new world
a tyler erp solution

Utility Management IVR Installation Guide

New World ERP – Financial Management: Revenue Collections

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OVERVIEW

- The new world ERP Web API service is accessed by a third-party Interactive Voice Response (IVR) vendor, to perform utility account inquiry and authorize utility payments
- The web API service can be installed on any IIS web server in the customer's environment (eSuite server, New World ERP app server). The customer and the IVR vendor are responsible for connectivity to the web API service, either via VPN or direct access to the external web server
- The IVR vendor can refer to the *NWS Utility Management Integration Guide* for the full API specifications. The functionality of the web API is static and the data fields returned by the service are not customizable

Note: Because it was specifically written to interface with Summation 360's IVR system, if used for other 3rd parties, those parties will need to refer to NWS Utility Management Integration Guide to develop solutions against the specifications.

REQUIREMENTS

Minimum system requirements:

- **Operating System:** Windows Server 2008 - 2012
- **IIS:** Installed

PREREQUSITES

Web API requires that the following IIS updates be installed:

- http://support.microsoft.com/kb/980368
- http://support.microsoft.com/kb/2522807

If above mentioned updates are not applicable for your operating system then follow instructions on how to update web.config file in the URL Routing Configuration section.

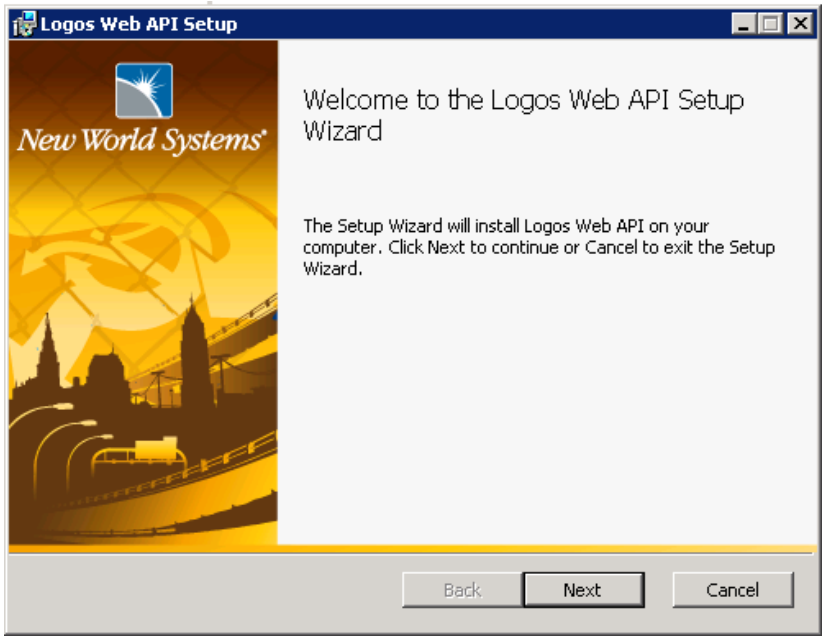
SETUP AND CONFIGURATION

INSTALLATION

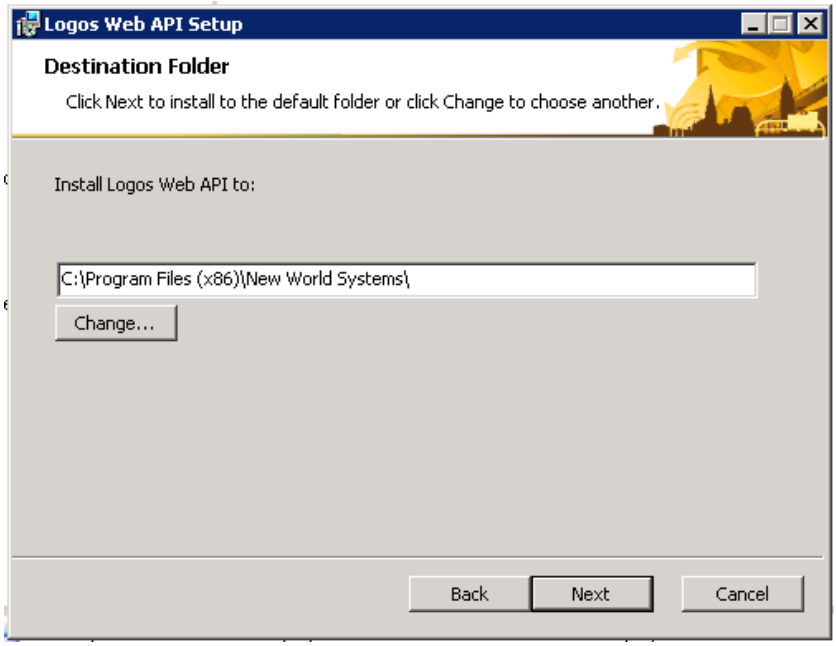
Note: The IVR vendor will be creating payment authorizations against actual UM accounts. It is highly recommended that the initial install point to the TEST New World ERP environment during the development and testing process. When you are ready to cutover to LIVE processing, the web API service can be reinstalled to point to the LIVE application server.

Copy the Logos-Wepapi-REL-x.xx folder to the web server where the web API is to be installed.

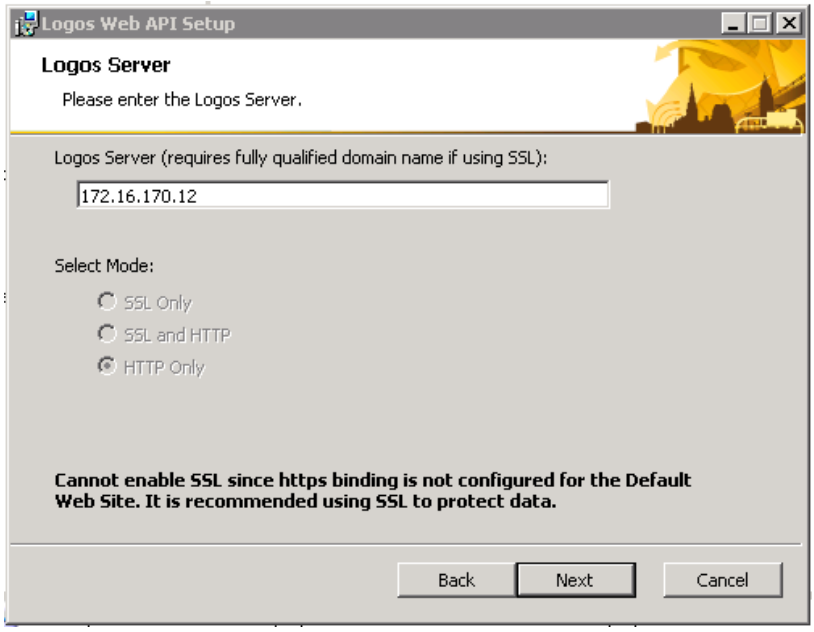
Open the folder, right-click the **setup.exe** file, and select 'Run as Administrator'.



Click ‘Next’, and select the installation directory.

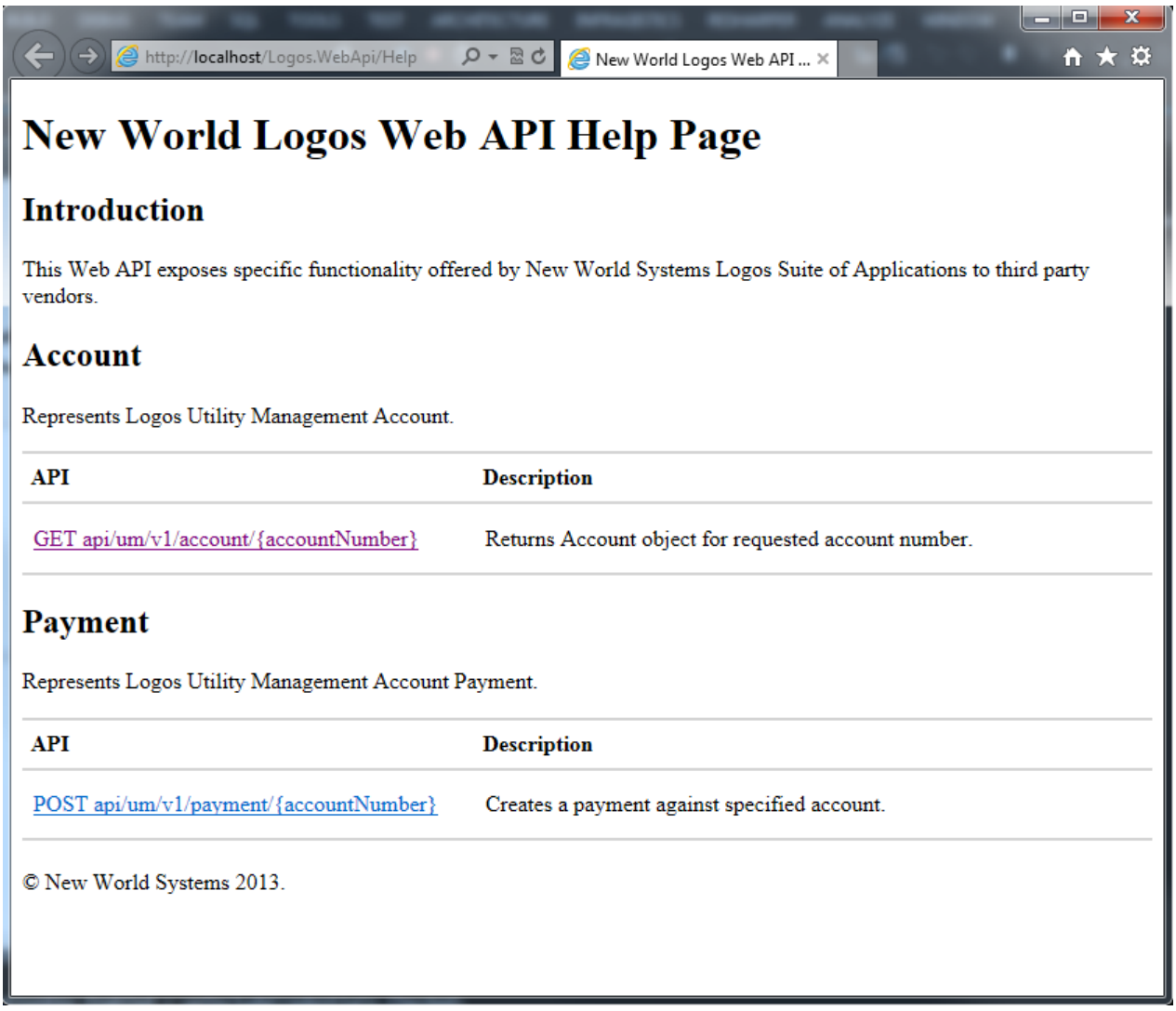


Select the IP address or DNS name or FQDN of the New World ERP application server that will be the initial source of the data. Only change the SSL mode option if required by your network configuration. Click ‘Next’, then click the ‘Install’ button.



INTERFACE SETUP

After successful installation open http://localhost/Logos.WebApi/Help/ in Internet Explorer from the same machine you ran the install on. You should see something similar to the following page:



URL ROUTING CONFIGURATION

Follow this step only if you see “HTTP Error 404.0 - Not Found” error page instead of the above screen. Please note Web API is using URL Routing and extensionless URLs. This means you won’t find any folder named “Help” on the root of the application.

If Windows updates mentioned in the beginning are not applicable for your operating system then you will need to edit web.config for Web API. Locate system.server tag and under modules add 2 lines as shown below:

```
<system.webServer>
  <modules>
    <remove name="UrlRoutingModule-4.0" />
    <add name="UrlRoutingModule-4.0" type="System.Web.Routing.UrlRoutingModule" preCondition="" />
  </modules>
</system.webServer>
```

WEB API SERVICES CONFIGURATION

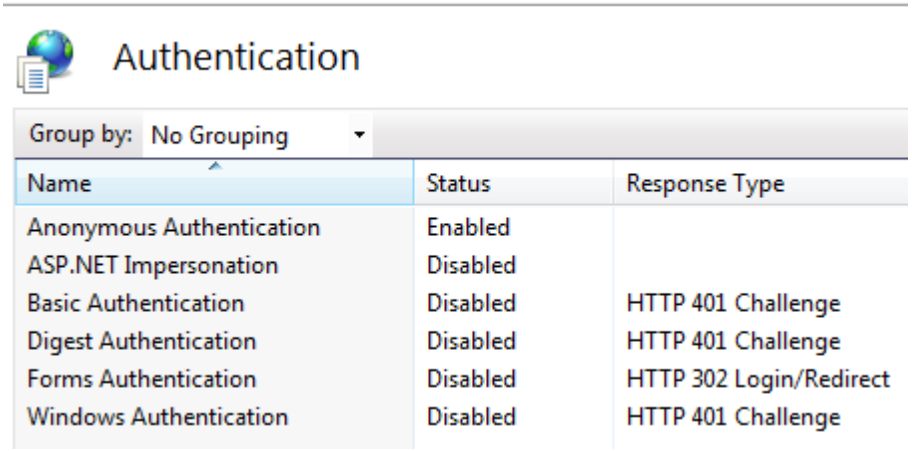
Navigate to the Web API folder (C:\Program Files (x86)\New World Systems\Logos Web API\bin) and open **VendorConfig.xml** file.

```
<vendors>
  <vendor username="name" password="password" requireLogosAuthorization="true">
    <payment paymentSourceModule="880E9B18-1672-4BF4-8126-55ADCBA40632" application="UM" module="Billing" displayName="IVR Payment" />
  </vendor>
```

- Update ***username*** and ***password*** properties with values your IVR vendor will use to authenticate themselves. These do not need to be valid network credentials or a Logos user. The IVR service will pass user name and credentials into our APIs, our APIs will confirm the credentials against the one entered here.
- The '**Require Logos Authorization**' option controls if additional credentials are required in the HTTP request header.
- The '**Payment Source Module**' value will be used in the Virtual Payment Source setup in New World ERP, later in this document.
- Verify the application is set as 'UM' and module as 'Billing'.
- '**Display Name**' field contains a default comment that will be used if no comment is provided in the payment POST. This comment can be viewed in the receipt created in Logos.

IIS SETUP

In Internet Information Service (IIS) Manager, expand **Default Web Site** and click on the Logos.WebApi node. Open '**Authentication**' and make sure only Anonymous Authentication is enabled.



Make sure 'HTTP Errors' are enabled under *Internet Information Services > World Wide Web Services > Common HTTP Features* from 'Turn Windows features on or off' in *Control Panel > Program and Features*.

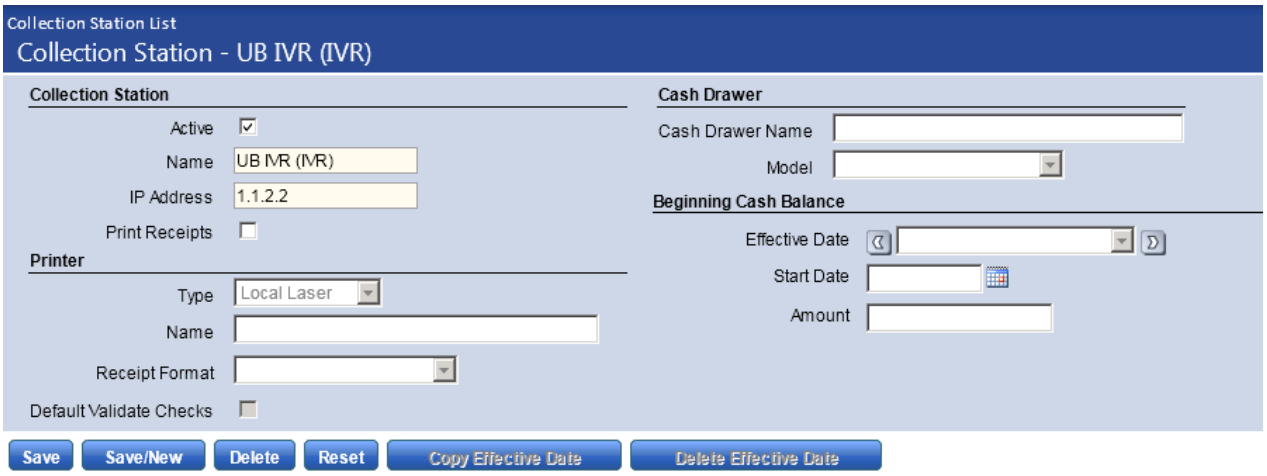
APPLICATION SETUP

Note: The web API service is a separate line item in your license key. Verify in Management Console that you have the 'ivr interface ut' item activated under 'Utility Management' prior to configuring the New World ERP application.

Payments processed through the IVR will be fed into the standard Revenue Collection process in New World ERP. Each business day, a receipt batch will automatically be created when the first payment is processed from the IVR. That payment and subsequent payments that day will collect in that batch as individual receipts. We recommend creating a separate collection station for the IVR receipt batches.

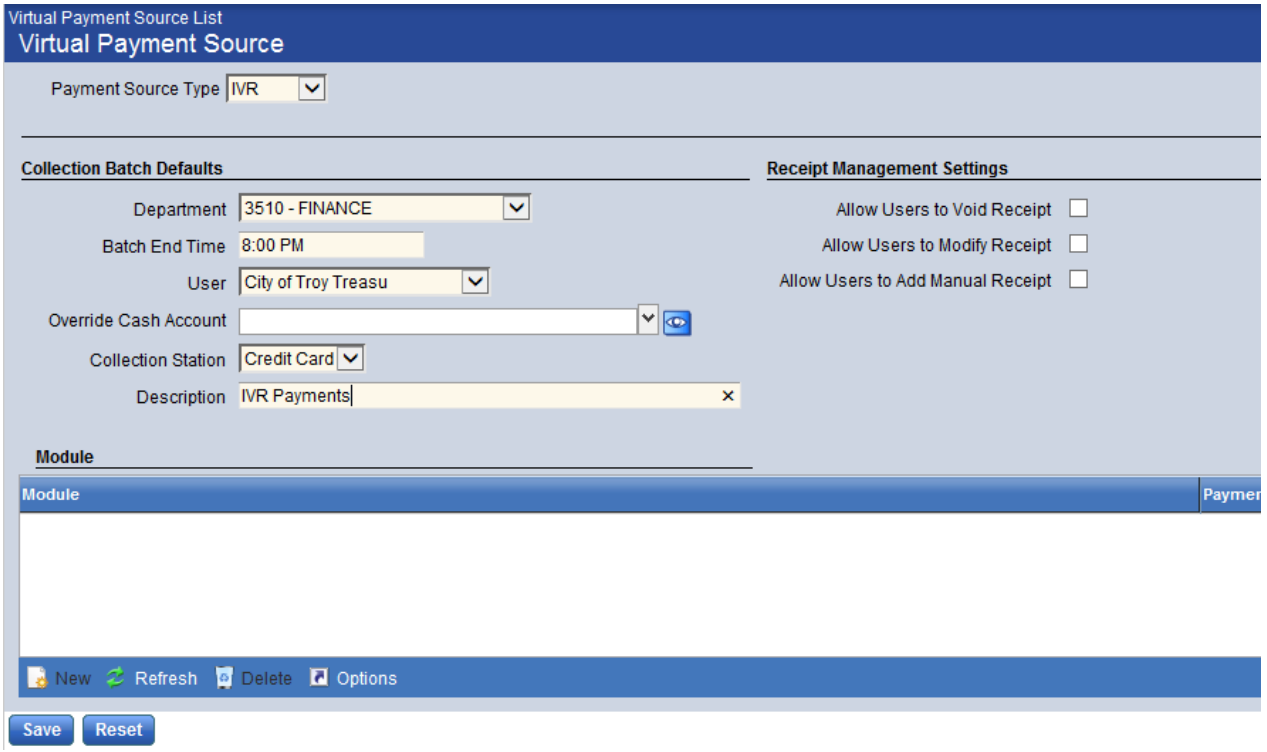
Collection Station

Navigate to Logos Suite\ Revenue Collections\ Collection Stations in New World ERP.
Create a new active collection station called IVR, with a dummy IP address.



Virtual Payment Source

Navigate to Logos Suite\ Revenue Collections\ Virtual Payment Source in New World ERP.
Click **New** to create a new Virtual Payment Source type, and enter the appropriate values:



These values define defaults for the receipt batch that will be automatically created to hold IVR payments. Additionally, they define the business day for the system.

a. Enter IVR in the ***Payment Source Type***

b. ***Department***: Enter the department responsible for reviewing and posting IVR payments in Revenue Collection

c. ***Batch End Time***: The close of business. Payments arriving after this time will be placed in a batch for the next business day. This timing may be dictated by settlement considerations on the credit card charges.

d. ***User***: This will be the cashier name associated with the auto generated receipt batch

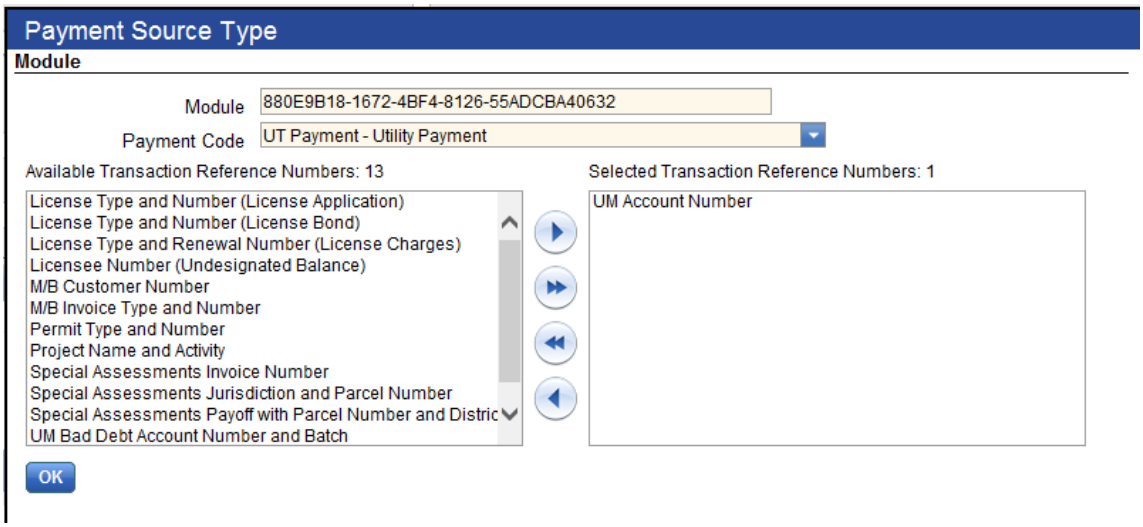
e. ***Override Cash Account***: used only when the standard cash account used for payments should be overridden for IVR payments.

f. ***Collection Station:*** We recommend creating a new collection station with a name that clarifies that the IVR system was the source of these payments.

g. ***Description***: "UM IVR Payments". This description is just to clarify the purpose of this virtual payment source in the list of virtual payment sources

h. **Allow checkboxes**: These determine the ability of users to maintain the receipts in the IVR batch. Cleared is the recommended setting for these checkboxes.

Click 'Save' to save the receipt batch settings.
Click the 'New' button under Module, to create a new association to a payment code.



A popup will appear. This in part defines the characteristics of the individual receipts that will be created and connects this setup with your instance of the IVR.

a. **Enter a GUID for module.** This must match the GUID in the **VendorConfig.XML** as described in "IVR Services Configuration" section above.

b. **Select a Payment Code**. This must be a payment code defined for use with the Utility Management Subledger.

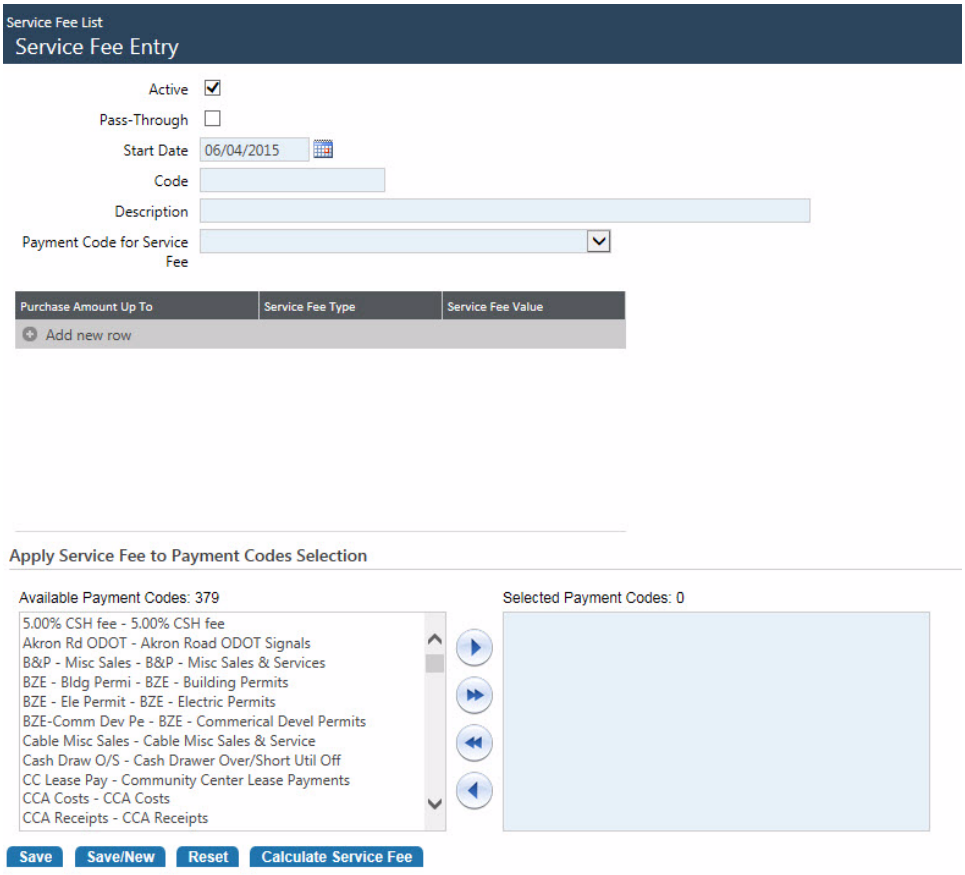
c. **Select UM Account Number** from available transaction reference numbers in the multi-select box.

Note: The Finance Department may want to create a new payment code specifically for IVR payments, to allow for easier filtering of IVR receipts vs Non-IVR receipts in Revenue Collections inquiry and reporting.

Service Fee Configuration

When customers pay by credit card, service fees can be applied as either a flat amount or percentage of the payment amount. Multiple tiers can be defined with threshold amounts to charge different amounts or percentages depending on the transaction total. Depending on the software configuration, your organization can choose to either collect and record the fees using a separate payment code or the fees can be passed through and charged directly by the third party provider.
To create a service fee for credit card transactions, navigate to **Maintenance \Logos Suite \Revenue Collection \Service Fees** and follow the steps below:

1. Click **New**. The Service Fee Entry page will be displayed.



2. If the service fee should be **Active**, select this check box.
3. Do not check the **Pass-Through** check box – this only used for integrated credit card payments.
4. Enter the **Start Date** for when the fee should start being applied. The default value is the current date for new entries. You may enter a different date or click the calendar icon to select one.
5. Enter a **Code** for the service fee. This is a required field that can accommodate up to 16 alphanumeric characters.
6. Enter a **Description** for the service fee. This is a required field that can accommodate up to 64 alphanumeric characters.

7. In the **Service Fee Type** drop-down, select from either **Flat Fee** or **Percentage**. This determines whether a set flat amount is charged as the service fee or if it should be a certain percentage of the payment amount.
8. The value entered in the **Service Fee Value** field will depend on the selection that was made in the previous drop-down. If you selected **Flat Fee**, enter a dollar amount with up to two decimal places. If **Percentage** was chosen, enter a percentage amount up to two decimal places. This field is required.
9. Select a **Payment Code for Service Fee** from the drop-down. A selection in this field is required. When a payment code is selected from the drop-down, the fee will be charged by your organization and recorded in Logos as a transaction. If using this method, the payment code that was set up in the section above should be selected.

Note: During the creation or modification of a service fee, the selected payment codes cannot be part of an open receipt batch or an error will be generated. Once the batches are posted, modifications including the deletion of the service fee can be made if necessary.

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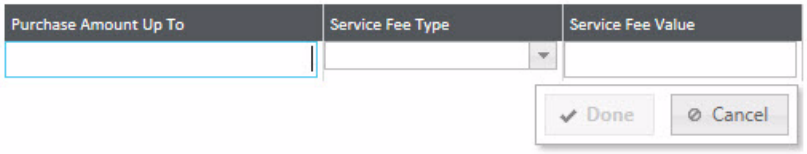
10. Click on Add new row in the grid to enable the fields where a single or multiple level of service fees can be set up.



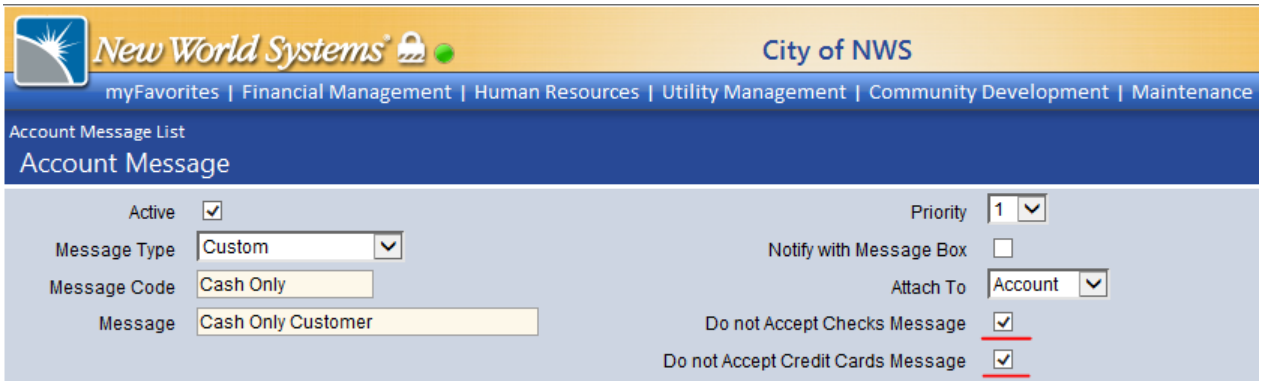
11. The Purchase Amount Up To field is not required if only a single flat fee or percentage is being set up for the service fee. A single row in the grid will charge the same service fee (either flat amount or percentage) for all transactions. If you are setting up a multitiered fee structure (e.g. more than one row), this field is required. Enter the maximum purchase amount for which the defined fee amount or percentage should be charged. The maximum amount that can be entered is 1,000,000.00.
12. In the Service Fee Type drop-down, select either Flat Fee or Percentage. A selection in this field is required.
13. In the Service Fee Value field, enter the amount that should be charged for the service fee. This field is required.
14. Once all required fields have been entered, click Done. The information will be added to the grid. If any edits need to be made to the entered information, click on the row to reactivate the entry fields.

Shut off Date Configuration

This step is optional. In order to enable shut off date you must have at least one delinquent event, having at least one work type action with termination action checked.

Restricted Payment Methods (Cash Only Flag) Configuration

This step is optional. In order to enable restricted payment methods you must have at least one account message with at least one 'Do not accept' message selected. In addition, this account message must be tied to the utility account in question.



Note: At this point, you may want to replicate the setup steps for Collection Station, Payment Code, Virtual Payment Source, Service Fee, Shutoff Date, and Restricted Payment Method in both LIVE and TEST, so that this configuration will not have to be re-created when refreshing the LIVE New World ERP database over TEST.

WEB API TEST CLIENT

A tool is provided with the product to test installation and query data from Logos WebAPI. Developers can also use this tool to validate their work.

Initial Testing

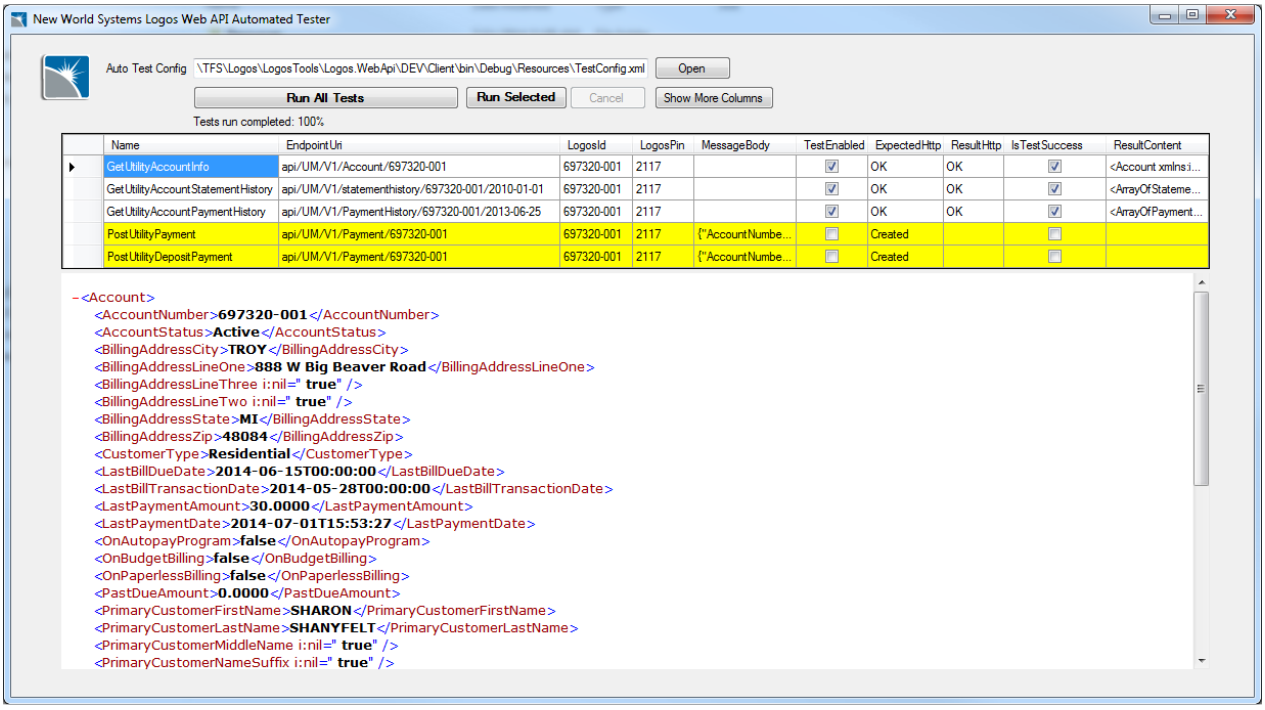
Navigate to C:\Program Files (x86)\New World Systems\Logos Web API\ClientTool\Resources and open **TestConfig.xml** file in a text editor:

```
<config>
    <!--
        Http Status Codes
        200 - OK
        201 - Created
        400 - Bad Request
        401 - Unauthorized
        404 - Not Found
        500 - Internal Server Error
    -->
    <baseuri>http://localhost/Logos.WebApi/</baseuri>
    <authkey>bill</authkey>
    <authvalue>password</authvalue>
    <output>application/xml</output>
    <includeauthcred>True</includeauthcred>
    <includelogoscred>True</includelogoscred>
    <tests>
        <test active="True">
            <name>GetUtilityAccountInfo</name>
            <endpoint>api/UM/V1/Account/697320-001</endpoint>
            <httpmethod>GET</httpmethod>
            <logosid>697320-001</logosid>
            <logospin>2117</logospin>
            <expectedhttpcode>200</expectedhttpcode>
        </test>
```

This XML file has a number of tests defined to ensure all features are working correctly. Ensure the fields highlighted in yellow have valid values for your environment.

AuthKey is the vendor **username** as defined in the **VendorConfig.XML** file.
AuthValue is the vendor **password** as defined in the **VendorConfig.XML** file.
LogosID is the UM account number.
LogosPIN is the numeric part of the service address.

Launch the **Web API Test Client** by running C:\Program Files (x86)\New World Systems\Logos Web API\ClientTool\Logos.WebApi.Client.exe.



Click any column in the first row to select it, and click 'Run Selected' button to run the test. You should see an XML formatted result in the bottom pane, similar to the image above.

Additional Tests

The **PostUtilityPayment** and **PostUtilityDepositPayment** are disabled by default for security. Initiating these tests will post a utility payment to New World ERP, and will have significant impact on a LIVE installation.

In the **TestConfig.XML**, ensure that the highlighted fields below are valid for your data set before testing the payment functions. Change the date to a recent bill cycle to easily review the payment in UM Customer Service.

```
<test active="False">
    <name>PostUtilityPayment</name>
    <endpoint>api/UM/V1/Payment/697320-001</endpoint>
    <httpmethod>POST</httpmethod>
    <logosid>697320-001</logosid>
    <logospin>2117</logospin>
    <expectedhttpcode>201</expectedhttpcode>
    <body>
        <![CDATA[
        {"AccountNumber": "697320-001", "PayeeName": "John Travolta", "PaymentAmount": 30.0,
        "PaymentDate": "2014-06-25T16:44:36.4959176-05:00", "PaymentType": "Charge",
        "AuthorizationCode": "AuthCode", "TransactionCode": "TransCode", "Comment": "Payment via WebApi."}
        ]]>
    </body>
</test>
```

You can choose to run all tests at once or run them individually by clicking on a test row on grid and clicking the **Run Selected** button. If a test fails, the row will be highlighted in red. Disabled tests are highlighted in yellow. You can enable a test by checking the '**TestEnabled**' checkbox or by changing the attribute named 'Active' to "**true**" in the XML file.

Similarly you can change all values from the test tool UI and run the tests with new values. Any manual changes you make in the test tool will not be saved to the TestConfig.XML file.

HANDOFF

If the processes in the Web API Test Client are successful, the service is functional, and ready for presentation to the third party IVR vendor. At a minimum, the vendor will need to know the **IP address** of the web server, and the vendor **username** and **password** from the **VendorConfig.XML** file. IVR vendors who have not developed against the Web API may need a copy of the *NWS Utility Management Integration Guide* for review.

TROUBLESHOOTING

The Logos Web API logs all requests in Windows Event Log. The logs can be viewed in **\Event Viewer \Applications** and **\Services \Logos \WebApi**.

Every incoming request is given a session id that can be used to track all event logs associated to that particular session. Administrators should monitor the **\Global \Admin** log for setup and application failures, and **\Request \Admin** log for failed login attempts.