		
Billable Servi	ces Rate									Grade Tune	List D	ate.		Datas	_	
Grade Type	Order Type		Tier >	Tier <=	Unit Rate	Flat Amount	Percent of Sales	Price Type		NON-BONDED	• Circ Pa	ace	_	Nates		
NON-BONDED	DG		0	999999999	10					Zone Type	Fixed /	Amount				
NON-BONDED	GENERAL		0	99999999	5					ZONE1	-					
NON-BONDED	ZONE1		0	999999999	8					Tier >	Percen	t of Price				
									_		-				1	
										Tier =	Price T	une		Activate Quotation		
												<i>n~</i>	•	File Attachment		Home
															_	F12
Meru Opton/Message																

To define charges by Zone Location

- 1. Set up the storage charge by Location
 - a. using one of the Storage Location option



- i. User must comprehand the implication when charging by Storage type of Location
 - When using PLANNED date the locations (and their Storage type) are that at the (opening of) bill (start date of billing period) date, not the 'current' stock position.
- 2. Switch to the Rate page
 - a. Select the Zone Type
 - b. Specify the Tier From / to and the charageable rate
- 3. Save
- 4. Repeat for every applicable Zones
 - a. If any the Zone is not defined for any occupied location, the locations will not be charged when billing is computed.

3.2. User-Definable Parameters

Beside the pre-defined parameters, a number of others that are user-definable need to be setup before the system can operate.

They are:

- 1. Currency
 - a. The currency to be used to charge client for service
- 2. Payment Term
 - a. Payment terms that are extended to the client
- 3. Billable Services code
 - a. The services that the warehouse perform on behalf of and chargeable to the clients
- 4. Billing Group
 - a. Billable service codes grouping
- 5. Billing Factor
 - a. This is a mark-up or mark-down factor.
 - i. By default, it is 1
 - ii. It is user define
 - iii. It must be used judiciously and typically should be applied only to billable by volume and/or weight to avoid discrepancy between billable and stock balance
- 6. Ship Mode
 - a. Enable set up of different rate for different shipment mode
- 7. Destination Region
 - a. Enable set up of destination based rate
- 8. Tax Type
 - a. Allow set up of different effective tax code for different services

3.2.1. Other User Defined Parameters

Following parameters are user definable

- 1. GL Account Code
- 2. GL Account Category
- 3. Bank Code
- 4. Bank Accounts Type





- 5. Currency
- 6. Payment Term
- 7. Billable Services
- 8. Bill Group

() CRiSTAL Services Billin	g Module					
System Edit Process Manag	e Reports Admin Add-On					
Billing - Billing Paramete	r Maintenance					Clear - F6
GL Account Code	GL Account Catetory	Bank Code	Bank a	Account Type		
Currency	Payment Term	Billable Services	Bill	ling Group		Find - F7
Parameter Code	Description		Updated By	Date Updated		
SGD	Singapore Dollars		CRISTAL1	19/08/2003		Save - F8
						Print - F10
						Droutionu E11
						Preview - FII
						Dates To
						Delete - F9
Parameter Code		Parameter Value		Updated By		
	•		-			
Description				Date Updated	_	l
						Return - F12
Comment Harm Cristel Cell II	Dilling Dilling Devenden Mais (j
Current User: Cristal Solutions 1	Billing - Billing Parameter Maintenance			C	atabase	: cristalwms_kline

These are to be configured under Admin | Billing Parameter Maintenance as shown below.

To define the values of the required parameter

- 1. Select the button by click on it.
- 2. Input the value or Parameter Code
- 3. Specify the Description
- 4. Click Save or press the F8 function key.
- 5. Repeat 2 to 4 until required values for the parameter is updated

Repeat the step for the next parameters.



4. SETTING THE BILLABLE SERVICES COMPUTATION

This is the area function of the 3PL billing module.

What defined in this function determine the computation of the billable services to be charged to a client.

The setup is designed in the format of preparing of a quotation. This enables the user to use the system to generate the quotation, have it approved and then activate the quotation to commence the services to the client. This eliminates the possibility of data entry error as the printed quotation that a client would be exactly the data that have been updated.

Once the quotation is activated, the computation of the billable services is taken over by a scheduled job in the Microsoft SQL Server.

However, a billable services maintenance function together with a manual triggered computation is provided to enable the user to make amendment as and when such a need arise.

The manual triggered computation disregards whatever computation that the system may have performed. The onus is therefore on the user to manage and control the manual computation.

4.1. Company-Client Relations

Before a quotation can be defined for a client, it is necessary to specify under which Company is to be billed under.

The Company is specified under the Client Profiles in the circled combobox.

4.1.1. Company-Client Relations Enquiry

To ensure the relations have been defined, inquiry can be made in Service Billing | | Inquiry | Company=Client Relations Query.

Select the company and the client under it will be listed as below:



Company-Clie	nt Relatio	n Query		D
Company one			1	Clear - F6
CSPL 💌	Client ID	Client Name	Status	MA ET
Not Applicable	ERC001	Euraco Finefood Pte Ltd	INACTIVE	FILL - FY
	MPO	MPO ASIA CO., LTD	ACTIVE	
List Order Details	UNITED	UNITED HOME ENTERTAINMENT CO., LTD	ACTIVE	Save - F8
	UNITED2	UNITED2 HOME ENTERTAINMENT CO., LTD	ACTIVE	8
	VMI CLT1	VMI Client 1	ACTIVE	Print - F10
	VMI CLT2	VMI Client 2	ACTIVE	D,
	VMI CUST	VMI Customer	ACTIVE	Preview - F
	WCL001	Wine Caviar LLP	ACTIVE	\sim
	WWP001	Winewise 1 Pte Ltd	INACTIVE	Delete - FS

4.2. Setting up a Quotation

🖲 CRiSTAL Warehouse Management System (5.396.	2 Build 445)			
System Favorites Inquiry Operations Import / Export S	itock Management Se	rvices Billing Reports	Basic Accounting	
Customer Service Remote Warehouse Passenger Control A	aministration Develo	pment		
A Billable Services Setup				
Company Quotation Reference Date	Status	Header	Details	ea
CSPL V 00000006 V 2007-07-04 V	ACTIVE	Terms	Rates	Find - F7
Client Information				
Client	Currency	Valid From Mi	nimum Total	Save - F8
UNITED UNITED HOME ENTERTAINMENT CO., LTD	SGD 💌	2007-07-04 🗾 49	90	-
Street	Payment Term	Valid Till		Print - F10
2/4 Samakkee Prakanphai Building	CASH 🔻	2010-09-30 💌		D.
Viphavadee Rangsit Tungsonghong Lak Si	Remark 1			Preview - F11
	Reference above,			×
Bangkok				Delete - F9
State Country Bostal Code				
THAILAND V 10210				
Telephone Fax Number	Remark 2			
662-9550561-3 662-9550564	Fpr clarification, please o	ontact		
Attention				
	Yours Sincerely			
Copy Ouotation Lines				
Source Company Source Quotation Ref	Daniel LEE			
Copy Terms and Conditions from Source Quotation			File Attachment	
Delete Details Copy Details from Source Quotation			Activate Quotation	r 💼 🗌
				Return - F12
Current: Default Admin ID Billable Services Setup	CRISTAL	frm3SBBillingSetup	Database: cristalwms	

To set up the computation for a client, a quotation needs to be created.

In the above screen

- 1. Specify the company that the quotation is prepared under
- 2. Select the client³, change any of the data if required
- 3. Specify the Valid From date
- 4. Specify the Valid Till date
- 5. Select the currency
- 6. Select the Payment Term

³ A new client must be first defined before the quotation can be created and the Company-Client Relationship be defined. See Client Profiles setup for details.



- 7. Specify the Minimum Total, if applicable
 - a. This will be invoked if the billable total is less than the specified
- 8. Click Save
- 9. A quotation reference will be given by the system.

We are now ready to prepare the computation details.

4.2.1. Terms and Conditions

In version 5.396.2, the function is enhanced to enable user to specify and update the Terms and Conditions of a quotation.

This enables a quotation to be printed and send to potential client. This eliminates error in the setup of a quotation that has been agreed by the client.

Select Terms button

CRI	STAL Warehouse Management System (5.396.2 Build 445)			
Syster Custo	n Favorites Inquiry Operations Import/Export Stock-Management Services Billing R ner Service Remote Warehouse Passenger Control Administration Development	eports Ba	isic Accounting	
🖮 Bil	able Services Setup			
Com	any Quotation Reference Date Status Header		Details	Clear - F6
LIC24	- 2007-07-04 • ACTIVE Terms		Rates	Find - F7
Tern	s and Conditions			
Line Seq	Term Description	User ID	Last Modified	Save - F8
10	Unless otherwise stated, all tariffs are subject to GST.	CRISTAL1	2010-12-26	Print - F10
15	Out of Pocket charge to be billed at cost plus 10%	CRISTAL1	2010-12-29	D
20	All prices quoted are subject to changes without prior notice.	CRISTAL1	2010-12-25	Preview - F11
30	All other charges (if any) not incurred by Guthrie Marketing (S) Pte Ltd, namely by PSA, Singapore Customs, Shipping	CRISTAL1	2010-12-25	~
40	For duty payment, application is subject to prior full payment of Customs duties & GST.	CRISTAL1	2010-12-25	Delete - F9
50	A service fee of 1% per month may be levied on out of pocket charges paid on your behalf.	CRISTAL1	2010-12-25	
60	Credit term is strictly one month based on the invoice date. Thereafter, a finance charge of 1% per month on	CRISTAL1	2010-12-25	
70	Company Marketing (S) Pte Ltd reserves the rights not to release goods until payment are received for outstanding	CRISTAL1	2010-12-25	
80	All goods bonded in Company Marketing (S) Pte Ltd are not covered under insurance.	CRISTAL1	2010-12-25	
90	Our warehouse storage facilities is subject to space availability and we are NOT equipped with air condition storage	CRISTAL1	2010-12-25	
100	Company Marketing (S) Pte Ltd^s normal working hours are as follows:	CRISTAL1	2010-12-25	
110	Requisition of order will be as follows :	CRISTAL1	2010-12-25	
Line	Term			
100	Company Marketing (S) Pte Ltd^s normal working hours are as follows:		^	
	Office Working Hours			
	Monday - Thursday : 0830 hrs - 1800 hrs Friday : 0820 hrs - 1720 hrs			
	Sat, Sun & PH : Closed			
				Return - F12
Current: I	efault Admin ID Billable Services Setup CRISTAL frm3SBBillingt	Setup	Database: cristalwms	

- 1. Leave Line blank for new term
- 2. Input the Term
- 3. Click Save
 - a. The Line numbering is in Tens. This is to facilitate insertion of terms and conditions when required.
 - b. Repeat as required.

4.2.2. Defining the Computation Details

To define the billable services and computation method, select the Service Type

- 1. Adhoc services
 - a. These services that occurred on an adhoc or on request basis. This needs to be recorded as and when it occurred.
- 2. System derived services
 - a. Services that can be derived by associating to 1 more of the Warehouse Tasks
- 3. Storage services



4.2.2.1. Defining Adhoc Service

Δ

To define an Adhoc service, select 'ADHOC' for Service Type. Fields that are not required are greyed off.

0	CRi	STAL Ware	house Manag	ement System (5.396.2 Bui	ld 445)						
Sy	sten	n Favorites	Inquiry Oper	ations Import/Export Stock M	lanagemen	t Services	Billing	Reports	Basic Accounting		
	Istor	ner Service	kemote wareno	use Passenger Control Adminis	stration L	vevelopmer	IC			1	
-	Bill	able Servi	ces Setup							Close F6	
Г	Comp	bany	Quotation Refere	ence Date Status			Header		Details	44	
	CSPL		▼ 00000006	▼ 2007-07-04 ▼ ACTIV	E		Terms		Rates	979 Find - F7	
- Billable Services - Row are selectable only when Service Detail frame is active											
Ιr	Line	Dilling Control	pill code	Description	Billing	Billing		Service	Cala datian Marthau	Save - F8	
	No	Billing Group	Bill Code	Description	Period	Method	UUM	Туре		6	
	1	GENERAL	HANDLING IN	Handling In	MONTHLY	LOOSE		SYSTEM	SERVICE_LOOSE	Print - F10	
	2	GENERAL	HANDLING OUT	Handling Out	WEEKLY	DELIVERY	ORDER	SYSTEM	SERVICE_DELIVER		
	3	GENERAL	STORAGE_AMBIAN	Storage Ambiance	DAILY	LOOSE		STORAGE	STRAIGHT_STOR/	Preview - F11	
	7	GENERAL	LOCAL_DELIVERY	Local Delivery	WEEKLY	DELIVERY	ORDER	SYSTEM	SERVICE_DELIVER	×	
	8	DG	LABELLING	Labelling	DAILY	CARTON	PACKS	SYSTEM	SERVICE_CARTON	Delete - F9	
	10	GENERAL	DOCUMENTATION	Documentation	DAILY	DELIVERY	ORDER	SYSTEM	SERVICE_DELIVER		
	11	GENERAL	STORAGE_RECEIPT	Storage Charges (Receipt)	DAILY	LOOSE		SYSTEM	SERVICE_LOOSE		
	12	GENERAL	CONTAINER 20	Continer Stuffing / Unstuffing 20 ft	DAILY			FIXED			
	13	GENERAL	CUSTOM_PERMIT	Customs Permit	DAILY	RECEIPT		SYSTEM	SERVICE_RECEIPT		
	<								>		
Ļ	.ine	Service Type	Handling In		Trx Da	te Type	ProRate N	Method	Ship Mode		
	1	SYSTEM -	Handling In		PLANN	JED 🚬	NA	•			
E	Billing	Group			Rate M	1ethod	Free Day	s Option	Destination Region		
	GENE	RAL 💌			EFFEC	TIVE	NA	-	•		
9	Servio	e Billing Code	Calculation Metho	od Billing Period	Step/M	1in Option	Free Day	s FTE Unit	Тах Туре		
	HAND	LING IN 🗾 💌	SERVICE_LOOSE	MONTHLY	▼ BILL_F	REF-DATE 💌		0.00125	NA		
E	Billing	Method	UOM	Warehouse Task Bill Fa	ctor Minimu	um Charge	Whse Co	st Group	Next Computation		
[LOOS	e 🔻		PUT AWAY	1	50	HANDLIN	IG 🔹	<u></u>	r and a second	
Ľ										Return - F12	
Curr	ent: D	efault Admin ID	Billable Services	s Setup	CRISTAL		frm3SBBill	ingSetup	Database: cristalwms	II	

- 1. Leave Line No blank for new service else select Line by click the required row in the grid box
- 2. Select the Billing Group that the service is to be grouped under
- 3. Select the Service Billing Code
 - a. This must be created first under User Defined Parameters
 - b. The system allows user to define the Billing Code. The onus is no the user to define them intelligently such that it is meaningful to other user.
- 4. Select the UOM that the services is to be charged
- 5. Specify the Step / Min Charge Option (Level), if applicable
 - a. If specified, it is applicable to applying of Step Charge (Rate Method) and Minimum Charge.
- 6. Specify the Minimum Charge amount, if applicable
- 7. Specify Billing Factor
 - a. Leave it as 1
 - b. This is currently applicable to Storage service when the calculation is in Volume, Weight or Revenue Ton
- 8. Select the Free Period method and specify the number of days free
 - a. Leave it as 'NA' as it is currently not activated.
 - b. Leave the Free Days blank
- 9. The Next Computation is not applicable for Adhoc services
- 10. Click Save to update the Service
- 11. Select Rates



WAREHOUSE MANAGEMENT SYSTEM

🛛 CRi	STAL Ware	house Man	agement	System	(5.396.2	Bui	ld 445))					
Systen	n Favorites	Inquiry O	perations	Import / E	export Sto	ick M	lanagem	ent Se	rvice	s Billing	Reports	Basic Accounting	
Custor	tier Service	Kernote Ware	nouse Pa	assenger U	ontroi Ad	minis	stration	Develo	pme	nt			
🐜 Bill	able Servi	ces Setup											
Com	pany	Quotation Re	ference	Date	9	Status				Header	· [Details	Clear - ro
CSPI		▼ 00000006	•	2007-07-04	-	ACTIV	'E	_		Terms		Rates	649 Find - F7
- Billable Services - Row are selectable only when Service Detail frame is active													
Line			_				Billing	Bill	ina		Service	^	Save - F8
No	Billing Group	Bill Code	Descript	ion			Period	Met	hod	UOM	Туре	Calculation Method	
7	GENERAL	LOCAL_DELIVER	RY Local De	livery			WEEKLY	/ DELIV	/ERY	ORDER	SYSTEM	SERVICE_DELIVER	Print - F10
8 DG LABELLING Labelling DAILY CARTON PACKS SYSTEM SERVICE_CARTON													
10	GENERAL	DOCUMENTATI	ON Documer	ntation			DAILY	DELIV	/ERY	ORDER	SYSTEM	SERVICE_DELIVER	Preview - F11
11	GENERAL	STORAGE_REC	EIPT Storage	Charges (Rec	eipt)		DAILY	LOC	SE		SYSTEM	SERVICE_LOOSE	×
12	GENERAL	CONTAINER 20	Continer	Stuffing / Un	stuffing 20 ft		DAILY				FIXED		Delete - E9
13	GENERAL	CUSTOM_PERM	IT Customs	Permit			DAILY	RECE	EIPT		SYSTEM	SERVICE_RECEIPT	
14	GENERAL	BG_USE	Bank Gui	arantee Use			DAILY	LOC	SE		SYSTEM	SERVICE_LOOSE	
15	GENERAL	CONTAINER 40) Vanning	g and devan	ning of			UN	IT	ONTAINE	ADHOC		
16	GENERAL	SHRINKWRAP	Shrinkwi	apping			MONTHL	Y RECE	EIPT	UNIT	SYSTEM	SERVICE_RECEIPT	
<	j											>	
Line	Service Type	Billable Ser	vices Rate –							Grade Ty	/pe	Order Type	
15	ADHOC	Tipr >	Tier <=	Linit Rate	Elat ámount	Perc	ent of Pr	ice Tyne		NON-BO	NDED 🔻		
Billing	Group			onicroado		Sa	ales ''		_	Tier Gre	ater Than	Tier To	
GENE	RAL 💌	0	999999999	140	I					0	-	99999999	
Servic	e Billing Code									Unit Rate		Fixed Amount	
CONT	AINER 40 💌									140		0	
Billing	Method									Percent	of Price	Price Type	
UNIT	v									0			
												,	Return - F12
	4 4 4 4 4 4					_	[
Current: Default Admin ID Billable Services Setup CRISTAL frm3SBBillingSetup Database: cristalwms													

- 12. Specify Grade Type
 - a. Bonded
 - b. Non-Bonded
- 13. Specify the Tier Greater Than
- 14. Specify the Tier To
- 15. Specify the appropriate Rate Chargeable (the options are mutual exclusive)
 - a. Unit Rate
 - i. Leave Fixed Amount as 0 as it is not applicable.
 - b. Fixed Amount
 - c. Percent of Price
 - i. Price Type
- 16. Click Add/Update Activity Tier
- 17. Repeat 1 to 16 for next Adhoc service.

4.2.2.2. Defining System Derived Services

To define a System derived service, select 'SYSTEM for Service Type. Fields that are not required are greyed off.



Billa Com	ble Services S	etup Ouotation Refe	rence Date Statu	IS		Heade	r	Terms	Clear - F6
CSPI Billal	L ble Services - I	00000006 Row are selectable	2007-07-04 ACT Ac	IVE active		Detail	;	Rates	#1 Find - F7
Line Billing Group Bill Code Description Billing Period Billing Billing UOM Service Calculation Method									
1	GENERAL	HANDLING IN	Handling In	MONTHLY	LOOSE		SYSTEM	SERVICE_LOOS	a
2	GENERAL	HANDLING OUT	Handling Out	WEEKLY	DELIVERY	ORDER	SYSTEM	SERVICE_DELIVE	Print - F10
3	GENERAL	STORAGE_AMBIA	Storage Ambiance	DAILY	LOOSE		STORAGE	STRAIGHT_STO	
7	GENERAL	LOCAL_DELIVERY	Local Delivery	WEEKLY	DELIVERY	ORDER	SYSTEM	SERVICE_DELIVE	Preview - E1
8	DG	LABELLING	Labeling	DAILY	CARTON	PACKS	SYSTEM	SERVICE_CARTC	
10	GENERAL	DOCUMENTATION	Documentation	DAILY	DELIVERY	ORDER	SYSTEM	SERVICE_DELIVE	X
11	GENERAL	STORAGE_RECEIF	Storage Charges (Receipt)	DAILY	LOOSE		SYSTEM	SERVICE_LOOSE	Delete - F9
12	GENERAL	CONTAINER 20	Continer Stuffing / Unstuffing 20 ft	DAILY			FIXED		
13	GENERAL	CUSTOM_PERMIT	Customs Permit	DAILY	RECEIPT		SYSTEM	SERVICE_RECEIP	
<								>	
Line	Service Type	Handling In		Billing	Period	Trx Dat	е Туре	ProRate Method	
1	SYSTEM	 Handling In 		MON	THLY 💌	PLANN	ED 💌	NA	
Billing	g Group			Rate M	lethod	Free Da	ys Option	Ship Mode	
GEN	IERAL	-		EFFE	TIVE -	NA	•	-	
Servi	ice Billing Code	Biling Method	Calculation Method	Step/I	Min Option	Free Da	v FTE Unit	Destination Region	
HAN	IDI ING IN	LOOSE	▼ SERVICE LOOSE	T BILL		1	0.00125	-	
Novt	Computation		Watchause Tack Bill Fac	tor Minim	um Charge	J J	ort Crown	Tay Type	
INC.				1	In Charge				
1	1	1	Y PUTAWAY	1	50	HANDL	UNG -	NA 💌	

- 1. Leave Line No blank for new service else select Line by click the required row in the grid box
- 2. Select the Billing Group that the service is to be grouped under
- 3. Select the Service Billing Code
 - a. This must be created first under User Defined Parameters
 - b. The system allows user to define the Billing Code. The onus is on the user to define them intelligently such that it is meaningful to other user.
- 4. Select the Billing Period
 - a. If Billing Period is 'MONTHLY' the Prorate Method will be enabled
 - b. Option available is Half-Month and Days
 - i. For Half-Month, if the part of months is greater than 0.52, the Prorate factor will be round to 1
 - ii. For Days, the actual part month will apply
- 5. Select the Billing Method
- 6. Select the Calculation Method
 - a. Only appropriate method will be available for selection
- 7. Specify the Warehouse Task to be associated
- 8. Select the UOM that the services is to be charged, if available or applicable
- 9. Specify the Step / Min Charge Option (Level), if applicable
 - a. If specified, it is applicable to applying of Step Charge (Rate Method) and Minimum Charge.
- 10. Specify the Minimum Charge if applicable
- 11. Specify Billing Factor

c.

- Leave it as 1 or redefine as appropriate
 - i. Never specify as ZERO or NEGATIVE as then the service would free or the client will be paid instead
- d. This is currently applicable when the Billing Method is in Volume, Weight or Revenue Ton
- 12. Select the Free Period method and specify the number of days free



- e. Leave it as 'NA' as it is currently not activated.
- f. Leave the Free Days blank
- 13. Specify Ship Mode, if applicable
- 14. Specify Pro Rate option, if applicable
- 15. Specify Destination Region, if applicable
- 16. Specified the Next Computation or commencement of the computation, if system generated
- 17. Click Save to update
- 18. Select Rates command button
 - a. Specify the Tier Greater Than
 - b. Specify the Tier To
 - c. Specify the appropriate Rate Chargeable (the options are mutual exclusive)
 - i. Unit Rate
 - Leave Fixed Amount as 0 as it is not applicable.
 - ii. Fixed Amount
 - iii. Percent of Price
 - Price Type
 - d. Click Add/Update Activity Tier
 - e. Repeat if step rate
- 19. Repeat above for next System derived service.

4.2.2.3. Defining Storage Services

To define Storage derived service, select 'STORAGE' for Service Type. Fields that are not required are greyed off.

Billa	ble Services S	etup												3	n
Com	oany	0	uotation Refe	erence Date	Statu	5				Heade	r	Te	erms	٦	Clear - F6
CSP		- 0	0000006	▼ 2007-07-04 ▼	ACTI	VE		— lī		Details	;	Ra	ates		A
Billa	ble Services -	Row a	are selectabl	le only when Service Detail f	frame is	active		,							Find - F7
Line Billing Group Bill Code Description Billing Period Method UOM Service Calculation Metho									Save - F8						
1	GENERAL	HAN	DLING IN	Handling In		MONT	HLY	LOOS	E		SYSTEM	SERVIO	E_LOOSE		- 4
2	GENERAL	HAND	DLING OUT	Handling Out	WEE	KLY	DELIVE	RY	ORDER	SYSTEM	SERVIO	E_DELIVE		Print - F10	
3	GENERAL	STO	RAGE_AMBI	Storage Ambiance		DAJ	LY	LOOS	E		STORAGE	STRAI	GHT_STC		
7	GENERAL	LOCA	AL_DELIVERY	Local Delivery		WEE	KLY	DELIVE	RY	ORDER	SYSTEM	SERVIC	CE_DELIVE		LSA Preview - E1
8	DG	LABE	LLING		DAI	LY	CARTO	N	PACKS	SYSTEM	SERVIO	E_CARTC			
10	GENERAL	DOCI	UMENTATION	Documentation		DAI	LY	DELIVE	RY	ORDER	SYSTEM	SERVIC	CE_DELIVE		×
11	GENERAL	STO	RAGE_RECEIF	Storage Charges (Receipt)		DAI	LY	LOOS	E		SYSTEM	SERVIC	E_LOOSE		Delete - F9
12	GENERAL	CON.	TAINER 20	Continer Stuffing / Unstuffing	20 ft	DAI	LY				FIXED				
13	GENERAL	CUST	FOM_PERMIT	Customs Permit		DAI	LY	RECEI	рт		SYSTEM	SERVIC	CE_RECEIP		
< 💷													>		
Line	Service Type	Sto	orage Ambian	ce		E	Silling P	eriod		Trx Date	е Туре	ProRate	Method		
3	STORAGE	- St	orage Ambian	nce		^	DAILY		•	ACTUA	L 🔽	NA	-		
Billing	g Group					F	late M	ethod		Free Da	ys Option	Ship Mo	de		
GEN	ERAL	-				~	EFFEC	TIVE	-	NA	-		-		
Serv	ce Billing Code	Billi	ing Method	Calculation Method		5	step/M	lin Optic	n	Free Da	v FTE Unit	Destinat	tion Region		
STO	RAGE_AMBIA		DOSE	▼ STRAIGHT_STORAGE_LO	OSE	-			-				-		
Next	Computation	,	M	Warehouse Task	Bill Fac	tor 1	4inimur	m Charo	e	Whse O	ost Group	Tax Tyr	ne		
				V	1	1			-	STORA	GE 🔻	NA	•		
	<u>ii</u>					- 1				1	_	D			Ē

Only 1 Storage service should be defined per Billing Group unless specifically required. Otherwise the computation of Storage will be multiply by the number of Storage code defined

- 1. Leave Line No blank for new service else select Line by click the required row in the grid box
- 2. Select the Billing Group that the service is to be grouped under



- 3. Select the Service Billing Code
 - a. This must be created first under User Defined Parameters
 - b. The system allows user to define the Billing Code. The onus is no the user to define them intelligently such that it is meaningful to other user.
 - c. The onus is on the user to specify a storage billing code.
- 4. Select the Billing Period
- 5. Select the Billing Method
- 6. Select the Calculation Method
 - a. Only appropriate method will be available for selection
- 7. Select the UOM that the services is to be charged, if available or applicable
- 8. Specify the Step / Min Charge Option (Level), if applicable
 - a. If specified, it is applicable to applying of Step Charge (Rate Method) and Minimum Charge.
- 9. Specify the Minimum Charge if applicable
- 10. Specify Billing Factor
 - a. Leave it as 1 or redefine as appropriate
 - i. Never specify as ZERO or NEGATIVE as then the service would free or the client will be paid instead
 - b. This is currently applicable when the Billing Method is in Volume, Weight or Revenue Ton
- 11. Select the Free Period method and specify the number of days free
 - a. Leave it as 'NA' as it is currently not activated.
 - b. Leave the Free Days blank
- 12. Specified the Next Computation or commencement of the computation
 - a. This is applicable if computation is system generated
- 13. Click Save to update Service
- 14. Select Rates command button
 - a. Specify the Tier Greater Than
 - b. Specify the Tier To
 - c. Specify the Unit Rate
 - i. Leave Fixed Amount as 0 as it is not activated.
 - d. Click Add/Update Activity Tier
 - e. Repeat if there is multi-tier
- 15. Work Unit
 - a. This is to be specified in term of FTE (Full Time Equivalent man-day)
 - b. This is used in Warehouse Costs Maintenance
- 16. Warehouse Cost Group
 - a. This is used in Warehouse Costs Maintenance
- 17. Repeat 1 to 14 for Storage of next Billing Group

4.2.3. Deletion of Details

To remove a billable code from a quotation, it is necessary to remove the Billable Service Rate. When the last range is removed the Billable Code will be removed from the quotation.



This is done by

- 1. Click the Billable Code row
- 2. Select Rate Setup
- 3. Click on the Billable Service Rate range
- 4. Click on the Remove Activity Tier
- 5. The Billable Service grid box will refresh and the Billable Service Rate will clear.
- 6. Select the Billable Code row again
- 7. Repeat 2 to 6 until all the rate ranges are removed.

4.2.4. Activate a Quotation

The background job scheduled in the MS SQL Server will process only 'ACTIVE' quotation. A quotation therefore must be activated once it is approved.

For version 5.395.2 and before, only 1 quotation can be active at any one time. Therefore, if there is an existing active quotation, it must be CLOSED before a new quotation can be activated.

Subsequent releases have been enhanced to allow multiple quotations to be activated. However the validity period of the quotation must not overlap nor is gap between the quotation periods be allowed. Failure to ensure continuity of active quotations will result in missing or incorrect computation of billable.

If there are 2 or more different rates are to charged, they are to be under different billing group within the same quotation. This would be applicable services that are product related – each product would have to be classified into different Billing Group.

On clicking of the Set Quotation to Active button, a pop-up window will prompt for authorisation. The quotation will be activated only if correction authorisation is entered.

Authorisation		
Activate selec	ted quotation?	
Authoriser Password		
Clear	Cancel	ok

4.2.5. Close Active Quotation

When an active quotation is no longer valid or replaced, it has to be closed.

On clicking of the Close Active Quotation button, a pop-up window will prompt for authorisation. The quotation will be closed only if correction authorisation is entered.



Authorisation	Authorisation									
Close selected	d quotation?									
Authoriser Password										
Clear	Cancel	ok								

4.2.6. Copying Quotation

Given that an active quotation cannot be amended when there is a minor change to some of the rate, function is provided to facilitate user to copy an active quotation to a new quotation.

This allows amendment to be made in the new quotation. After which, the original quotation is closed and new quotation be activate.



5. BILLABLE ACTIVITY MAINTENANCE

Billable activities are services performed by the warehouse operation that is to be charged to the client.

The function is for updating of activity that are computed by the system via the setup defined in the Services Computation setup, adhoc activity captured via the VA services update in the WMS, and/or manually input in this function.

This menu option incorporates 3 functions:

- 1. Add and Update Billable Service
- 2. Manual generate of derivable services and storage
- 3. Export and generate of debit note

5.1. Add and Update Billable Service

This enable to add and maintain billable services that are generated by the system automated job or entry from the WMS' VA Services.

🚺 CRISTAL War	ehouse Manage	ment Syst	em (5.395.	4 Build 20)		[_ 🗆 🗙			
🚵 Billable Acti	vity Maintenan	ce					Clear - F6			
Company Cli SSP. Billing Reference Cu 50000012 S	Company Client Maintenance SSPL INITED INITED HOME ENTERTAINMENT CO., LTD Compute Billing Reference Currency Status Billing Date From Billing Date To 00000012 SGD CLOSED 01-01-2007 31-03-2007 Debit Note									
Reference	Billing Date	Line No	Billing Group	Bill Code	E		- Save-10			
GLO00001	05-02-2007	1	DEFAULT	HANDLING IN	F	×	Print - F10			
GLO00001	05-02-2007	2	DEFAULT	F	°C	<u>A</u>				
GL000001	09-02-2007	1	DEFAULT	STORAGE_AM	BIANCE F	PC	Preview - F11			
GLO00001	09-02-2007	2	DEFAULT	STORAGE_AMBI	ANCE P	×C	×			
GLO00001	10-02-2007	1	DEFAULT	STORAGE_AMBI	ANCE P	°C	Delete - F9			
GLO00001	10-02-2007	2	DEFAULT	STORAGE_AMBL	ANCE F	× ×				
Billable Activity Maint	tenance									
Source Document Ref Li	ine # Billing Group	Billable Servic	e Code	Item Code						
GLO00001 ▼	1 DEFAULT	▼ STORAGE_A	MBIANCE -	CHT-1650		<u> </u>				
Billable Service Descriptio	n anco from 01, Jan 2007 to 21	1 Max 2007 ac at 00	2 Eab 2007	Item Description						
Billing LIOM	ance from or Jan 2007 to 3. Jantity Linit Ra	t mar 2007 as at 0:	ount	I Item LIOM	Item Ouan	tity				
	0 2.5	75	5	PC 💌	30	~~~	Return - F12			
Current: Default Admin ID	Billable Activity Maintenan	ce	CRISTAL	frm35BBillin	ngEntry	Database: c	ristalwms			

The process in the Billable Services Maintenance in adding new billable service

- 1. Input or select the Billable Document Ref
- 2. Leave the Line # blank
 - a. System will automatically assigned the next number
- 3. Specify the Billing Group
- 4. Specify the Bill Code and update the Details
- 5. Select the Billing UOM
- 6. Input the Quantity
- 7. Input the Unit Rate
- 8. Optional input Item Code, Item UOM and Item Quantity, if applicable.
- 9. Click Save
 - a. The input is updated and the grid box is refreshed.
- 10. Repeat 1 to 9 for next Billable Services

To update existing record:

1. To update an existing click the row in the grid box



- a. The data will be transferred to the text boxes
- 2. Change, if applicable, the Billing Group
- 3. Change, if applicable, the Bill Code and update the Details
- 4. Change, if applicable, the Billing UOM
- 5. Change, if applicable, the Quantity
- 6. Change, if applicable, the Unit Rate
- 7. Optional Change, if applicable, Item Code, Item UOM and Item Quantity, if applicable.
- 8. Click Save
 - a. The input is updated and the grid box is refreshed.
- 9. Repeat 1 to 8 for next rows

5.2. Manual Generation of Derivable Services and Storage

Ø	CRISTA	L Ware	house	Manage	ment Sy	stem (5.395	.4 Build	20)			_	
4	a Billabl	e Activ	ity Mai	intenanc	e								Clear - F6
	Company	Clien	nt							Mainte	nance	-	<i>8</i> 45
	CSPL		TED		HOME ENTER		0., LTD -		ĺ	Com	pute		Find - F7
	Diming Date From Diming							Dehit	Note	1			
ļ						101 01 200	_	1 101 00 2007					Save - F8
	Reference	Billing Date	Line No	Billing Group	Bill Code	Bill UOM		Bill Qty	Currency	U	nit Rate 📤	1	
	GLO00001	05-02-2007	1	DEFAULT	HANDLING IN	PC		30	SGD		, L		Print - F10
	GLO00001	05-02-2007	2	DEFAULT	HANDLING IN	PC		20	SGD		Ę	1	
	GLO00001	09-02-2007	1	DEFAULT	STORAGE_AM	PC		30 SGD			2.5		Dura investor
	GLO00001	09-02-2007	2	2 DEFAULT STORAGE_AM			20 SGD				2.5		Preview - F11
	GLO00001	10-02-2007	1	DEFAULT	STORAGE_AM	PC	30 SGD				2.5		\times
	GLO00001	10-02-2007	2	DEFAULT	STORAGE_AM	PC	20 SGD				2.5		Delete - F9
	GLO00001	11-02-2007	1	DEFAULT	STORAGE_AM	PC		30	SGD		2.5	1	
	GLO00001	11-02-2007	2	DEFAULT	STORAGE_AM	PC		20	SGD		2.5 🗡		
	<										>		
ſ	Compute Bi	llable Servic	es										
										Service 1	fype		
	Billing Group		Bill Code			Calculation f	lethod			Ac	ihoc		
	GENERAL		STORAGE	AMBIANCE		STRAIGHT :	TORAGE	LOOSE		Ser	vices		
										Sto	orage		
										Fi	xed		
									×	Dec			£
L													Return - F12
Cu	rrent: Default	Admin ID	Billable Activ	ity Maintenanc	e		CRISTAL	1	rm35BBilling	Entry	Database: c	rist	alwms

To manually trigger computation of derivable billable services

- 1. Select Compute Derivable Billable Services
- 2. Select Service Type to be derived
- 3. Select the Required Date or billing date
- 4. Click Process Billable Service
- 5. The system will generate the billable services and refresh the grid box on completion

5.3. Export and Create Debit Note

The generation of debit notes directly from the billable services is limited to direct line to line billing. If minimum charges and / or stepped charges are applied, it is enabled only at line level.

Complex application of minimum charge and stepped such as at reference, bill code, and billing group... is required to first generate the billing report and then manual raise the debit notes. This is due to the complexity of the billing and non-standard requirement of different sites.



Ø	CR	iSTAL W	/arehous	e Man	agemen	t System	(5.395	.4 Build 20)			
4	a Bi	llable Ac	ctivity M	ainte	nance						Clear - F6
	Company Client Maintenance SSP VINITED UNITED HOME ENTERTAINMENT CO., LTD Compute Biling Reference Currency Status Biling Date From Biling Date To D0000012 SGD CLOSED 01-01-2007 31-03-2007 Debit Note										Find - F7
	Sel	Reference	Billing Date	Line No	Billing Group	Bill Code	Bill UOM	Bill Qty	Currency	د^	
	Y	GLO00001	05-02-2007	1	DEFAULT	HANDLING IN	PC	30	SGD		Print - F10
	γ	GLO00001	05-02-2007	2	DEFAULT	HANDLING IN	PC	20	SGD		
	γ	GLO00001	09-02-2007	1	DEFAULT	STORAGE_AM	PC	30	SGD		<u> </u>
	Y	GLO00001	09-02-2007	2	DEFAULT	STORAGE_AM	PC	20	SGD		Preview - F11
	γ	GLO00001	10-02-2007	1	DEFAULT	STORAGE_AM	PC	30	SGD		×
	Y	GLO00001	10-02-2007	2	DEFAULT	STORAGE_AM	PC	20	SGD		Delete - F9
	γ	GLO00001	11-02-2007	1	DEFAULT	STORAGE_AM	PC	30	SGD		
	Y < 1	GLO00001	11-02-2007	2	DEFAULT	STORAGE_AM	PC	20	SGD	>	
Generate Debit Note Select All DeSelect All Debit Note Number Close Bill Reference											
	Pro	ocess Debit N	ote					1	teopen Bill Re	eference	Return - F12
Cur	rent: I	Default Admin I	D Billable A	ctivity Mair	ntenance		CRISTAL	frm3SBE	illingEntry	Database: cr	istalwms

When creating debit note all the records that are in 'WAITING' status will be summarised to create the new debit note:

- 1. Select Debit Note Generation
- 2. Click 'Select All'
 - a. To unselect row that is not to be billed, double-click the row.
- 3. Click 'Process Debit Note'
- 4. On completion, a message will show the debit note number created and the number of lines processed.
- 5. The status of the billing reference will set to CLOSED.



6. Clear the grid box

5.3.1. Closing Bill Reference

The button 'Close Bill Reference' button enable user to close off a billing computation that have been processed.

This is provided for site where invoicing is done on an accounts receivable system.

The function enables the data to be retained in the system for future reference,

5.3.2. Reopen Billing Reference

The function enable user to reopen a CLOSED billing reference that may required additional change.

However, the reopen is not allowed if the invoicing is done via the 'Process Debit Note' button.

5.4. File Attachment

The below window is activated by clicking on the 'File Attachment'.

This enabled user to attach copy of document related to the quotation.





To attach a file:

- 1. Click the Down Arrow button in 'Attachment File Path and Name
 - a. Windows Open folder will pop up
 - b. Select the file
 - c. The path and file will be displayed
 - i. The specified file must be on a shared folder otherwise only the station that updated the attachment can open the file as it is 'local'
- 2. Input Remark as requirement
- 3. Click Update

To delete an attached file, click the file and then click Remove button



6. DEBIT NOTES

Debit Notes menu option is for the generation of debit notes or service invoices.

This function is available only under Basic Accounting - which is not usually enabled,

Sites that wish to use the option can request for it to be enabled.

🕅 CRiSTAL Warehouse Management System (5.395.4 Build 20)							
🖎 Debit Note Entry							Clear - F6
Company Debit Note # Debit Note Date CSPL 08120000027 18-12-2008	Document	Reference	Status DATA ENT	RY	He	ader tails	Find - F7
Debit Note Information Client	Currency		GST Rate (*	%)	Debit Note A	mount	Save - F8
UNITED UNITED HOME ENTERTAINMENT CO., LTD Bill To Information	SGD Payment	Term	GST Amoun	0 t) Debit Note N	8340 JET 8340	Print - F10
Client Customer Supplier UNITED	Discount ((%) 0	Discount Ar	nount) Debit Note T	otal 8340	Preview - F11
Address 2/4 Samakkee Prakanphai Building	Payment	Reference	Payment Ty	/pe	Amount Paid		X Delete - F9
Viphavadee Rangsit Tungsonghong Lak Si	Remark Generate	from Billable	e Service - re	ference: OC	1000006	^	
Bangkok State Country Postal code THAILAND 10210 Attention						~	
	,				Post Rec Reverse AF Post Pay	eivable R Posting /ment	E Return - F12
Current: Default Admin ID Debit Note Entry		CRISTAL		frm35BNote	eDebit	Database: cr	ristalwms

6.1. Create new debit note

To create a new debit note:

- 1. Select the Company code
 - a. Update client code,
 - b. Update the Bill To details
 - c. Select Payment Term
 - d. Update Discount, if applicable.
- 2. Click Save
- 3. A new debit note number will be assigned.

6.2. Update existing debit note

Order Help	Order Help						
CRISTAL	CRISTAL CRISTAL Solutions Pte Ltd						
Pending Docu	ment Reference						
Debit Note	Date	Client	Bill to	Company			
00000001	06/10/2003	HML	HML	HITACHI MAXELL, LTD			
00000002	09/10/2003 1:	HML	HML	HITACHI MAXELL, LTD			
00000003	09/10/2003 1:	HML	HML	HITACHI MAXELL, LTD			
00000004	09/10/2003 1:	AA	AA	ASSA ABLOY SINGAPORE PTE LTD			
00000005	14/10/2003 12	AHB	AHB	TYCO ELECTRONICS (S) PTE LTD			
00000006	14/10/2003 1:	ATLAS	ATLAS	ATLAS HI-FI PTE LTD			
00000007	14/10/2003 2:	ATLAS	ATLAS	ATLAS HI-FI PTE LTD			
80000000	15/10/2003 3:	AHB	AHB	TYCO ELECTRONICS (S) PTE LTD			
00000009	19/10/2003 2:	AHB	AHB	TYCO ELECTRONICS (S) PTE LTD			
IN00000001	03/10/2003	AHB	AHB	TYCO ELECTRONICS (S) PTE LTD			
	<u>C</u> anı	cel	<u>S</u> elect				

- 1. Select the company code and click the drop down button of the Debit Note #.
 - a. A pop-up will appear
 - b. Click on required record
 - c. Click on Select



2. Detail of the debit note will be displayed

6.3. Update Debit Note Detail

🕅 CRiSTAL Warehouse Management System (5.395.4 Build 20)								
😽 Debit Note Entry							Clear - F6	
Company Debit Note ≠ Debit Note Date Document Reference Status Header CSPL ▼ 18-12-2008 ▼ GL000090								🚧 Find - F7
Debit	Note Details							
Line	Bill Code	Bill Detail	Reference	иом	Unit Price	Qty	Line Amou	Save - F8
1	HANDLING IN	Receipt Billing - reference: 000	(GL000090		1.90	600	114	8
2	STORAGE_RECEIPT	Receipt Billing - reference: 00000006	GLO00090		12	600	72	Print - F10
	Preview - F11 X Delete - F9							
	Deference	Pill Code	Description					
1	GLONNIA	HANDI ING IN	Receipt Bi	lina - reference:	0000006			
Unit of	Measurement Quan	tity Unit Price		ing forororicor			~	
Line Ar	mount GST R	ate (%) GST Amount	Line Total					
1140	0	0	1140					L 1
								Return - F12

6.3.1. Update Existing Detail Line

- 1. Select the row to be edit
 - a. The text boxes will be populated
- 2. To remove, click the Remove command button, else
- 3. Change the data in the text box that is to be amended
- 4. Click 'Save'

6.3.2. Add New Detail Line

- 1. Ensure the Line # is blank
 - a. Click Clear command button if it is not
- 2. Select the Billing Group
- 3. Select the Bill Code
- 4. Amend the Description if applicable
- 5. Input the document Reference
- 6. Select the billing UOM
- 7. Input the Quantity
- 8. Input the Unit Rate
- 9. Amend the GST Rate if applicable
- 10. Click Add / Update
- 11. Repeat 1 to 10 for next detail line



Appendix A. BILLABLE STORAGE COMPUTATION

The storage computation is designed to be SQL statement based. This concept enables new calculation method to be designed and added to the system without the need to update the EXE.

A.1. Calculation Methods

In Build 394 and later, following are the method of storage service calculations

- 1. Accrual
- 2. Advanced
- 3. Anniversary
- 4. Straight
- 5. Average
- 6. Max Pallet

The calculation process of each of the methods is independent of the billing period and billing unit of measurement.

A.1.1. Accrual Method

In the Accrual method the storage chargeable is derived by computing

- 1. The stock balance as at the START of billable period day, week, month...
- 2. Compute the stock received during the period

The billable quantity is the sum of the 2 calculations.

A.1.1.1. Notes

This is in effect a combination of the Straight Method and SERVICE RECEIPT.

For WEEKLY billing where the storage is to be charged always from the start of week (Monday), then the combination must be used instead of Accrued Method.

SERVICE RECEIPT have been enhanced since Build 819 to facilitate this requirement.

A.1.2. Advanced Method

In the Advanced method, the storage chargeable comprises of

- 1. The stock balance as at the START of the billable period day, week, month...
- 2. The stocks that were received in the prior period,
 - a. Bearing in mind that when the storage is billed in advance, the shipment received during the billing period have not been received yet and therefore have to be billed in the next billing period.

In the Advanced method, the billable storage would comprise of a forward period and a prior period.

A.1.2.1. Notes

This is in effect a combination of the Straight Method and SERVICE RECEIPT.

For WEEKLY billing where the storage is to be charged always from the start of week (Monday), then the combination must be used instead of Advanced Method,

SERVICE RECEIPT have been enhanced since Build 819 to facilitate this requirement.

A.1.3. Anniversary Method

In the Anniversary Method, storage chargeable is computed based the date of receipt, be it week or month...



In effect, storage is charges for every incoming shipment on the day of receipt. It is then charged again on period anniversary of receipt date on the stock balance of the receipt.

The receipt is charged on every anniversary until the stock is totally depleted.

This method requires every incoming shipment to be tracked by its receipt date.

A.1.4. Straight Method

Storage is charged based on the stock balance on the billing date.

The billing period can either be accrued or advanced.

The billing date is the START of the specified billing period range except when the billing period is WEEKLY (calendar week)

For WEEKLY, it always starts from Monday and end on Sunday.

• If the start day for a date range in WEEKLY is not a Monday, it is automatically be adjusted and commence from the first Monday in the billing date range.

A.1.5. Average Method

In average method, the chargeable stock is the average of the stock balance as at the START and END of the billing period.

The system computes the stock balance as at the start and end of the billing period. It then averages the 2 values to get the billable quantity.

A.1.6. Max Pallet Method

In this method, charges are computed based on the maximum number of pallets that during the billing period. This is done by computing the balance stock of each day in the billing period and identity the day with the maximum pallet.

Pallet count may be based on Logical or Physical pallet.

A.2. Calculation Process

The processes in the computation are:

- 1. If applicable, extract the relevant product UOM definition into a temporary table
 - a. Definition of the LOWEST UOM if LOOSE is required
 - b. Definition of the second LOWEST UOM if WHOLE is required
 - c. Definition of the PALLET UOM if PALLET is required
 - d. Not applicable if the Calculation is by LOCATION occupied
- 2. Compute the stock status as at the billing date
 - a. This involve freeze the stock status by taking a snapshot of current stock status
 - b. Reverse the transactions that have been effected since the required billing date
- 3. Compute the start and end of the required Billing Period
- 4. Reverse the transaction in the Billing Period prior to the billing date
 - a. If Accrual billing, reverse Picking
 - b. If Advanced billing, reverse Receipt
 - c. If Anniversary billing, reverse Picking of selected Receipt.
- 5. Compute the billable services
- 6. Update the line numbering
- 7. Update unit rate and minimum charge basing on the billing group classification of the product



Appendix B. AUTOMATED BILLABLE SERVICE COMPUTATION

The computation of the billable service can be triggered manually via the menu option Billable Service Maintenance or through a scheduled job of a stored procedure 'system_billable_activity_compute'.

When setting up the schedule job, the system date will be the default scheduled date.





Appendix C. CALCULATION METHODS

C.1. System – Services

The Calculation Methods are Receipt Type agnostic except for those that are specifically so named – RETURN (which filter for RETURNS receipt type) and NRTN (for receipt types other than RETURNS)

S/N0	CALCULATION METHODS	Stored Procedure Name	Details
1.	SERVICE_ASN_ORDERLINE	acc_service_asn_line_compute	Compute billable by the number receipt ASN lines
2.	SERVICE_CARTON_OUT	acc_service_carton_compute	Compute billable based on the number pack (carton) count as updated in Despatch Packing (delivery pallet table).
			If not available, computed WHOLE quantity.
3.	SERVICE_DELIVERY	acc_service_delivery_compute	Compute billable for delivery by
			• Trips
			Delivery Orders
			From 5.398 Build 686, following billing UOM have been added
			ITEM count
			LINE_DO
			LINE_SO
			• UNIT
			VOLUME (based on UNIT dimensions)
			WEIGHT (based on UNIT weight)
4.	SERVICE_LICENSE_SCAN	acc_service_license_tag_scan	Compute billable based on computed barcodes scanned
			Number of pallet PLUS
			Number of whole PLU
			Balance LOOSE

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	All Rights Reserved	Last Undated: 12-Dec-15
Solutions Pte Ltd		Lust opullou. 12 Dec 10



S/N0	CALCULATION METHODS	Stored Procedure Name	Details
5.	SERVICE_LOOSE	acc_service_loose_compute	Compute billable at LOWEST UOM by Quantity Volume Weight
6.	SERVICE_NONSTD	acc_service_nonstd_compute	 Revenue Ton (Volume or weight, whichever is higher) Compute billable for non-standard (flagged as in Product Definition) items basing on dimensions / weight input during receipt by Volume
7	SERVICE PACKED CARTON	acc service nacked carton	 weight Revenue Ton (Volume or weight, whichever is higher) Computed billable by the number of CARTON packed for dispatch via Carton Item Packing
			 Number of cartons packed Date range based on Sales Orders.Delivery Date Method available from Release 5.398
8.	SERVICE_PALLET	acc_service_pallet_compute	Compute billable based on LOGICAL pallets by Number of Pallets Volume Weight
9.	SERVICE_PALLET_WHOLE	acc_service_pallet_whole_compute	 Revenue Ton (Volume or weight, whichever is higher) Note: Pallets is computed by items and rounded up Compute billable by logical PALLET and WHOLE (cartons)
		In 5.398 Build 723, this procedure is converted to a wrapper to call procedure	PALLET – computed number of logical full pallet





S/N0	CALCULATION METHODS	Stored Procedure Name	Details	
		acc_service_pallet_whole_loose which is designed as common procedure to handled PALLET & WHOLE and WHOLE & LOOSE	 WHOLE (carton) – computed remainder quantity after deducting full pallets and round-up WHOLE Note: 	
			WHOLE quantity is based on defined product UOM – if flagged else based on second lowest level	
			When using this, it is necessary to defined PALLET and WHOLE billable services using 2 bill code. E.g. PICK_PLT and PICK_CTN	
			Minimum Charge and Stepped Charging are not applicable with is option as they would not be apply correctly even though they are not disabled in the setup screen.	
10.	SERVICE_PALLET_WHOLE_PICKED	acc_service_pallet_whole_picked	Compute billable based SKU (pallet and carton) handled	
			PALLET – computed rounded-up logical pallet	
			 WHOLE (carton) – computed remainder quantity after deducting full pallets and round-up WHOLE 	
			Note: WHOLE quantity is based on defined product UOM – if flagged else based on second lowest level	
			When using this, it is necessary to defined PALLET and WHOLE billable services	
11.	SERVICE_PHY_PALLET	acc_service_phy_plt_compute	The computation is billing group insensitive. It computes based on the pallet numbering only – disregarding item code and therefore disregarding billing group.	
			The rationale for the logic is that if there multiple items on pallet that belong to multiple billing groups, the pallet will be multiple counted.	
12.	SERVICE_RECEIPT	acc_service_receipt_compute	Compute billable of receipts by number of receipts	
			Version 5.396.2 - Enhanced to compute by	
			1. (Number of) Order (Receipt)	
			2. (Number of Receipt) Line	
			 (Number of) Order Line (same as Line – added for backward compatibility) 	

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S/N0	CALCULATION METHODS	Stored Procedure Name	Details
			4. (Number of distinct) Item
			5. (Number of distinct) Item – Item Color
			6. Unit (quantity)
			This enhancement effectively redundant SERVICE_RECEIPT_ORDERLINE
			Version 5.398 and later – Enhanced to compute at UNIT level by
			1. Volume
			2. Weight
			3. Revenue Ton
			4. Location -
			a. Count of Locations
			5. PShelf
			a. Count of Locations that are defined as PSHELF
			6. Shelf
			a. Count of Locations that are defined as SHELF
			7. Racks
			a. Count of Locations that are defined with Storage system other than PSHELF or SHELF
			Method is also enabled for billing by Receipt Type
13.	SERVICE_WHOLE	acc_service_whole_compute	Computing WHOLE mandate that there is a WHOLE level defined in the Unit of Measurement hierarchy.
			The WHOLE level by definition is the level above the LOOSE or lowest level.
			The procedure computes the service against CHECK IN, PUTAWAY and PICKING.
			DESPATCH is enabled on 01 Dec 2008
			Compute billable by

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S/N0	CALCULATION METHODS	Stored Procedure Name	Details
			 Quantity Volume Weight Revenue Ton (Volume or weight, whichever is higher)
14.	SERVICE_WHOLE_LOOSE	acc_service_whole_loose_compute	Compute billable by logical WHOLE (cartons) and LOOSE (Unit)
		In 5.398 Build 723, this procedure is converted	WHOLE – computed number of logical full carton
		acc_service_pallet_whole_loose which is	LOOSE – computed remainder quantity after deducting full carton quantity
		designed as common procedure to handled PALLET & WHOLE and WHOLE & LOOSE	Note:
			WHOLE quantity is based on defined product $UOM-if$ flagged else based on second lowest level
			When using this, it is necessary to defined PALLET and WHOLE billable services using 2 bill codes. E.g. PICK_PLT and PICK_CTN
			In 5.396.2, the PALLET level is treated as WHOLE if an item has only 2 UOM level defined.
			Minimum Charge and Stepped Charging are not applicable with is option as they would not be apply correctly even though they are not disabled in the setup screen.
15.	SERVICE_WHOLE_LOW	acc_service_whole_lowest_compute	This method is a variation to the SERVICE_WHOLE in that the 2 nd lowest level is always treated as the WHOLE.
			This method will give the same result as SERVICE_WHOLE if none of the items has their UOM type flagged as WHOLE.
			Method is provided to meet situation where some service is charged at lowest WHOLE while other is charge as specified WHOLE at the same time.
	C.1.1. Obsoleted Billing Options		
	The following billing options are obsoleted in Build 819.		
	1. The options are replaced by the enhanced SERV	ICE_RECEIPT procedures:	
	a. service_non-return_receipt		

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- **b.** SERVICE_NON-RETURN_RECEIPT_ORDERLINE
- **C.** SERVICE_RECEIPT_ORDERLINE
- d. service_return_receipt
- **e.** SERVICE_RETURN_RECEIPT_ITEM
- f. service_return_receipt_orderline
- 2. The options below are replaced by SERVICE_DELIVERY
 - a. SERVICE_ORDERLINE

Their procedures are retained to facilitate backward compatibility.

However, they will no longer be maintained or enhancement.

Any redefinition of existing quotations that have been using the above methods will need to be redefined using the replace options.

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CR()STAL WAREHOUSE MANAGEMENT System

C.2. Storage Services Computation

Please see Notes below when deciding on the options

S/N0	CALCULATION METHODS	Stored Procedure Name	Details
1.	ACCRUAL_STORAGE_LOCATION	acc_storage_location_accurred_compute	Compute by Location Accrued
2.	ACCRUAL_STORAGE_LOOSE	acc_storage_loose_accurred_compute	Compute by Whole Accrued
3.	ACCRUAL_STORAGE_NONSTD	acc_storage_phy_plt_accurred_compute	Compute by Non Standard Packing Accrued
4.	ACCRUAL_STORAGE_PALLET	acc_storage_pallet_accurred_compute	Compute by Logical Pallet Accrued
5.	ACCRUAL_STORAGE_PHY_PALLET	acc_storage_nonstd_accurred_compute	Compute by PHYSICAL Pallet Accrued When billing by VOLUME, WEIGHT or REVENUE TON, if there is multiple items on the pallet, then the average is used as the biking quantity
6.	ACCRUAL_STORAGE_WHOLE	acc_storage_whole_accurred_compute	Compute by Loose Accrued
7.	ADVANCED_STORAGE_LOCATION	acc_storage_location_advanced_compute	Compute by Location Advanced
8.	ADVANCED_STORAGE_LOOSE	acc_storage_loose_advanced_compute	Compute by Whole Advanced
9.	ADVANCED_STORAGE_NONSTD	acc_storage_nonstd_advanced_compute	Compute by Non Standard Packing Advanced
10.	ADVANCED_STORAGE_PALLET	acc_storage_pallet_advanced_compute	Compute by Logical Pallet Advanced
11.	ADVANCED_STORAGE_PHY_PALLET	acc_storage_phy_plt_advanced_compute	Compute by PHYSICAL Pallet Advanced When billing by VOLUME, WEIGHT or REVENUE TON, if there is multiple items on the pallet, then the average is used as the biking quantity
12.	ADVANCED_STORAGE_WHOLE	acc_storage_whole_advanced_compute	Compute by Loose Advanced
13.	ANNIVERSARY_STORAGE_LOCATION	acc_storage_location_anniversary_compute	Compute by Location Anniversary
14.	ANNIVERSARY_STORAGE_LOOSE	acc_storage_loose_anniversary_compute	Compute by Loose Anniversary
15.	ANNIVERSARY_STORAGE_NONSTD	acc_storage_nonstd_anniversary_compute	Compute Non-Standard Packing Anniversary by Transaction Date
16.	ANNIVERSARY_STORAGE_PALLET	acc_storage_pallet_anniversary_compute	Compute by Pallet Anniversary



CR()STAL	Warehouse Management System

S/N0	CALCULATION METHODS	Stored Procedure Name	Details
17.	ANNIVERSARY_STORAGE_PHY_PALLET	acc_storage_phy_plt_anniversary_compute	Compute by PHYSICAL Pallet Anniversary When billing by VOLUME, WEIGHT or REVENUE TON, if there is multiple items on the pallet, then the average is used as the biking quantity
18.	ANNIVERSARY_STORAGE_WHOLE	acc_storage_whole_anniversary_compute	Compute by Whole Anniversary
19.	AVERAGE_STORAGE_LOCATION	acc_storage_location_average_compute	Compute by Location AVERAGE Stock Balance
20.	AVERAGE_STORAGE_LOOSE	acc_storage_loose_average_compute	Compute by Loose AVERAGE Stock Balance
21.	AVERAGE_STORAGE_PALLET	acc_storage_pallet_average_compute	Compute by Logical Pallet AVERAGE Stock Balance
22.	AVERAGE_STORAGE_PHY_PALLET	acc_storage_phy_plt_average_compute	Compute by PHYSICAL Pallet AVERAGE Stock Balance
23.	AVERAGE_STORAGE_WHOLE	acc_storage_whole_average_compute	Compute by Whole AVERAGE Stock Balance
24.	MAXIMUM_STORAGE_PALLET	acc_storage_maximum_compute	Compute by Maximum Pallet Logical Physical
25.	STRAIGHT_STORAGE_LOCATION	acc_storage_location_straight_compute	Compute by Location Straight Stock Balance
26.	STRAIGHT_STORAGE_LOOSE	acc_storage_loose_straight_compute	Compute by Loose Straight Stock Balance
27.	STRAIGHT_STORAGE_PALLET	acc_storage_pallet_straight_compute	Compute by Logical Pallet Straight Stock Balance
28.	STRAIGHT_STORAGE_PHY_PALLET	acc_storage_phy_plt_straight_compute	Compute by PHYSICAL Pallet Straight Stock Balance When billing by VOLUME, WEIGHT or REVENUE TON, if there is multiple items on the pallet, then the average is used as the biking quantity
29.	STRAIGHT_STORAGE_WHOLE	acc_storage_whole_straight_compute	Compute by Whole Straight Stock Balance

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C.2.1. Storage Option comparison

			V	Veek 1	1					V	Veek 2	2					V	Veek	3		
Date	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Inbound		100			50			200		100			89				500				
OutBound			20			50			100			60			200				300		
Stock	0	100	80	80	130	80	80	280	180	280	280	220	309	309	109	109	609	609	309	309	309
Accured								150							469						
Advanced	0							230							698						
Straight	0							80							309						
Straight + Receipt	0	100			50			280		100			89		309		500				
Max Stock	0							130							309						
Average								40							295						
Anniversary		100			50			200	30	100			89		120		520				
		100							20												
		100			50				30			0									
								200							120						
										100							20				
													89							0	
																	500				
Cumulative																					
Accured		0	0	0	0	0	0	150	150	150	150	150	150	150	619	619	619	619	619	619	619
Advanced		0	0	0	0	0	0	230	230	230	230	230	230	230	928	928	928	928	928	928	928
Straight		0	0	0	0	0	0	80	80	80	80	80	80	80	389	389	389	389	389	389	389
Straight + Receipt		100	100	100	150	150	150	430	430	530	530	530	619	619	928	928	1428	1428	1428	1428	1428
Max Stock		0	0	0	0	0	0	130	130	130	130	130	130	130	439	439	439	439	439	439	439

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C.2.2. Notes

- 1. Storage Computation by Physical Pallet (..PHY_PLT) disregards stocks in locations for which the Storage (system) is defined as BINS, PSHELF and SHELF.
 - a. This locations by definition are not full pallet locations and thus deemed not be holding any pallet
- 2. For Straight Storage, when the billing period is WEEKLY (calendar week), the start day is always Monday and ending next Sunday.
 - a. If the specified date range does not start on a Monday, the start day for the first billing week will the first Monday in the billing period.
- 3. For storage billing by PSHELF, this is applicable only if the location address is based on CRiSTAL convention of AABBLLSS where
 - a. AA aisle or row id
 - b. BB Bay number
 - c. LL Racks Level
 - d. SS pallet Slot

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Appendix D. BILLING REPORTS

A number of billing reports are made available in the system to meet the needs of different operations:

- 1. By transaction reference
- 2. By Billing Group
- 3. By lot number

Below is sample of the by transaction reference:

D.1. Sample of Billing Activities (By Reference)

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/49 Ipha Iang HAJ	Samakkee Pra avadee Rangs ikok ILAND 10210 i ble Activiti e	kanphai Buildin sit Tungsongho es (by Refere	g ngLakSi ence) from ()1 Jan 2007 to 3	1 Mar 2007	те	Biling Reference : 00000012 Date : 2007-02-05 Quotation Ref : Payment Term : Ourrency : SGD Page : 1 of 58							
/ No	Ref #	Billing Date	Trx Date	Client Ref	Billing Group	Service Billing Code	Product Code	Item Qty	Billable Qty	Grade Type	PRF**	Unit	Rate	A mo unt
	GLC000001	2007-02-05	09-02-2007	TEST	DEFAULT	HANDLING IN	СНТ-1650	30.00	30,00000	NON+BONDE	1.00	PC	5.000	150.00
	GLC000001	2007-02-05	09-02-2007	TEST	DEFAULT	HANDLING IN	UHE-5028	20.00	20,00000	NON-BONDE	1.00	PC DC	5.000	100.00
	GLC00001	2007-02-09	09-02-2007		DEFAULT	E	CHI-1650	30.00	30,00000	NUMBONDE	1.00	PC -	2,500	75.00
	GLC00001	2007-02-10	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	CHT-1650	30.00	30,00000	NON-BONDE	1.00	PC	2.500	75.00
	GLC000001	2007-02-11	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	СНТ-1650	30.00	30.00000	NON-BONDE	1.00	PC	2.500	75.00
	GLC000001	2007-02-12	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	СНТ-1650	30.00	30.00000	NON-BONDE	1.00	PC	2.500	75.00
	GLC000001	2007-02-13	09-02-2007	TEST	DEFAULT	E STORAGE_AMBIANC	CHT-1650	30.00	30,00000	NON-BONDE	1.00	PC	2.500	75.00
	GLC000001	2007-02-14	09-02-2007	TEST	DEFAULT	E STORAGE_AMBIANC	СНТ-1650	30.00	30.00000	NON-BONDE	1.00	PC	2.500	75.00
	GLC000001	2007-02-15	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	СНТ-1650	30.00	30.00000	NON-BONDE	1.00	PC	2,500	75.00
D	GLC000001	2007-02-16	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	СНТ-1650	30.00	30,00000	NON-BONDE	1.00	PC	2.500	75.00
1	GLC00001	2007-02-17	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	CHT-1650	30.00	30,00000	NON-BONDE	1.00	PC	2.500	75.00
2	GLC000001	2007-02-18	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	CHT-1650	30.00	30.00000	NON-BONDE	1.00	PC	2.500	75.00
3	GLC000001	2007-02-19	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	CHT-1650	30.00	30,00000	NON-BONDE	1.00	PC	2.500	75.00
6	GLC000001	2007-02-20	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	CHT-1650	30.00	30.00000	NON-BONDE	1.00	PC	2.500	75.00
5	GLC000001	2007-02-21	09-02-2007	गडा	DEFAULT	STORAGE_AMBIANC	СНТ-1650	30.00	30,00000	NONBONDE	1.00	PC	2.500	75.00
6	GLC00001	2007-02-22	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	СНТ-1650	30.00	30.00000	NON-BONDE	1.00	PC	2.500	75.00
7	GLC000001	2007-02-23	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	CHT-1650	30.00	30,00000	NON-BONDE	1.00	PC	2.500	75.00
8	GLC000001	2007-02-24	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	CHT-1650	30.00	30.00000	NON-BONDE	1.00	PC	2.500	75.00
•	GLC000001	2007-02-25	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	СНТ-1650	30.00	30.00000	NON-BONDE	1.00	PC	2.500	75.00





2/4 Samakkee Pr Jphavadee Rang Jangkok IHAILAND 1021(Sillable Activit i	akanphai Buildin Isit Tungsongho) i es (by Refere	ig ingLakSi ence)from (01 Jan 2007 to 3	1 Mar 2007	т	IST	Biling Refere Date Quotation Re Payment Ten Qurrency Page	3				
5/No Ref #	Billing Date	Trx Date	Client Ref	Billing Group	Service Billing Code	Product Code	Item Qty	Billable Qty Grade Type	PRF**	Unit	Rate	A mo unt
33 GLC00002	2007-03-26	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	UHE-5373	30.00	30,00000 NON+BONDE	1.00	PC	2,500	75.00
34 GLO00002	2007-03-27	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	UHE-5373	30.00	30,00000 NON-BONDE	1.00	PC	2.500	75.00
35 GLO00002	2007-03-28	09-02-2007	TEST	DEFAULT	E STORAGE_AMBIANC	UHE-5373	30.00	30,00000 NON-BONDE	1.00	PC	2.500	75.00
36 GLO00002	2007-03-29	09-02-2007	TEST	DEFAULT	E STORAGE AMBIANC	LHE-5373	30.00	30,00000 NON-PONDE	1.00	PC	2,500	75,00
17 CLO00002	2007 02 20	09.02.2007	TEST	DEEALLT		146 5 373	20.00		1.00	 DC	3 500	75.00
s/ GLC00002	2007-03-30	03-02-2007				0	50.00	30.00000 1434480482	1.00	PC	2,500	/5,00
38 GLO00002	2007-03-31	09-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	UHE-5373	30.00	30,00000 NON-BONDE	1.00	PC	2.500	75.00
GLC00002		2007-03-31	TEST		Reference Total: GLO 0	0002		1,020.00000				2,625.00
39 GLO00003	2007-02-05	10-02-2007	TEST	DEFAULT	HANDLING IN	UHE-5028	20.00	20,00000 NON-BONDE	1.00	PC	5.000	100.00
40 GLC00003	2007-02-10	10-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	UHE-5028	20.00	20,00000 NON-BONDE	1.00	PC	2,500	50.00
41 GLO00003	2007-02-11	10-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	UHE-5028	20.00	20.00000 NON-BONDE	1.00	PC	2.500	50.00
GLC000003		2007-02-11	TEST		Reference Total: GLO 0	0003		60.00000				200.00
42 GLC00004	2007-02-12	12-02-2007	TEST	DEFAULT	HANDLING IN	PROD002	30.00	30.00000 NON-BONDE	1.00	PC	5.000	150.00
43 GLO00004	2007-02-12	12-02-2007	TEST	DEFAULT	HANDLING IN	UHE-5028	50.00	50.00000 NON-BONDE	1.00	PC	5.000	250.00
44 GLC00004	2007-02-12	12-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	30.00	30,00000 NON-BONDE	1.00	PC	2,500	75.00
45 GLO00004	2007-02-13	12-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	30.00	30,00000 NON-BONDE	1.00	PC	2.500	75.00
46 GLO00004	2007-03-01	12-02-2007	TEST	DEFAULT	E STORAGE_AMBIANC	PROD002	30.00	30,00000 NON-BONDE	1.00	PC	2.500	75.00
47 GLC00004	2007-02-28	12-02-2007	TEST	DEFAULT	E STORAGE_AMBIANC	PROD002	30.00	30,00000 NON-BONDE	1.00	PC	2.500	75.00
48 GLO00004	2007-02-27	12-02-2007	TEST	DEFAULT	E STORAGE AMBIANC	PROD002	30.00	30,00000 NON-BONDE	1.00	PC	2.500	75.00
49 GLO00004	2007-02-26	12-02-2007	TEST	DEFALLT	E STORAGE AMBIANC	PROD002	30.00	30,00000 NON-PONDE	1.00	PC	2,500	75,00
50 GLO00004	2007-02-22	12-02-2007	TEST	DEFALLT	E STORAGE_AMBIANC	PROD002	30.00	30,00000 NON-BONDE	1.00	PC	2.500	75.00





LNTED HOME ENTERTAINMENT CO., LTD 2/4 Samakkee Prakanphai Building Whavadee Rangsit Tungsonghong Lak Si Bangkok THAILAND 10210 Billable Activities (by Reference) from 01 Jan 2007 to 31 Mar 2007					ТЕ	TEST				Biling Reference : Date : 2003 Quotation Ref : Payment Term : Qurrency : Page :			: 00000012 7-02-12 : : SGD : 57 of 58			
/No Ref #	Billing Date	Trx Date	Client Ref	Billing Group	Service Billing Code	Product Code	Item Qty	Billable Qty	Grade Type	PRF**	Unit	Rate	A mo unt			
62 KGR0000045	2007-02-12	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
63 KGR0000045	2007-02-11	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
64 KGR0000045	2007-02-10	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
65 KGR0000045	2007-02-09	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
66 KGR0000045	2007-02-07	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
67 KGR0000045	2007-02-08	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON+BONDE	1.00	PC	2.500	125.00			
68 KGR0000045	2007-01-30	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
69 KGR0000045	2007-01-31	02-02-2007	TEST	DEFALLT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
70 KGR0000045	2007-02-01	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON+BONDE	1.00	PC	2.500	125.00			
71 KGR0000045	2007-02-02	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
72 KGR0000045	2007-02-03	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
73 KGR0000045	2007-02-04	02-02-2007	TEST	DEFALLT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
74 KGR0000045	2007-02-05	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON+BONDE	1.00	PC	2.500	125.00			
75 KGR0000045	2007-02-06	02-02-2007	TEST	DEFAULT	STORAGE_AMBIANC	PROD002	50.00	50.00000	NON-BONDE	1.00	PC	2.500	125.00			
KGR00000 45		2007-02-06	TEST		Reference Total: KGR00	100045		20,731.00000					52,702.50			
									UNITED 101	AL:		35	2,745.00			



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