7615 Omnitech Place | Victor, NY 14564
www.idibilling.com

Core Release Bulletin

CostGuard Solution 18.1 Release

Jan 2018

Table of Contents

About this Document

IDI's Core Release Bulletins describe new *Core* functionality introduced with the release through either Adaptive (AR) or Feature (FR) requests. Core functionality is defined as a capability that is available to all customers that upgrade to the release, although in some cases additional custom work may be required to leverage it. This document includes an overview of the new capabilities as well as the required configuration or setup information. Supporting documentation can be found on E-Support under *Online Help*.

Additional training opportunities are also available through IDI University. Please contact your Account/Project Manager for more information.

1 Release Summary

The following change orders are of interest to both CostGuard users (IDI customers) and IDI associates.

Functional Area	AR/FR	Description
Payment Gateway	AR 7579 FR 2783 FR 2737 FR 2738	**New Payment Gateway Application (PGA):** • **PGA Web Application** supports payment transaction search • **PGA Integration with CostGuard Client, Customer Care and OnlineBill** – With PGA integration, these applications will not forward confidential information to the CostGuard server or store sensitive card information. These types of transactions will be handled using hosted iframe pages.
Customer Care	AR 7974	**Separate Permission for Editing CPNI Fields** – lets Customer Care users edit CPNI fields without providing edit ability to any other customer data currently available in the *Manage Customer* permission, and provides a separate permission for the *Account Password* field in CPNI.
Tickets	AR 7968 FR 2805	**Email Address Field Editable for Unsolicited Email Tickets**: • Lets a colleague work a ticket when originating user is going to be out of the office. • Facilitates correcting instances where Email Address field has wrong address e.g. Users sends email to wrong mailbox, CostGuard forwards email to the correct mail box; however, CostGuard email address is incorrectly placed in the Email Address field. **Remain in Tickets when environment is changed** - Users stay in Tickets module when switching environments rather than being redirected to *My Account* page in Security.
Orders	FR 2748 FR 2803	**Cancel Unused Service Number Inventory Reservations** when: • Service is removed from assembling cart • Cart is Submitted then Cancelled BEFORE Billing System Update **Support for Sales Channels** - Lets users identify and associate a sales person to an Order. This facilitates downstream reporting for sales commissions and so on.
E-Pay	AR 7835	**Send SMS notifications when customer enrolls in recurring auto-pay** – impacts Workflow, Customer Care and CostGuard Client
Wholesale Billing	FR 2806	**Ability to track margins service providers earn with wholesale agreements** as well as the margins the reseller is earning selling to the end-customer. To support this CostGuard can now track: • Service provider's cost for usage and features being consumed • Wholesale price being offered to the reseller • Final retail price paid by the end-customer
Retail Installment Plans	FR 2809	**Installment Plan (billing product) Start Date** now represents when the corresponding equipment was fulfilled (shipped or picked up) rather than when it was purchased. Beginning billing of installments when the corresponding equipment is fulfilled prevents scenarios where subscribers are billed for equipment on back order or other fulfillment challenges/delays that can occur post-purchase.
Tempus Payment Gateway	AR 7913	**Support for TransArmor token with Tempus** eliminates a reconciliation issue.
Admin Console Security	FR 2808	**Scaling Tab Size in Admin Console Security** - Prior to this release, in Admin Console > Security, the tabs remained the same size when the window was maximized. This added empty space. This enhancement removes the empty space and improves the presentation.

2 Payment Gateway Application

The Payment Gateway Application (PGA) is a web browser application that lets a hosted iframe capture sensitive credit card information when making payments via CostGuard POS, Customer Care and OnlineBill. Having the PGA communicate with the payment provider with a hosted iframe and using the web service means that no sensitive credit card information is stored in IDI databases or passed over CostGuard networks.

The PGA has four major components:

- Web application – Used for tendering credit cards in POS.
- Web application – (Admin) Used for searching transactions and troubleshooting.
- Web services/APIs – Lets other applications such as OnlineBill and Customer Care consume the PGA as a microservice and support an iframe.
- Configuration – Various settings to enhance and control the PGA experience.

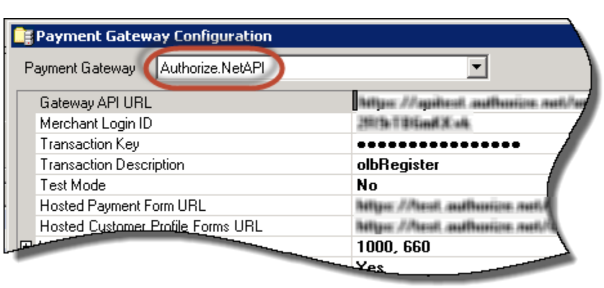
These components combine to provide the following benefits:

- iframe technology provides greater security.
- reduced development time for updates - Single touch point for supported gateway iframe code changes.
- transaction searching and troubleshooting reduces need to login into gateway portal.
- RESTFUL web services instead of SOAP (easier to consume).

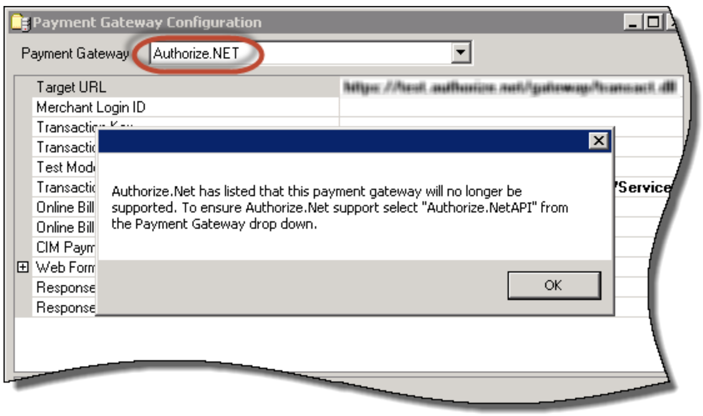
Currently, Authorize.NETAPI is the only Payment Gateway provider supported in the PGA.

2.1 SUPPORT FOR NEW AUTHORIZE.NET IFRAMES

CostGuard supports Authorize.Net's new REST APIs and hosted payment forms (i.e. iframes). A new payment gateway provider called Authorize.NETAPI is now available. When configured as described in *Setup*, the PGA web services will communicate with Authorize.Net's APIs. This allows the PGA and any apps consuming it to display Authorize.Net's payment iframe.



Customers currently using the old Authorize.Net will have to convert to the new Authorize.NetAPI prior to March 30, 2018. When the old gateway is selected from the drop down, a warning will let users know that this gateway will no longer be supported.

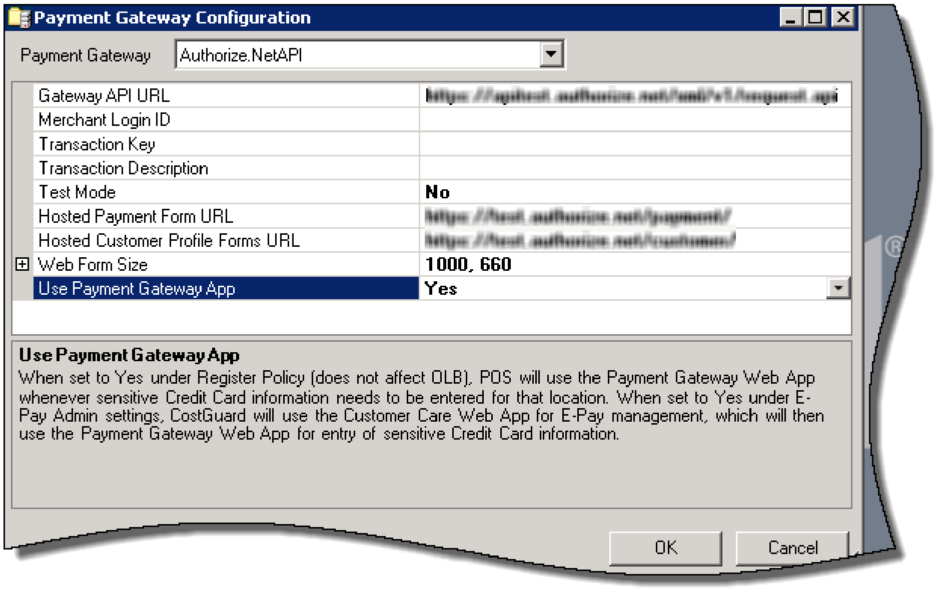


An IDI product article describes recommended process for converting to the new Authorize.NetAPI. This article can be found in the IDI Knowledge Center in ESupport.

2.1.1 GATEWAY SETUP NEW FUNCTIONALITY

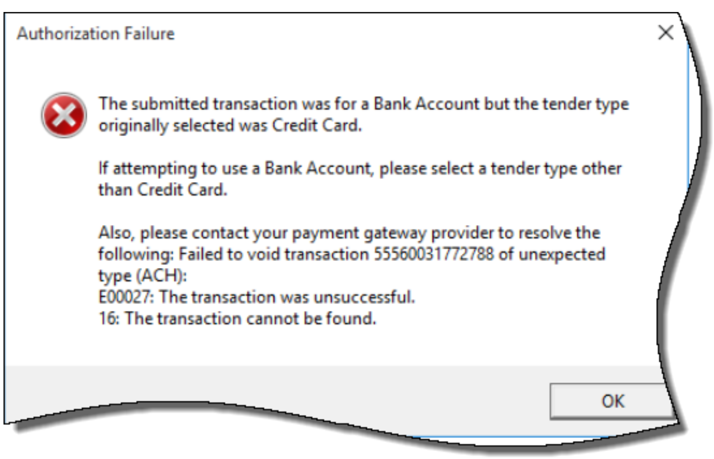
Several enhancements were made to PGA functionality originally created under AR 7579.

The *Use Payment Gateway App* (Use PGA) help text was updated to clarify that this setting has no impact on OnlineBill. This means that when a POS register is configured as the OLB register, changing the *Use PGA* setting will have no impact. OnlineBill will always consume the PGA when Authorize.NETAPI is the configured gateway. However, the *Use PGA* setting will have an impact on user experience when changed on non OnlineBill registers or in Admin Console. This impact will be covered in the *Setup* section below.



Also, an update was added in POS to account for the payment type selection in Authorize.NETAPI's iframe. Users must select the tender type in POS (credit card, bank account) however, the iframe will also present users with a payment type selection. The iframe does not support passing in the selected type from POS. This presents a condition where one type can be selected in POS and a different type can be selected in the iframe. To prevent CostGuard from becoming out of sync with the gateway, an error has been added for this situation.

In the PGA iframe you will still see the message *your transaction is processing, please close the browser* after submitting in the PGA; however, POS will detect the mismatch on the response and display an error. The error will direct users to re-tender the transaction using the correct tender type. The error will also advise if the originally attempted transaction was voided successfully or requires manual interaction with the gateway.



POS was also updated to NOT present the PGA browser page when the intent is to swipe the credit card. This functionality is based on the registers associated devices.

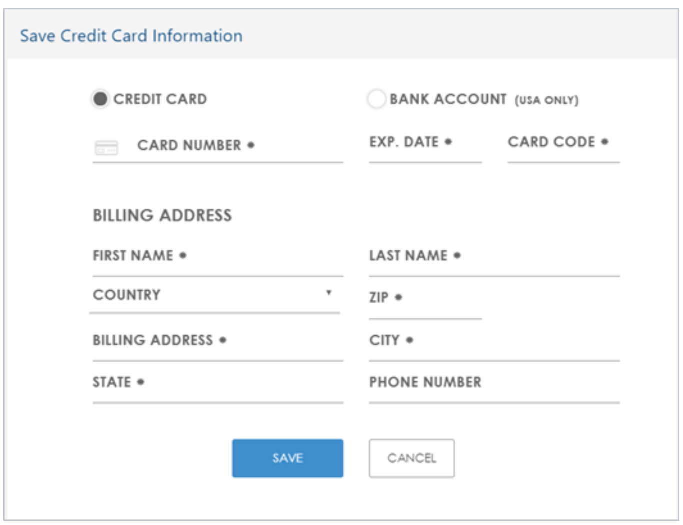
2.2 PGA INTEGRATION WITH COSTGUARD

Customers previously using an iframe in Customer Care or OnlineBill will see little change regarding the PGA integration. The iframe provided by the new Authorize.NETAPI has a slightly different look but all existing functionality remains intact and has not changed. This integration allows Customer Care and OnlineBill users to take advantage of the benefits that the PGA provides. As POS did not use iframe functionality prior to this development, the look and feel for POS users will differ a bit more than for web application users.

2.2.1 USING PGA IN CUSTOMER CARE

Customer Care has been enhanced to use the Payment Gateway application when creating an E-Pay credit card account. This will support the requirements for the Authorize.net changes that are expected in March of 2018. Also, you can set up CostGuard to have Customer Management users be redirected to Customer Care for managing E-Pay accounts.

When you navigate to the E-Pay Accounts page (**BILLING** > **E-Pay Accounts**), clicking the **NEW+** button opens an iframe dialog (example shown below).



If the payment provider is Authorize.NetAPI (new version of Authorize.NET), the PGA iFrame will be used for creating a credit card account. Even though the iFrame includes an option for Bank Account, this option should not be used. It will result in an error message.

If the provider is Authorize.NET (older version of Authorize.NET), the original iFrame directly called from Customer Care will be used for creating a credit card account.

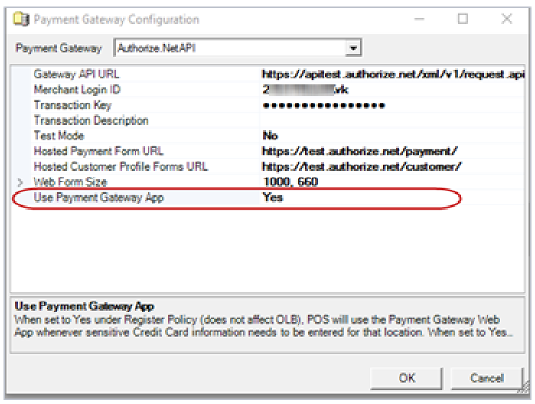
The functionality to save a credit card in Customer care has not changed. The **SAVE** button in the iFrame submits the form to the PGA. If the PGA completes the save successfully, you will be returned to the Customer Care page where additional E-Pay account attributes are available to populate. You must hit **SAVE** on the Customer Care page to save the account.

2.2.2 REDIRECTING CUSTOMER MANAGEMENT USERS TO CUSTOMER CARE

CostGuard client will redirect users to Customer Care for E-Pay transactions when the **Use Payment Gateway App** setting in Admin Console is set to **Yes**. Also, to successfully redirect, the Base Application URL parameter must be configured in Configuration Console.

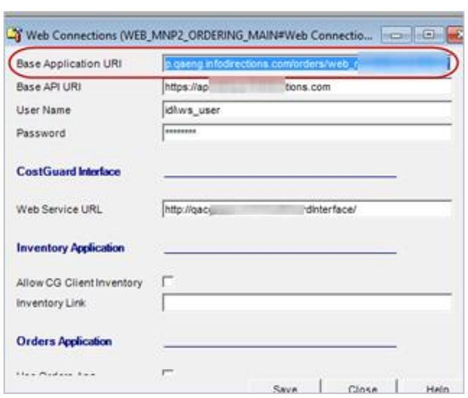
Use Payment Gateway App Setting – Admin Console

The path is: Business Rules > Local Services > CostGuardService > *server* > Customer Management > E-Pay > Enhanced PCI Configuration:



Base Application URL – Config Console

The **Base Application URL** setting (Web Connections) in Configuration Console must be configured. This was previously the *Orders Link* and has been moved out of the Orders section and relabelled to *Base Application URL*.



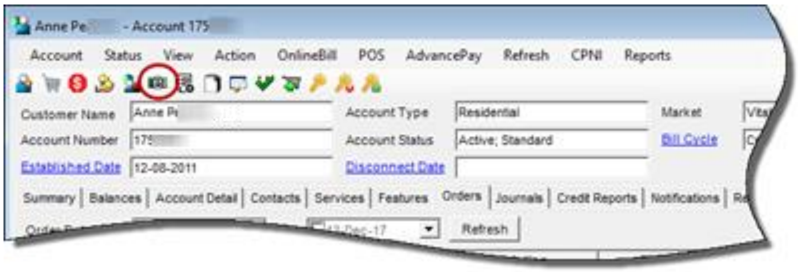
Notes:

- When the *Use Orders App* setting is checked (to use the Orders web module), this needs to contain the Orders application URL. If you're not using the Orders web module, this can be the same as the Base API URI (no module or environment specified).
- The redirect to Customer Care for E-Pay accounts will work whether the URL contains the full path to Order or just the base value.

Redirect Points

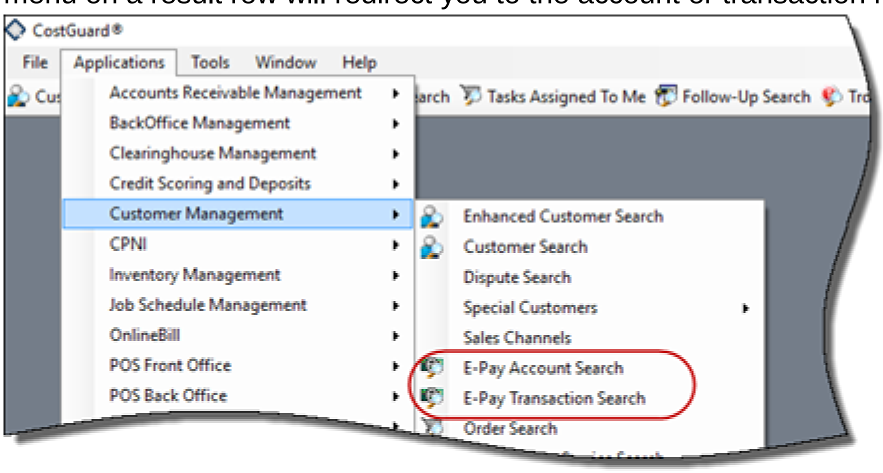
When CostGuard is set up for redirect as described above, any of the following will result in redirecting users to Customer Care:

- On the Customer page – clicking the View E-Pay Accounts icon:



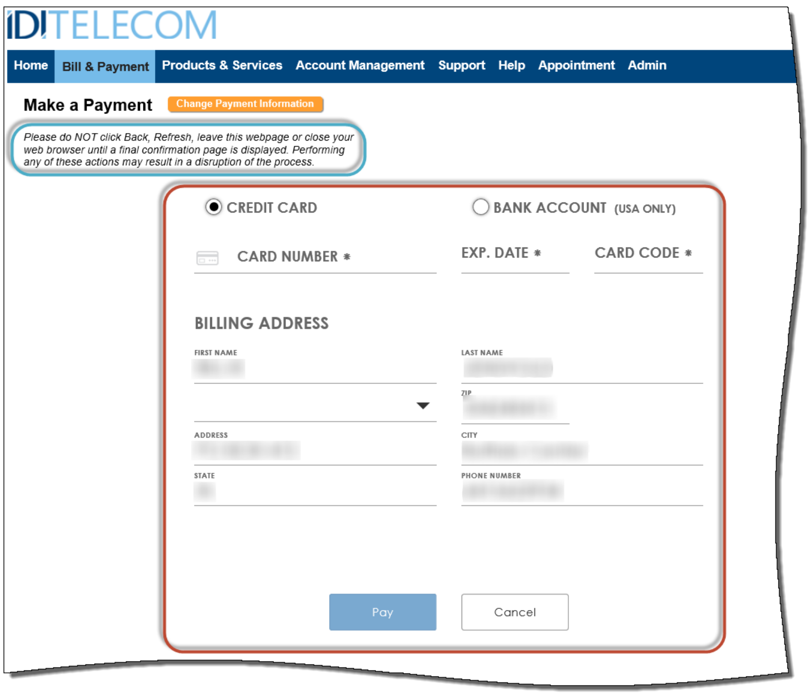
- On the Customer page – choosing **Status** > **E-Pay**:

- From the Applications menu, choosing E-Pay Account Search or E-Pay Transaction Search and then selecting an item from the Search Results. The results grid will display in CostGuard client, but clicking on a result or selecting View Customer from the context menu on a result row will redirect you to the account or transaction in Customer Care:



2.2.3 USING PGA IN ONLINEBILL

In the screen shot below the new iframe is highlighted with a red box. The information within the iframe is similar to what users previously experienced. The differences are styling updates as well as configuration changes with Authorize.Net (see *Setup*). The *Please do NOT click back text* highlighted in the blue box used to be a configurable footer option in Authorize.Net's old iframe. The new iframe no longer supports this configurable option so the text has been added to the OnlineBill page.



2.2.4 USING THE PGA IN POS

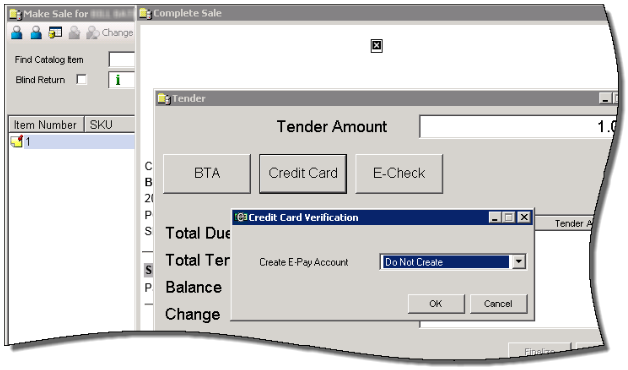
The PGA was developed to solve the requirement of processing credit cards through POS with a hosted iframe. The PGA is a web browser-based application that lets a hosted iframe capture sensitive credit card information.

Having the PGA communicate with the payment provider with a hosted iframe and using the PGA web service means that no sensitive credit card information is stored on IDI databases or passed over IDI networks.

When properly configured (see *Setup*) the following scenarios outline how to tender credit card transaction using the PGA in POS.

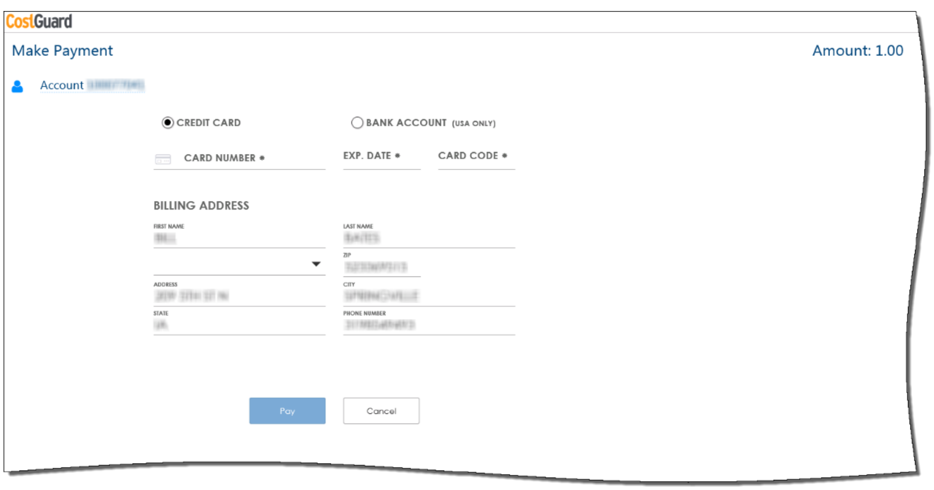
POS Make Sale One-Time Credit Card Transaction

Prior to the PGA, the entire tendering process occurred within the CostGuard Client. Now POS can tender credit cards through the PGA's web service and iframe. On entering and tendering the transaction amount, CostGuard passes customer information and the amount to the PGA web service.

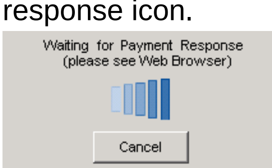


This will trigger the PGA *Make Payment* browser page to open automatically. The *Make Payment* page displays the account number, the amount of the transaction, and the payment iframe. The amount comes from the tender action in POS and can't be changed in the web application. If the amount is incorrect and needs to be changed you'll have to click **CANCEL** to close the browser and return to tendering in POS.

The PGA *Make Payment* page hosts the Authorize.NETAPI iframe. This is where you enter the sensitive credit card information and its associated billing address information and submit the transaction.



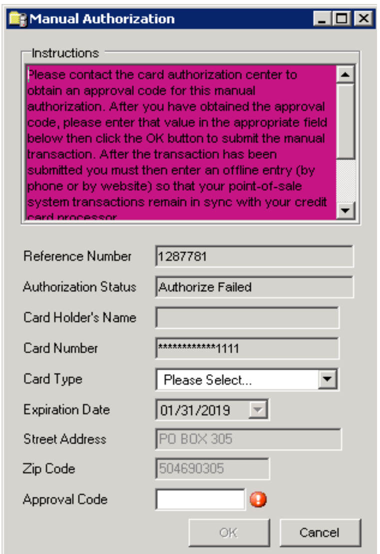
As you enter payment information in the PGA browser pages, POS will display a Pending response icon.



Once you click **SAVE** in the iframe, the PGA Web Service calls the payment gateway API to authorize the amount.

- If the transaction is authorized:
  - The PGA web service will pass the authorization to POS.
  - The credit card tender is displayed on the Tender Form.
  - The PGA web service saves the transaction token returned via the API response.
- If the charge is not authorized the applicable decline or error will be displayed.

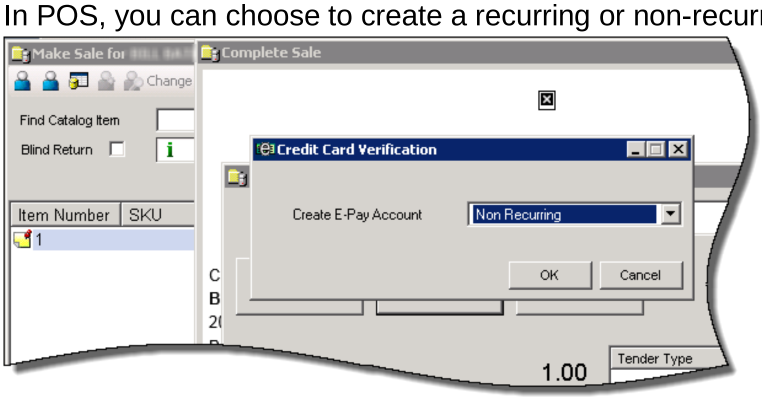
Note: You can still manually authorize a card; however, this screen has been updated to only show the last four digits of the credit card number entered in the PGA iframe.



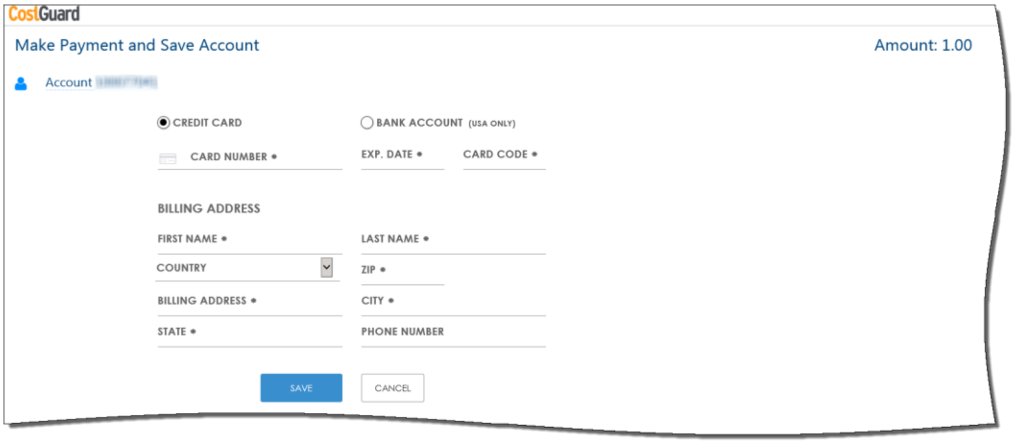
POS Make Sale Credit Card Transaction and Create E-Pay Account

When you tender a transaction in POS and choose to create an E-Pay account, CostGuard passes customer information and the amount to the PGA web service. This will trigger the PGA *Make Payment and Save Account* browser page to open automatically. This page will ensure the Credit card is tokenized with the payment processor and the token will be saved in CostGuard for use with the E-Pay account.

In POS, you can choose to create a recurring or non-recurring E-Pay Account.



Enter the sensitive credit card information, confirm the billing address information and submit the transaction in the PGA (click **SAVE**).



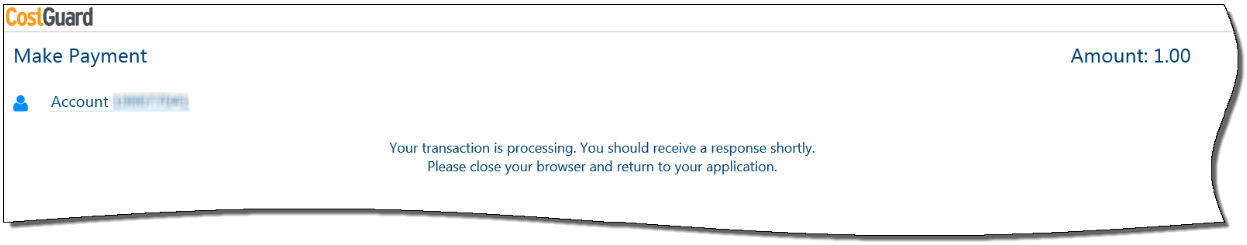
The PGA Web Service calls the payment gateway API to authorize the transaction.

- If the transaction is authorized:
  - The PGA web service will pass the authorization to POS.
  - CostGuard will display the credit card tender on the Tender Form.
  - CostGuard will save the transaction token returned via the API response.
  - CostGuard will make a second call through the PGA Web Service to the payment gateway and adds the card to the repository.
    - If the token is generated:
      - CostGuard will create the account (listed as an available account under E-Pay Accounts).
      - Associate the token returned via the API response to the account.
    - If the token is not generated, display an error message.
- If the transaction is not authorized, display the applicable decline or error message
- If the charge is not authorized display the applicable decline or error.

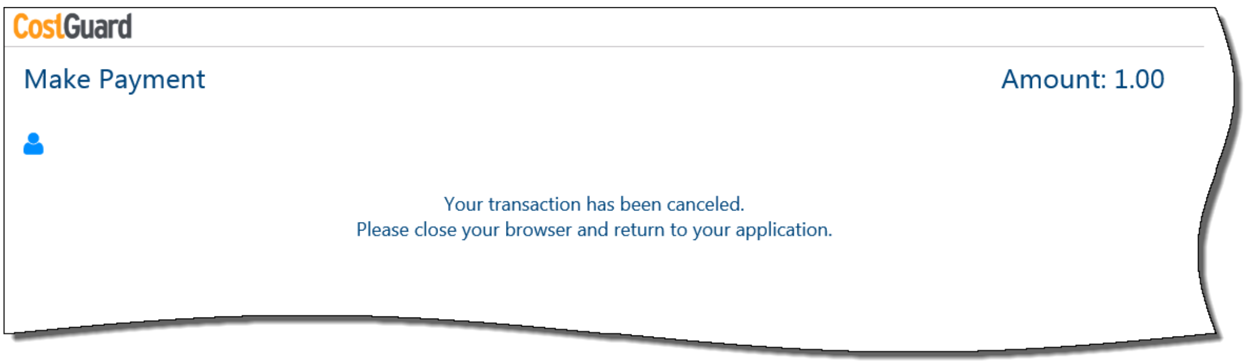
Submitting and Canceling in the PGA

After you choose to SAVE or CANCEL in the payment iframe, you will receive the corresponding confirmation message:

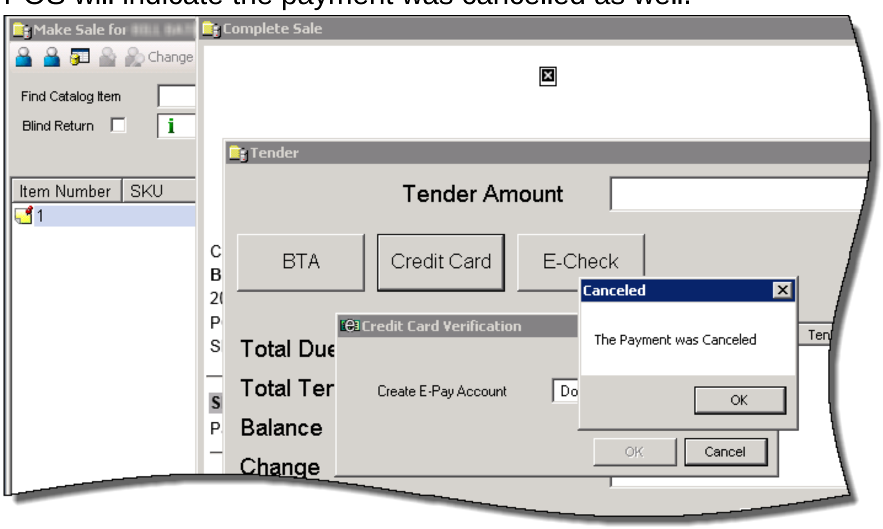
SAVE:



CANCEL:



POS will indicate the payment was cancelled as well.



2.3 PAYMENT GATEWAY WEB APPLICATION – TRANSACTION SEARCH

The Payment Gateway web application lets you search for payment transactions and drill down to view transaction details.

2.3.1 PERMISSIONS

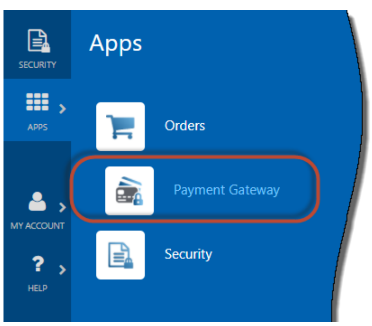
There are two roles related to this functionality as managed via the Security Web Module:

- Role: *Payment Gateway User*, Permissions: *Allow Log On*
- Role: *Payment Gateway Admin*, Permissions: *Allow Log On* and *Administrator*

Both roles let you search for transactions and view details. The Admin role lets you view *all* transaction detail fields, while some fields are hidden from Payment gateway users.

2.3.2 ACCESSING THE PAYMENT GATEWAY WEB APPLICATIONS

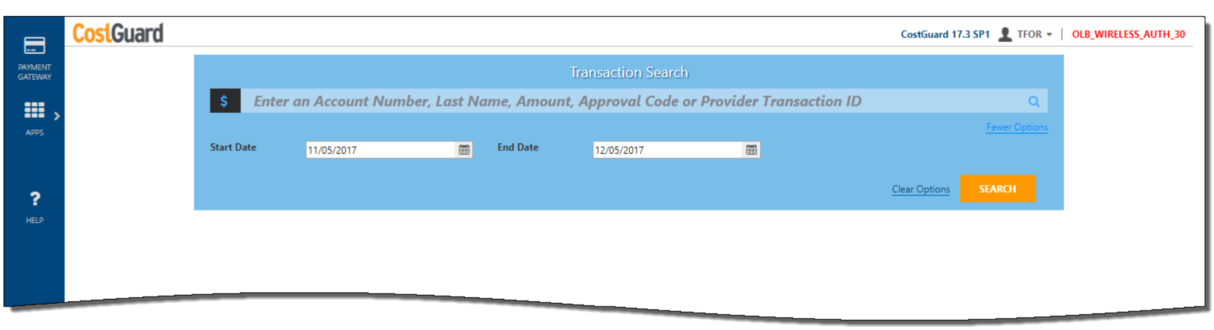
Users with either the Payment Gateway Admin or User role will have the Payment Gateway icon available in their Application Tray.



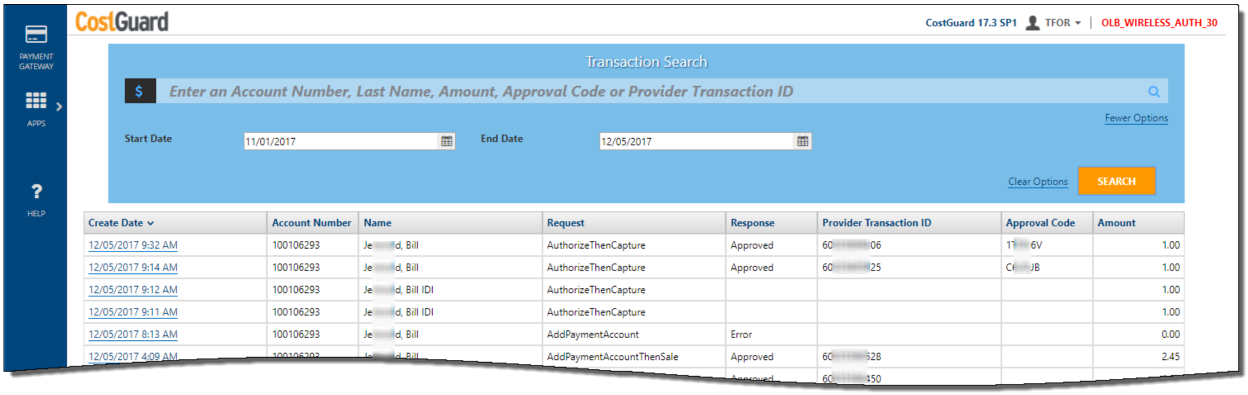
Selecting that icon displays the Payment Gateway OmniSearch page.

2.3.3 PAYMENT GATEWAY OMNISEARCH

You can search for payment transactions by Account Number, Last Name, Amount, Approval Code or Provider Transaction ID. Clicking **More Options** provides fields for limiting search results by Start and End Date. These dates default to the past 30 days.

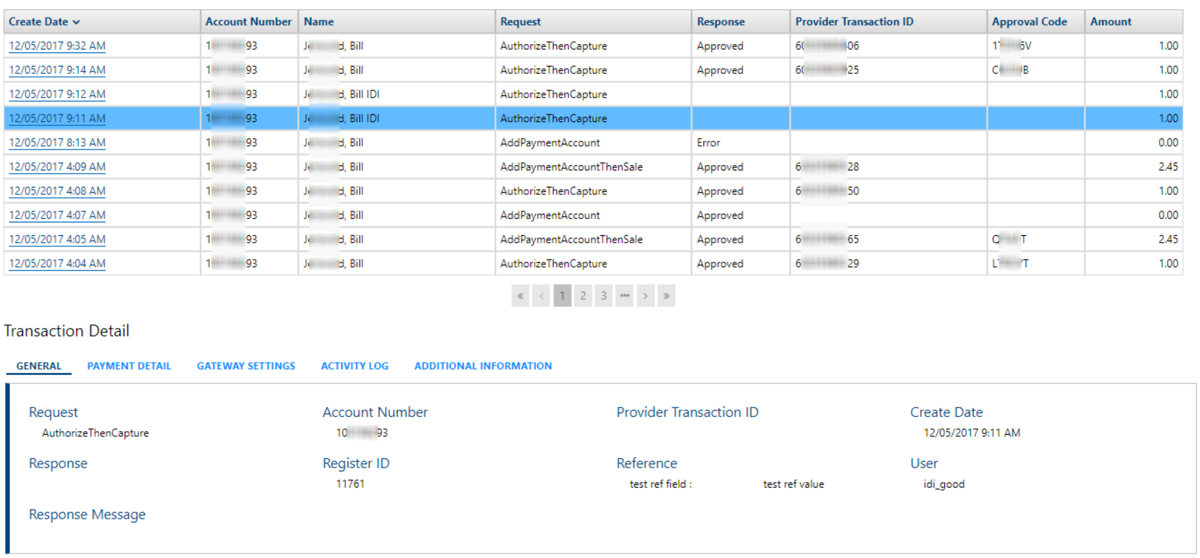


The Search results list the matching transactions.

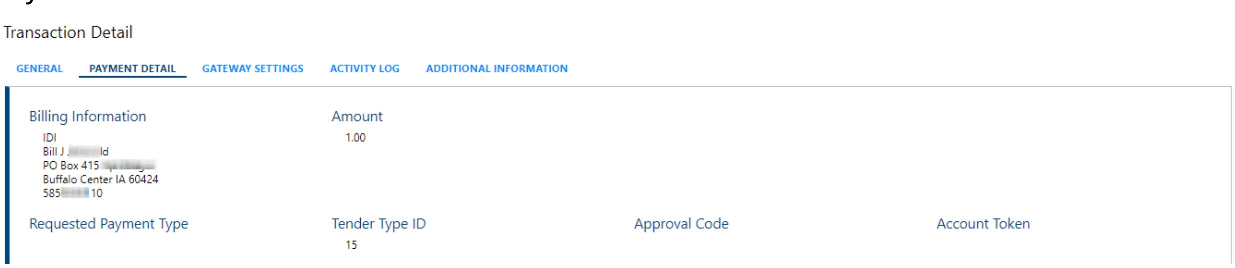


Clicking the Create Date displays the corresponding transaction details. This view has five tabs.

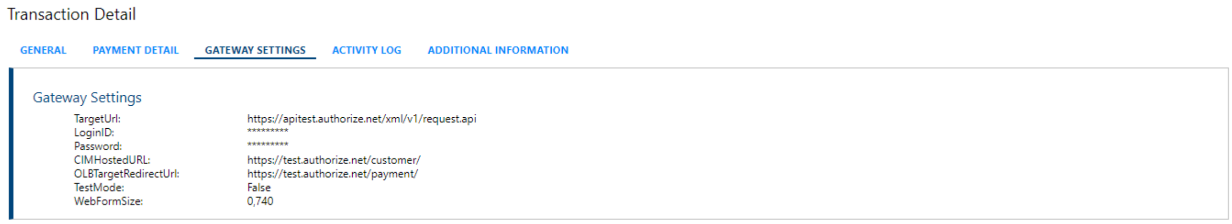
- General



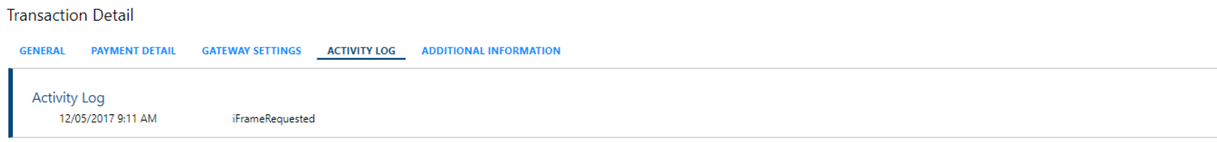
- Payment Detail – Note: Account token field is masked.



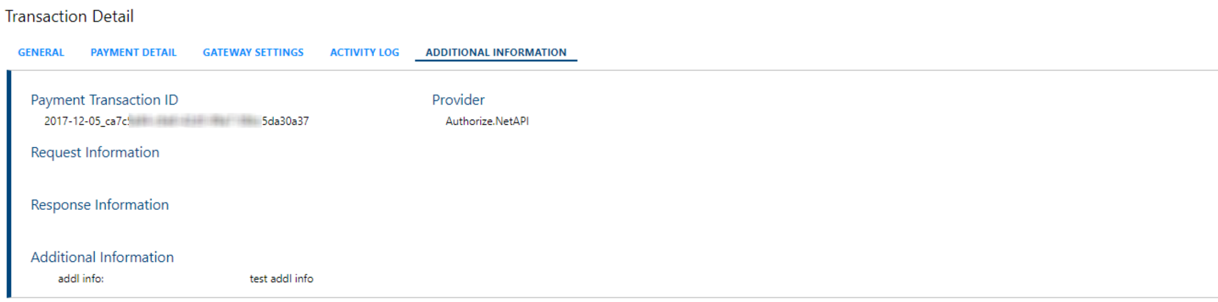
- Gateway Settings – This tab is only available for Admin users. The LoginID and Password fields are masked.



- Activity Log



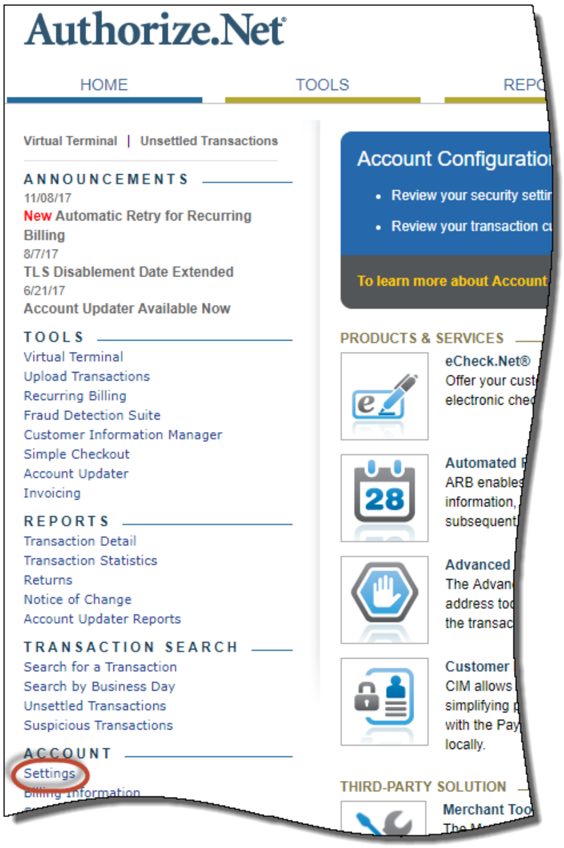
- Additional Information

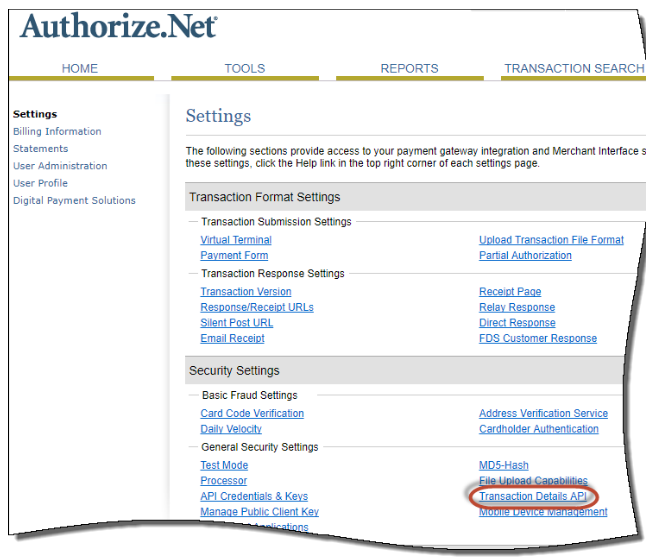


2.4 SETUP

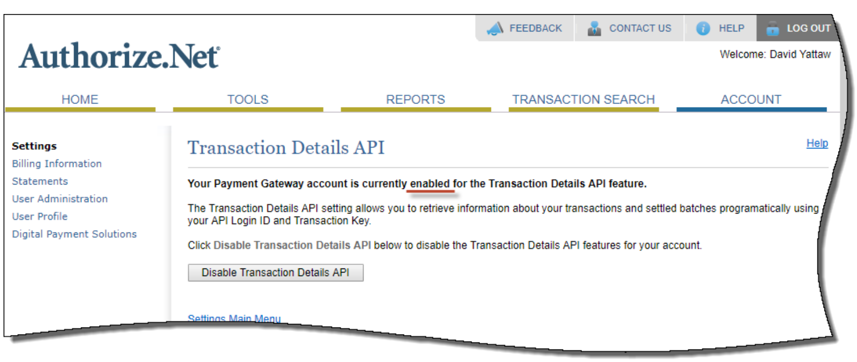
2.4.1 SETUP IN THE AUTHORIZE.NET PORTAL

Prior to converting to the new Authorize.NETAPI gateway, you must enable the Transaction details API for your Authorize.Net account. To do this, log into Authorize.Net, select **Settings** under the Account section then select **Transaction details API**.



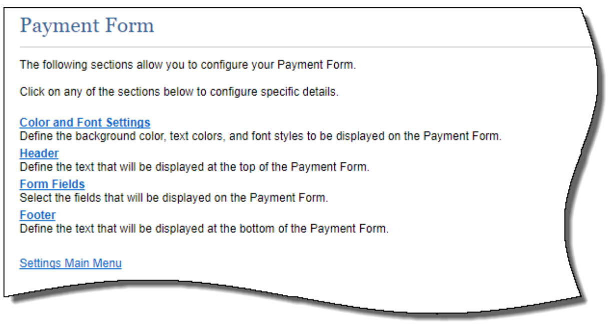


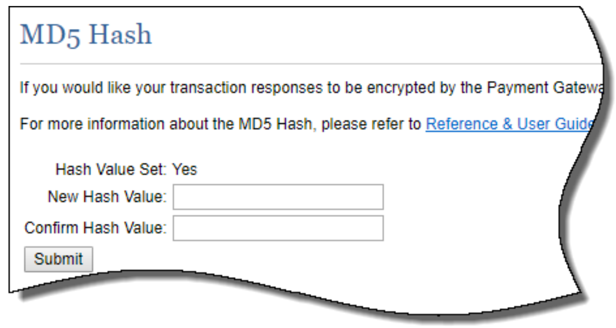
From the Transaction details API screen click the button to enable this API.

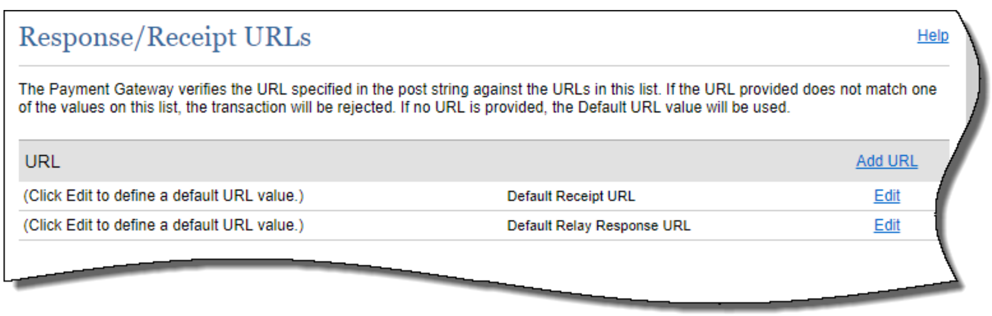


Obsolete Authorize.Net Portal Settings for OnlineBill

NOTE: Authorize.NET portal settings previously configured to use Authorize.Net with OnlineBill no longer apply. These settings include Payment Form settings, response/receipt values, and MD5 Hash values. There is no need to remove these configurations as Authorize.NetAPI will ignore them.

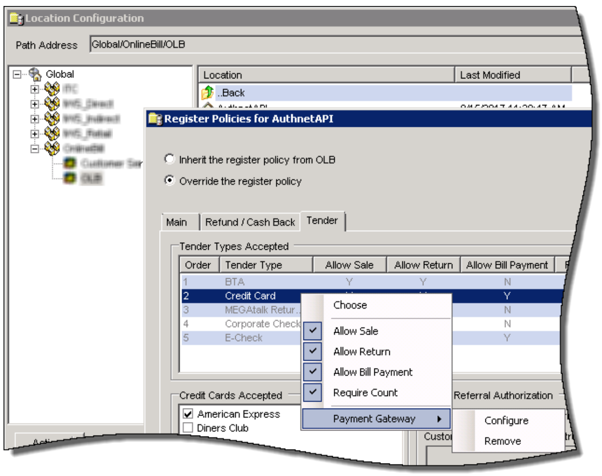




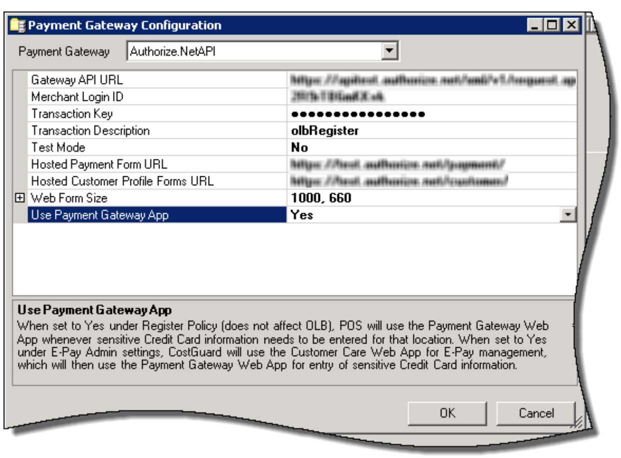


2.4.2 USE PAYMENT GATEWAY APP SETTING IN POS

You can configure and use the PGA with POS through each of your locations' register policies. Navigate to **Applications** > **POS Back Office** > **Locations**, then drill down to the desired location and right click to view the register policy. Next, on the tender tab of the register policy, right click on credit card and select **Payment Gateway** > **Configure**.



Select **Authorize.NetAPI** from the Payment Gateway dropdown and configure the URLs, Login ID, and Transaction Key with your gateway account information.



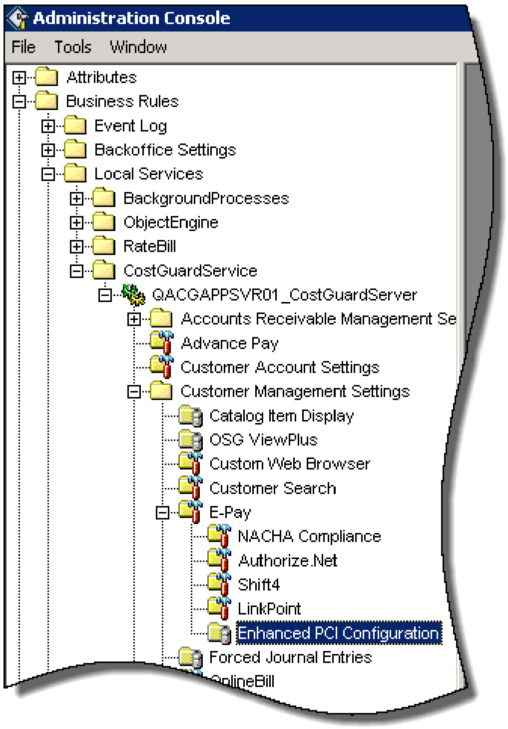
The *Use Payment Gateway App* setting is what triggers POS to use the PGA web application for tendering Credit Cards. When set to **Yes**, POS will launch the PGA web application when a credit card is tendered. The PGA will then handle the communication to Authorize.NETAPI. When this setting is set to **No**, POS will tender credit cards as it has in the past. The CostGuard client will communicate with Authorize.NetAPI via APIs and web services.

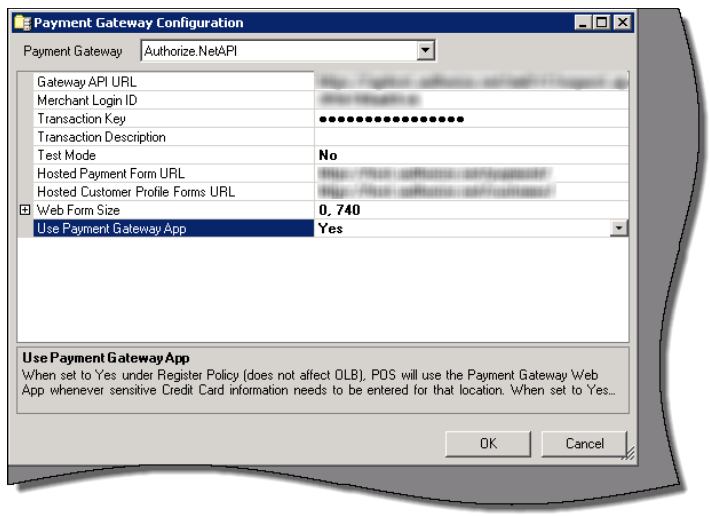
The default value for *Use Payment Gateway App* is **No**.

2.4.3 USE PAYMENT GATWEWAY APP SETTING IN ADMIN CONSOLE

The payment gateway configurations for E-Pay transactions are in the Admin Console. These settings are only available to IDI so you'll require assistance from IDI to configure these settings.

To access the payment gateway configurations, navigate to **Enhanced PCI Configuration**.



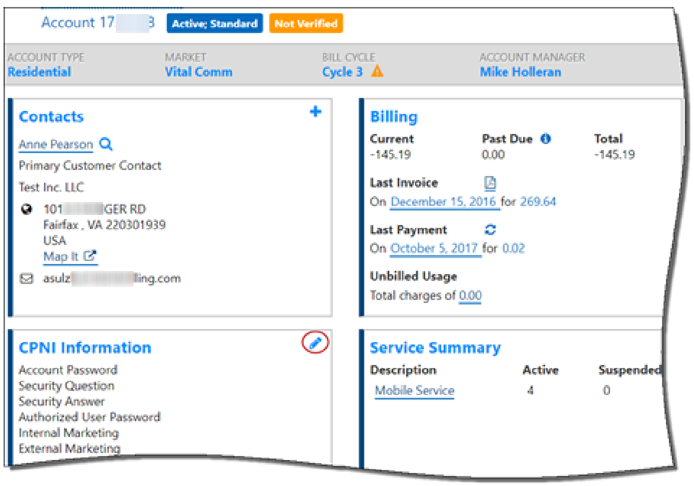


The *Use Payment Gateway App* setting is what triggers CostGuard Client to re-direct users to the Care web application when set to **Yes** in Admin. Additional IDI internal configuration is required for the re-direct to occur. This is described in *Redirecting Customer Management Users to Customer Care*.

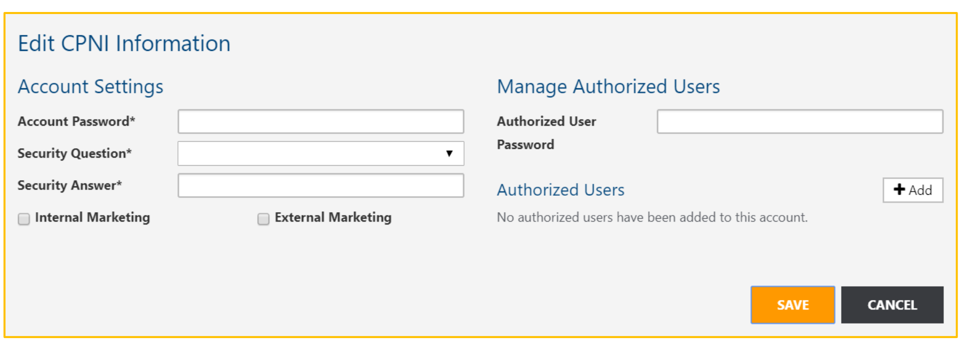
3 Customer Care Web Module

3.1 ABILITY TO EDIT CPNI INFORMATION

A new Edit CPNI Information permission supports editing CPNI information via the Customer Summary page. This permission has been added to the Customer Care *Admin* role. This lets you grant users the ability to edit CPNI information without also granting them full access to customer information. Users with this permission will have a pencil icon in the right corner of the CPNI info panel.



Clicking this icon opens a dialog that lets you edit the CPNI information.



Notes:

- The existing Manage Customers permission will not change. This permission will continue to let users edit customer information on the Account Details page, including CPNI information.
- The new Edit CPNI Information permission will not allow users to edit CPNI information from the Account Details page. It only applies to the Customer Summary page.

4 Orders Web Module

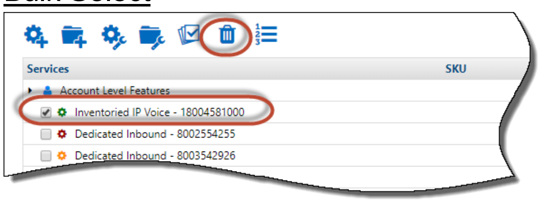
4.1 CANCEL UNUSED SERVICE NUMBER INVENTORY RESERVATIONS

Prior to version 18.1, while assembling an Order, if a Service was assigned a reserved Service Number from inventory and was then subsequently removed from the Order, you were not able to release the unused reservation directly in the Orders web module. Rather, you would have to use the CostGuard Client to do this. With 18.1, when removing a Service from an Order you can choose to release the reserved Service Number directly in the Orders web module. Similar functionality on the Order Summary page cancels reservations when you cancel an Order that had been submitted with reserved Service Numbers.

4.1.1 ORDER ASSEMBLY

When you choose to remove a Service from the Order, either via the bulk select function or via the Service Details pane, with the 18.1 release, the confirmation dialog has a new check box that lets you choose to release reservations associated with the Services being removed.

Bulk Select



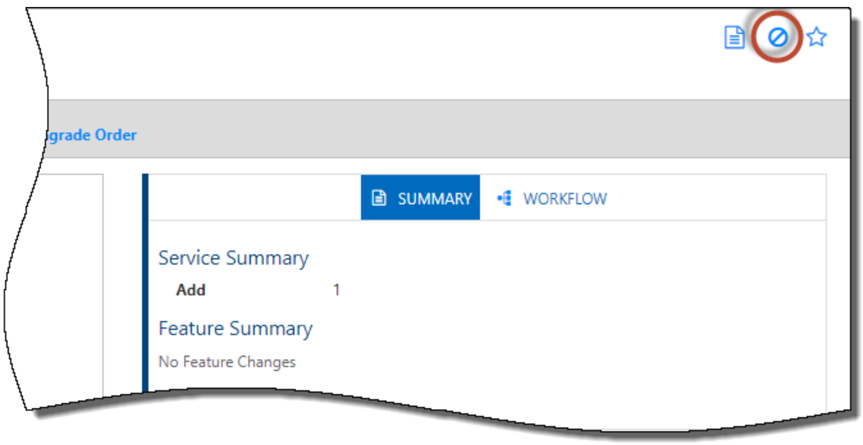
Service Details pane

Confirmation Dialog with Release Reservations Check Box

Note: Not checking this check box will save the reservation for this order. If you decide to allocate the service number(s) to another service, they will be immediately available for use.

4.1.2 CANCELING A SUBMITTED ORDER

A new icon is available in the upper right-hand corner of the Order Summary page that lets you cancel in-process Orders. **Note**: Updates can be made until the *Billing System Update* action has been completed by Workflow, or the Order status is *Complete*. In either of these cases, the order will be read only.



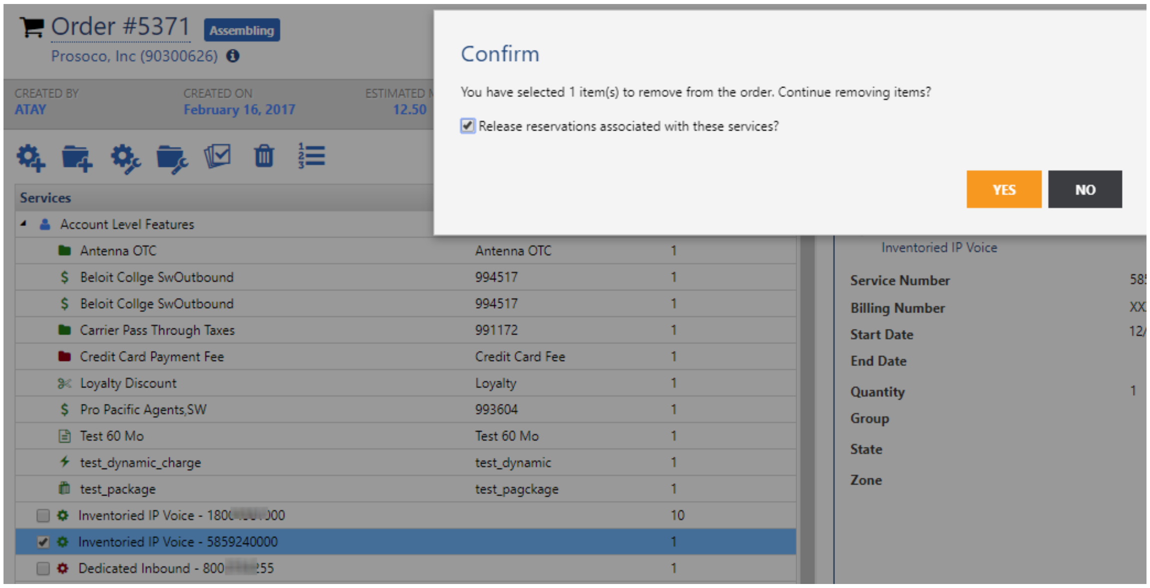
When you cancel an Order:

- The associated Workflow is cancelled along with any unfinished steps
- Service Number Inventory Reservations on the order are cancelled
- If the Billing System Update action has completed, manual clean-up may be required
- The cancelled order cannot be edited

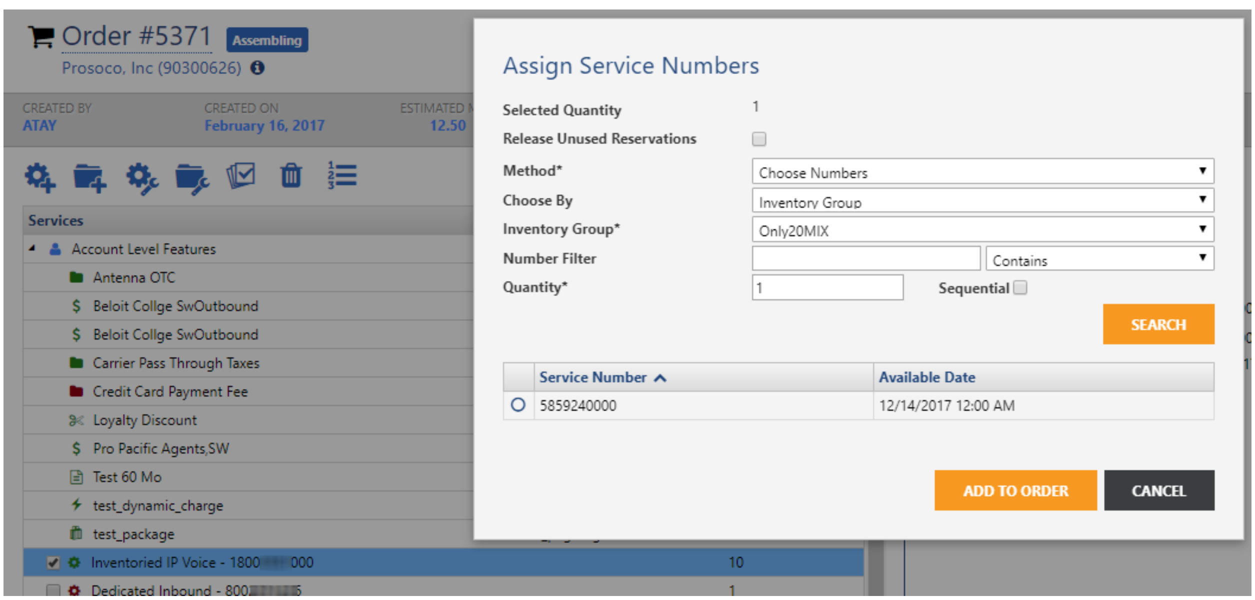
Note: Any cancelled reservation that was saved as part of the order, is released and available for re-use, immediately for general service number inventory fulfilment. See the example below.

Example: Cancelled Reservation Released and Immediately Available for Use

In the screen shot below, Inventoried IP Voice 5859244000 is removed from the Order and the reservation is released.



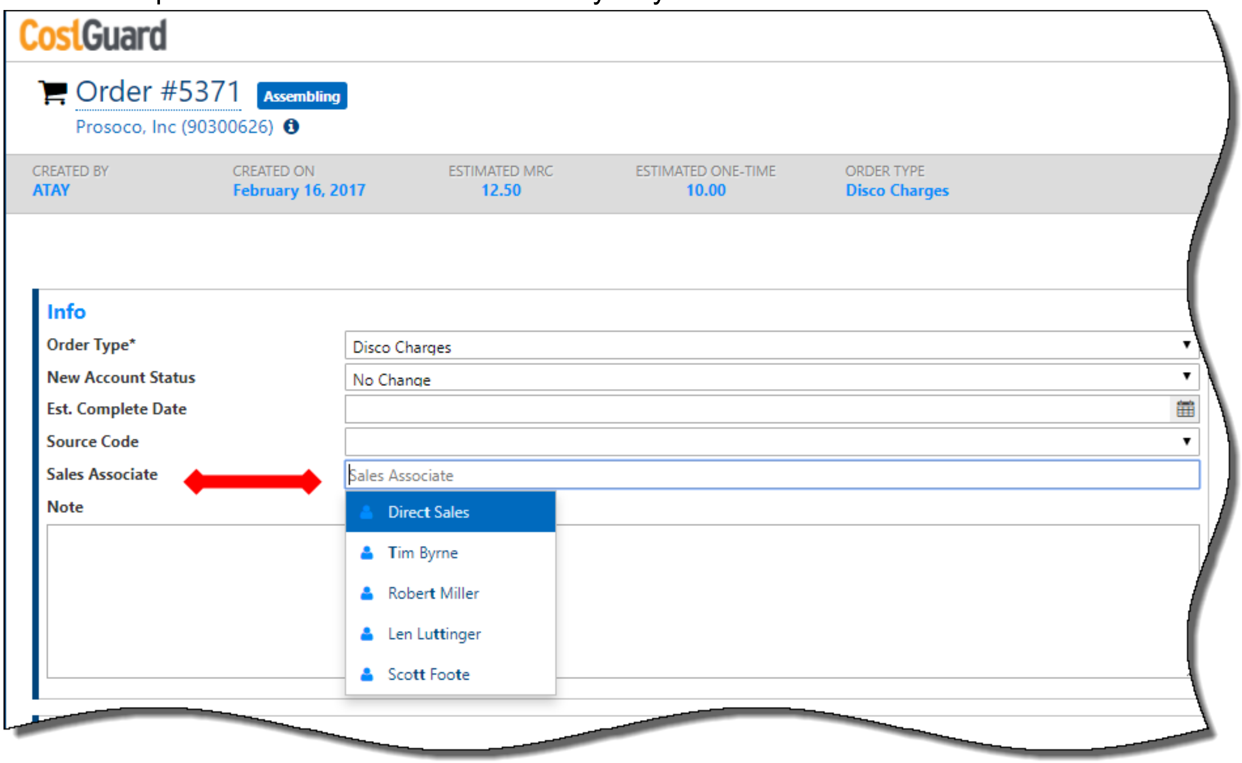
In a subsequent *Choose Service Number* step in the same Order, 5859244000 is immediately available to be chosen.



4.2 MAKING SALES ASSOCIATE AVAILABLE IN ORDERS

This lets users identify and associate a sales person to an Order. This facilitates downstream reporting for sales commissions and so on.

A new field has been added to the Orders Summary page, in the Info Panel, to capture the Sales Associates. Since Sales Associates already exist in Customer Care, type-ahead functionality facilitates finding existing associates. This information is saved with the Order but does not impact the customer's account in any way.



5 Notifications on Enrolling in Recurring Auto-pay

CostGuard can be set up to send a notification when a customer enrolls their E-Pay account in recurring auto-pay. This allows for a notification to be sent regardless of what application updated the E-Pay account (OnlineBill, Customer Care, CostGuard Client).

The solution leverages Workflow Trigger functionality with the existing *Send Notification* Workflow Action. **Note**: The *Send Notification* Action uses the CostGuard Notification engine. CostGuard Notifications were chosen to support SMS (the CostGuard Communications platform does not yet support SMS).

Two New Workflow Triggers are available in the Workflow Trigger gallery:

- E-Pay Account Created
- E-Pay Account Modified

A configuration option in Customer Care lets you enable/disable notifications for E-Pay auto-pay enrollment. This option applies to OnlineBill and CostGuard Client, as well as Customer Care, so it must be configured even if you don't use Customer Care. Enabling this option instantiates two Workflow Triggers in your system:

- *E-Pay Account Created* with Action = *Send Notification*
- *E-Pay Account Modified* with Action = *Send Notification*

    Note: The *E-Pay Account Created* and *E-Pay Account Modified* triggers can also be used with other Workflow actions to support other business needs.

CostGuard Client changes have been made to support notifications for E-Pay accounts:

- New Data Source: E-Pay Account Notifications
- Template: Sample SMPP Notification template for E-Pay Account Notifications

5.1 SETUP

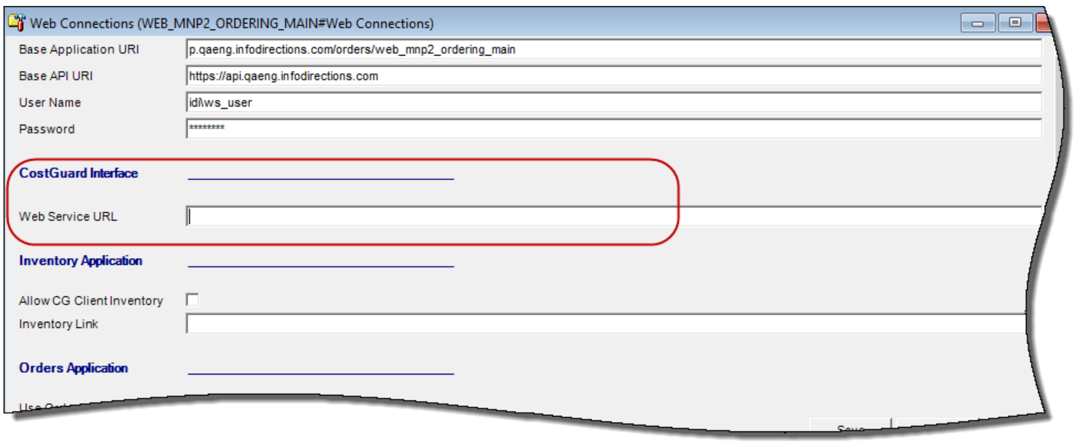
Note: You should already be using customer notifications, and have the delivery method set up in Admin Console. If this is not already in place, additional setup will be needed.

5.1.1 WEB SERVICE URL - CONFIGURATION CONSOLE

This setting is required for the Workflow Trigger functionality to work. It is only available to authorized IDI associates. Configure the Web Service URL via

Web Connections > CostGuard Interface

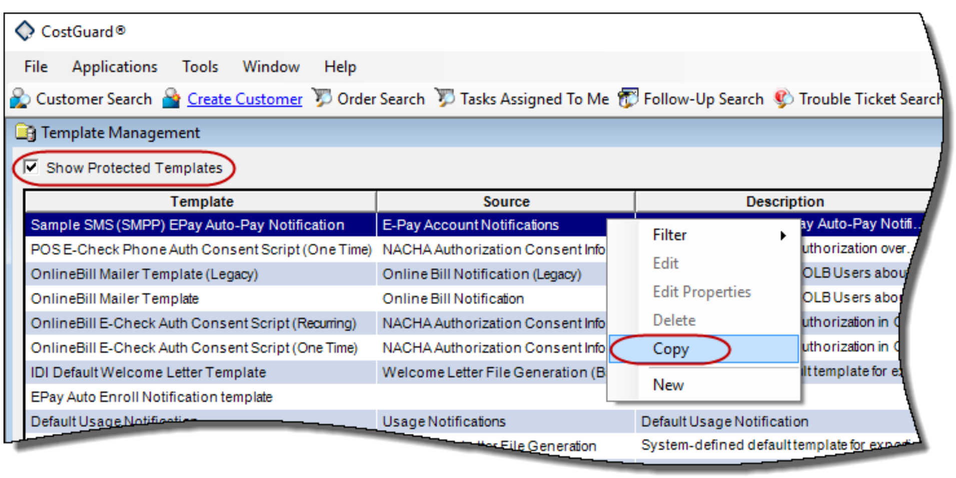
Set the value to: **http://**<*application server*>**/CostGuardInterface/**



5.1.2 NEW SAMPLE TEMPLATE - COSTGUARD CLIENT

A new sample template called *Sample SMS (SMPP) EPay Auto-Pay Notification* lets you specify custom text for the notifications. The template works with the SMPP delivery method. The path is: *Backoffice Management > Customer Notifications > Manage Templates*

The *Show Protected Templates* checkbox must be checked to see this sample template. Because the template is protected, you need to make a copy in order to make customizations.



Note: The template text is used in both the *account created* and *account updated* notification. If you need different text for each notification, you'll need to create two separate templates. Some additional Trigger configuration will also be needed.

New E-Pay Account Notifications Data Source

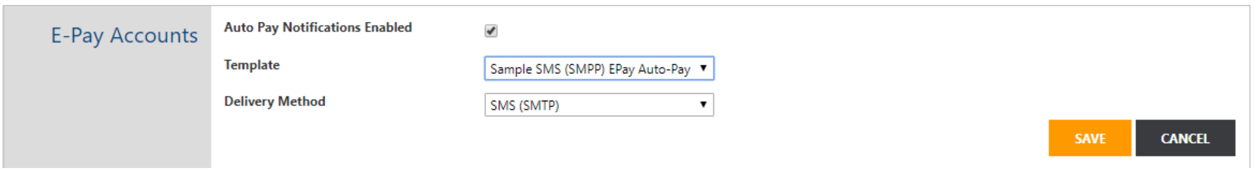
This data source can be used in customer notification templates. It contains the following fields:

- EPayAccountID
- BankAccountType
- CustID
- CusomerAccountNumber
- CustomerName
- CustomerPrimaryContactPhone1
- CustomerPrimaryContactPhone1Type
- CustomerPrimaryContactPhone1TypeID
- CustomerPrimaryContactEmail1
- PrimaryServiceNumber
- EPayAccountDescription
- EPayAccountNumber
- EPayAccountExpirationDate
- EPayAccountRecurringEndDate
- EPayAccountRecurringStartDate
- EpayAccountRecurringStatus

5.1.3 ENABLE/DISABLE SETTINGS - CUSTOMER CARE

Note: *Auto Pay Notifications* must be enabled in Customer Care. This setup is required whether or not you use Customer Care. If you don't use Customer Care, the setup may be performed for you by an IDI associate. Enabling this setting creates two Workflow triggers with accompanying Send Notification actions that drive this functionality in *all* areas where it is supported (CostGuard Client, OnlineBill and Customer Care).

The *Auto Pay Notifications* setting is disabled (unchecked) by default. The setting is located under **Manage** > **Settings**. Access to this setting requires the *Manage Settings* permission in Customer Care.



To enable,

- Check *Auto Pay Notifications Enabled*. This creates the Workflow Triggers and their accompanying *Send Notification* Actions. Once enabled, disabling this setting will delete the triggers.
- Select the custom template you set up for this purpose.
    - Only templates associated with the E-Pay Account Notifications data source will be available for selection.
    - If you use two different templates for *account created* and *account updated* notifications, you can only select one here, and it will be used when creating both Workflow Triggers. A user with access to Workflow can then modify one of Triggers to use a different template.
- Select the Delivery Method. Options are SMS (SMPP), SMS (SMTP) or Email.

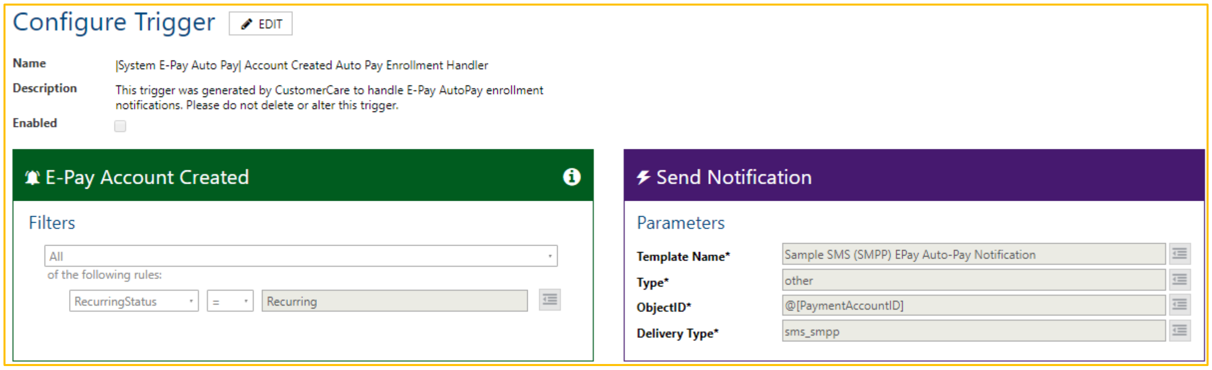
5.1.4 MORE ON THE WORKFLOW TRIGGERS (AND ACCOMPANYING ACTIONS)

The Triggers (left side) are populated exactly as shown below. The properties available to filter on include: BankAccountTypeID, ContactID, CreditCardTypeID, CustomerID, EndDate, IsDeleted, IsTerminated, LastModifiedDate, LastModifiedUser, PaymentAccountID, RecurringEndDate, RecurringStartDate, RecurringStatus, RemittanceTypeID, StartDate.

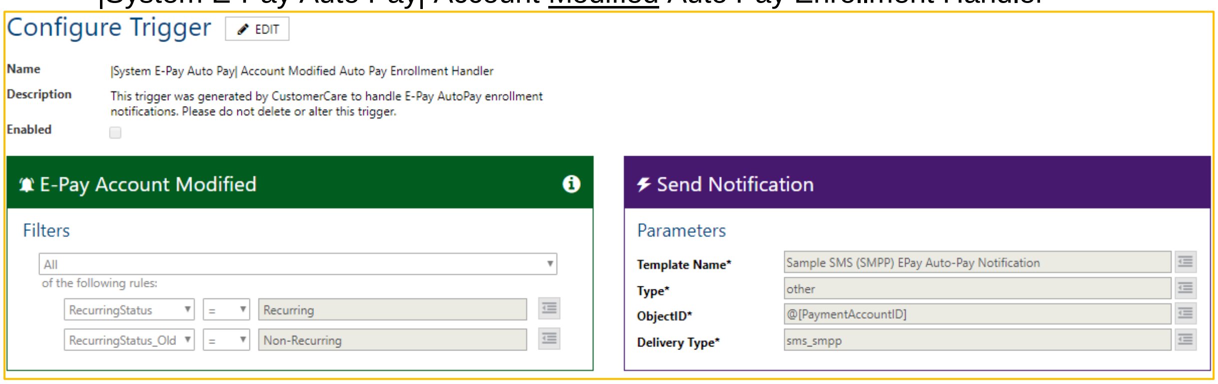
The associated Actions (right side) are populated based on the parameters entered when the E-Pay Accounts setting was saved.

The Triggers do not require any further configuration unless you're using two different templates for *account created* and *account updated* notifications. In this case you'll need to change the Template specification in the applicable Action.

- |System E-Pay Auto Pay| Account Created Auto Pay Enrollment Handler:



- |System E-Pay Auto Pay| Account Modified Auto Pay Enrollment Handler



5.1.5 NOTE FOR TESTING

The Config Console provides a Test Mode setting for each delivery method in the Delivery Configuration dialog. The path is:

Local Service >Background Processes> Customer Notifications > Delivery Configuration

In a non-production environment, the Test Mode setting should be checked to prevent messages going out to customers. Unchecking the Test Mode setting in a non-production environment should be carefully coordinated.

6 Wholesale Billing

CostGuard allows companies that provide wholesale services to also offer billing services for their reseller's end-customers. CostGuard will track:

- the cost to the service provider for usage and features being consumed
- the wholesale price being offered to the reseller
- the final retail price paid by the end-customer

Using this information, a provider can track the margins they are earning in their wholesale agreements, as well as the margins the reseller is earning by selling to the end-customer.

6.1 WHOLESALE FIELDS

CostGuard uses three values on usage and features to track the different charges that are used in Wholesale Billing:

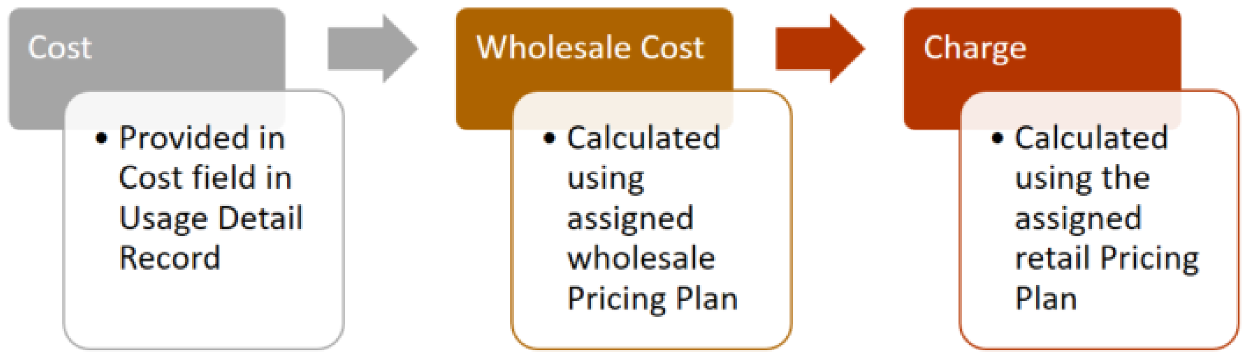
- **Cost -** The amount it costs the service provider to deliver the service. This information is calculated outside of CostGuard, but can be stored on usage and features for reference and reporting.
- **Wholesale Cost -** The amount the service provider is charging the reseller for the service. For usage, this is calculated by CostGuard based on configured wholesale Pricing Plans. For features, this is set by the service provider.
- **Charge -** The amount the end-subscriber is being charged by the reseller. For usage, this is calculated by CostGuard based on configured retail Pricing Plans. For features, this is set by the service provider.

6.2 COSTGUARD CLIENT SUPPORT FOR WHOLESALE COST

Wholesale Cost can be configured in the Product Catalog; however, it is not displayed on accounts or orders within CostGuard Client. Users who need to view or override a Wholesale cost field must use the Customer Care or Orders web module.

6.3 TRACKING WHOLESALE USAGE

6.3.1 WHOLESALE USAGE OVERVIEW



6.3.2 COST

Cost for a usage record is tracked by populating the cost value in the usage detail record sent to CostGuard for rating. CostGuard will identify the Cost provided on the original source record and preserve this through to the rated usage record.

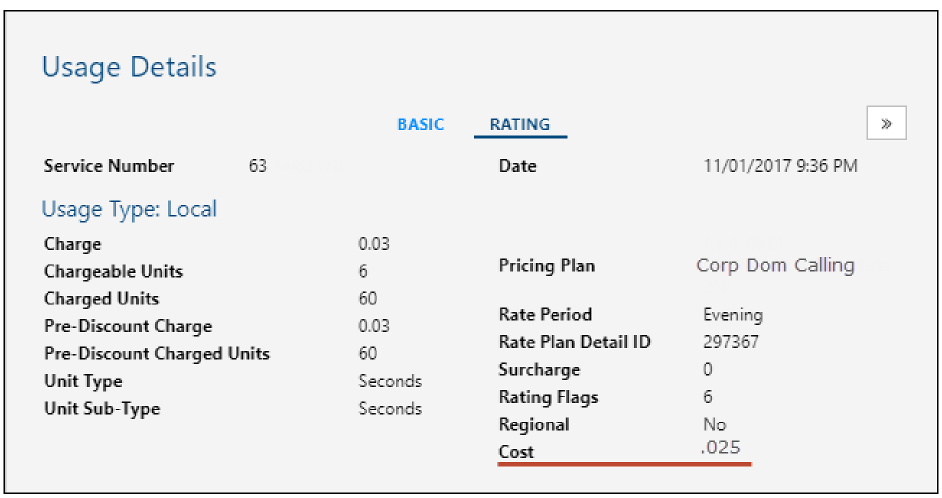
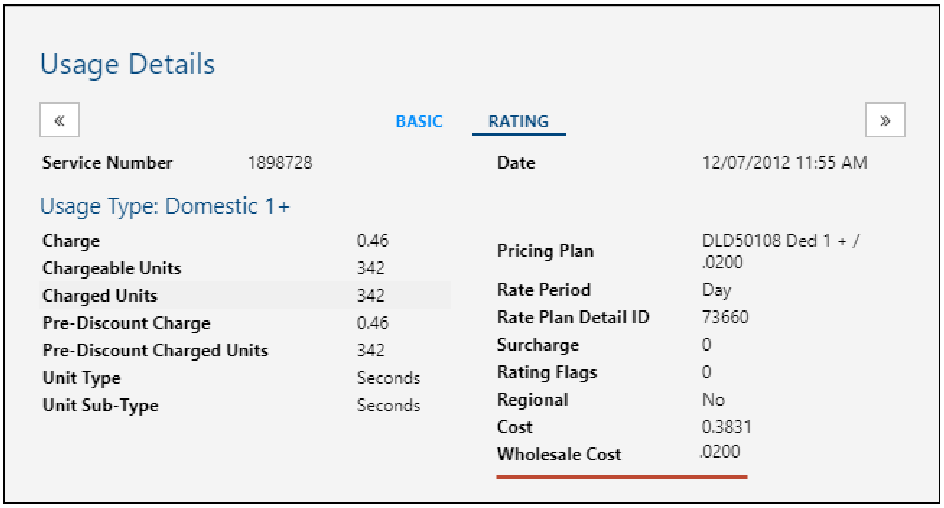


Figure 1 Rated Usage Record Displayed in Customer Care

6.3.3 WHOLESALE COST

Wholesale Cost for usage is calculated by assigning a wholesale Pricing Plan to either the service or the customer. When CostGuard detects an applicable wholesale Pricing Plan is assigned, it will calculate the rate and store it in the Wholesale Cost field on the record.



A Wholesale Pricing Plan is configured and assigned like a retail pricing plan, except when you create the Wholesale plan it you must specifically indicate it will be used for wholesale.

Configuring Wholesale Pricing Plans using Pricing Plan Categories

Customers using Pricing Plan Categories can configure a Plan to handle Wholesale rating by setting the Category to Wholesale.

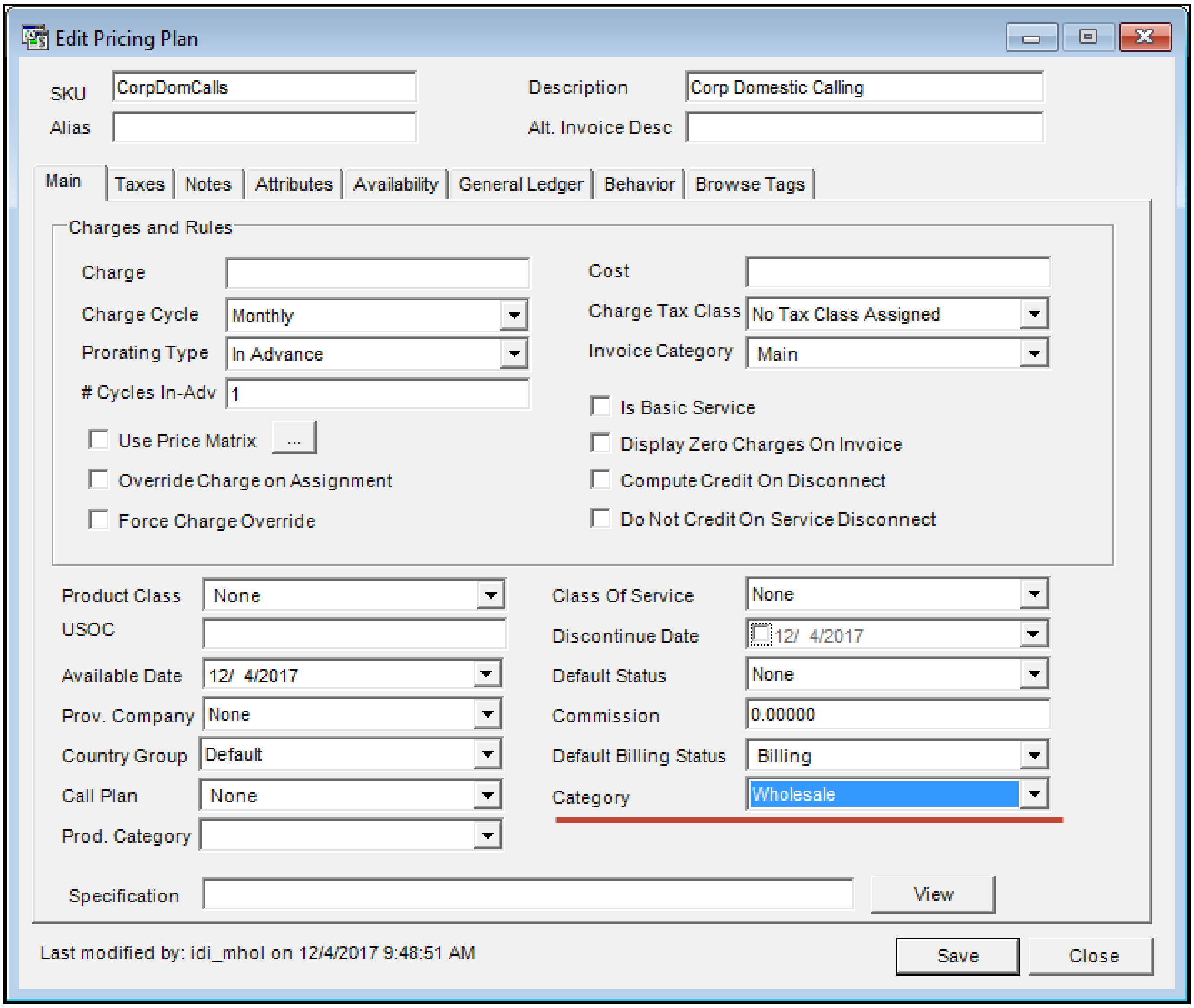


Figure 2 Configuring a Pricing Plan as Wholesale

6.3.4 CHARGE

In Wholesale Billing, the Charge for usage is calculated by using the retail pricing plans assigned. This works the same as for non-wholesale end-customers.

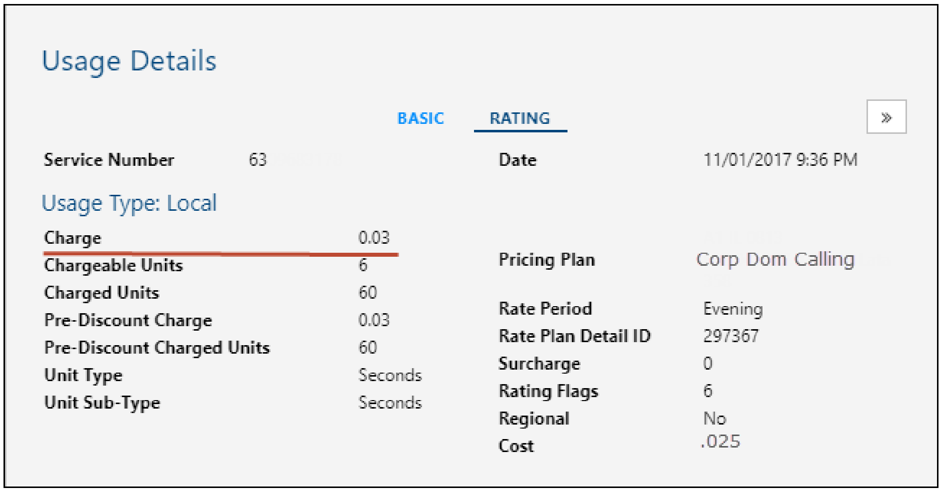
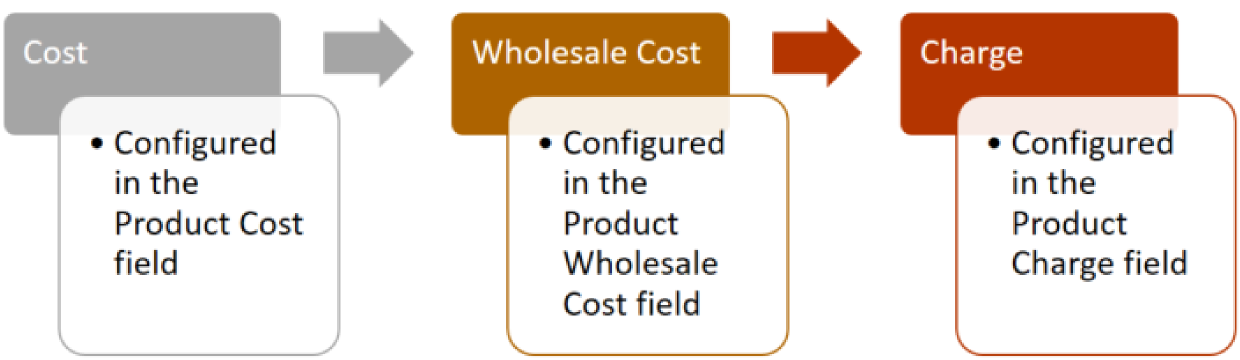


Figure 3 Rate Usage Record Displayed in Customer Care

6.4 TRACKING WHOLESALE FEATURES

6.4.1 WHOLESALE FEATURES OVERVIEW



6.4.2 COST

Cost for a Feature is configured in the Product Catalog by setting the value in the Cost field.

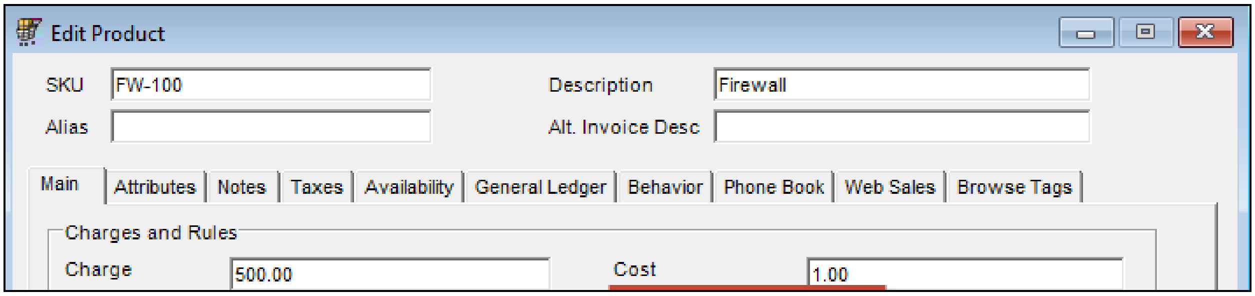


Figure 4 Editing a Feature in Product Catalog

Assigned instances of this Feature will display the associated Cost value for users who have the Show Cost permission assigned in Customer Care.

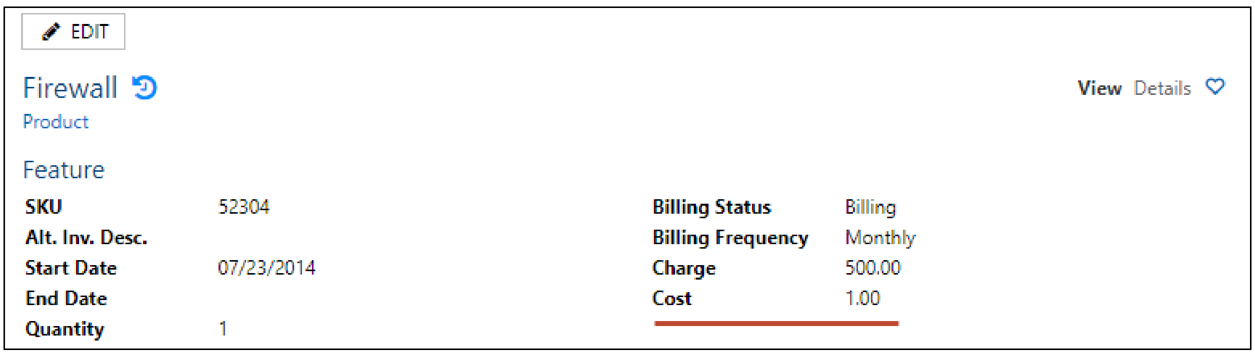
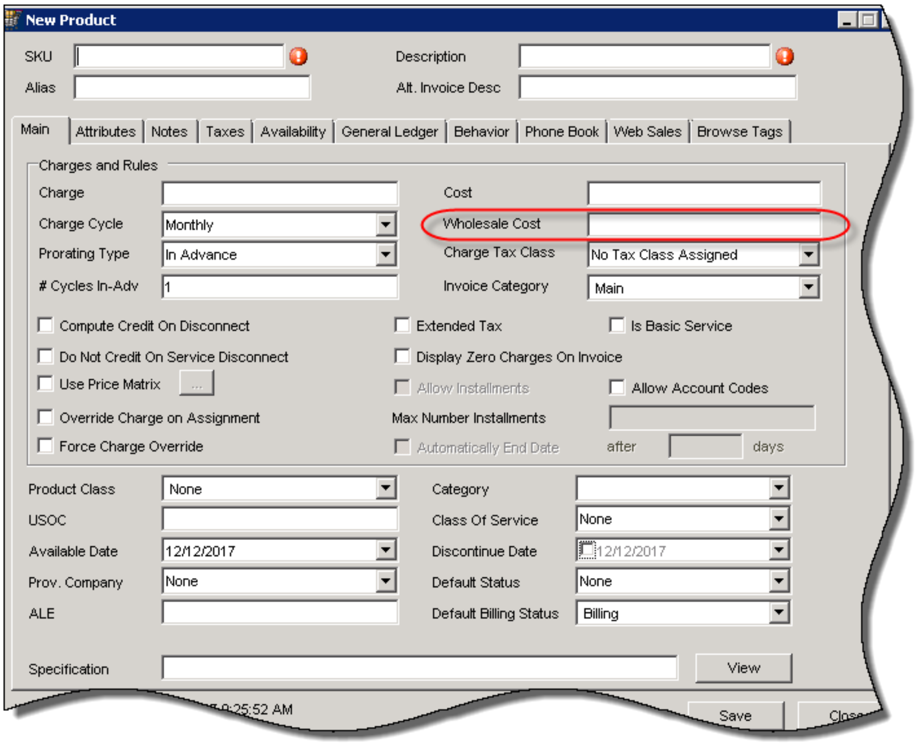


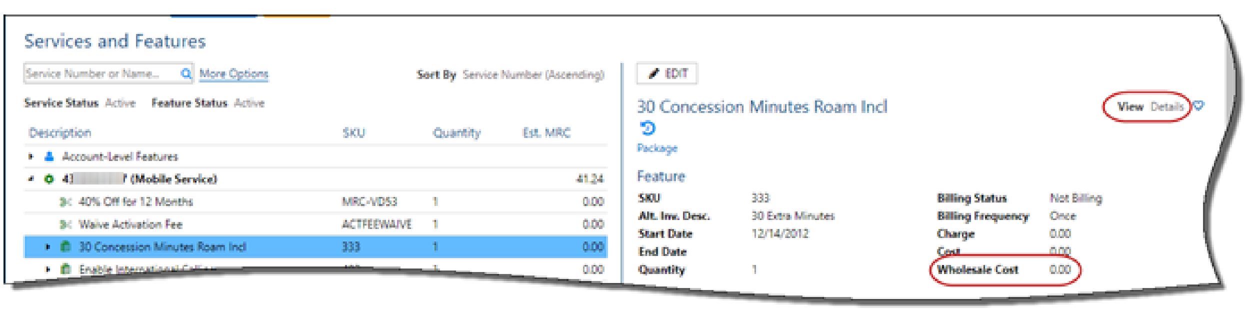
Figure 5 View Feature Details in Customer Care

6.4.3 WHOLESALE COST

Wholesale Cost for a Feature is configured in the Product Catalog by setting the value in the Wholesale Cost field.



Assigned instances of this Feature will display the associated Wholesale Cost value for users who have the Show Cost permission assigned in Customer Care.



6.4.4 CHARGE

In Wholesale Billing, the Charge for Features are calculated the same as for non-wholesale customers, using the configured Feature charge.

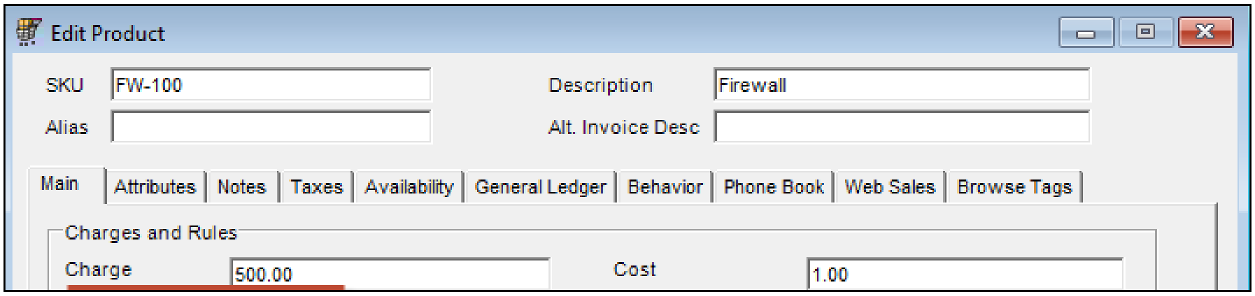


Figure 6 Editing a Features in Product Catalog

Assigned instances of this Feature will display the associated Charge value.

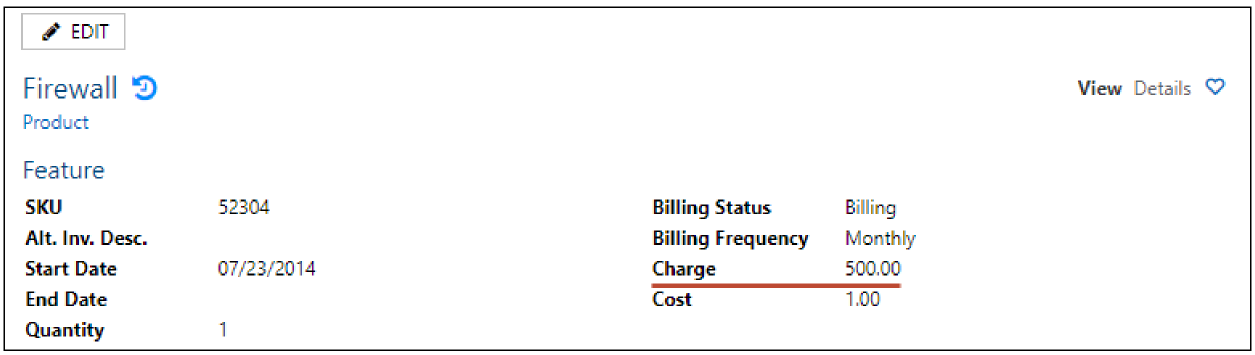


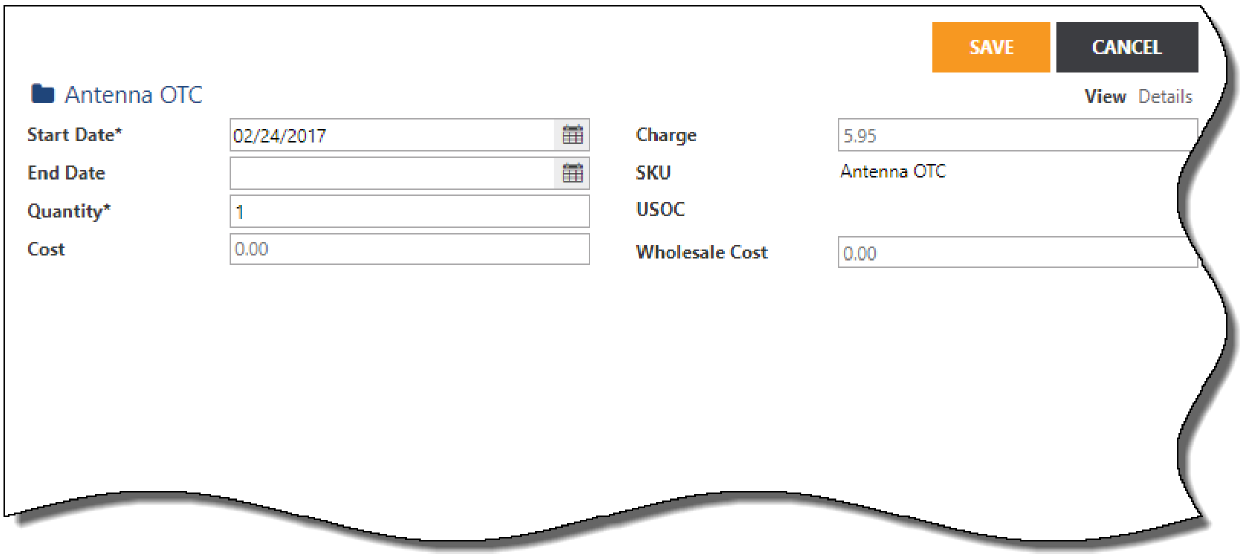
Figure 7 Viewing Feature Details in Customer Care

6.4.5 OVERRIDING COST, WHOLESALE COST AND CHARGE

CostGuard lets you override the configured default for a Feature's Cost, Wholesale Cost or Charge on an individual basis. This can either be done during an Order or by editing the Feature on the account.

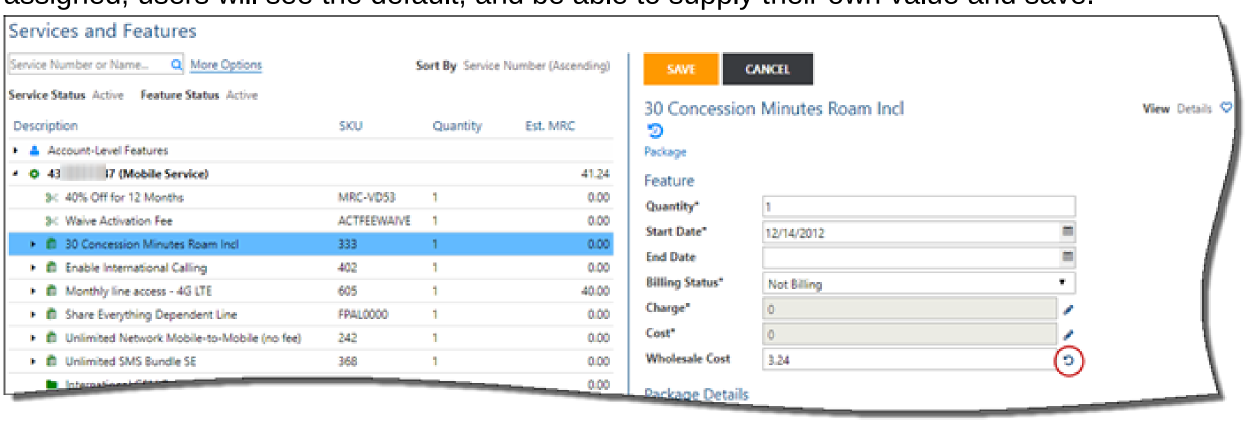
6.4.6 OVERRIDING DURING AN ORDER

Users require the *Orders - Override Cost* permission to set the Cost or the Wholesale Cost for an individual instance of a Feature during an order. With this permission assigned users will see the default, and be able to supply their own value and save.



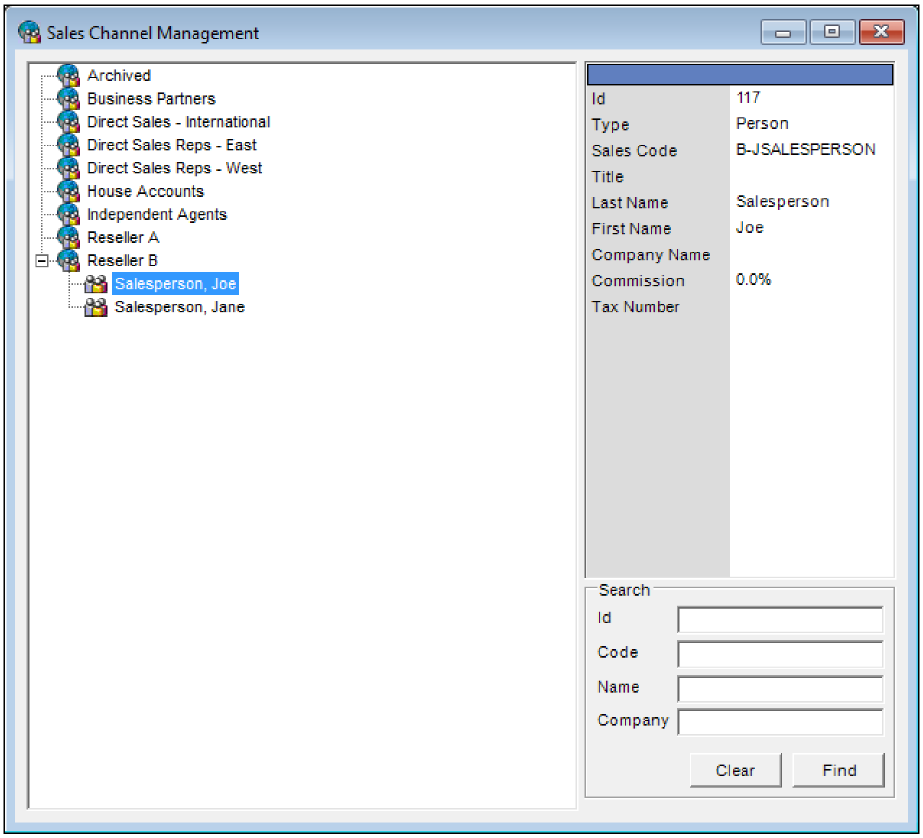
6.4.7 OVERRIDING IN CUSTOMER CARE

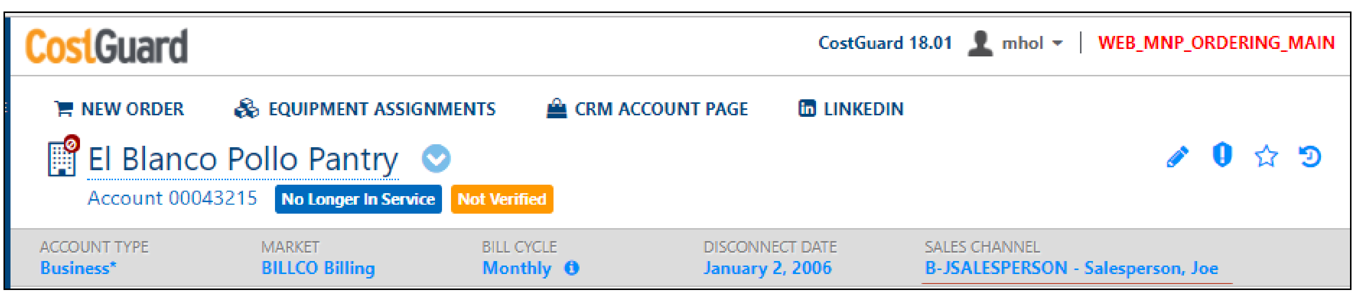
Users require the Customer Care - *Override Cost* permission to edit the Cost or the Wholesale Cost for an individual instance of a Feature assigned to an account. With this permission assigned, users will see the default, and be able to supply their own value and save.



6.5 TRACKING RESELLERS

Customer accounts can be associated to a reseller by using the Sales Channel property on the account. Sales Channels are a hierarchical grouping of sales organizations and individuals that are responsible for selling your services. Creating Sales Channels that represent your different resellers and their sales reps and then assigning them to accounts allows you to track your margins as well as the revenues owed.





6.6 COSTGUARD 18.1 CHANGES TO SUPPORT WHOLESALE BILLING

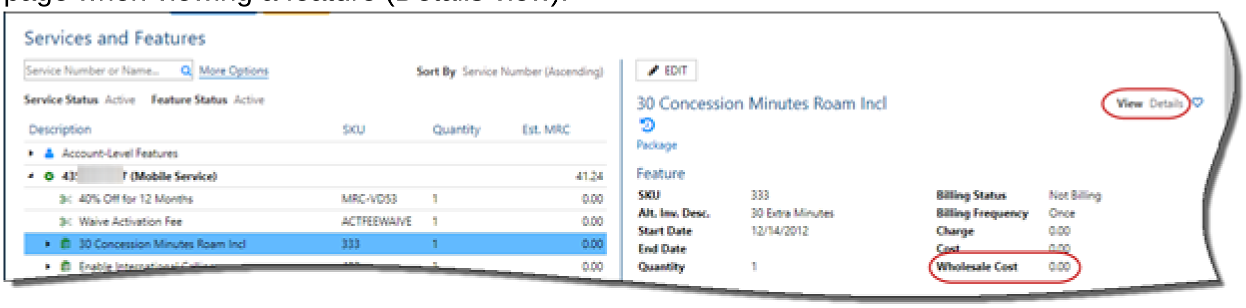
The Wholesale Billing solution is a combination of existing CostGuard functionality and features added in CostGuard 18.1. The following sections describe the specific changes made to CostGuard in the 18.1 release for this functionality.

6.6.1 CUSTOMER CARE

Customer Care has been enhanced to let you view and edit the wholesale cost on a feature (all product types except Discounts and Contracts). Additionally, Customer Care has been enhanced so that wholesale pricing plans can be distinguished from standard pricing plans

6.6.2 VIEW WHOLESALE COST

On the Services and Features page, the wholesale cost will be displayed on the right side of the page when viewing a feature (Details view).



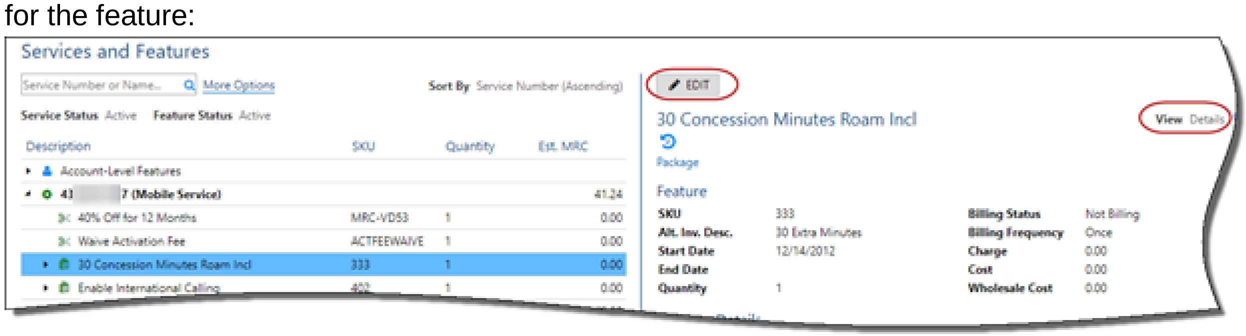
Permission

Display of the wholesale cost is controlled by the *Show Cost* permission in Customer Care. This is an existing permission that also controls whether the *Cost* field is displayed on a feature.

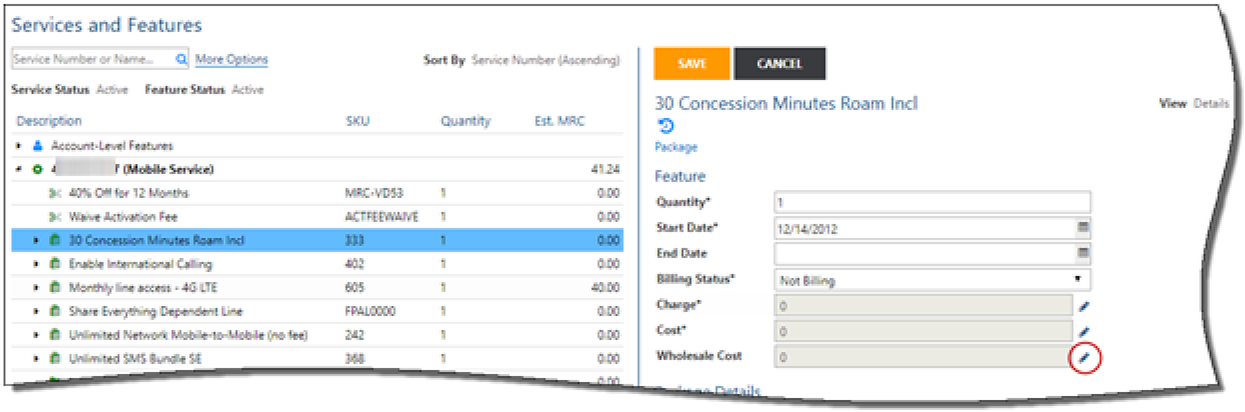
The permission is included in the *Customer Care Admin* role

6.6.3 EDIT WHOLESALE COST

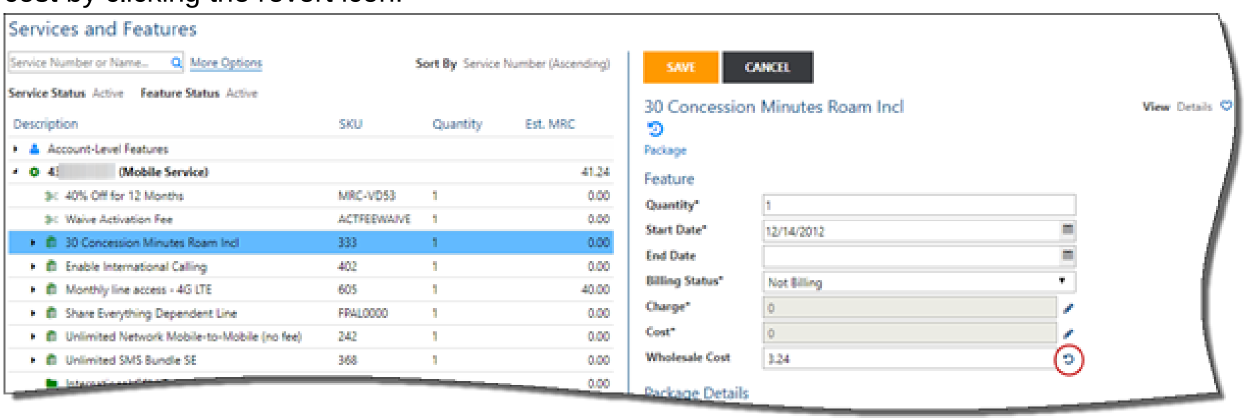
The ability to override the wholesale cost on a feature has been added to the Services and Features page. Users with permissions to edit a feature and override cost, will have a pencil icon next to the Wholesale Cost field when editing a feature. Click **EDIT** from the Details view for the feature:



Once in *Edit* mode, the Wholesale Cost can be overridden by clicking the pencil:



If the Wholesale Cost has been overridden, it can be reverted to the Product Catalog wholesale cost by clicking the revert icon:



Permission

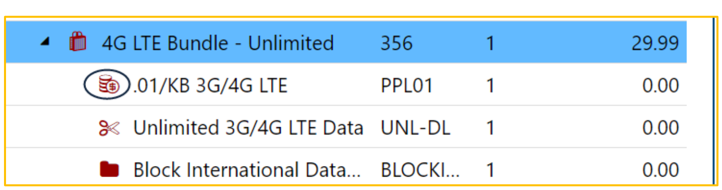
The ability to edit wholesale cost is controlled by the *Override Cost* permission in Customer Care. This is an existing permission that also controls whether the *Cost* field is editable.

The permission is included in the *Customer Care Admin* role

6.6.4 WHOLESALE PRICING PLAN

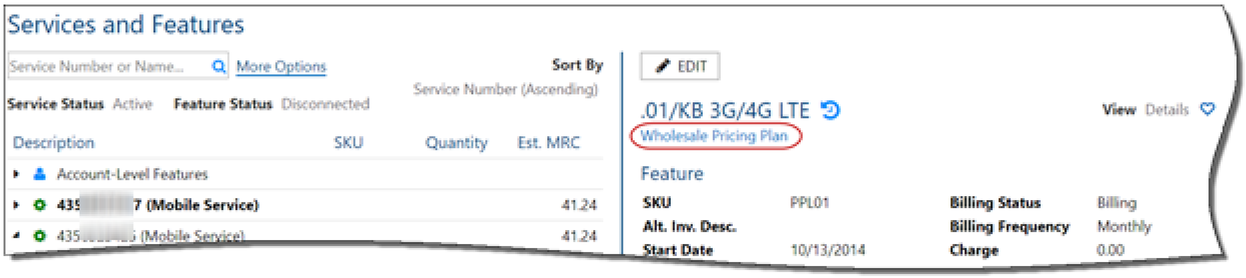
Customer Care has been enhanced to distinguish a wholesale pricing plan from a standard pricing plan (when the product type is *program* and the product sub-type id is *1/wholesale*).

Wholesale pricing plans will be displayed with a unique icon when viewing the features on the Services and Features page and the Service Detail page:



4G LTE Bundle - Unlimited	356	1	29.99
.01/KB 3G/4G LTE	PPL01	1	0.00
Unlimited 3G/4G LTE Data	UNL-DL	1	0.00
Block International Data...	BLOCKI...	1	0.00

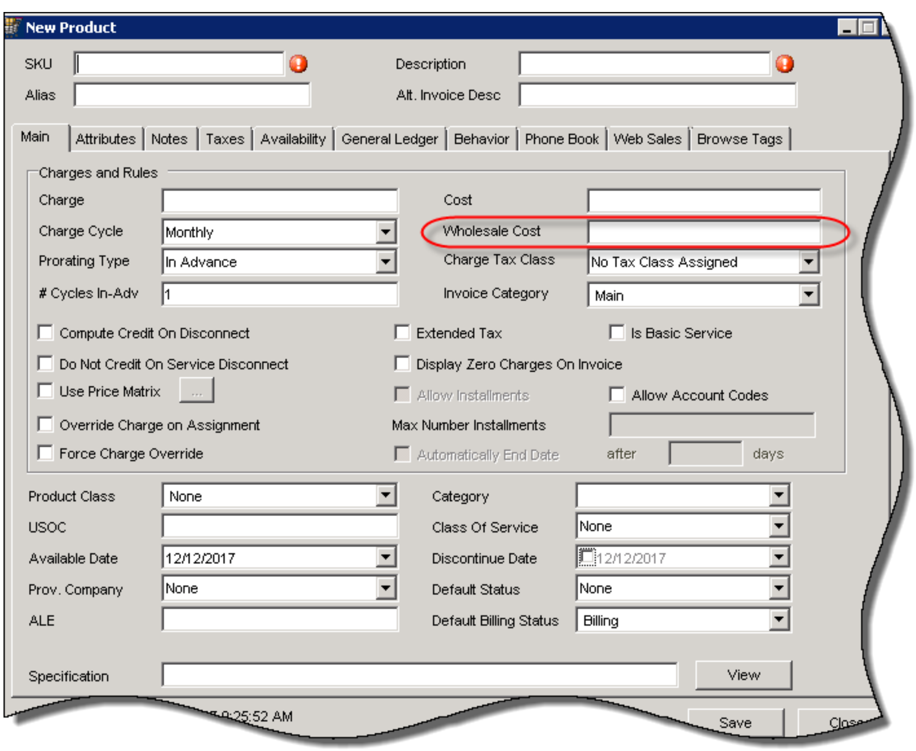
The feature details on the right side of the Services and Features page has been updated to display *Wholesale Pricing Plan*.

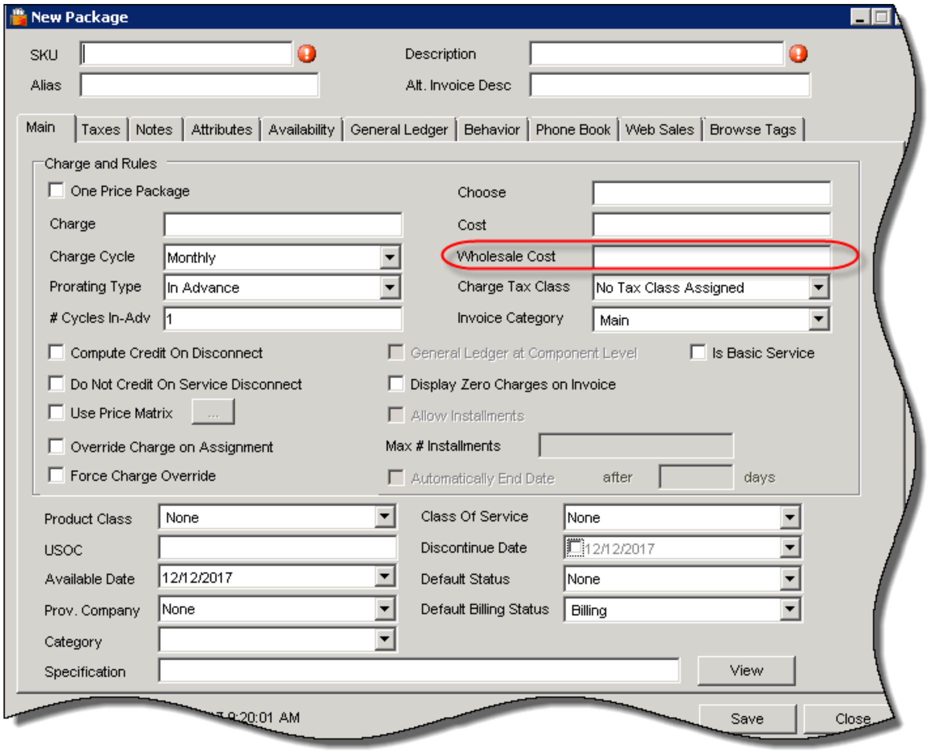


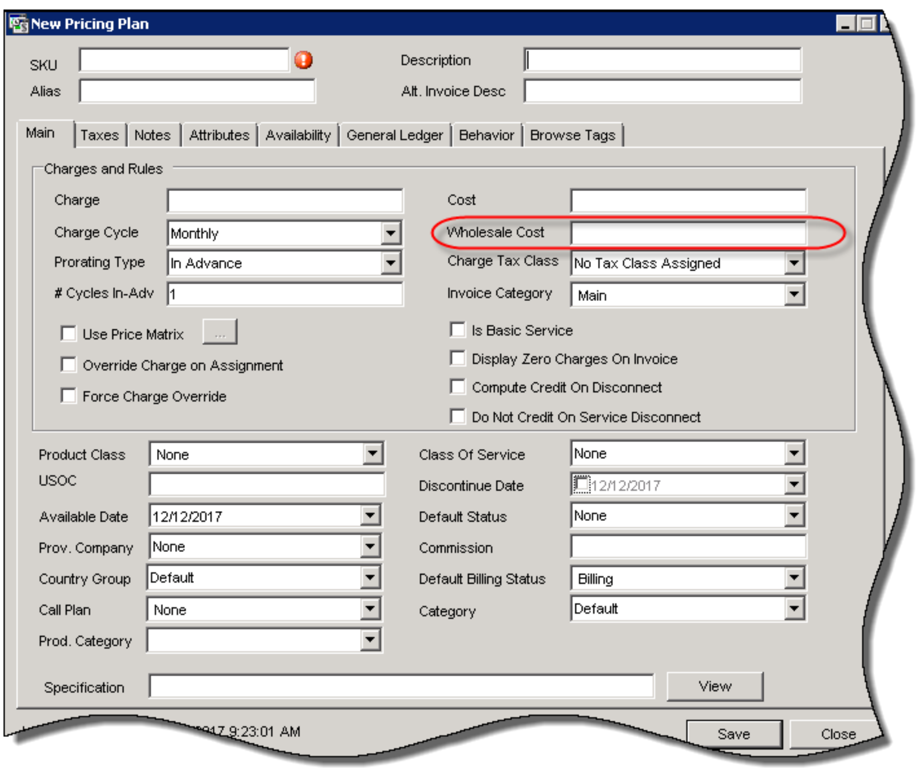
6.6.5 PRODUCT CATALOG

The following Product Catalog forms were updated with Wholesale Cost:

- Product
- Package
- Pricing Plans



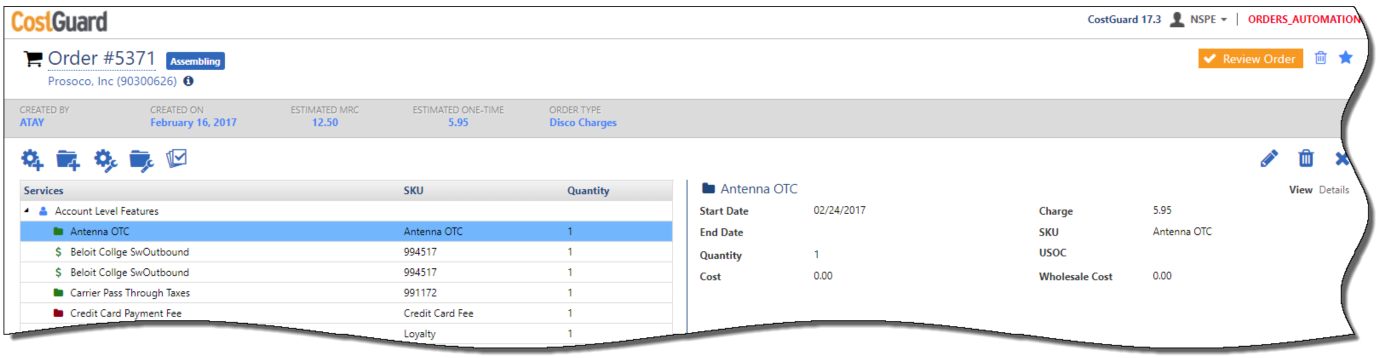

New Package
SKU
Description
Alias
Alt. Invoice Desc
Main
Taxes
Notes
Attributes
Availability
General Ledger
Behavior
Phone Book
Web Sales
Browse Tags
Charge and Rules
One Price Package
Choose
Charge
Cost
Charge Cycle
Monthly
Wholesale Cost
Prorating Type
In Advance
Charge Tax Class
No Tax Class Assigned
Cycles In-Adv
1
Invoice Category
Main
Compute Credit On Disconnect
General Ledger at Component Level
Is Basic Service
Do Not Credit On Service Disconnect
Display Zero Charges on Invoice
Use Price Matrix
Allow Installments
Override Charge on Assignment
Max # Installments
Force Charge Override
Automatically End Date
after
days
Product Class
None
Class Of Service
None
USOC
Discontinue Date
12/12/2017
Available Date
12/12/2017
Default Status
None
Prov. Company
None
Default Billing Status
Billing
Category
Specification
View
Save
Close

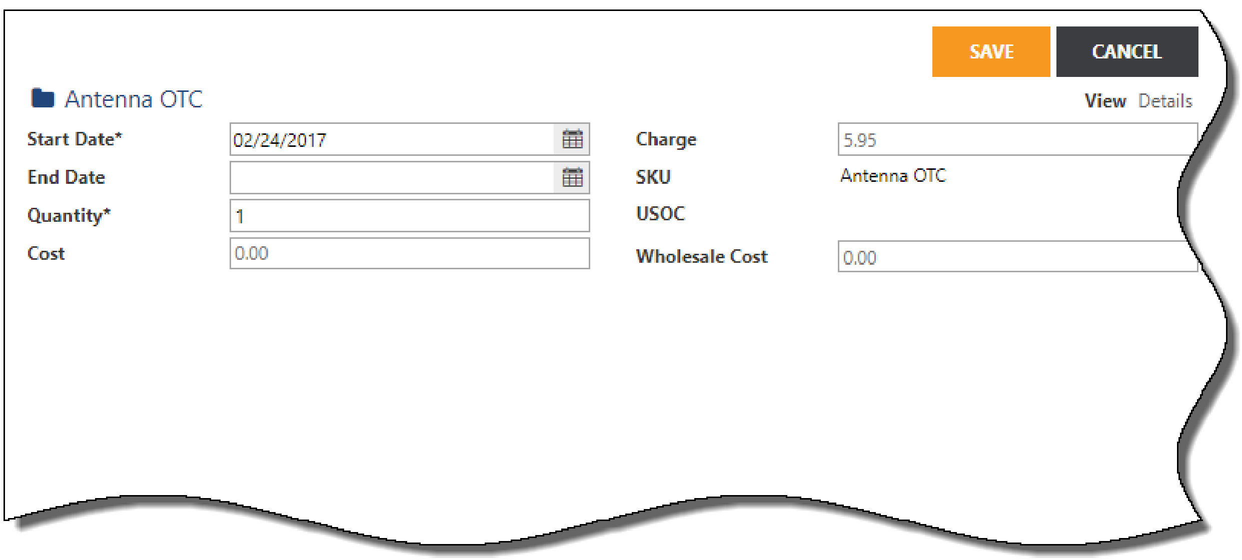

New Pricing Plan
SKU
Description
Alias
Alt. Invoice Desc
Main
Taxes
Notes
Attributes
Availability
General Ledger
Behavior
Browse Tags
Charges and Rules
Charge
Cost
Charge Cycle
Monthly
Wholesale Cost
Prorating Type
In Advance
Charge Tax Class
No Tax Class Assigned
Cycles In-Adv
1
Invoice Category
Main
Use Price Matrix
Is Basic Service
Override Charge on Assignment
Display Zero Charges On Invoice
Force Charge Override
Compute Credit On Disconnect
Do Not Credit On Service Disconnect
Product Class
None
Class Of Service
None
USOC
Discontinue Date
12/12/2017
Available Date
12/12/2017
Default Status
None
Prov. Company
None
Commission
Country Group
Default
Default Billing Status
Billing
Call Plan
None
Category
Default
Prod. Category
Specification
View
017 9:23:01 AM
Save
Close

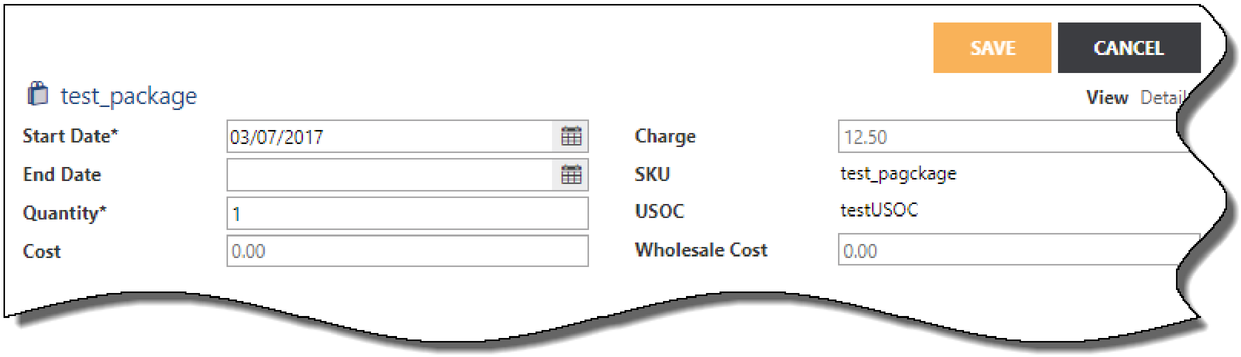
6.6.6 ORDERS

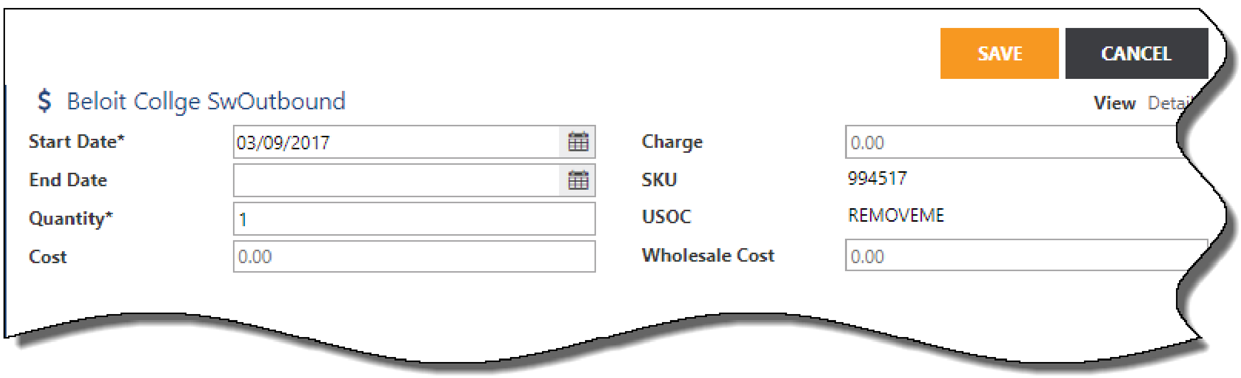
In the Order Details page, when you select the pencil icon to edit the following feature types, you can view or override the Wholesale Cost and Cost fields:

- Product
- Package
- Pricing Plan









The ability to view or change the Wholesale Cost on an Order are controlled by the existing *View Cost* and *Override Cost* permissions in the Orders module.

7 Retail Installment Plan Start Date

The Installment Plan (billing product) Start Date now represents when the corresponding equipment was fulfilled (shipped or picked up) rather than when it was purchased. Beginning billing of installments when the corresponding equipment is fulfilled prevents scenarios where subscribers are billed for equipment on back order or other fulfillment challenges/delays that can occur post-purchase.

Prior to this change, the completion/finalization of the Sales Request would include the creation (and subsequent add) of the billing installment plan. This function has now been moved to the creation of a Fulfillment Sale transaction.

With this change, you will not see the installment plan (billing product) on the order associated to the Sales Request. The assigned Start Date of the Installment Plan reflects when the corresponding equipment had been fulfilled. You can see the assigned Start Date by viewing the Installment Plans (Account-> Installment Plans) or by viewing the installment plan details of the assigned billing product.

Note: These changes have no impact on the performed transactions or the current user experience.

8 TransArmor Token – Tempus Gateway

The TransArmor token may be used to help solve a CostGuard register reconciliation issue related to E-Pay credit card transactions, where the Tempus total for the E-Pay account does not match the CostGuard total. Note that the TransArmor token (when enabled) is only used on E-Pay credit card transactions, and is not used on Smart Node (one-time) transactions.

Use of the TransArmor token is controlled by several new settings. One is located in Admin Console Business Rules and must be set by an authorized IDI associate. Also all applicable registers must have their Register Policy configured to support this functionality. This setting is available to authorized CostGuard users.

When **Use TransArmor Token** is set to **Yes** as described in *Setup*, the TransArmor token will be passed (if available) to Tempus. **NOTE:** Smart Node (one-time transactions) are unaffected by TransArmor.

The following scenarios define how the TransArmor token may be applied:

- **Customer Management E-Pay - Create New Credit Card E-Pay Account**
  When you create a new credit card account in Customer Management and Tempus provides a TransArmor token, that token will be associated to the E-Pay account in CostGuard.

- **Customer Management E-Pay - Edit Credit Card E-Pay Account**
  When you edit and existing credit card account in Customer Management and Tempus provides a TransArmor token, that token will be associated to the E-Pay account in CostGuard.

- **Customer Management E-Pay - Make Onetime Charge**
  When you perform a Make Onetime Charge on a credit card account, the TransArmor token (if available) will be passed to Tempus.

- **Customer Management E-Pay - Make Onetime Credit**
  When you perform a Make Onetime Credit on a credit card account, the TransArmor token (if available) will be passed to Tempus.

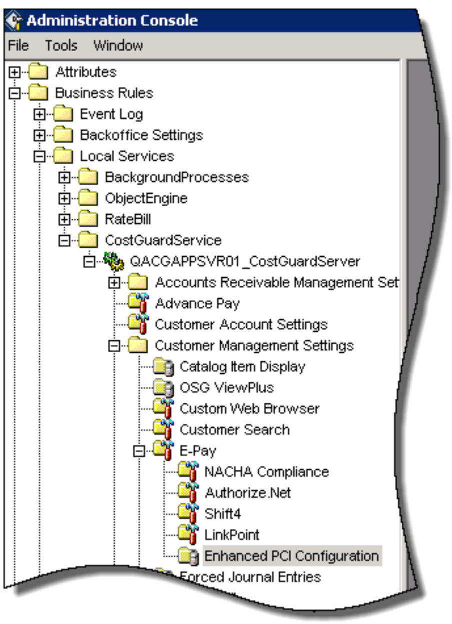
- **POS Save Account Credit Card Transaction (non Smart-Node)**
  When you choose to save a credit card account in POS, CostGuard will associate the TransArmor token with the saved account if passed in from Tempus.

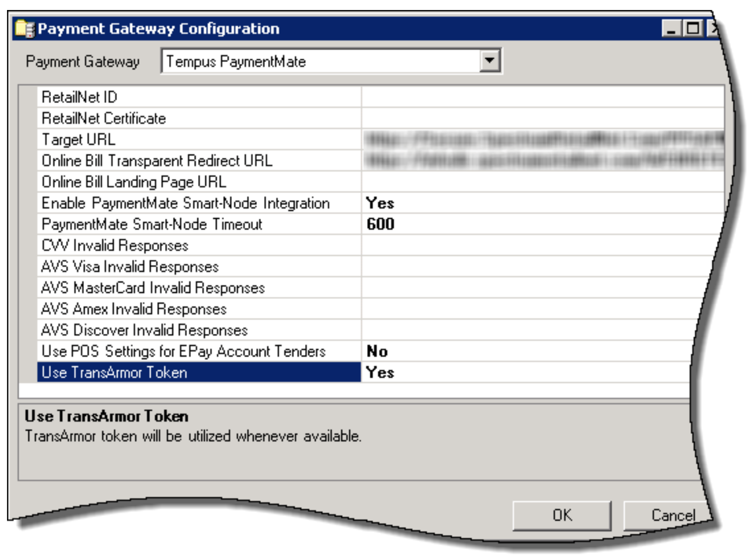
8.1 SETUP

8.1.1 USE TRANSARMOR TOKEN SETTING – ADMIN CONSOLE

To use the TransArmor token with Customer Management EPAY, the *Use TransArmor Token* setting must be set to **Yes** in the Admin console. This setting is not available to customers and must be set by an authorized IDI associate.

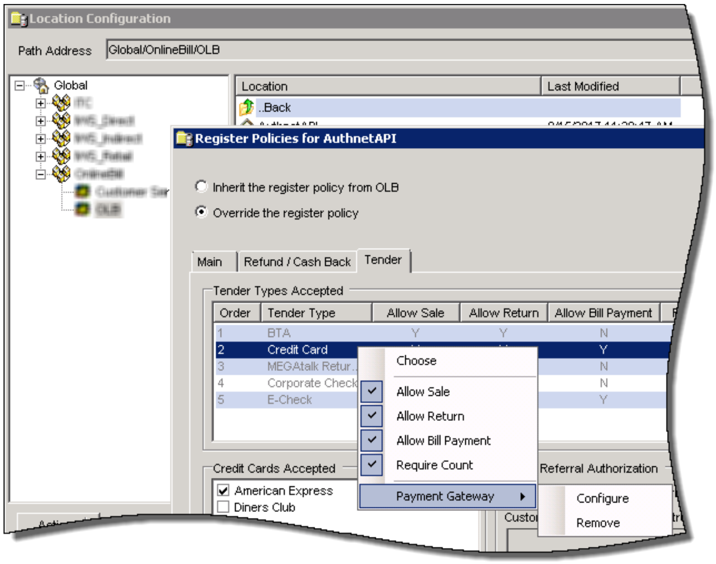
In Admin, under Business Rules > Local Services, open the Enhanced PCI Configuration section and set *Use TransArmor Token* to **Yes**.





8.2 USE TRANSARMOR TOKEN – REGISTER POLICY SETUP

To use the TransArmor token with POS transactions, the *Use TransArmor Token* setting must also be set to **Yes** on all applicable registers. Navigate to **Applications** > **POS Back Office** > **Locations**, then drill down to the desired location and right click to view the register policy. Next, on the tender tab of the register policy, right click on credit card and select **Payment Gateway** > **Configure**.



Set the *Use TransArmor Token* to **Yes**.