

Cello How-To Guide

Cello Billing

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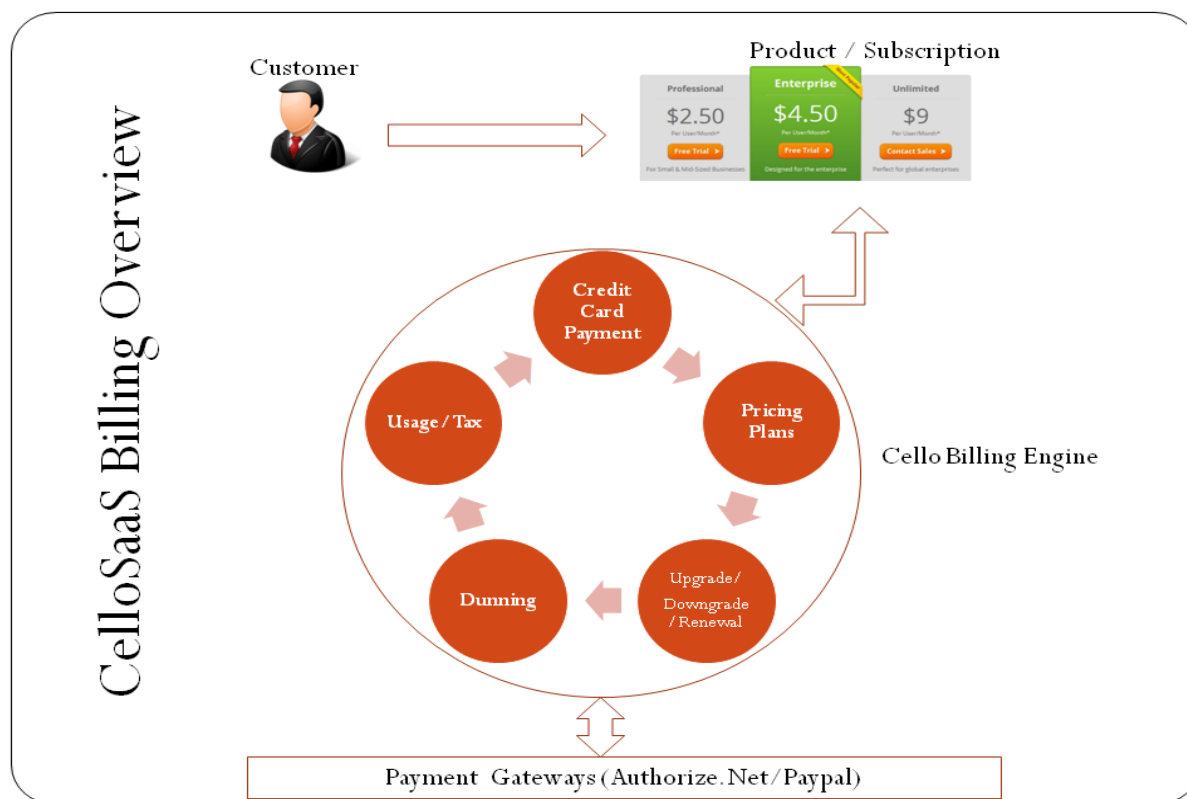
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1 Introduction to Cello Billing

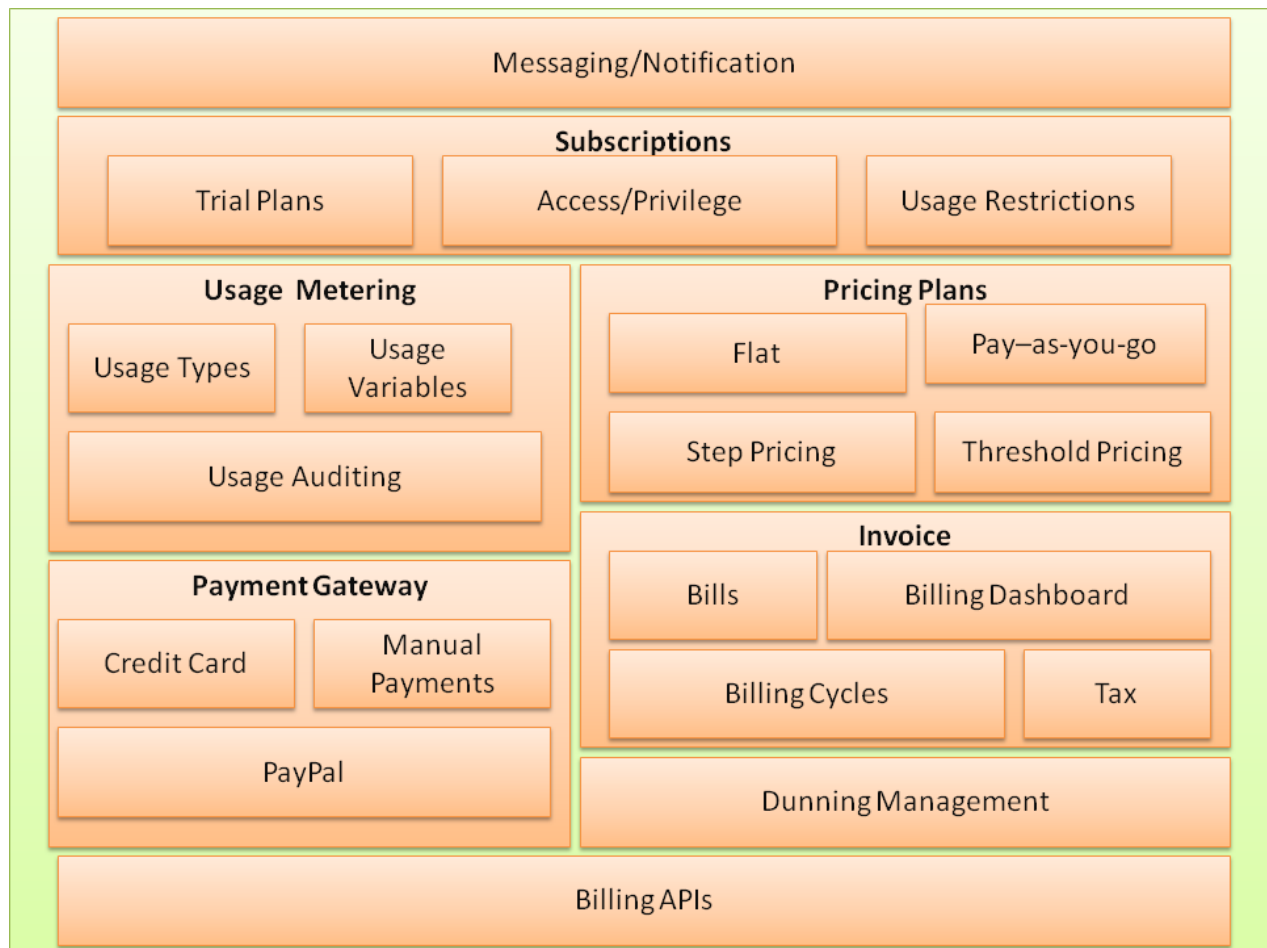
CelloSaaS Billing Engine is a standalone module that takes care of all the billing and invoicing needs of any Subscription based businesses. Cello automates the process of raising the invoices based on the frequencies set by the product owner, bill the customer based on the usage, apply taxes, Automatic Payment Collection, Notification etc. This document briefly covers the various components of CelloSaaS Billing Engine in detail.



CelloSaaS Billing Module Overview

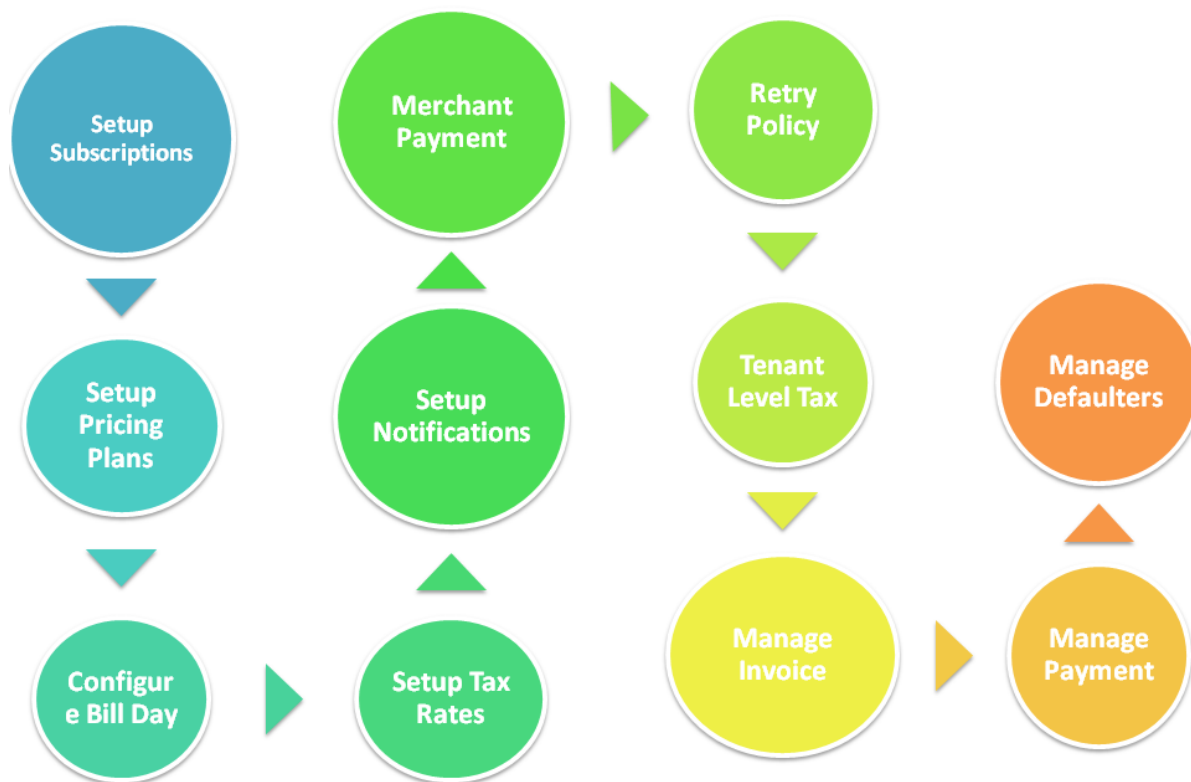
Although, Billing Engine is a standalone module, it works well with other features such as Subscription and Tenant Management features of Cello. Billing Engine is integrated with Subscription module of Cello by default, i.e. when a subscription plan is created, it can be simply hooked with billing plan to raise invoice based on the frequency set by the Product owner.

1.1 Components of Cello Billing Engine



1.2 CelloSaaS Billing Overview

Below are the step by step processes to enable Billing with CelloSaaS.



- Step 1: Setup Subscriptions, [Refer here](#).
Step 2: Setup Pricing Plans, [Refer here](#).
Step 3: Configure the Bill Day, [Refer here](#).
Step 4: Setup General Tax Rates, [Refer here](#).
Step 5: Setup Notifications Template, [Refer here](#).
Step 6: Configure Merchant Payment Settings, [Refer here](#).
Step 7: Configure Payment Retry, [Refer here](#).
Step 8: Configure Tenant Tax Rates, [Refer here](#).
Step 9: Manage Invoice, [Refer here](#).
Step 10: Manage Payment, [Refer here](#).
Step 11: Manage Defaulters, [Refer here](#).

1.3 Introduction to Subscription Management

Refer " [Subscriptions Management](#) " document.

1.4 Introduction to Pricing Management

Refer " [Pricing Plans](#) " document.

1.5 Introduction to Usage Variables

Refer “Usage Variables” document.

2 Taxing

CelloSaaS simplifies the process of applying tax components in the Invoices. Cello supports general tax as well as Tenant Specific Taxes. Using general Tax Policies, Product Owners can simply set the general taxes in one place and have it applied for the entire Tenants invoice globally. Cello takes the tax input in % and calculates the tax based on the invoice cost and applies the same on the final invoice.

Default Taxes are applied to all the Tenants in the system (exempted only when the Tenant has its own Tax rules defined while on boarding).

2.1 Configure General Tax Rates

Navigate to Admin >> Subscription >> Tax Rates

CelloSaaS

admin@company.com | Change Tenant

My AccountSubscriptionTenantAccess ControlConfigurationBusiness EventsNotificationsWorkflowReportingMonitor

Setup Default Tax Rates

CancelSave

Description

Default taxes

Name	Description	Percentage	Order	
VAT 4%	VAT 4%	4%	0	

Add

Setup Default Rates

Click on Add button to add as many line items as the product needed.

CelloSaaS

admin@company.com | Change Tenant

My AccountSubscriptionTenantAccess ControlConfigurationBusiness EventsNotificationsWorkflowReportingMonitor

Setup Default Tax Rates

CancelSave

Description

Default taxes

Name	Description	Percentage	Order	
VAT 4%	VAT 4%	4%	0	
CST 3%	CST 3%	3%	1	
PST 5%	PST 5%	5%	2	
EST 1%	EST 1%	1%	3	

Add

Setup Default Rates

2.2 Tax Ordinals

While adding taxes, specify the order in which the taxes should be applied (refer the above screen). To understand the significance of the ordinals refer the below example.

With reference to the above Screenshot, the invoice and tax calculation will be as follows,

		Significance of Ordinals
Base Subscription Cost (Basic Plan)	99 \$	
Total	99\$	
Tax - 4%	3.96 \$	0 – When the ordinal set as , the tax calculation will be simply based on the base cost i.e. 99\$
Total (Base Cost + Vat)	102.96\$	
CST -3%	3.08	1 – When set to 1 refers the cumulative total of base cost + 0 th ordinal cost and calculates the tax based on the accumulated number. i.e. 102.96
Total (Base Cost + Vat + CST)	106.04	
PST -5%	5.30	2 – When set to 2 the tax will be calculated on the cumulative total of base cost + 0 th ordinal cost + 1 st Ordinal cost i.e. 102.96
Total (Base Cost + Vat + CST + PST)	111.34	
EST -1%	1.11	3 – When set to 3 the tax will be calculated on the cumulative total of base cost + 0 th ordinal cost + 1 st Ordinal cost + 2 nd Ordinal cost i.e. 102.96
Total (Base Cost + Vat + CST + PST + EST)	111.34	
Grand Total	111.34\$	

Once the General Tax is configured, whenever an invoice is generated by the Cello Billing Engine these General Tax components will be automatically applied as part of the invoice.

Note: Although it is meant specifically for Taxing, but you can also configure other components which may or may not be tax, but needs to be applied for all customers (Refer below Screenshot).

CelloSaaS

Company

address
state
United States - 12345

+1 (234) 56 89 90
admin@company.com

INVOICE

July 05, 2008
Invoice no#97
Period: 6/1/2008 - 7/1/2008

Acme Corp

Address
State
Qatar - 21597

+1-903-766-2159
belva.majewski@techcello1.com

Details		
Item Name	Description	Amount
Basic Package - Basic Plan	Period: 6/1/2008 12:00 AM to 7/1/2008 12:00 AM	\$149.00
Sub Total		\$ 149.00

Taxes		
Item Name	Description	Amount
VAT 4.0%	General Tax	\$5.96
Sub Total		\$5.96
Net Amount		\$154.96

Payments

+ Add Payment

No payments made so far!

Notes

Invoice

2.3 Configure Tenant Specific Tax

For Tenants where the general Tax Policies are not applicable, Ex: A Tenant from Italy is subscribed to a product, but the product is configured only with US Taxing Policy as general policy. In such cases, it is recommended to set tenant specific Tax Policies.

Tenant specific Tax policies can be set while creating the Tenants via Tenant Management Module.

Navigate to Admin>> Manage Tenants >> Add Tenant

How-To – Cello Billing Management

CelloSaaS

admin@company.com | Change Tenant

My Account

Subscription

Tenant

Access Control

Configuration

Business Events

Notifications

Workflow

Reporting

Monitor

Add Tenant

Cancel

Save

Tenant Details

Tenant Code String *

Tenant Name *

Description

Website

URL

Tenant Types *

SMB

Auto Debit

☐

Data Partition *

Default

Company Size *

--Select--

Billing Address

If any field for Billing Address is filled in, the mandatory check will be enforced.

Address *

City *

State *

Country *

--Select Country--

Postal Code

Contact Details

If any field for Contact Details is filled in, the mandatory check will be enforced.

First Name *

Last Name *

Phone *

Fax

Contact Email *

Country

-- Select --

Tenant Admin User Details

First Name *

Last Name

User Name *

Tenant Admin Email

Package Settings

Package *

--Choose A Package--

Price Plan

--Choose a plan--

Subscription Start Date *

11/5/2013

Subscription End Date

Trial End Date

Number of Users

Tax Rate

Description

Default taxes

Name	Description	Percentage	Order	
VAT 4%	VAT 4%	4 %	0	

+ Add

Cancel

Save

v 4.3.1.0

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Setup Tax Policies While creating a Tenant

Note: Tenant specific Tax Policies takes higher priority than General Tax Policies, hence General Taxes are voided.

3 Billing Cycles

The billing cycle is the period of time between billings. For instance for the monthly cycle, if the billing cycle starts on the 1st day of the month then it will end by 30th or 31st day of the month (depends on the calendar). During the billing cycle the product consumption charges are posted to the Tenant Invoice (based on the pricing plan, Refer [Pricing Plan](#)). At the end of the billing cycle, the tenant will be billed for all unpaid charges during the billing cycle.

Example

If a Subscriber, started an account on 1st May, his/her Billing Cycle would be between 1st May to 31st May, but if a Tenant starts an Account by 15th May, then the Billing Cycle would be between 15th May to 15th June.

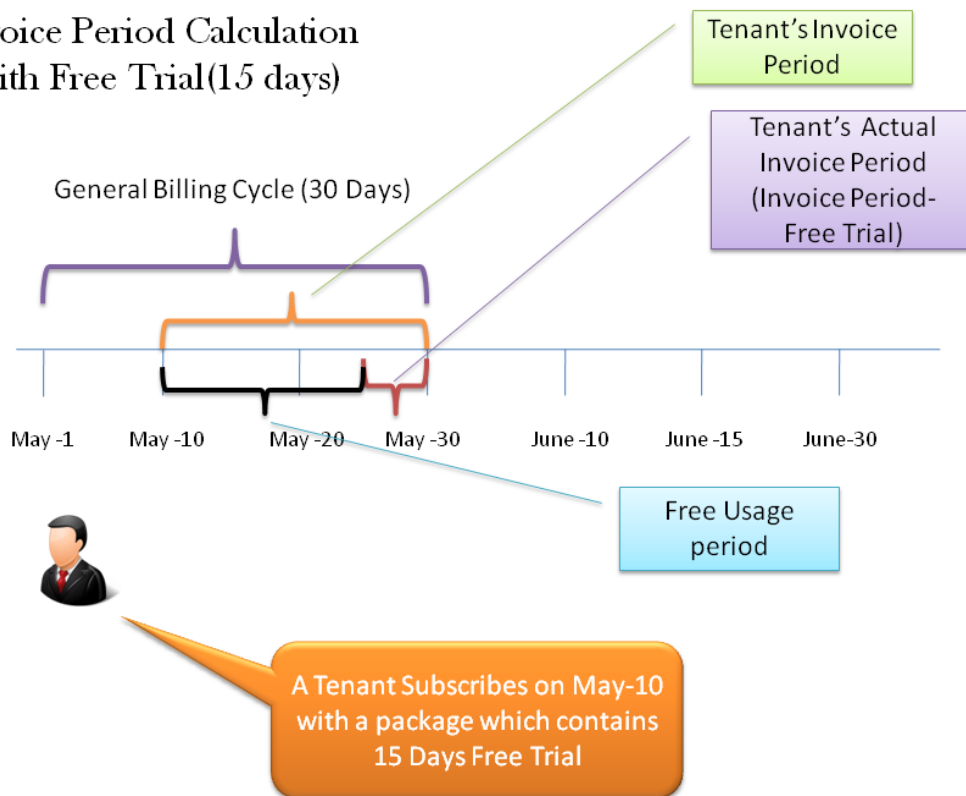
If the product's billing cycle is 1st-30th but if a tenant subscribed on 15th, then the customer will only be invoiced for the 15 days and not for the full month and for the forthcoming bills the product's general billing cycle will be followed.

Note: Billing Cycles are always global for the entire product and not specific to the individual Tenants.

3.1 Billing Cycle and Free Trial Period

Product Owners can create Subscriptions plans with Free Trial Period; refer [Subscription Management](#), for example when purchasing a basic package the tenant may get 15 Days free usage. Below Image shows the Invoice Period Calculation. Refer ([How to create Subscription Plans with Free Trial Period.](#))

Invoice Period Calculation with Free Trial(15 days)



Note:

- Cello v 4.3.1 supports only monthly billing cycle.
- Bill Day is global across all tenants irrespective of the tenant types.

3.2 Billing Start Date

Billing or Charging Dates is set only at the global Level and there is no provision for individual tenants to change the date as per their need.

By Default, Cello set 1st of every month as billing start day and considers 30 or 31st as the Billing End Day for monthly frequency and 90 days for Quarterly etc. In case if you want to set every month 15th to the following month 15th to be the billing period, then you must set the start date as 15 and the end date is automatically calculated by the system based on the frequency i.e. Monthly, Quarterly etc.



Customize Billing Periods

Bill Frequency	Start Day	Charge Day	Edit
Monthly	1	5	
Quarterly	1	5	
Semiannual	1	5	
Annual	1	5	

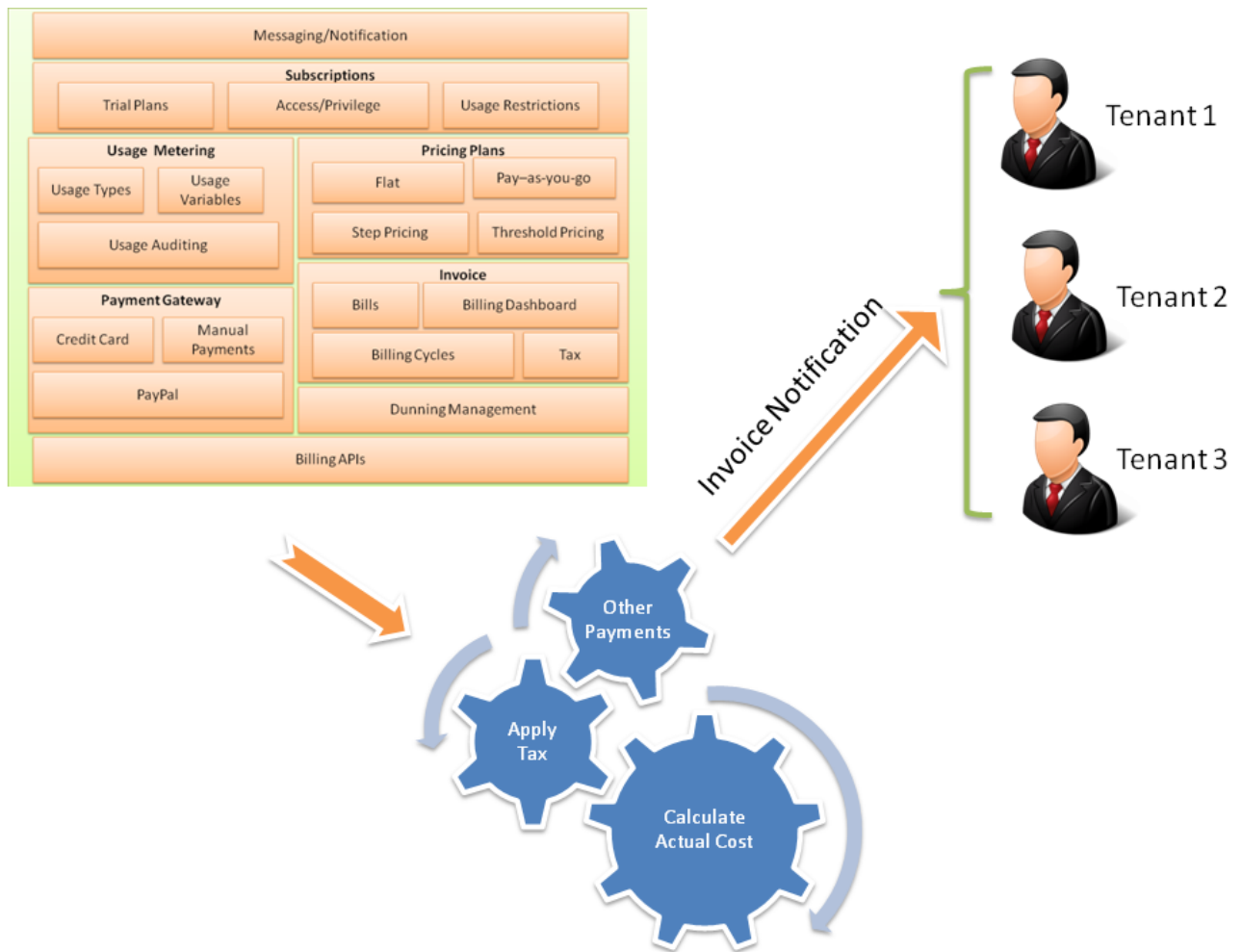
3.3 Billing Charge Day

Billing Charge date denotes the day of the month on which the bill has to be generated. For example, the monthly billing when set to 20th, the billing engine will raise invoice for all the customers on the configured day who have chosen Monthly Billing.

4 Invoice Generation

An invoice is a statement which shows actual charges, tax, and payments altogether. When a subscription is created or renewed, the billing engine will sum the charges, discount or tax as appropriate, and send the invoice out for collection. The Application subscribers are notified of successful or failed invoice collection via email.

Note: CelloSaaS Billing Engine will raise 0\$ invoice for Trial Customers with Monthly billing Cycles.



4.1 Components of Invoice

By default, an invoice document will contain the following information:

1. Product Logo
2. Product Owner Address
3. Tenant Address
4. Invoice Number
5. Tenant Billing Address
6. Charge Details
 - a. Flat cost or Pay as you go Cost
 - b. Tax
 - c. Any other Additional Cost

7. Tax , Pervious Payment Made, Notes


Company
address
state
United States - 12345

☎ +1 (234) 56 89 90
✉ admin@company.com

INVOICE
September 05, 2013
Invoice no#1296
Period:8/1/2013 - 9/1/2013

Extensive Enterprise
Address
State
Korea, Democratic People'S Republic Of - 76901

☎ +1-114-534-7689
✉ chery.hockman@techcello1.com

Details		
Item Name	Description	Amount
Starter Package - Starter Plan	Period: 8/1/2013 12:00 AM to 9/1/2013 12:00 AM	\$499.00
Sub Total		\$499.00

Taxes

ⓘ No tax components available!

Total\$499.00

Payments

ⓘ No payments made so far!

Notes

Sample Invoice

Replace this image with some proper data

4.2 Invoice Status

Depends upon the stage of the invoices, it passes through the various statuses, they are

Current

An Invoice that are pending for collection. Application has not yet received payments for the current month invoices.

Unpaid

Invoices that attempted collection, but payment failed. These invoices will be retried automatically through the dunning process.

Paid

Successfully collected invoice.

4.2.1 How is the final Invoice amount calculated

The Final invoice amount is calculated based on the Subscription Plan and Pricing Plan opted by the Tenant as well as the general or Tenant level tax and Additional component if any,

For Example

Base Subscription Cost (Basic Plan)	99 \$
Additional Usage Cost (Step Pricing Plan)	150\$
Total	249\$
Tax - 4%	9.96\$
Grand Total	258.96\$

4.3 Invoice Pro-Ration

Using Cello's Subscription Management Module, Tenants can be allowed to either upgrade or downgrade their subscription plan at any point of time. Cello Billing management system takes care of automated customer communications, proration of payments, as well as the management of billing for each customer according to their plan.

You may have to prorate the charges if you or the customer decided to end the account early during the billing period. Prorating is the process of calculating the service charge by day to determine the total fee for that billing period. It is a partial charge for services.

How-To – Cello Billing Management

Refer [here](#) to under the procedure for upgrading / downgrading the Subscription Plan.

Let us look at a few examples on how proration is determined.

Step1: Determine the total cost for the period and the number of days in that Billing Cycle. For instance, if the Tenant's bill is \$200 monthly, Cello billing engine takes the number of days in that particular month. Use 30 days in the month of June, for an example.

Step2: Divide the total fee for the period by the number of days in the month. In this example the result is \$200 divided by 30, or \$6.67 per day.

Step 3: Determine how many days in that period the customer didn't use the service. Say, for example, the customer cancelled the service after 16 days of use in the previous month --- that means he requires a service credit for 14 days.

Step4: Multiply the number of days the customer did not use the service by the per-day prorated rate. So in this example, that is 14 days times \$6.67, or \$93.38.

Step5: Add a line to the service invoice crediting this fee to the customer (for instance, "-93.38"). Deduct it from the full charge for the month, which is \$200, to determine the final invoice balance for the previous month, of \$106.62.

Step6: Notates the invoice with a description of the deduction to clarify the purpose of the credit. For instance, "Prorated credit for 14 days --- June 17-30."

Example Scenarios

Scenario 1: Downgrading a plan with proration

Current Plan: \$99/Month
Current Billing Period: 1 Jun 2013 to 1 July 2013
Downgraded On: 15 Jun 2013
Per Day Cost [As per Current Plan] = $\$99 / 30 = \$ 3.3$ Per Day
Prorated Cost = $15 * 3.3 = \$49.50$

New Plan: \$49/Month
Service Used: 15 days
Per Day Cost [As per new Plan] = $\$49 / 30 = \$ 1.6$ Per Day
Prorated Cost = $15 * 1.6 = \$24.50$
Total Cost = \$ 74

Scenario 2: Upgrading a plan with proration

Current Plan: \$49/Month

Current Billing Period: 1 Jun 2013 to 1 July 2013

Downgraded On: 15 Jun 2013

Per Day Cost [As per Current Plan] = \$49 /30 = \$ 1.6 Per Day

Prorated cost = 15 * 1.6= \$ 24.50

New Plan: \$99/Month

Service Used: 15 days

Per Day Cost [As per new Plan] = \$99 /30 = \$ 3.3 Per Day

Prorated Cost = 15* 3.3= \$49.50

Total Cost = \$ 74

Scenario 3: Pro-rata on account cancelation

Plan: \$99/monthly

Current Billing Period: 1 Jun 2013 to 1 July 2013
















Cancelled On: Jun 15

Amount for Period Used: 15 days used x \$3.3/day

Pro-rata: \$49.50

In the event of upgrading/downgrading the subscription plans, email notification is automatically sent from the billing service. To change or update the email content, navigate to Admin >> Notifications>> Content Template >> look for “Tenant Subscription Changed Mail” and update the content.

Edit Template Details

Locale Name	en
Template*	<div><p>B <i>I</i> <u>U</u> abc x₂ x² T TT HI T               </p><p>Dear {{Tenant.ContactDetail.FirstName}} {{Tenant.ContactDetail.LastName}}, Your subscription {{TenantLicense.PackageName}} has be changed successfully.</p><p>Please login to the system for more information.</p><p>Regards, Product Admin]</p></div>

4.4 Invoice Manual Adjustments

There are chances some customers willing to pay offline instead of Online or auto debit. In such cases, the product administrator or the billing admin can manually mark the payment as received. Another use case for the manual adjustments is for refund cases, CelloSaaS billing Service doesn't facilitates to process refund money back to the customers, and instead the application administrator can make adjustments manually in the invoices once it is generated.

Adjustments can either be a fixed increase (debit) or decrease (credit) to the invoice. The details of a manual adjustment such as the amount, adjustment type and reason code are permanently stored within the Cello database. Any manual adjustments that exist for an invoice at the time the order is priced will always be applied. All manual adjustments are created as transient repository items and it is applicable only for the particular Invoice. Subsequent Invoice processing will not have any impact on the earlier manual adjustments.

Note: Email notifications will not be sent by default in the event of manual payments, but it can be programmed to send notifications on Manual payments.

4.4.1 How to make Adjustments in Invoice

Navigate to Admin >> Client Bills>>Select the Invoice>> Click on Edit

CelloSaaS admin@company.com | Change Tenant

My Account Subscription Tenant Access Control Configuration Business Events Notifications Workflow Reporting Monitor

Manage Child Bills

Tenant: Acme Corp Search

Account Summary			
Tenant Name	Acme Corp belva.majewski@techcello1.com +1-903-766-2159	Total Bills	90
Package Q View History	Use and Pay Package	Total Amount	\$12,556.76
Price Plan	Use & Pay Plan	Total Paid	\$0.00
Subscription Period	11/7/2013 4:50 AM	Overdue Amount	\$12,556.76

Current Bill Statement							Edit View Download
Previous Balance	Invoice No#	Bill Period	Invoice Date	Bill Amount	Total Amount Payable	Due Date	
\$12,556.76	1754	11/1/2013 - 12/1/2013	11/14/2013	\$34.99	\$12,591.75	12/5/2013	

Current Bill Charge Details			Previous Bills					
Item Name	Description	Amount	Invoice No#	Bill Period	Amount	Paid	Edit	View
Use and Pay Package - Use & Pay Plan	Period: 11/7/2013 4:50 AM to 12/1/2013 12:00 AM	\$0.00	1727	10/1/2013 - 11/1/2013	\$154.96	\$0.00	Edit	View
BillingInvoiceYTD	BillingInvoiceYTD	\$0.00	1702	9/1/2013 - 10/1/2013	\$154.96	\$0.00	Edit	View
Basic Package - Basic Plan	Period: 11/1/2013 12:00 AM to 11/7/2013 4:50 AM	\$30.80	342	8/1/2013 - 9/1/2013	\$149.00	\$0.00	Edit	View

Invoice Page

1. Select the particular Tenant from the Tenant List drop down.

How-To – Cello Billing Management

2. Look for the “Current Bill Statement” container
3. Click on the “Edit” icon on top of the container
4. Clicking on “Edit” will open the invoice in edit mode, refer the below screenshot

CelloSaaS admin@company.com | Change Tenant

My Account Subscription Tenant Access Control Configuration Business Events Notifications Workflow Reporting Monitor

Edit Invoice Cancel Save

CelloSaaS
Company

address
state
United States - 12345

+1 (234) 56 89 90
admin@company.com

INVOICE

November 14, 2013
Invoice no#1754
Period: 11/1/2013 - 12/1/2013

Acme Corp

Address
State
Qatar - 21597

+1-903-766-2159
belva.majewski@techcello1.com

Details		
Item Name	Description	Amount
Use and Pay Package - Use & Pay Plan	Period: 11/7/2013 4:50 AM to 12/1/2013 12:00 AM	\$0.00
BillingInvoiceYTD	BillingInvoiceYTD	\$0.00
Basic Package - Basic Plan	Period: 11/1/2013 12:00 AM to 11/7/2013 4:50 AM	\$30.80
Previous Adjustments	Previous Month Cost Adjustments	<input type="text" value="-15"/>
Add Line Item		
Sub Total		\$ 15.80

Taxes		
Item Name	Description	Amount
VAT 4%	VAT 4%	\$1.23
CST 3%	CST 3%	\$0.96
PST 5%	PST 5%	\$1.65
EST 1%	EST 1%	\$0.35
Tax Total		\$4.19
Net Amount		\$34.99

Edit Invoice (Manual Adjustments)

5. Update the Item Name, Description and Adjustment value (in usd \$\$).
6. Click on Save.
7. Once the Manual adjustment successfully updated, the invoice page will look like below.

How-To – Cello Billing Management

CelloSaaSadmin@company.com | Change Tenant

My Account

Subscription

Tenant

Access Control

Configuration

Business Events

Notifications

Workflow

Reporting

Monitor

Preview Invoice

BackEditPrintDownload

CelloSaaS
Company
address
state
United States - 12345

+1 (234) 56 89 90
admin@company.com

INVOICE
November 14, 2013
Invoice no#1754
Period:11/1/2013 - 12/1/2013

Acme Corp
Address
State
Qatar - 21597

+1-903-766-2159
belva.majewski@techcello1.com

Details

Item Name	Description	Amount
Use and Pay Package - Use & Pay Plan	Period: 11/7/2013 4:50 AM to 12/1/2013 12:00 AM	\$0.00
BillingInvoiceYTD	BillingInvoiceYTD Usage: BillingInvoiceYTD: 0 unit	\$0.00
Basic Package - Basic Plan	Period: 11/1/2013 12:00 AM to 11/7/2013 4:50 AM	\$30.80
Previous Adjustments	Previous Month Cost Adjustments	-\$15.00
	Sub Total	\$15.80

Taxes

Item Name	Description	Amount
VAT 4%	VAT 4%	\$0.63
CST 3%	CST 3%	\$0.49
PST 5%	PST 5%	\$0.85
EST 1%	EST 1%	\$0.18
	Tax Total	\$2.15
	Total	\$17.95

Payments

No payments made so far!

Notes

Please find the cost-breakdown for the services used. Please make payment at your earliest convenience, and do not hesitate to contact me with any questions.

Payment terms: to be received within 30 days.

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Invoice Page

4.5 Tenant Invoice

Tenant Invoice refers to the Invoice of an individual Tenant, when an invoice is generated by the Billing Engine for a Tenant; it is displayed under Admin>> My Account>>My Bills

Components of My Bills

Account Summary – Displays the detailed information about the package, total amount paid etc

Current Bills– Displays the current month bill details




Current Bill Charge Details– Displays the current month bill breakup details

Previous Bills– Displays all the previous month Bill details [Highlighted in Red are unpaid bills]

Bill Reports – Interactive Chart displays the bills charges

My Bills

Account Summary

Tenant Name	Acme Corp  belva.majewski@techcello1.com  +1-903-766-2159	Total Bills	90
Package  View History	Use and Pay Package	Total Amount	\$12,556.76
Price Plan	Use & Pay Plan	Total Paid	\$0.00
Subscription Period	11/7/2013 4:50 AM	Overdue Amount	\$12,556.76

Current Bill Statement









[View](#) [Download](#)

Previous Balance	Invoice No#	Bill Period	Invoice Date	Bill Amount	Total Amount Payable	Due Date
\$12,556.76	1754	11/1/2013 - 12/1/2013	11/7/2013	\$32.03	\$12,588.79	12/5/2013

Current Bill Charge Details

Item Name	Description	Amount
Use and Pay Package - Use & Pay Plan	Period: 11/7/2013 4:50 AM to 12/1/2013 12:00 AM	\$0.00
BillingInvoiceYTD	BillingInvoiceYTD	\$0.00
Basic Package - Basic Plan	Period: 11/1/2013 12:00 AM to 11/7/2013 4:50 AM	\$30.80
VAT 4%	VAT 4%	\$1.23

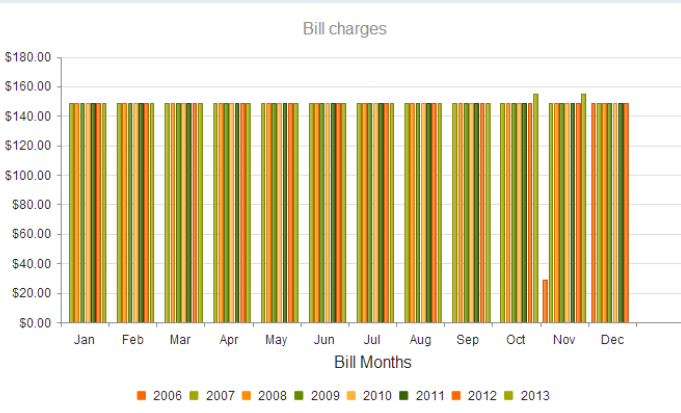
Previous Bills

Invoice No#	Bill Period	Amount	Paid	View
1727	10/1/2013 - 11/1/2013	\$154.96	\$0.00	
1702	9/1/2013 - 10/1/2013	\$154.96	\$0.00	
342	8/1/2013 - 9/1/2013	\$149.00	\$0.00	
337	7/1/2013 - 8/1/2013	\$149.00	\$0.00	
332	6/1/2013 - 7/1/2013	\$149.00	\$0.00	
328	5/1/2013 - 6/1/2013	\$149.00	\$0.00	
324	4/1/2013 - 5/1/2013	\$149.00	\$0.00	
320	3/1/2013 - 4/1/2013	\$149.00	\$0.00	
315	2/1/2013 - 3/1/2013	\$149.00	\$0.00	
311	1/1/2013 - 2/1/2013	\$149.00	\$0.00	

Show 10 entries Showing 1 to 10 of 90 entries

Bill Reports

Type: Column

Years: ☒ 2006 ☒ 2007 ☒ 2008 ☒ 2009 ☒ 2010 ☒ 2011 ☒ 2012
☒ 2013

Usage Statistics

Usage Name	Max Limit	Used	Remaining
BillingInvoiceAmount	UNLIMITED	0	UNLIMITED
BillingInvoiceYTD	UNLIMITED	0	UNLIMITED

4.6 Clients Invoices

Client Invoice Refers to collection of all the bills of the Tenants. This is generally available only for Product Administrators and Tenants who have sub Tenants under them especially in the Tenant Hierarchy Scenarios i.e Resellers, Enterprise Tenants etc

To View Client Bills, Navigate to Admin >> Subscription>> Client Bills

How-To – Cello Billing Management

CelloSaaS

admin@company.com | Change Tenant



Manage Child Bills

Tenant: Acme Corp Search

Account Summary			
Tenant Name	Acme Corp ✉ belva.majewski@techcello1.com ☎ +1-903-766-2159	Total Bills	90
Package Q View History	Basic Package	Total Amount	\$12,556.76
Price Plan	Basic Plan	Total Paid	\$0.00
Subscription Period	5/17/2006 12:00 AM	Overdue Amount	\$12,556.76

Current Bill Statement							✎ Edit 👁 View 📄 Download
Previous Balance	Invoice No#	Bill Period	Invoice Date	Bill Amount	Total Amount Payable	Due Date	
\$12,556.76	1754	11/1/2013 - 12/1/2013	11/6/2013	\$154.96	\$12,711.72	12/5/2013	

Current Bill Charge Details		
Item Name	Description	Amount
Basic Package - Basic Plan	Period: 11/1/2013 12:00 AM to 12/1/2013 12:00 AM	\$149.00
VAT 4%	VAT 4%	\$5.96

Previous Bills					
Invoice No#	Bill Period	Amount	Paid	Edit	View
1727	10/1/2013 - 11/1/2013	\$154.96	\$0.00	✎	👁
1702	9/1/2013 - 10/1/2013	\$154.96	\$0.00	✎	👁
342	8/1/2013 - 9/1/2013	\$149.00	\$0.00	✎	👁
337	7/1/2013 - 8/1/2013	\$149.00	\$0.00	✎	👁
332	6/1/2013 - 7/1/2013	\$149.00	\$0.00	✎	👁
328	5/1/2013 - 6/1/2013	\$149.00	\$0.00	✎	👁
324	4/1/2013 - 5/1/2013	\$149.00	\$0.00	✎	👁
320	3/1/2013 - 4/1/2013	\$149.00	\$0.00	✎	👁
315	2/1/2013 - 3/1/2013	\$149.00	\$0.00	✎	👁
311	1/1/2013 - 2/1/2013	\$149.00	\$0.00	✎	👁
Show 10 entries Showing 1 to 10 of 90 entries ⏪ 👁 1 2 3 4 5 ⏩					

Client Bills

4.7 Invoice Search

The application administrator can have a unified look of all the past invoices using Search Bills page.

Login as Product Administrator and Navigate to Billing >> Search Client Bills

CelloSaaSadmin@company.com | Change Tenant

My Account

Subscription

Tenant

Access Control

Configuration

Business Events

Notifications

Workflow

Reporting

Monitor

Search Bills

Filter

Tenant: All

Status: All

From Date:

To Date:

Reset

Search

Search Result

Notification Select a notification

Email

	Invoice No#	Tenant Name	Invoice Date	Bill Period Start	Bill Period End	Amount	Paid	Status	Email Audit	View
<input type="checkbox"/>	1727	Acme Corp	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1753	Praxis Corporation	11/5/2013	10/1/2013	11/1/2013	\$518.96	\$0.00	UNPAID		
<input type="checkbox"/>	1752	Omni Consimer Products	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1751	LuthorCorp	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1750	Mr. Sparkle	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1749	Globo-Chem	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1748	Galaxy Corp	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1747	Extensive Enterprise	11/5/2013	10/1/2013	11/1/2013	\$518.96	\$0.00	UNPAID		
<input type="checkbox"/>	1746	Ankh-Sto Associates	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1745	Allied Biscuit	11/5/2013	10/1/2013	11/1/2013	\$518.96	\$0.00	UNPAID		

Show 10 entries

Showing 1 to 10 of 1730 entries

1

2

3

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8

9

10

...

172

173

v 4.3.1.0

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Search Client Bills

5 Payment Management

CelloSaaS billing systems is integrated with two major and widely used payment gateways. These Payment Gateways allows the product owners to accept payment using credit cards.

They Payment Gateways are

1. PayPal
2. Authorize.net

Product Owners can use either or both of these payment gateways to collect payments from Tenants.

The first step in the Process of Payment Management is Product Owners has to create Merchant account with Authorize.Net or PayPal.

Note: With Cello ver.4.3.1, the default currency accepted throughout the product is USD, but it can be configured to accept UK dollars as well.

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5.1 How to enable Auto Payment

The product owners can configure the payment gateway related settings such as Application ID, Login ID, and Secret Key etc in the Payment API Settings page. [Refer the below screenshot].

Navigate to My Account >> Payment API Accounts

CelloSaaS

admin@company.com | Change Tenant

My Account

Subscription

Tenant

Access Control

Configuration

Business Events

Notifications

Workflow

Reporting

Monitor

Payment API Accounts

PayPal

PayPal Email *

Application Id *

API User Id *

API Password *

API Signature *

Mode *

Sandbox

Save

Authorize.NET

Authorize.NET Email *

API Login Id *

Transaction Key *

Mode *

Test

Save

v 4.3.1.0

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For PayPal, Enter the following Details:

- PayPal Email ID
- Application ID
- API User ID
- API Password
- API Signature

For Authorize.net, Enter the following Details:

- Authorize.Net Email ID
- API Login ID
- Transaction Key

Note: Select the appropriate Setup Mode i.e. SANDBOX or LIVE and update the Credentials. To Create Sandbox \$ Merchant Account, refer to below urls

Click on Submit to save the details.

5.2 PayPal Merchant Account

To open a merchant account with PayPal Payment Gateway, refer PayPal's Knowledgebase <https://www.paypal.com/in/webapps/mpp/merchant>. PayPal has a robust sandbox/testing setup allows you to create testing Merchant account and other related settings.

Sandbox PayPal Account: <https://developer.paypal.com/>

Real Merchant Account: <https://www.paypal.com/in/webapps/mpp/merchant>

Note: It is recommended to use Sandbox Mode during the development and Testing Phase and when moving to Production it is mandatory to change it to LIVE.

5.3 Authorize.net Merchant Account

Product owners could setup Merchant account with Authorize.Net and activate the merchant account. <http://www.authorize.net/solutions/merchantsolutions/onlinemerchantaccount/>

Note: Once the Payment API details configured using the above screen, the respective payment Gateways are immediately contacted by the Cello Billing engine then validated and saved.

Things to check before you start charging your customers:

- Make test payments using real cards on your live payment gateway and confirm that it is successful. You can always void or refund these transactions.
- Verify that all your site and product configuration settings are setup correctly.
- Make sure that the right events have been enabled for email notifications.

5.4 How to make Manual Payment

Manual payment refers to the payments done offline. For example, Tenants might want to pay the bills offline in spite of having of the Auto Payment mechanisms. For such situations manual payments facility can be helpful for Administrators to accept Offline Payments. The offline mode payment could be anyone of the methods. They are

- Pay by check, cash or at the door
- Bank Transfer, C.O.D. or Mailed Payment

How-To – Cello Billing Management

- Any other payment methods

When the application administrator receives the payment in personal / offline or if the administrator wants to make some adjustments in the invoice, the Product administrator can update the invoice with the appropriate information about the payment received, mode, date and time of when he received the payment etc.

Step1: Navigate to Admin>> Client Bills

Step2: Select the specific Tenant using the Context menu on the top

Step3: Click on the Edit icon on the particular Invoice

My Account

Subscription

Tenant

Access Control

Configuration

Business Events

Notifications

Workflow

Reporting

Monitor

Manage Child Bills

Tenant:

Acme Corp

Q Search

Account Summary

Tenant Name	Acme Corp belva.majewski@techcello1.com +1-903-766-2159	Total Bills	90
Package View History	Basic Package	Total Amount	\$12,556.76
Price Plan	Basic Plan	Total Paid	\$0.00
Subscription Period	5/17/2006 12:00 AM	Overdue Amount	\$12,556.76

Current Bill Statement

Previous Balance	Invoice No#	Bill Period	Invoice Date	Bill Amount	Total Amount Payable	Due Date
\$12,556.76	1727	10/1/2013 - 11/1/2013	11/5/2013	\$154.96	\$12,711.72	11/5/2013

Current Bill Charge Details

Item Name	Description	Amount
Basic Package - Basic Plan	Period: 10/1/2013 12:00 AM to 11/1/2013 12:00 AM	\$149.00
VAT 4%	VAT 4%	\$5.96

Previous Bills

Invoice No#	Bill Period	Amount	Paid	Edit	View
1702	9/1/2013 - 10/1/2013	\$154.96	\$0.00		
342	8/1/2013 - 9/1/2013	\$149.00	\$0.00		
337	7/1/2013 - 8/1/2013	\$149.00	\$0.00		
332	6/1/2013 - 7/1/2013	\$149.00	\$0.00		
328	5/1/2013 - 6/1/2013	\$149.00	\$0.00		
324	4/1/2013 - 5/1/2013	\$149.00	\$0.00		
320	3/1/2013 - 4/1/2013	\$149.00	\$0.00		
315	2/1/2013 - 3/1/2013	\$149.00	\$0.00		
311	1/1/2013 - 2/1/2013	\$149.00	\$0.00		

Client Bills

Step 4: Click on the Add Payment button in the Edit Invoice Page

Step 5: Select the appropriate Mode i.e. Card/Cash/Manual/Credit

Step 6: Fill the other details such as Date/Amount /Notes and click on Save

How-To – Cello Billing Management

Edit Invoice

Cancel Save

CelloSaaS

Company

address
state
United States - 12345

+1 (234) 56 89 90
admin@company.com

INVOICE

September 05, 2013
Invoice no#342
Period: 8/1/2013 - 9/1/2013

Acme Corp

Address
State
Qatar - 21597

+1-903-766-2159
belva.majewski@techcello1.com

Details

Item Name	Description	Amount
Basic Package - Basic Plan	Period: 8/1/2013 12:00 AM to 9/1/2013 12:00 AM	\$149.00
Sub Total		\$ 149.00

Taxes

No tax components available!

Net Amount \$149.00

Payments

+ Add Payment

No payments made so far!

Notes

Edit Invoice

Cancel Save

Invoice No# 189 (UNPAID)

Account Information

Fresh & Easy
Noah Jacob
noah@techcello1.com
Member since 3/10/2011

Billing Address

Invoice Summary

189
11/5/2011
10/1/2011 - 11/1/2011
\$ 0.00
\$ 515.16
\$ 515.16
\$0.00
UNPAID

Line Items

Item Name	Amount
Use and Pay Package - Usage Plan	\$0.00
Spent	% of Spent on YTD Spent \$515.16
Total	\$ 515.16

Payments

+ Add Payment

No payments made so far!

Add New Payment

Payment Mode Card
Paid Date
Paid Amount 0
Notes

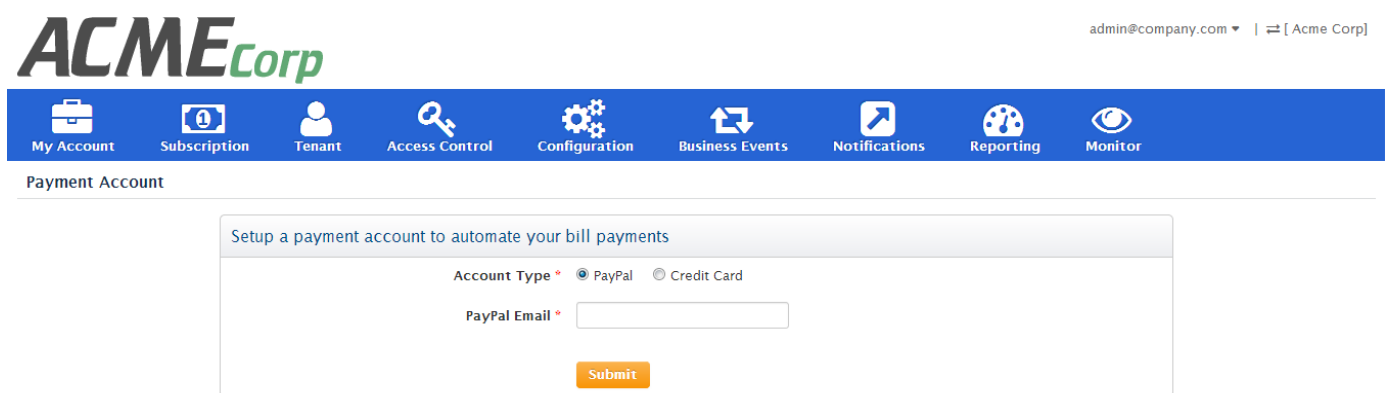
Cancel Pay

5.5 Tenant Payment Setup

Tenants who have subscribed to Paid Plans must update their Credit card details or setup PayPal Account details for automatic Payment deductions. For Tenants who are in Trial Mode and while nearing the trial expiration, the Tenant admin will receive notifications both in email as well as via the system notification (if enabled) for upgrading their subscription.

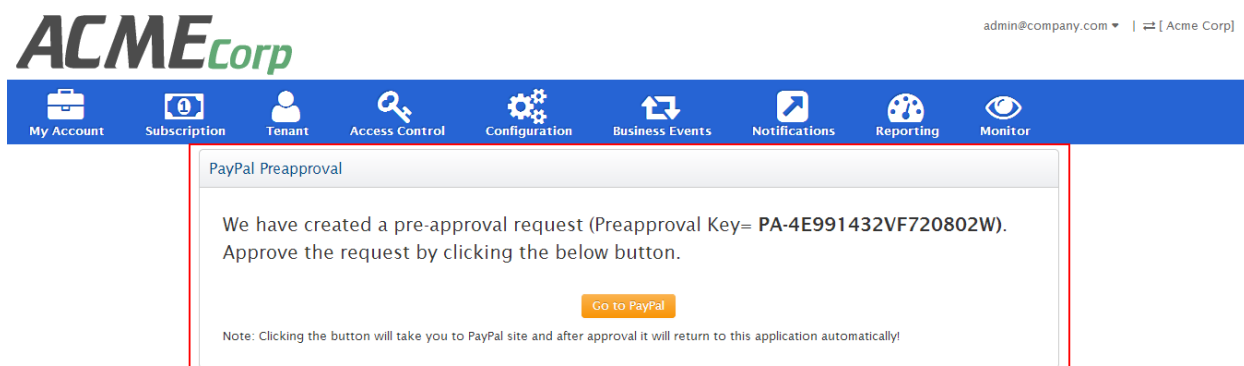
To navigate to the Credit Card Account page Go to My Account >>Setup Payment Account.

5.5.1 PayPal Account Setup



The screenshot shows the ACME Corp web interface. The top navigation bar includes links for My Account, Subscription, Tenant, Access Control, Configuration, Business Events, Notifications, Reporting, and Monitor. The user is logged in as admin@company.com. The main content area is titled "Payment Account" and contains a form for setting up a payment account. The form has a heading "Setup a payment account to automate your bill payments" and two radio buttons for "Account Type": "PayPal" (selected) and "Credit Card". Below this is a text input field for "PayPal Email" and a "Submit" button.

Enter the PayPal Account Email Credential and click on submit.



The screenshot shows the ACME Corp web interface after a successful PayPal account setup. The top navigation bar is the same. The main content area is titled "PayPal Preapproval" and contains a message: "We have created a pre-approval request (Preapproval Key= PA-4E991432VF720802W). Approve the request by clicking the below button." Below the message is a "Go to PayPal" button. A note at the bottom states: "Note: Clicking the button will take you to PayPal site and after approval it will return to this application automatically!"

How-To – Cello Billing Management

PayPal sends a Pre-Approval Key to navigate to the PayPal Login Page to verify the account.

The screenshot shows a PayPal Pre-Approval Key page. On the left, a box titled "Your preapproved payment summary" contains details: Name: John's Test Store, Start date: Nov 4, 2013, and End date: Nov 4, 2014. On the right, there is a "Log in to your PayPal account" section with a "Log in to your PayPal account" link, a "Log in" button, and a "Problem with login?" link. Below this, a link says "Cancel preapproval and return to John's Test Store".

Refer [PayPal Knowledge base](#) to understand the Credit Card details update setup.

5.5.2 Credit Card Account Setup

Step1: Click on the Credit Card option in the Payment Account Page.

The screenshot shows the ACME Corp Payment Account setup page. The top navigation bar includes links for My Account, Subscription, Tenant, Access Control, Configuration, Business Events, Notifications, Reporting, and Monitor. The main content area is titled "Payment Account" and contains a form to "Setup a payment account to automate your bill payments". The form has two radio buttons for "Account Type": "PayPal" (selected) and "Credit Card". Below this is a "PayPal Email" field and a "Submit" button.

Step2: Fill the Credit Card Information

Step 3: Click on Submit

The screenshot shows the 'Create Credit Card Account' page in the CelloSaaS USReseller interface. The page has a dark blue header with the CelloSaaS logo and 'USReseller' text. On the right of the header, it says 'Hi, admin@company.com', a language selector for 'USReseller', and a 'Sign Out' link. Below the header is a navigation bar with links: Home, My Actions, My Account, Admin, Billing, Reporting, Manage Workflow, Manage Business Rules, and Manage Events. The main content area is titled 'Create Credit Card Account' and contains two sections: 'Credit Card Details' and 'Account Address Details'. The 'Credit Card Details' section has fields for 'Card Number *', 'Expiration*' (with a dropdown for month and a text box for year), and 'CCV*'. The 'Account Address Details' section has fields for 'Email*', 'Name' (split into first and last), 'City', 'State', 'Country', 'Street*', 'Zip*', and 'Phone'. At the bottom right of the form are 'Submit' and 'Reset' buttons. The footer of the page features the techcello logo on the left and 'Copyright © 2012 by techcello.com' on the right.

5.5.3 Update Account/ Credit Card Details

Tenants can update their credit card details at any point of time via “Credit Card Account Page”. The updated Credit Card details will be used from the next Billing Cycle Onwards.

5.5.4 Credit Card Validation

CelloSaaS doesn't validate the provided credit card details by itself and leaves the responsibility to Integrated Payment Gateways i.e. Authorize.Net and PayPal. The respective Gateways validate the credit card whether it is tied to a valid account and can be successfully charged before it is saved to their database.

Note: In some cases, cardholders may see a temporary authorization for \$1.00 on their account after their card has been verified.

5.5.5 Authorize.net Credit Card Validation Response

Authorize.net payment gateway will return transaction results for all the transactions. The transaction response indicates whether the transaction was accepted or declined and includes information about the transaction.

5.5.6 Fields included in the payment gateway response are provided in the table below.

The field order applies only to AIM transactions. For SIM transactions, the transaction response fields are not necessarily sent in the exact order listed here. Developers are encouraged to use the name of the field in order to locate the correct response. If your code expects transaction response fields in a particular order, future updates to the SIM API may cause unexpected results from your code.

ORDER	FIELD NAME	VALUE	FORMAT	NOTES
1	Response Code	The overall status of the transaction	1 = Approved 2 = Declined 3 = Error 4 = Held for Review	

To view the complete list of response, refer

http://www.authorize.net/support/merchant/Transaction_Response/Transaction_Response.htm

5.5.7 Payment History

Cello Billing system audits all the payments accepted through all methods i.e. Credit Card/Manual etc. To view the Payment History, Navigate to Admin>> Subscription>> Client Payment History

CelloSaaS

admin@company.com | Change Tenant

My Account

Subscription

Tenant

Access Control

Configuration

Business Events

Notifications

Workflow

Reporting

Monitor

Child Payment History

Tenant: All

Status: ALL

Transaction Id:

Invoice No:

From Date:

To Date:

Reset

Search

Invoice No	Tenant Name	Type	Transaction Id	Date	Amount	Attempt	Status
1735	Acme, inc.	CreditCard	2201288511	11/5/2013 12:03 AM	\$154.96	1	COMPLETED
1730	DemoAccount	CreditCard	-	11/5/2013 12:03 AM	\$78.49	1	ERROR
1703	Acme, inc.	CreditCard	2199320244	10/5/2013 12:01 AM	\$154.96	1	COMPLETED
1700	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1699	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1698	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1697	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1696	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1695	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1694	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED

Show 10 entries

Showing 1 to 10 of 425 entries

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42

43

5.6 Payment Security

Cello billing system stores all the Payment account details settings in the Cello Database in the encrypted format and doesn't store in Clear text format for security reasons. While fetching back, the data will be again decrypted and rendered in the page. Developers have the flexibility to choose the type of encryption to be applied.

Cello billing system doesn't store or manipulate the Credit Card details received from the customer. As soon as the customer or product admin hits the save button on the Credit Card details page, all these details are stored in the Authorize.net server and not in the Cello Database. These Servers are highly protected and follows all sorts of Compliance Refer [Authorize.net](#) & [PayPal](#) PCI Compliance. This means your sensitive customer payment information is stored in a data centre that conforms to the highest standards set by the major credit card vendors, and have the necessary controls in place as dictated by the International services organization reporting standards.

6 Dunning Management

A Tenant's credit card transaction can fail for various reasons. When the daily limit of the card has been exceeded, or the card has insufficient funds etc., the payment gateways will indicate Failure signals.

The Failed payments can be automated to retry multiple times, the process of retrying attempts to capture payments on invoices that are due is called Dunning.

CelloSaaS billing System automates this process and retries for a maximum of <<Defined Number>> times after which the payment will be stopped to invoice or left active and marked as unpaid.

6.1 Configure Retry Frequency

The frequency of Retry process can be configured globally using the Configuration file located inside the Billing Windows Service "**CelloSaaS.BillingWindowsService.exe**"; CelloSaaS will automatically mark the account unpaid after the successful execution of <<Configured number of retry>>.

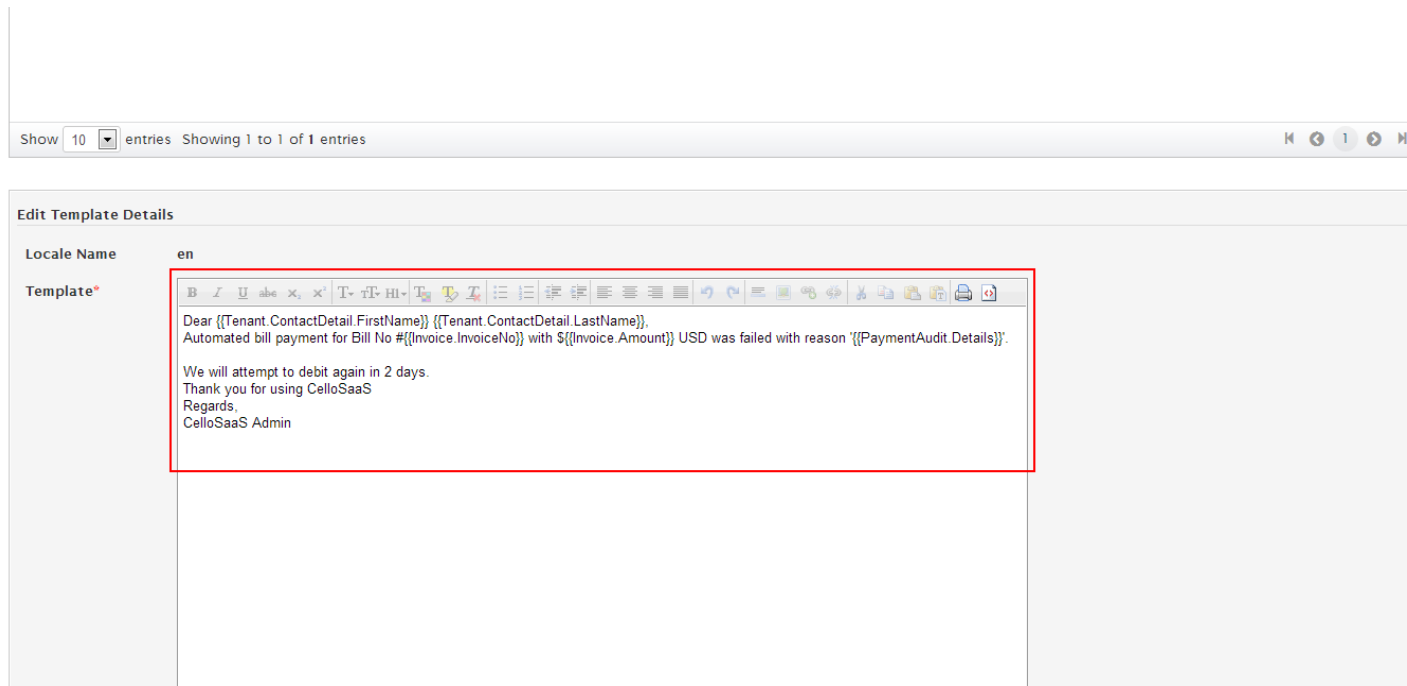
Once the payment is made offline by any of the mode, the product admin can mark the payment collected using the dashboard using the manual adjustments [Refer Manual Payments].

```
<appSettings>
  <add key="MaxParallelThread" value="4" />
  <add key="BatchSize" value="20" />
  <add key="Interval" value="360000" />
  <add key="MaxPaymentRetry" value="3" />
  <add key="RetryIntervalInDays" value="2" />
  <add key="PreTrialEndNotificationDays" value="3"/>
```

6.2 Transaction Failed Notifications

On every failed transaction, Cello Notification Engine will send Transaction Failed Email Notifications automatically. CelloSaaS sends the series of email notification for each retry.

To change the content of the “Payment Failure Template”, navigate to Admin>> Notifications>> Content Template and click on Manage Template.



The screenshot shows a web interface for editing a template. At the top, there is a table with one entry, showing '1' of '1' entries. Below this is the 'Edit Template Details' form. The form has a 'Locale Name' field set to 'en'. The 'Template' field is a rich text editor containing the following text:

Dear {{Tenant.ContactDetail.FirstName}} {{Tenant.ContactDetail.LastName}},
Automated bill payment for Bill No #{{Invoice.InvoiceNo}} with \${{{Invoice.Amount}}} USD was failed with reason '{{PaymentAudit.Details}}'.

We will attempt to debit again in 2 days.
Thank you for using CelloSaaS
Regards,
CelloSaaS Admin

7 Understanding Over dues

Overdue refers to the old dues/charges to be paid by the Tenants.

7.1 Admin view of over dues

Login as the Product Administrator Navigate to Subscription>> Child Bills>> Select a Tenant in the Context menu [Refer below Screen shot]

Over dues are highlighted in red colour in the Previous Bills Container.

CelloSaaS

admin@company.com | Change Tenant

My AccountSubscriptionTenantAccess ControlConfigurationBusiness EventsNotificationsWorkflowReportingMonitor

Manage Child Bills

Tenant: Acme Corp Search

Account Summary

Tenant Name	Acme Corp ✉ belva.majewski@techcello1.com ☎ +1-903-766-2159	Total Bills	90
Package Q View History	Basic Package	Total Amount	\$12,556.76
Price Plan	Basic Plan	Total Paid	\$0.00
Subscription Period	5/17/2006 12:00 AM	Overdue Amount	\$12,556.76

Current Bill Statement

EditViewDownload

Previous Balance	Invoice No#	Bill Period	Invoice Date	Bill Amount	Total Amount Payable	Due Date
\$12,556.76	1754	11/1/2013 - 12/1/2013	11/6/2013	\$154.96	\$12,711.72	12/5/2013

Current Bill Charge Details

Item Name	Description	Amount
Basic Package - Basic Plan	Period: 11/1/2013 12:00 AM to 12/1/2013 12:00 AM	\$149.00
VAT 4%	VAT 4%	\$5.96

Previous Bills

Invoice No#	Bill Period	Amount	Paid	Edit	View
1727	10/1/2013 - 11/1/2013	\$154.96	\$0.00	✎	👁
1702	9/1/2013 - 10/1/2013	\$154.96	\$0.00	✎	👁
342	8/1/2013 - 9/1/2013	\$149.00	\$0.00	✎	👁
337	7/1/2013 - 8/1/2013	\$149.00	\$0.00	✎	👁
332	6/1/2013 - 7/1/2013	\$149.00	\$0.00	✎	👁
328	5/1/2013 - 6/1/2013	\$149.00	\$0.00	✎	👁
324	4/1/2013 - 5/1/2013	\$149.00	\$0.00	✎	👁
320	3/1/2013 - 4/1/2013	\$149.00	\$0.00	✎	👁
315	2/1/2013 - 3/1/2013	\$149.00	\$0.00	✎	👁
311	1/1/2013 - 2/1/2013	\$149.00	\$0.00	✎	👁

Show 10 entries Showing 1 to 10 of 90 entries

7.2 Tenant view of over dues

Login as the Tenant Administrator Navigate to My Account>> My Bills [Refer below Screen shot]

Over dues are highlighted in red colour in the Previous Bills Container.

My Bills

Account Summary

Tenant Name	Acme Corp ✉ belva.majewski@techcello1.com ☎ +1-903-766-2159	Total Bills	90
Package View History	Basic Package	Total Amount	\$12,556.76
Price Plan	Basic Plan	Total Paid	\$0.00
Subscription Period	5/17/2006 12:00 AM	Overdue Amount	\$12,556.76

Current Bill Statement

[View](#) [Download](#)

Previous Balance	Invoice No#	Bill Period	Invoice Date	Bill Amount	Total Amount Payable	Due Date
\$12,556.76	1754	11/1/2013 - 12/1/2013	11/6/2013	\$154.96	\$12,711.72	12/5/2013

Current Bill Charge Details

Item Name	Description	Amount
Basic Package - Basic Plan	Period: 11/1/2013 12:00 AM to 12/1/2013 12:00 AM	\$149.00
VAT 4%	VAT 4%	\$5.96

Previous Bills

Invoice No#	Bill Period	Amount	Paid	View
1727	10/1/2013 - 11/1/2013	\$154.96	\$0.00	View
1702	9/1/2013 - 10/1/2013	\$154.96	\$0.00	View
342	8/1/2013 - 9/1/2013	\$149.00	\$0.00	View
337	7/1/2013 - 8/1/2013	\$149.00	\$0.00	View
332	6/1/2013 - 7/1/2013	\$149.00	\$0.00	View
328	5/1/2013 - 6/1/2013	\$149.00	\$0.00	View
324	4/1/2013 - 5/1/2013	\$149.00	\$0.00	View
320	3/1/2013 - 4/1/2013	\$149.00	\$0.00	View
315	2/1/2013 - 3/1/2013	\$149.00	\$0.00	View
311	1/1/2013 - 2/1/2013	\$149.00	\$0.00	View

Show 10 entries Showing 1 to 10 of 90 entries

8 Payment History

8.1 Product Admin view of Payment History

Cello tracks all the payment transactions for all the modes of payment i.e. Auto Payment through Credit Card, Manual Payment etc. To View the Payment History

Login as Product Administrator, Navigate to Subscriptions>> Client Payment History

Payment History Page offers Filter Condition to search payment audit based on various Parameters. They are

1. By Tenant Name
2. By Status
3. By Transaction ID
4. Invoice Number
5. Start & End Date

How-To – Cello Billing Management

CelloSaaSadmin@company.com | Change Tenant

My Account

Subscription

Tenant

Access Control

Configuration

Business Events

Notifications

Workflow

Reporting

Monitor

Child Payment History

Tenant:

All

Status:

ALL

Transaction Id:

Invoice No: From Date: To Date:

Reset

Search

Invoice No	Tenant Name	Type	Transaction Id	Date	Amount	Attempt	Status
1292	Extensive Enterprise	Other	-	11/6/2013 6:13 AM	\$499.00	0	COMPLETED
1735	Acme, inc.	CreditCard	2201288511	11/5/2013 12:03 AM	\$154.96	1	COMPLETED
1730	DemoAccount	CreditCard	-	11/5/2013 12:03 AM	\$78.49	1	ERROR
1703	Acme, inc.	CreditCard	2199320244	10/5/2013 12:01 AM	\$154.96	1	COMPLETED
1700	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1699	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1698	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1697	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1696	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED
1695	Praxis Corporation	Other	-	9/26/2013 1:51 PM	\$499.00	0	COMPLETED

Show

10

 entries Showing 1 to 10 of 426 entries

1

2

3

4

5

6

7

8

9

10

...

42

43

8.2 Tenant Admin view of Payment History

Like Product Administrators, Tenant Administrators can also view the payment history of their past payments.

Navigate to My Account>> Payment History

ACME Corpadmin@company.com | [Acme Corp]

My Account

Subscription

Tenant

Access Control

Configuration

Business Events

Notifications

Workflow

Reporting

Monitor

My Payment History

Status:

COMPLETED

Transaction Id:

Invoice No: From Date: To Date:

Reset

Search

9 Billing Dashboards

Billing Dashboard gives the overview of the Cello billing system. The billing dashboard comprises of 4 major blocks. They are

1. Tenant Revenues based on Year (Revenue Chart)
2. Revenue by Tenants
3. Top 5 Revenue making Tenants
4. Revenues Trend

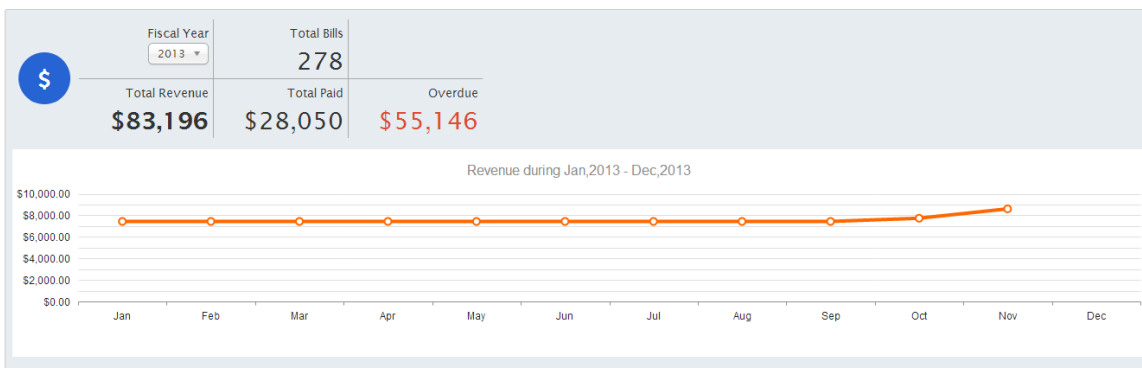
Navigation >> Billing >> Dashboard

CelloSaaS

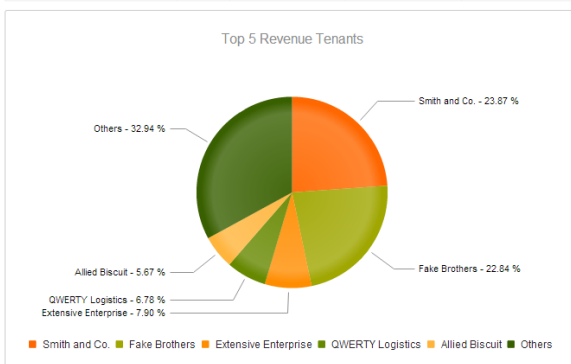
admin@company.com | Change Tenant



Billing Dashboard



Top 5 Revenue Tenants				
Tenant Name	Bills	Amount	Paid	Overdue
Smith and Co.	86	\$128,184.49	\$0.00	\$128,184.49
Fake Brothers	82	\$122,651.08	\$119,533.16	\$3,117.92
Extensive Enterprise	89	\$42,422.73	\$499.00	\$41,923.73
QWERTY Logistics	77	\$36,434.73	\$35,396.81	\$1,037.92
Allied Biscuit	69	\$30,446.73	\$0.00	\$30,446.73



Revenue by tenants					
Tenant Name	Bills	Amount	Paid	Overdue	Action
ABC Telecom	17	\$0.00	\$0.00	\$0.00	Q View Bills
Acme Corp	90	\$12,556.76	\$0.00	\$12,556.76	Q View Bills
Acme, inc.	82	\$10,768.76	\$309.92	\$10,458.84	Q View Bills
AgileBio	1	\$0.00	\$0.00	\$0.00	Q View Bills
Allied Biscuit	69	\$30,446.73	\$0.00	\$30,446.73	Q View Bills
Ankh-Sto Associates	91	\$12,556.76	\$12,246.84	\$309.92	Q View Bills
Bootstrap	2	\$0.00	\$0.00	\$0.00	Q View Bills
Demo ccount2	1	\$48.15	\$0.00	\$48.15	Q View Bills
Demo Company	20	\$0.00	\$0.00	\$0.00	Q View Bills
Demo, inc.	17	\$6,494.73	\$0.00	\$6,494.73	Q View Bills

Tenant Revenues Trend					
Period: 2009 - 2013					
Tenant	2009	2010	2011	2012	2013
ABC Telecom	-	-	-	\$0.00	\$0.00
Acme Corp	\$1,788.00	\$1,788.00	\$1,788.00	\$1,788.00	\$1,650.92
Acme, inc.	\$1,788.00	\$1,788.00	\$1,788.00	\$1,788.00	\$1,650.92
AgileBio	-	-	-	-	\$0.00
Allied Biscuit	\$5,988.00	\$5,988.00	\$5,988.00	\$5,988.00	\$5,528.92
Ankh-Sto Associates	\$1,788.00	\$1,788.00	\$1,788.00	\$1,788.00	\$1,650.92
Bootstrap	-	-	-	-	\$0.00
Dell Systems	-	-	-	-	-
Demo ccount2	-	-	-	-	\$48.15
Demo Company	-	-	-	\$0.00	\$0.00

9.1 Search Client Bills

CelloSaaS billing system provides an effective billing search mechanism to search the current and past billing information. The billing search feature enables the product admin to search with Tenant, Status, from and to invoice date details.

Login as Product Administrator, Navigate to Subscription >> Search Client Bills (Application only for Product Admin & Tenant Hierarchy Scenarios)

CelloSaaSadmin@company.com ▾ | ⇌ Change Tenant

My Account

Subscription

Tenant

Access Control

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Monitor

Search Bills

Filter

Tenant: ▾ All

Status: ▾ All

From Date:

To Date:

Reset

Search

Search Result

Notification ▾ Select a notification

Email

	Invoice No#	Tenant Name	Invoice Date	Bill Period Start	Bill Period End	Amount	Paid	Status	Email Audit	View
<input type="checkbox"/>	1727	Acme Corp	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1753	Praxis Corporation	11/5/2013	10/1/2013	11/1/2013	\$518.96	\$0.00	UNPAID		
<input type="checkbox"/>	1752	Omni Consimer Products	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1751	LuthorCorp	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1750	Mr. Sparkle	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1749	Globo-Chem	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1748	Galaxy Corp	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1747	Extensive Enterprise	11/5/2013	10/1/2013	11/1/2013	\$518.96	\$0.00	UNPAID		
<input type="checkbox"/>	1746	Ankh-Sto Associates	11/5/2013	10/1/2013	11/1/2013	\$154.96	\$0.00	UNPAID		
<input type="checkbox"/>	1745	Allied Biscuit	11/5/2013	10/1/2013	11/1/2013	\$518.96	\$0.00	UNPAID		

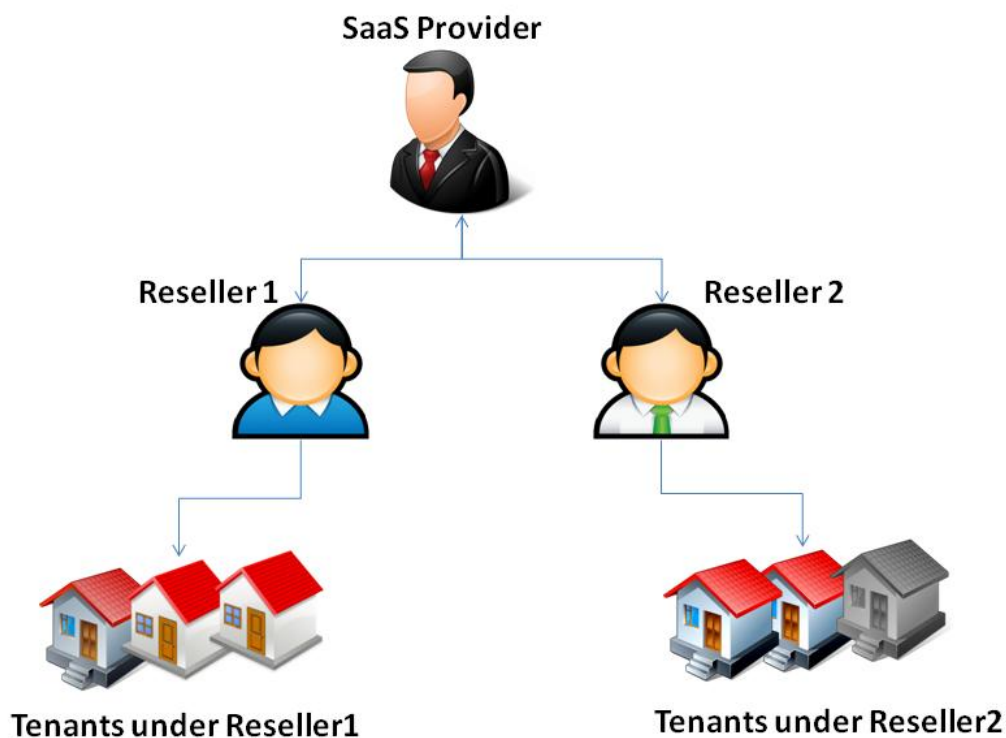
Show ▾ 10 entries Showing 1 to 10 of 1730 entries

⏪ ⏴ 1 2 3 4 5 6 7 8 9 10 ... 172 173 ⏵ ⏩

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10 Billing in Reseller Model

TechCello provides [Tenant Hierarchy](#), a feature which enables the SaaS owner to sell the product in a Reseller/Distributor Model. In the Reseller Scenarios, the reseller tenant may or may not use the product himself and simply sell the product to other customers. In this scenario, Reseller might pay a percentage of the revenue to the Product Provider made by sub selling the product to its customers.



To identify a total month on month revenue made as well as the Total year revenue made by all the tenants of the Reseller, Cello provides two default variables. They are

1. **BillingInvoiceAmount** – Refers to current month total revenue made from all the Tenants under a reseller
2. **BillingInvoiceYTD** – Refers to yearly total revenue made from all the Tenants under a reseller

Manage Line Item

Name *

Description

Factor Type

Flat

Calculation Type

Threshold Pricing

Slab Usage Variable

BillingInvoiceAmount

Acted On Usage Variable

BillingInvoiceAmount

Slab Rates

--Select--

BillingInvoiceAmount

BillingInvoiceYTD

Start Value

End Value

Cost Factor (USD)

+ Add

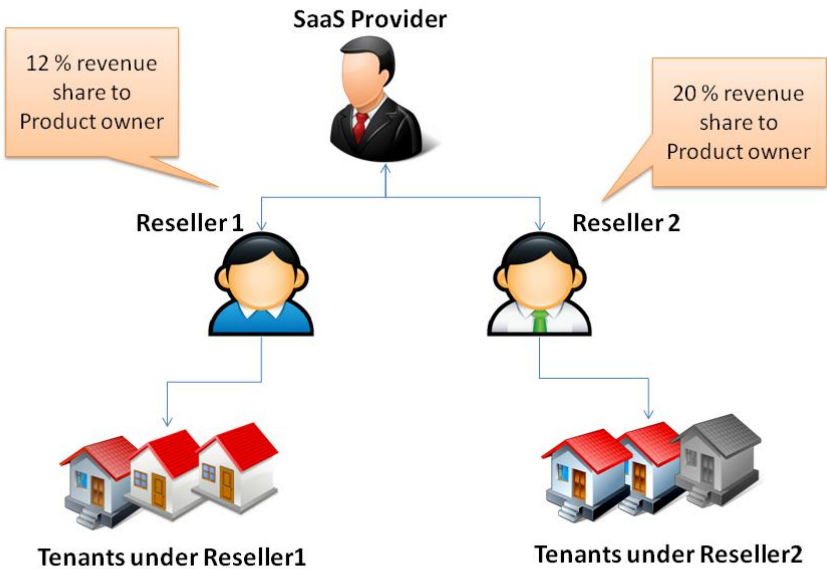
Cancel

Save

Slab Usage Variable

10.1 Setup Pricing Plan for Reseller Tenant

Raising invoice for Reseller Tenant is different from a normal Tenant (without sub tenants),because for a normal tenant the pricing plan would be based on usage counters whereas for a reseller who has multiple tenants under him will be based on revenue share model. For example



To create a Pricing Plan for the Reseller tenant, follow the below steps, they are

1. Create A Subscription plan including the mandatory modules and Features, Refer Subscription Management.
2. Create a Price Plan with or without base cost. Refer below screenshot.

CelloSaaS admin@company.com | Change Tenant

My Account Subscription Tenant Access Control Configuration Business Events Notifications Workflow Reporting Monitor

Manage Price Plans for Reseller Plan Cancel Save

Plan Name * Reseller - Price Plan Plan Description Reseller - Price Plan - 10 % Revenue Share

Skip Billing * ☒ Plan Price * 999 USD / Month

Line Items + Add

Line items not yet added!

3. Let's see how to create a Price Plan for the below Scenarios

Consider the following Scenario,

10.1.1 Scenario1

Product owner is creating a Reseller Tenant and wants to get 20% revenue on month on month on whatever the revenue made by selling the product.

The Price Plan screen creation will be as follows:

- Select the Factor type as **“Each”**, which refers to **“Revenue Share”** on the total revenue made by the Reseller
- Calculation Type must be **“Threshold”**
- Choose **“BillingInvoiceAmount”** variable for both **“Slab Usage Variable”** and **“Acted on Usage Variable”**
- While Defining the slab value, set the start value in 1 (in \$\$) and End Value must be empty i.e. infinity (refers to total revenue made), Set the Percentage value in the Cost Factor i.e 20%

Manage Line Item

Name: Reseller - Price Plan

Description: Reseller - Price Plan with 20% revenue share

Factor Type: Each

Calculation Type: Threshold Pricing

Slab Usage Variable: BillingInvoiceAmount

Acted On Usage Variable: BillingInvoiceAmount

Slab Rates

Start Value	End Value	Cost Factor (USD)
1		20

1 \$ - Infinite dollars, the revenue share will be 20 %

Buttons: + Add, Cancel, Save

10.1.2 Scenario2

Product owner is creating a Reseller Tenant and wants to get fixed revenue on month on month.

The Pricing Plan creation will be as follows:

- Select the Factor type as **“Flat”**, which refers to **“Flat Cost”** which has to be paid by the Reseller to the Product Owner.
- Calculation Type must be **“Threshold”**
- Choose **“BillingInvoiceAmount”** variable for both **“Slab Usage Variable”** and **“Acted on Usage Variable”**
- While Defining the slab value, set the start value in 1 (in \$\$) and End Value must be empty i.e. infinity (refers to total revenue made), set the value of Flat cost in the Cost Factor Field.

Manage Line Item

Name: Reseller - Price Plan

Description: Reseller - Price Plan with 20% revenue share

Factor Type: Flat

Calculation Type: Threshold Pricing

Slab Usage Variable: BillingInvoiceAmount

Acted On Usage Variable: BillingInvoiceAmount

Select "Billing Invoice Amount for Monthly Revenue Share"

Slab Rates

Start Value	End Value	Cost Factor (USD)
1		1000

1\$ - Infinite Dollars, the revenue share will be 1000 \$

+ Add

Cancel Save

10.1.3 Scenario3

Product owner is creating a Reseller Tenant and wants to get dynamic Percentage Share based on the performance of the Sales (Refer below table)

Start Value (in Dollars)	End Value (in Dollars)	Percentage Share
1	25000	25%
25001	50000	15%
50001	100000	10%

The Price Plan screen creation will be as follows:

- Select the Factor type as **“Each”**, which refers to **“Revenue Share”** on the total revenue made by the Reseller
- Calculation Type must be **“Step Pricing”**
- Choose **“BillingInvoiceAmount”** variable for both **“Slab Usage Variable”** and **“Acted on Usage Variable”**
- While Defining the slab value, set the start value as 1 (in \$\$) and End Value of the first slab (in \$\$), set the Cost Factor with the Percentage that has to be shared by the reseller to the product owner, similarly create slabs for other line items as well (Refer below Screenshot).

Manage Line Item

Name * Reseller - Price Plan

Description Reseller - Price Plan with Dynamic revenue share

Factor Type Each

Calculation Type Step Pricing

Slab Usage Variable BillingInvoiceAmount

Acted On Usage Variable BillingInvoiceAmount

Slab Rates

Start Value	End Value	Cost Factor (USD)
1	25000	25
25001	50000	15
50001	100000	10

+ Add

Cancel Save

In Percentage

10.1.4 Scenario4

Product owner is creating a Reseller Tenant and wants to get dynamic flat cost based on the performance of the Sales (Refer below table)

Start Value (in Dollars)	End Value (in Dollars)	Flat Cost
1	25000	1000\$
25001	50000	1500\$
50001	100000	2000\$

The Price Plan screen creation will be as follows:

- Select the Factor type as **“Flat”**, which refers to “Flat Cost” which has to be paid by the Reseller to the Product Owner based on the slabs.
- Calculation Type must be **“Step Pricing”**

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- Choose “**BillingInvoiceAmount**” variable for both “Slab Usage Variable” and “Acted on Usage Variable”
- While Defining the slab value, set the start value as 1 (in \$\$) and End Value of the first slab (in \$\$), set the Cost Factor with the Actual Cost that has to be shared by the reseller to the product owner, similarly create slabs for other line items as well (Refer below Screenshot).

Manage Line Item

Name: Reseller - Price Plan

Description: Reseller - Price Plan with Dynamic revenue share

Factor Type: Each

Calculation Type: Step Pricing

Slab Usage Variable: BillingInvoiceAmount

Acted On Usage Variable: BillingInvoiceAmount

Slab Rates

Start Value	End Value	Cost Factor (USD)
1	25000	1000
25001	50000	15000
50001	100000	2000

In Dollars

+ Add

Cancel Save

Note: To define Yearly Reseller Pricing plan, simply choose “**BillingInvoiceYTD**” variable for both “Slab Usage Variable” and “Acted on Usage Variable” instead of “BillingInvoiceAmount”.

11 Notification Template

From invoice receipts to declined payments, Cello Billing Service can be configured to email customers and keep them informed about the billing statuses. The emails can be customized and individually enabled.

Navigate to Admin >> Notification >> Content Template

By default Cello Billing Service configured to send emails for the below actions which are completely Customizable by the Product Administrators. These individual emails can be enabled/disabled in the email's Edit Settings page. Emails settings and templates configured for Billing Notifications are global.

By Default, Cello provides all the below mentioned email templates for various purposes. Product Administrators can customize these default templates according to their needs.

Email Type	Description
Bill Generated	Sent when bill is generated on the billing day.
Payment Confirmation	Sent whenever payment is successfully processed.
Payment Failure	Sent when the tenant has auto debit enabled and auto bill payment is failed.
Un Paid Bills Alert Template	Manually Send alert emails for the overdue tenants.
Payment Success	Sent when the tenant has auto debit enabled and generated bill payment is success.

For more information, Refer Notification topic

12 Introduction to Billing Scheduling Engine

Execution of Billing, Generation of Invoice for bulk of customers in a single Shot, Validating the Billing etc are long running process and difficult to be done in the Web Context. Cello Provides Billing Service Engine, an Windows Service which could sit in a Web Role or worker Role[in the Case of Windows Azure] and continuously Poll the messages and execute.

12.1 Responsibilities of Billing Service

- Generate Invoices based on the configuration

- Check Bill Date and Check bill Frequency
- Retry failed payments
- send pre-trial/subscription end notifications

12.2 How to Setup Billing Service

The Billing Service Installer is located right inside the CelloSaaS Installer Package named “Billing”, below are the step by step to install the Billing Service

- Navigate to the Folder, Open and search for “install.bat”
- After installing the Service successfully
- Execute “start.bat” to start the Installed Service (If not already started).
- Update the connection string in the **sql.config** file to point to the Cello Meta Database or where ever the billing data is stored.

12.3 Billing Service Configuration

Billing Service Related settings can be found in the “**CelloSaaS.BillingWindowsService.exe**” placed inside the Billing Service Folder.

Below are the important configurations, they are

```
<appSettings>
  <add key="MaxParallelThread" value="4" />
  <add key="BatchSize" value="20" /> // Number of items needs to be taken in a single batch
  <add key="Interval" value="360000" /> // Interval between each batch processing
  <add key="MaxPaymentRetry" value="3" /> // Payment retry count
  <add key="RetryIntervalInDays" value="2" /> // Payment Retry Interval Days
  <add key="PreTrialEndNotificationDays" value="3"/>
  <add key="PreSubscriptionEndNotificationDays" value="7"/>
  <add key="PreTrialEndNotificationName" value="Pre-Trial End Notification"/> //Name of the Pre
Trial End Notification
  <add key="TrialEndNotificationName" value="Trial Ended Notification"/> //Name of the Pre Trial
End Notification
  <add key="PreSubscriptionEndNotificationName" value="Pre-Subscription End Notification"/>
//Name of the Pre Subscription End Notification
```

```
<add key="SubscriptionEndNotificationName" value="Subscription Ended Notification"/> //Name
of the Subscription End Notification
<add key="UseBatchNotification" value="False"/>
<add key="YearStartMonth" value="4"/>
<add key="Payment_CancelUrl" value="http://localhost:5000/Billing/PaymentCancelled" />
<add key="Payment_ReturnUrl" value="http://localhost:5000/Billing/PaymentApproved" />
<add key="PAYPAL_REDIRECT_URL"
value="https://www.sandbox.paypal.com/webscr&cmd=" />
<!-- Available Modes: Test or Live -->
<add key="AuthorizeNETServiceMode" value="Test" />
<add key="ClientSettingsProvider.ServiceUri" value="" />
<!-- To turn OFF or ON the Extended Fields for the Entities-->
<add key="EnableExtendedFields" value="true"/>
<!-- Enable FlatTable or KeyValueTable -->
<add key="ExtnTableFormat" value="FlatTable"/>
<add key="DefaultInvoiceNote" value="&lt;p&gt;Please find the cost-breakdown for the services
used. Please make payment at your earliest convenience, and do not hesitate to contact me with
any questions.&lt;/p&gt;&lt;br&gt;&lt;p&gt;Payment terms: to be received within 30
days.&lt;/p&gt;"/>
</appSettings>
```

12.3.1 *PayPal Configuration*

```
<paypal>
  <settings>
    <!-- Integration mode - Can be one of live/sandbox -->
    <add name="mode" value="sandbox" />
    <!-- Connection timeout in milliseconds. Defaults to 30 seconds -->
    <add name="connectionTimeout" value="30000" />
    <!-- The number of times a request must be retried if the API endpoint is unresponsive. Defaults
to 1 -->
    <add name="requestRetries" value="1" />
    <!-- Your IP Address. -->
    <add name="IPAddress" value="127.0.0.1" />
  </settings>
  <accounts />
</paypal>
```

13 Contact Information

Any problem using this guide (or) using Cello Framework. Please feel free to contact us, we will be happy to assist you in getting started with Cello.

Email: support@techcello.com

Phone: +1(609)503-7163

Skype: techcello