



MANITOU TO SEDONA OFFICE INTEGRATION

Contents

Overview	3
Integration Setup	3
Adding the Router to the Manitou Configuration	9
Starting the Router from the Manitou System Manager (MSM)	10
Creating an Accounting Company	10
Defining Billable Charges	14
Sedona Linker	15
Installing and Configuring the Sedona Linker	16
Pre-Link Matching	18
Matching Options	19
List Options	20
Running the Linker	23
Forward Scan Exception Messages	30
Reverse Scan Exception Messages	31
Integration "In Action"	31
"Common Fields"	31
Entering a New Customer (Central Station Owned)	32
Systems	35
Monitoring Services	38
Accounting Status	40
Accounting Functions	41
Manitou Maintenance Issue creating Sedona Service Ticket	43
Integrating Manitou Maintenance Types with Sedona Service Tickets	45
Dealer Billing	47
Dealer Billing Setup	48
Dealer Information	49
Dealer Billing Rates	50
Dealer Billing Charges	52
Prorating	57
Generating Dealer Billing	58
Customer Signal Count Generator	58
Dealer Billing Deferred Revenue	58
Dealer Billing Generate	59
Dealer Billing Preview	60
Dealer Billing Post	60
Dealer Third-Party Billing	60

Overview

This document gives a very in depth look at the Manitou to SedonaOffice Integration. There is a separate document for the SedonaOffice to Manitou direction

For compatible versions and a quick look at functionality, please refer to the [Release Strategy Document](#).

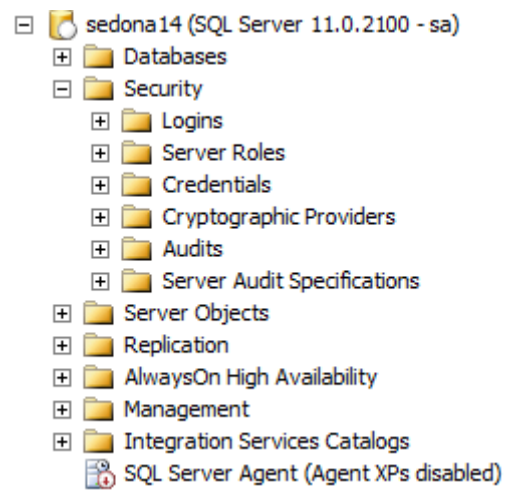
Manitou to SedonaOffice

Manitou is capable of integrating with both “local” and “cloud” installations of Sedona. “Local” integration refers to an “on premises” installation where the Sedona server is directly accessible to the Manitou server over the network. “Cloud” integration refers to an installation where the Sedona data is located in Sedona’s Cloud environment. The initial setup defining how to communicate with Sedona differs for each type, but the actual integration functionality is the same for both installations.

Integration Setup

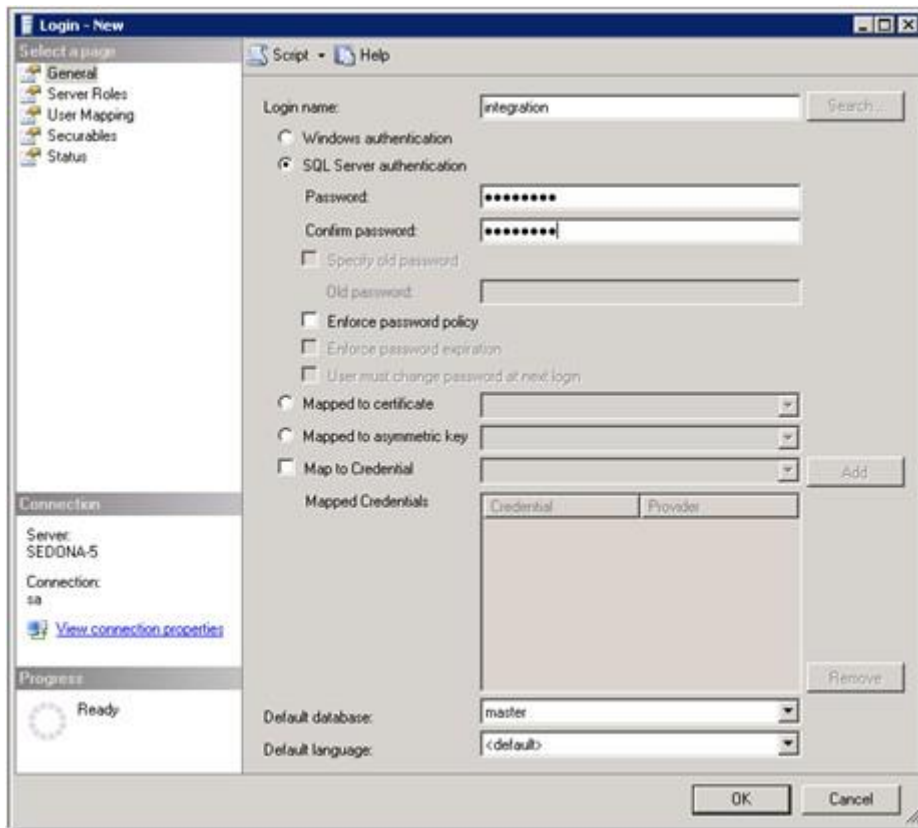
For local installations, a specific SQL login user must exist on the Sedona SQL server. This user must have full access to all databases.

1. Open **SQL Server Management Studio** on the Manitou Server.
2. Type the Sedona Server name and SQL login information in the appropriate fields.
3. Click the **Plus Sign** next to **Security**



Right-click **Logins** and choose **New Logins**. The **Login – New** window appears.

4. Type **Integration** in the **Login Name**

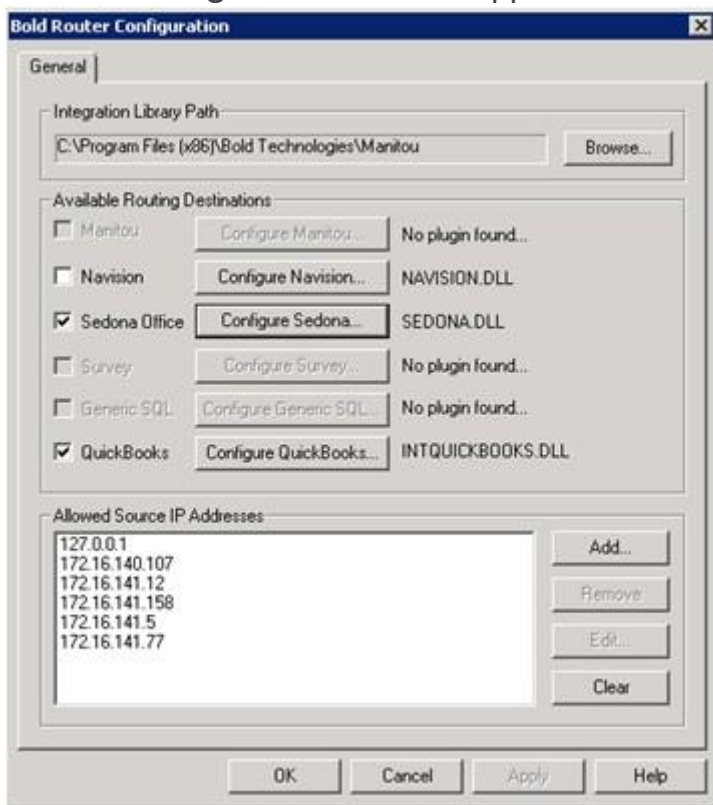


5. Select the **SQL Server Authentication**
6. Type **boldtech** in both the **Password** and **Confirm Password**
7. Clear the **Enforce Password Policy** check box.
8. On the left side of the **Login – New** window, choose **Server Roles** from the **Select a Page**
9. Select the **SysAdmin** check field.
10. Click **OK** and then exit the **SQL Server Management**

For cloud installation types, the appropriate .NET Framework must be installed. Currently this is 4.8.

For both installation types, the Manitou Router is configured:

1. Go to the **Manitou** folder on the Manitou Server that will host the Router.
2. Check to ensure the required dll's (listed below) are in the **Manitou** folder. If not, look in the patch folders for the latest versions and copy them into the **Manitou** folder. Note that only one Sedona dll should be in the **Manitou** folder at any given time. If more than one exists there, even if named differently, it can cause problems. For example, having both Sedona.dll and Sedona.dll.old is an undesirable situation. All unused Sedona dll's should be moved to another folder. Also note that only one installation type (local or cloud) can be accommodated at any given time. Both local and cloud cannot be configured or used at the same time.
 1. For local installations, Sedona.dll is required.
 2. For cloud installations, SedonaCloud.dll, BoldTechnologies.Drivers.SedonaCloud.dll, IdentityModel.dll, Newtonsoft.Json.dll, and System.Text.Encodings.Web.dll are required.
3. Right-click RouterConfig.exe and select **Run as Administrator**. The **Bold Router Configuration** window appears.

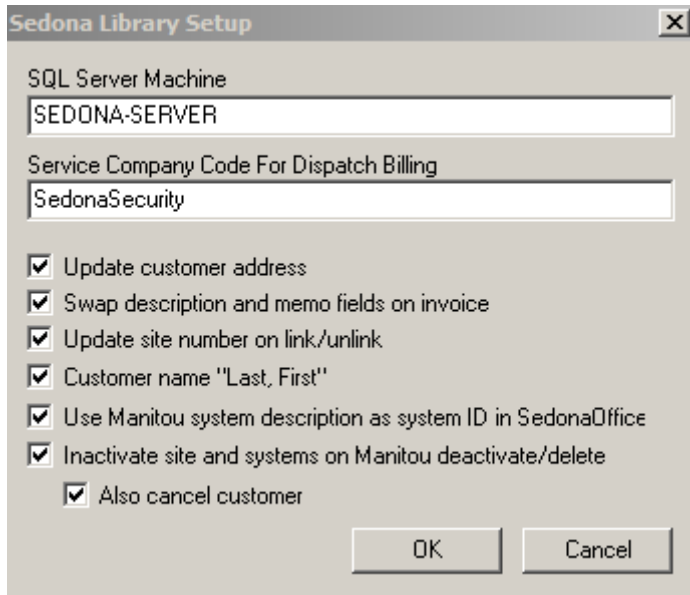


4. Click the **Browse** button next to the **Integration Library Path**
5. Go to the **Manitou** folder and click **OK**.

Note: The **Configure Sedona** button is now active. Either Sedona.dll or SedonaCloud.dll will be shown to the right, depending on the installation type.

6. Select the **Sedona Office** check box.
7. Click the **Configure Sedona** The Setup dialog box appropriate to the installation type will be displayed. The first part of each dialog specifies how to communicate with Sedona. The remaining options are the same for both installation types.

1. Local installation:



The screenshot shows a Windows-style dialog box titled "Sedona Library Setup". It contains two text input fields: "SQL Server Machine" with the value "SEDONA-SERVER" and "Service Company Code For Dispatch Billing" with the value "SedonaSecurity". Below these fields is a list of seven checked options: "Update customer address", "Swap description and memo fields on invoice", "Update site number on link/unlink", "Customer name 'Last, First'", "Use Manitou system description as system ID in SedonaOffice", "Inactivate site and systems on Manitou deactivate/delete", and "Also cancel customer". At the bottom right are "OK" and "Cancel" buttons.

The SQL Service Machine specifies the name of the SQL Server instance where the Sedona databases reside.

Cloud installation:

Company Name	URL	User ID	User Password
SedonaCloud	https://sedonacloudtest.com	TestUser	TestPassword
SedonaCloud2	https://sedonacloudtest.com	TestUser	TestPassword

Service Company Code For Dispatch Billing

SedonaSecurity

☒ Update customer address

☒ Swap description and memo fields on invoice

☒ Update site number on link/unlink

☒ Customer name "Last, First"

☒ Use Manitou system description as system ID in SedonaOffice

☒ Inactivate site and systems on Manitou deactivate/delete

☒ Also cancel customer

OK Cancel

Very important! The Company Name here must match the company **name** (not ID) entered in Accounting Companies setup in Supervisor Workstation. A single SedonaOffice database can accommodate multiple accounting companies set up in Supervisor Workstation for the same or different purposes (such as one for "regular" integration and one for dealer billing). In this scenario, the applicable accounting companies in Supervisor Workstation would have the same company name, which would then use the same entry here.

This form allows multiple company names to be configured here to accommodate multiple Sedona companies configured in Supervisor Workstation that target different SedonaOffice databases.

We found that it is possible to configure SedonaCloud API instances with non-standard Client Secrets. We did not know this prior to development. The SedonaCloud API must have the client secret that begins with "BA316CAB" until we rework this flow.

The URL, User ID, and User Password are set according to the Sedona Cloud installation.

1. Options common to both installations:

Service Company Code For Dispatch Billing: This specifies the Sedona service company code that will be used for all ticket functions that require a service company.

Update Customer Address: When a Sedona site's address, phone numbers, or e-mail

is updated by Manitou, the Sedona site's customer's corresponding information can optionally be updated as well, if it exactly matched the site's information before the change. Please note the following:

- The entire name and address is treated as a unit, meaning the customer's name, address, city, state, and zip must have exactly matched the site, otherwise the customer's name/address will not be updated.
- If the site's phone 1, phone 2, fax number, and/or e-mail address is changed, the customer's information is individually compared to the site. If the site's phone 1 was changed and the customer's phone 1 matched the site's phone 1, the customer's phone 1 is changed. If the site's phone 2 was changed and the customer's phone 2 matched the site's phone 2, the customer's phone 2 is changed. And so forth with fax and e-mail.

Swap description and memo fields on invoice: When creating dealer invoices (Manitou dealer billing generate/post), by default the description field contains billing period information of the entry (added on <date>, removed on <date>, billed from/thru dates, etc.), and the memo field contains the customer ID, name, and monitoring service description. If it is desired to swap these fields, enable this option.

Update site number on link/unlink: If it is desired to have the Sedona site number field contain the Manitou customer ID, enable this option.

Customer name "Last, First": If this option is enabled, the Manitou customer "search name" field (converted to title case) is used instead of the "normal" customer name to populate the Sedona customer/site name.

Use Manitou system description as system ID in SedonaOffice: By default, the Manitou customer ID is used to populate the Sedona system ID. If it is desired to use the Manitou system's description (not to be confused with the system *type* description) to populate the Sedona system ID, enable this option.

Inactivate site and systems on Manitou deactivate/delete and Also cancel customer:

- If this is not enabled, Sedona is left unchanged.
- If this is enabled:
 - If the Manitou customer has a 3-level A/R account number ("x-y-z"): ◦ The Sedona site is inactivated.
 - If there are no other active sites remaining on the Sedona customer:
 - If "Also cancel customer" is enabled, the customer is completely cancelled.
 - Otherwise, the customer is inactivated.
 - If the Manitou customer has a 2-level A/R account number ("x-y"):
 - If "Also cancel customer" is enabled, the Sedona customer is completely cancelled.
 - Otherwise, the customer is inactivated.

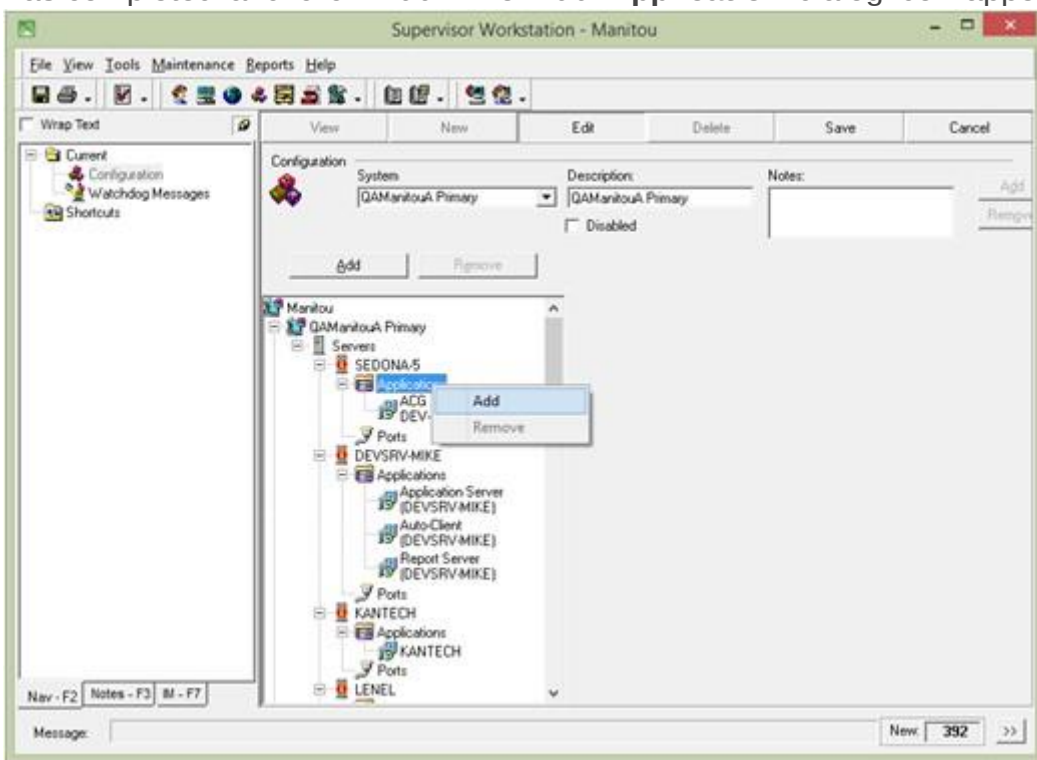
8. Click **OK** when finished with the Library Setup dialog. You return to the **Bold Router Configuration**
9. In the bottom section of the **Bold Router Configuration** type the IP address of each of the Manitou machines, the IP address of **0.0.1**, and the IP address for the Sedona Server.

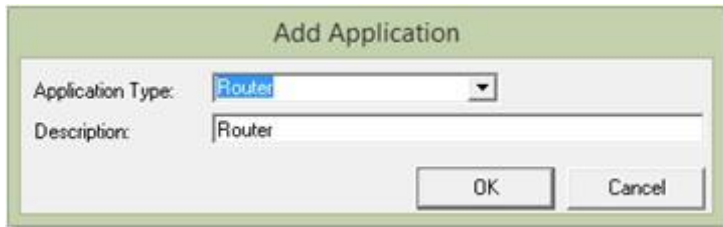
To add each IP address:

1. Click the **Add**
2. Type the IP address.
3. Click **OK**.
4. Repeat until all address are entered.
5. To complete the configuration click **OK** on the **Bold Router Configuration**

Adding the Router to the Manitou Configuration

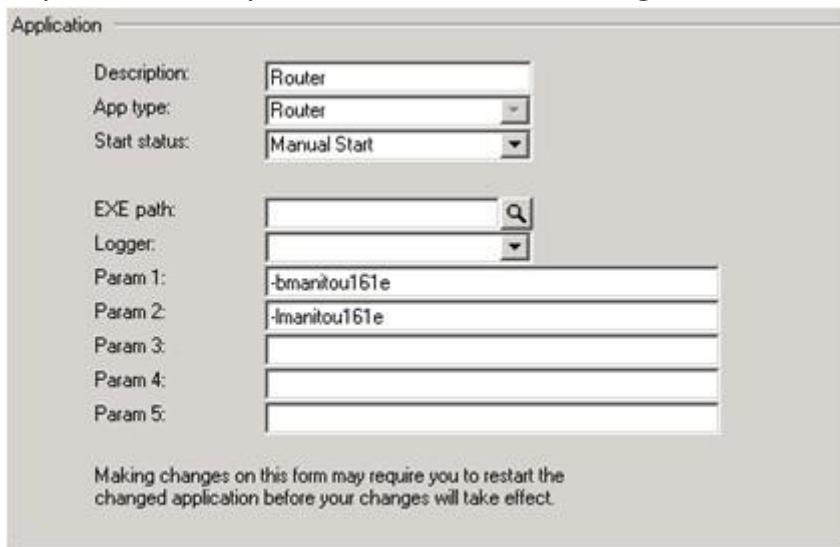
1. Open Supervisor Workstation.
2. Go to Maintenance | Setup | Configuration.
3. Click **Edit**.
4. Right-click **Applications** under the server on which the router configuration was completed and click **Add**. The **Add Application** dialog box appears.





The 'Add Application' dialog box has a title bar 'Add Application'. It contains two labels: 'Application Type:' with a dropdown menu showing 'Router' and a small downward arrow, and 'Description:' with a text box containing 'Router'. At the bottom right are 'OK' and 'Cancel' buttons.

5. Select **Router** from the **Application Type** drop-down list box and click **OK**. The **Application** group box appears.
6. Under **Application**, type -b plus the *BrokerServerName* in the **Param 1**
7. Under **Application**, type -l plus the *LoggerServerName* in the **Param 2**
8. Click **Save**.
9. Repeat these steps for each additional configuration on the customer's system.



The 'Application' configuration window has a title bar 'Application'. It contains several fields: 'Description:' with a text box 'Router', 'App type:' with a dropdown 'Router', and 'Start status:' with a dropdown 'Manual Start'. Below these are 'EXE path:' with a text box and a search icon, and 'Logger:' with a dropdown. There are five 'Param' fields: 'Param 1:' with '-bmanitou161e', 'Param 2:' with '-lmanitou161e', and 'Param 3:', 'Param 4:', and 'Param 5:' are empty. At the bottom, a note reads: 'Making changes on this form may require you to restart the changed application before your changes will take effect.'

Starting the Router from the Manitou System Manager (MSM)

1. Open MSM on the active Manitou machine. If it is already open, click the **Refresh**
2. Right-click **Router** and click **Start**.

Creating an Accounting Company

1. In Supervisor Workstation go to Maintenance | Accounting Companies.
2. Click **Edit**.

3. Click the **Add The Add Accounting Company** dialog box appears.

Add Accounting Company

Company ID: SEDONA

Interface Type: Accounting to Manitou

Application: Sedona

Name: Master Setup Standard

NOTE: If there are no company names in the Name combo after you have selected an Accounting System, then your system has not been configured for integration with accounting systems, and you can not add a company.

OK Cancel

4. Enter an appropriate name for the Sedona Accounting Company in the **Company ID**
5. Select **Accounting to Manitou CS, Manitou CS to Accounting, or Dealer Billing** from the **Interface Type** drop-down list box. This “direction” essentially specifies which application controls changes in billing, and in which application a new account is first entered. However, when the direction is Manitou to Accounting, a new account can be entered in Sedona first. It is of utmost importance to discuss the functionality and determine which direction is appropriate.
 1. Accounting to Manitou: All billing is manually entered and maintained in Sedona.
 2. Manitou to Accounting: Assuming the “Customer Push” option is enabled for the company, as billable monitoring services are added, modified, or removed in Manitou, recurring is automatically adjusted appropriately in Sedona.
 3. Dealer Billing: Used when dealer invoices are manually generated in Manitou and posted to Sedona. When an accounting company is being selected for a dealer, only companies designated as Dealer Billing are available for selection. Note that this functions the same as Manitou to Accounting.
6. Select **Sedona** from the **Application** drop-down list box.
7. The **Name** drop-down list will be populated with the available Sedona Companies. Select the appropriate company.
8. Click **OK**.

9.The information on the main form can then be entered.



Accounting Company

Company ID: CLOUDTEST

Interface type: Manitou CS to Accounting

Application: Sedona

Name: SedonaCloud

DSN:

User:

Password:

Server:

Default Accounting Branch:

☒ Update common fields

☒ Account ID required

☒ Force Account ID to be unique

☐ Force services to be one-to-one with recurring

☒ Push Customer Changes

DSN is not used by Sedona integration.

User and **Password** specify the Sedona SQL server login for local installations. These are not used by cloud installations.

Server is not used by Sedona integration.

Default Accounting Branch specifies which Sedona branch will be assigned to new customers created in Manitou and pushed into Sedona. By definition, this applies only when the direction is Manitou to Accounting or Dealer Billing. This can be left blank to use the default branch as set up in Sedona.

Update common fields: If this option is not enabled, Manitou will not attempt to update Sedona when the customer name, address, or contact points are updated. If this option is enabled, common fields are updated regardless of integration direction. In other words, even if the direction is Accounting to Manitou, changes to name, address, or contact points in Manitou will update Sedona if Sedona's information matched Manitou's. If the direction is Manitou to Accounting and Push Customer Changes is enabled, that option takes precedence over this one.

Please note the following:

- The entire name and address is treated as a unit, meaning the Sedona site's name,

address, city, state, and zip must have exactly matched Manitou, otherwise the site's name/address will not be updated.

- If Manitou's first or second "phone" contact point, first "fax" contact point, and/or first e-mail address is changed, the Sedona site's information is individually compared to Manitou. If Manitou's first phone contact point was changed and the Sedona site's phone 1 matched Manitou's first phone contact point, the site's phone 1 is changed. If Manitou's second phone contact point was changed and the Sedona site's phone 2 matched Manitou's second phone contact point, the site's phone 2 is changed. And so forth with fax and e-mail.

Account ID required: Specifies whether or not an A/R number must be entered when this accounting company is selected on a customer. This is forced to "enabled" for Sedona integration.

Force Account ID to be unique: Specifies whether or not the same A/R number can be assigned to more than one customer in the same accounting company. This is forced to "enabled" for Sedona integration.

Force services to be one-to-one with recurring: If this option is enabled, linked customers cannot be created, stored, or imported unless all services are completely matching. This means that for every monitoring service that is in Manitou, it must also contain a recurring item in Sedona, which includes the quantity of each recurring item. For example, if there are four open/close services under a system in Manitou, there must be four open/close recurring items listed under the same system in Sedona. This is likely the preferred method for most Central Stations. However, some might want to roll up charges for accounting and don't want to unroll and itemize individual items. In these cases, this option should be disabled.

Note: If the accounting company is set for one-to-one services and the direction is Accounting to Manitou, Manitou verifies that the services and recurring appear to match whenever a customer is made active, and whenever any changes are made that affect services of an active customer.

Push customer changes: This option must be enabled to push any changes other than the update of "common fields" (as defined above) to Sedona. This includes the addition and deletion of systems and services, and the corresponding adjustments to recurring. Under normal circumstances, this should always be enabled.

Note: As with “Update common fields”, this option applies regardless of integration direction. Although billing information is pushed only when the direction is Manitou to Accounting, non-billing changes are pushed regardless of direction, but only if this option is enabled. The exception to this is if the Manitou customer ID is changed, the Sedona references to that Manitou ID are updated regardless of this option, otherwise the link between the accounts would be broken.

Also note that when the direction is Manitou to Accounting, enabling this option forces the “common fields” in the Sedona site to match Manitou. Changes to the “common fields” in Manitou will overwrite that information in the Sedona site without regard to what is currently there (the corresponding information in the Sedona site does not have to match Manitou to get updated). However, the Sedona site’s customer’s information must match the site in order for the customer’s information to get updated.

You **MUST** have this enabled to create a brand new SedonaOffice customer from a Manitou Customer. This is also true from the new customer wizard in Manitou.

10. Additional companies can be added at this point if desired. Click **Save** when all desired companies have been added to save all the accounting company information.

Defining Billable Charges

Manitou Monitoring Types are the link between billable services in Manitou and their associated charges in Sedona. A monitoring type is attached to a monitoring service of a customer. The billing code of that monitoring type is then used as the recurring item when that billing information is pushed into Sedona. Monitoring type definitions are entered in Supervisor Workstation | Maintenance | Setup | Monitoring Types.

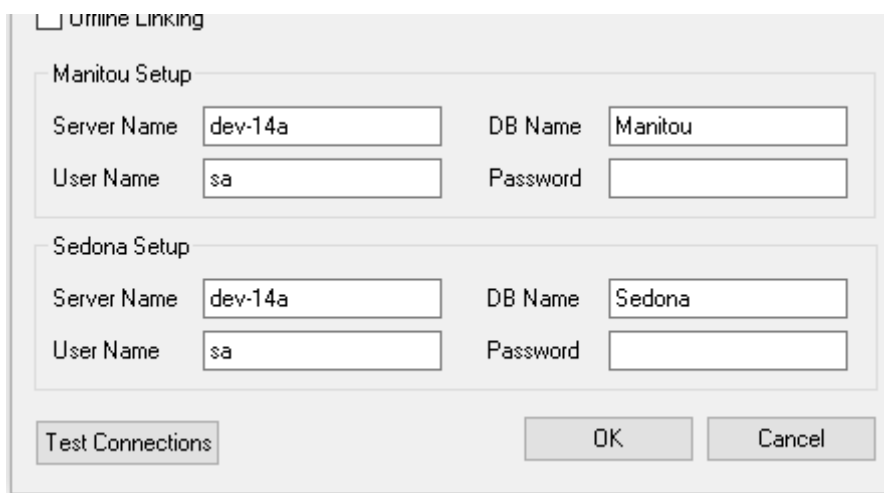
located in the Cloud, the "Offline Linking" option must be used as this utility will not have direct access to the "live" data. This is discussed further below.

Installing and Configuring the Sedona Linker

To install and configure the Sedona Linker, do the following:

- Go to the **Updates 1** folder and copy the SedonaLinker.exe file.
- Paste the file into the current Manitou directory. If offline linking will be used, the executable can be placed on any machine with access to the offline linking database.
- Right-click SedonaLinker.exe and then select **Run as Administrator**. The **Database Connection Parameters** window appears.

If both the Manitou and Sedona data is located on-premises, the Offline Linking option is not used.



☐ Offline Linking

Manitou Setup

Server Name: DB Name:

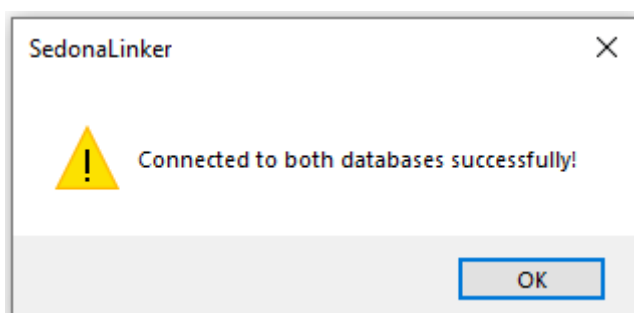
User Name: Password:

Sedona Setup

Server Name: DB Name:

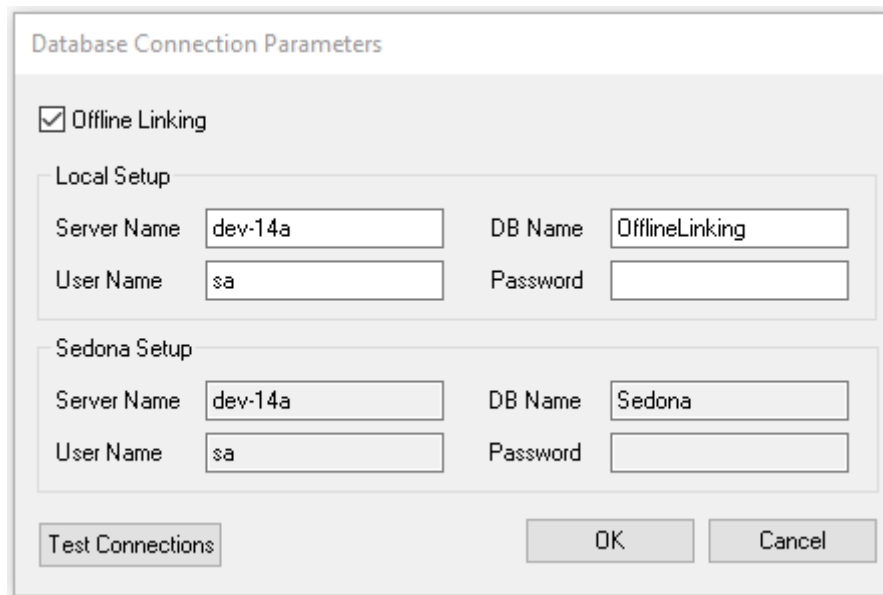
User Name: Password:

- Under **Manitou Setup**, type the information regarding the Manitou server and database.
- Under **Sedona Setup**, type the information regarding the Sedona server and database.
- Click **Test Connections**. If both setups are properly configured, the following message box appears:



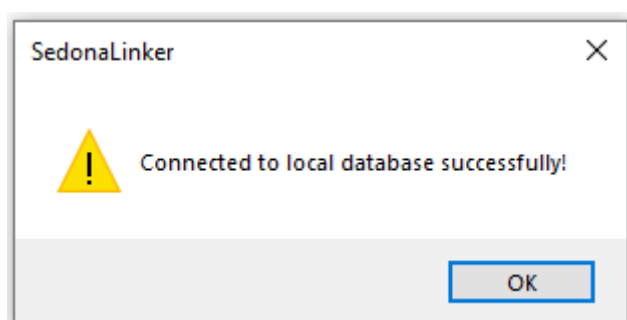
Click **OK**. The **Sedona Linker** window appears.

If the Manitou and/or Sedona data is located in the Cloud, the Offline Linking option must be used. This requires that SQL scripts supplied by us be used to extract the necessary information from the Manitou and Sedona databases. The results from the scripts are imported into a local database accessible by this utility. All functionality in this utility is the same as when doing on- premises linking, except that instead of performing the actual updates here, a JSON file is created which is then used as the input file to the Accounting Linker utility which performs the actual updates via the Manitou and Sedona APIs.



The screenshot shows a dialog box titled "Database Connection Parameters". It has a checkbox labeled "Offline Linking" which is checked. Below this, there are two sections: "Local Setup" and "Sedona Setup". Each section contains four input fields: "Server Name", "DB Name", "User Name", and "Password". In the "Local Setup" section, "Server Name" is "dev-14a", "DB Name" is "OfflineLinking", "User Name" is "sa", and "Password" is empty. In the "Sedona Setup" section, "Server Name" is "dev-14a", "DB Name" is "Sedona", "User Name" is "sa", and "Password" is empty. At the bottom of the dialog, there are three buttons: "Test Connections", "OK", and "Cancel".

- Under **Local Setup**, type the information regarding the local server and database. This is where the results of the Manitou and Sedona extract scripts are placed for use by this utility. The database must exist, but should initially be empty.
- **Sedona Setup** shows the saved information from the last time the Linker was run without the Offline Linking option. This is not needed and cannot be changed when doing Offline Linking, but remains intact so it is available if Offline Linking is not used in the future.
- Click **Test Connections**. If the local setup is properly configured, the following message box appears:



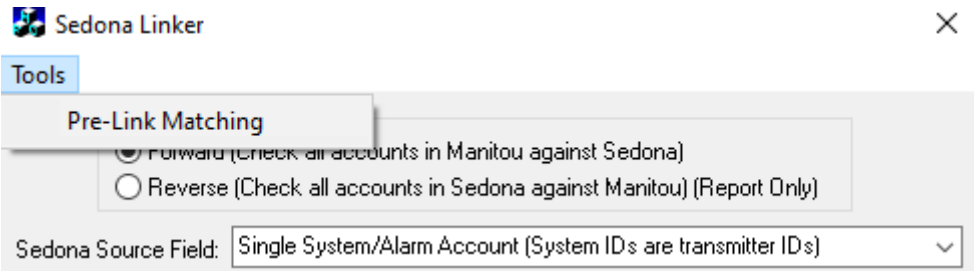
Click **OK**. The **Sedona Linker** window appears.

Note that if any of the offline linking tables do not exist in the database, they are created at this time behind the scene. The first time offline linking is used with a database, "Test Connections" should be used to create the tables before they are populated with the results of the extract scripts. The built-in SQL Import utility should *not* be used to create the tables by importing the results, because the Linker ensures the correct field types and necessary indexes are in place. To have this utility re-create a table, simply delete the table from the database and Test Connections again.

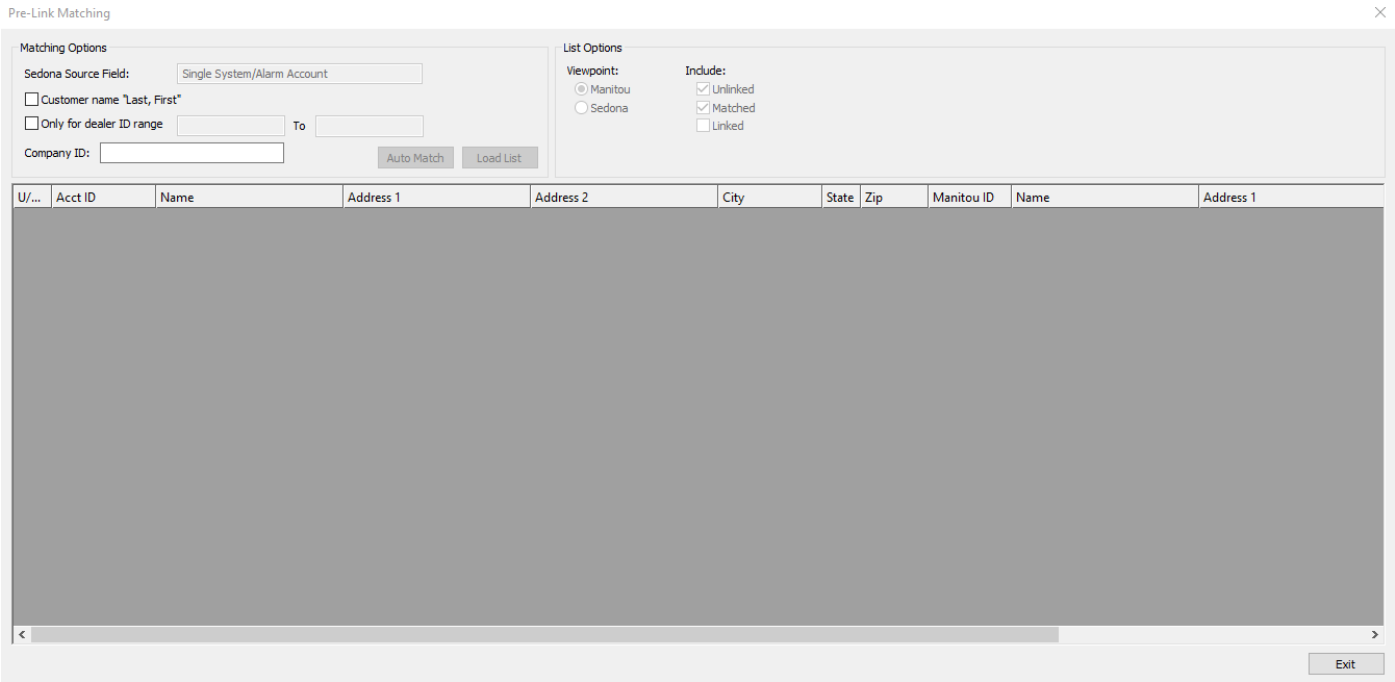
Pre-Link Matching

If the Sedona data does not point to all desired Manitou customers, Sedona and Manitou accounts can be automatically matched together based on name and address information, or manually matched one at a time. This pre-link matching process should be performed prior to running the actual linking process because it ensures the matched accounts will be linked as desired. Note that any matches made here are not physically linked until the actual linking process is run.

To perform pre-link matching, click **Tools** and select **Pre-Link Matching**.



The **Pre-Link Matching** window appears.



Matching Options

- The **Sedona Source Field** from the Linker main form is shown here for reference. Matched accounts will be identified and set based on this option.
- **Customer name "Last, First"**: This option is used only during the auto-match process. If the Sedona name is stored as "Last, First", this option would be enabled so the matching process compares the Manitou 'file-as' name (stored in "Last, First" order) to the Sedona name. Additionally, this is done only for residential customers in Manitou.
- If matching should be performed only for a specific dealer range, select the **Only for dealer ID range** check box and then type a range in the from/to fields. Please note that this affects only which Manitou customers are loaded.
- The **Company ID** specifies the accounting company as set up in Manitou and must be entered before the list can be loaded. Only Manitou customers with that accounting company or no accounting company will be included.

After all desired options have been entered, click **Load List**. The applicable accounts are loaded.

- If offline linking is enabled, this includes all Manitou customers included in the extract - filtered by the matching options, and all Sedona accounts included in the extract. A subset (or all) of the local copy of the data is loaded each time.
- If offline linking is not enabled, this includes all active Manitou customers from the live database - filtered by the matching options, and all active Sedona accounts from the live database that do not have a "Cancelled" status. Each time this form is opened and the list loaded, the live data is retrieved, so the loaded list is potentially different every time.

Pre-Link Matching

Matching Options

Sedona Source Field:

☐ Customer name "Last, First"

☐ Only for dealer ID range To

Company ID:

List Options

Viewpoint: ☒ Manitou ☐ Sedona

Include: ☒ Unlinked ☒ Matched ☒ Linked

U/...	Manitou ID	Name	Address 1	Address 2	City	Region	Postcode	Acct ID	Name	Address 1
U	440	Teresa McCarten	1234 Main St		Seluda	VA	23147			
L	441	Laura Bimm	1234 Main St		Seluda	VA	23147	10157-2191	Laura Bimm	1234 Main St
U	442	Tracy Breck	1234 Main St		Seluda	VA	23147			
U	443	Pat Gail	1234 Main St		Seluda	VA	23147			
U	445	Charles Gordon Wilson Revere...	601 Tamarron Dr		Colorado Springs	CO	80919			
U	446	Kathi Molinari	1234 Main St		Seluda	VA	23147			
U	453	DLR-126 System	2815 Roundtop Dr		Colorado Springs	CO	80918			
U	454545	Test 123								
U	455	Brennan Wells	6275 Soaring Dr		Jonesboro	CO	80918			
M	458	Sedona	3214 Sedona Road		El Paso	CO	799341234	10001-20	Sedona	3214 Sedona Road
U	461	Bold XML Driver	421 Windchime Pl		Colorado Springs	CO	80919			
U	4648	Ryan Harvey	1234 Some St.		Colorado Springs	CO	80918			
U	466	VertX Default Account	421 Windchime Place		Colorado Springs	CO	80919			
U	472	Willy Porter	308 Homeland Ct		Colorado Springs	CO	80921			
U	475	Joe Schmo	301 Schmo Way	Suite 100	Colorado Springs	CO	80919			
U	477	Yannas Test Account	97987 lee road 9321		Colorado Springs	CO	80916			
U	487	Alan's New Customer	123 Anystreet		Anytown	CO	81326			
U	488	Kevin's New Account	1234 Anystreet		Anytown	CO	81326			

Exit

- **Auto Fix**: This process will automatically remove 'match' information from Sedona that points to a Manitou customer that does not exist. (If a 'matched' Sedona account shows a Manitou ID but no name/address information, the link is broken and would be removed by this process.) This situation is not normal and would typically be caused by abnormal

program termination or other data corruption.

- **Auto Match:** The Auto Match function evaluates Manitou customers on an individual basis looking for exact or almost-matching name and address matches in the list of unlinked Sedona accounts. As it is searching, it keeps track of accounts that almost match based on an algorithm of differences in the name and address. If an exact match is found, it immediately connects the accounts and proceeds to the next Manitou customer. If an exact match was not found after searching all Sedona accounts, it matches the Sedona account that most closely matches the Manitou customer, if at least one almost-match was found.
Upon completion, the number of matched accounts will be shown.

List Options

- **Viewpoint**
selects the viewpoint of the grid.
 - **Manitou** shows all Manitou customers on the left side and the Sedona account to which they are matched/linked on the right.
 - **Sedona** shows all Sedona accounts on the left side and the Manitou customer to which they are matched/linked on the right.
- **Include** allows specification of which accounts are included in the display. At least one option must be included.
 - **Unlinked** accounts do not point to any account on the other side. These will have a U in the U/M/L column and a red background.
 - **Matched** accounts point to an account on the other side, but are not physically linked in the live data. These will have an M in the U/M/L column and a yellow background. When the linking process is actually performed, these are the accounts that will be (or attempted to be) linked; or in the case of offline linking, written to the output file.
 - **Linked** accounts are physically linked in the live data and cannot be modified here. These will have an L in the U/M/L column and a green background.

Manual Matching

To manually match or unmatch an account, double-click on the desired row in the grid. The **Pre-Link Manual Match** form will be displayed. Only unmatched or matched accounts can be modified in this manner. Linked accounts cannot be changed. When in the Manitou viewpoint, the selected Manitou customer will be shown and the Sedona account can be chosen. When in the Sedona viewpoint, the selected Sedona account will be shown and the Manitou customer can be chosen. If the selected account is already matched, both accounts will be shown upon initial display of this form. If the selected account is currently unmatched, the account to be matched to the selected account can be found and chosen.

Sedona Site		Manitou Customer
Site ID:	Search	Customer ID: AA111027
Name:	> <	Name: SIU Test Account
Address:	> <	Address: 421 Windchime Place
City:	> <	City: Colorado Springs
State:	> <	Region: CO
Zip:	> <	Postcode: 80919
Reset		Reset
		OK Cancel

If the desired Sedona site (when matching a Manitou customer) or Manitou customer (when matching a Sedona account) is known, the ID can be entered directly. Otherwise, the appropriate account can be found by clicking the **Search** button.

Search Criteria						
Name:	City:	Sort By: ☒ Name ☐ City				
Address:	Zip:	☐ Address ☐ Zip		Search		
Acct ID	Name	Address 1	Address 2	City	State	Zip
						OK Cancel

The desired search criteria is entered and sort option selected (note that the sort option can be changed at will after the search results are loaded). Leaving the search criteria empty will include all accounts. Note that the source of the accounts shown here is the loaded list, not the live data. (An account not in the currently loaded list cannot be "found".)

Once a specific account is selected, either directly or by a search, or the selected account was already matched, the two accounts are shown side-by-side.

Sedona Site				Manitou Customer	
Site ID:	10013-19	Search		Customer ID:	AA111027
Name:	George Washington		> <	Name:	SIU Test Account
Address:	1234 Mount Vernon Lane		> <	Address:	421 Windchime Place
			> <		
City:	Colorado Springs		> <	City:	Colorado Springs
State:	CO		> <	Region:	CO
Zip:	80919		> <	Postcode:	80919
Reset				Reset	
				OK	Cancel

The names/addresses of either account can be modified on this form, typically to get the two sides in sync. The arrow buttons in the center can be used to push the data from one side to the other. The **Reset** button is used to revert the name/address back to what it was before this form was loaded.

If the selected account was already matched before this form was displayed, the existing match can be removed by blanking out the matched ID.

When **OK** is selected on this form:

- If an existing match was removed, the "loaded list" data is updated, meaning the selected account will no longer be linked when the linking process is actually performed.
- If a match was added, the "loaded list" data is updated, meaning the selected account will be linked to the specified account when the linking process is actually performed.
- If the name/address information has been modified:
 - The "loaded list" data is updated.
 - If Offline Linking is enabled, changes to a Sedona account will ultimately get ignored. Only the Manitou customer is written to the output file.
 - If the **Don't Sync address data** option is enabled on the main Linker form, Manitou name/address changes here will be ignored.
 - If the **Don't Sync address data** option is not enabled on the main Linker form, the Accounting Linker will update the "live" Manitou name/address to the information supplied by the Sedona Linker. When the accounting company/number is ultimately saved on the Manitou customer, the options of that accounting company will dictate if and how the name/address information is propagated into Sedona.
 - If Offline Linking is not enabled, the live name/address data is also updated at this time. The current "live" information must exactly match the current "loaded list" information (prior to the changes on this form) for the live update to take place.

Running the Linker

The Linker is the process that ultimately performs the actual database updates to link the Manitou and Sedona accounts together, or creates the offline output file when offline linking is enabled.

However, there are options that allow the utility to only report on the linking process without performing the actual database updates or creating the output file. The Sedona Linker has many options, all of which are explained below. The options are slightly different based on the Offline Linking option and scan direction.

When Offline Linking is enabled:



Tools

Scan Direction

☒ Forward (Check all accounts in Manitou against Sedona)
☐ Reverse (Check all accounts in Sedona against Manitou) (Report Only)

Sedona Source Field:

Site/Site Number (New Location) ▼

☐ Use Sedona system Alarm # to match Manitou system description

☒ Report only (Don't link)
☒ Only link unlinked accounts
☐ Customer name "Last, First"

☐ Don't sync address data
☐ Don't link systems
☐ Also link unlinked systems of linked accounts
☒ Run unattended (no system link prompting)

Date to terminate existing recurring

9/24/2020 ▼

Date to begin new recurring ☒ Current date ☐ Start date in monitoring service

☐ Only for dealer ID range To

Offline output file

C:\AccountingLinker.json

Browse...

☒ Multiple match error file

C:\multiple.txt

Browse...

☒ Missing match error file

C:\missing.txt

Browse...

☒ Address mismatch file

C:\addrlink.txt

Browse...

☒ Cust name mismatch file

C:\custname.txt

Browse...

☒ System link error file

C:\syserror.txt

Browse...

Company ID:

SED_LINK

Logged Output:

Run

Exit

When Offline Linking is not enabled:

 Sedona Linker ✕

Tools

Scan Direction

- ☒ Forward (Check all accounts in Manitou against Sedona)
- ☐ Reverse (Check all accounts in Sedona against Manitou) (Report Only)

Sedona Source Field: Site/Site Number (New Location) ▾

☐ Use Sedona system Alarm # to match Manitou system description

☒ Report only (Don't link) ☐ Don't sync address data

☒ Only link unlinked accounts ☐ Don't link systems

☒ Replace cust name/addr (if same as site) ☐ Also link unlinked systems of linked accounts

☐ Customer name "Last, First" ☐ Run unattended (no system link prompting)

Date to terminate existing recurring 9/24/2020 ▾

Date to begin new recurring ☒ Current date ☐ Start date in monitoring service

☐ Only for dealer ID range To

☒ Multiple match error file C:\multiple.txt Browse...

☒ Missing match error file C:\missing.txt Browse...

☒ Address mismatch file C:\addrlink.txt Browse...

☒ Cust name mismatch file C:\custname.txt Browse...

☒ System link error file C:\syserror.txt Browse...

Company ID: SED_LINK

Logged Output: Run

Exit

When reverse scan is selected:

 Sedona Linker ✕

Tools

Scan Direction

☐ Forward (Check all accounts in Manitou against Sedona)

☒ Reverse (Check all accounts in Sedona against Manitou) (Report Only)

Sedona Source Field: Site/Site Number (New Location) ▾

☐ Use Sedona system Alarm # to match Manitou system description

☒ Report only (Don't link)

☐ Don't sync address data

☐ Don't link systems

☐ Replace cust name/addr (if same as site)

☐ Customer name "Last, First"

☐ Run unattended (no system link prompting)

Date to terminate existing recurring 9/24/2020 

Date to begin new recurring ☒ Current date ☐ Start date in monitoring service

☐ Only for dealer ID range To

☒ Multiple match error file

C:\multiple.txt

Browse...

☒ Missing match error file

C:\missing.txt

Browse...

☒ No contract ID error file

C:\nocontid.txt

Browse...

Company ID: SED_LINK

Logged Output: Run

Exit

Scan Direction: Linking by a forward scan evaluates every account in Manitou and attempts to locate a matching account in Sedona. This lets you know which accounts exist in Manitou, but not in Sedona. A reverse scan, on the other hand, scans every account in Sedona and attempts to locate a match in Manitou. This lets you know which accounts exist in Sedona, but not in Manitou. A reverse scan will never perform any actual linking – it is for reporting purposes only.

Sedona Source Field: All new integrations should be using the Site/Site Number option. The other options are available only for existing legacy compatibility.

- **Single System/Alarm Account:** Linking is performed by finding the Manitou account number in the **Alarm #** field of the Sedona site's "first" system. If there are multiple systems on that Sedona site, the first-found Manitou account is the one linked to the Sedona site regardless of the information contained in any other of the site's system's **Alarm #** field.
- **Site/Site Number:** Linking is performed by finding the Manitou account number in the Sedona site's **Site Number** field.
- **System/Alarm Account:** Linking is performed by finding the Manitou account number in the Sedona site's system's **Alarm #** field. All systems under that site must point to the same Manitou account, otherwise it will not be linked.

Use Sedona system Alarm # to match Manitou system description: When linking is specified at the site level, the **Alarm #** field in the Sedona system can be populated with the description of the Manitou system to which the Sedona system should be linked to ensure the desired systems are tied. If the **Alarm #** field is populated and that system description is not found under the Manitou customer, the Sedona system will not be linked and will be listed on the exception report. If the **Alarm #** field is not populated, the default system linking process is followed.

Report Only (Don't link): This option can be enabled for testing purposes. When ready to actually link the accounts/create the output file, this option is left unchecked. This is forced to be enabled when performing a reverse scan.

Only link unlinked accounts: If this option is not enabled, Manitou customers that already have an accounting company and number will be included in the process. This option may seem contradictory to the whole process, but it is possible that the A/R information has been pre-populated in Manitou but the Manitou customer has not yet been physically linked to a Sedona site (a Sedona site does not point back to the Manitou customer). In the context of this option, "unlinked" simply equals "absence of A/R company and number in Manitou".

Note that if there are multiple companies being linked, this option should be enabled when linking subsequent companies after the first to prevent unlinking of a previously linked customer.

Replace cust name/addr (if same as site): Unless optioned not to, the Sedona site's name/address is updated during the linking process. Enabling this option will cause the Sedona site's *customer's* name/address to be updated as well, if it matched the site name/address beforehand. This option is not available when performing offline linking because the accounting company's setup options will ultimately dictate if and how the name/address is propagated to Sedona.

Customer name Last, First: If the Sedona name is stored as "Last, First", this option would be enabled so the linking process compares the Manitou "file-as" name (stored in "Last, First"

order) to the Sedona name. Additionally, this is done only for residential customers in Manitou (that is, non-residential customers will still be compared by the “regular” name).

Don't Sync Address Data:

- **Offline Linking enabled:** This causes the supplied name/address to be ignored by the Accounting Linker, meaning the existing Manitou name/address will remain as-is. The accounting company's setup options will ultimately dictate if and how the address is propagated to Sedona.
- **Offline Linking disabled:** Enabling this option prevents Manitou address information from overwriting Sedona site address information at the time linking occurs.

Don't Link Systems: Enabling this option links accounts at the customer/site level, but will not link systems. In most cases, this option should be disabled. Manitou reconciliation cannot occur if systems are not linked. When offline linking, this simply stops systems from being written to the output file, ultimately causing systems to not get linked by the Accounting Linker.

Also Link Unlinked Systems of Linked Accounts: Enabling this option links currently unlinked systems, even if the Manitou customer itself is already linked (other systems of the customer may or may not be currently linked). This option is automatically disabled if **Don't Link Systems** is enabled.

Run Unattended (No System Link Prompting): During the actual linking process, if a user-resolvable conflict is found, a dialog box displays where manual resolution of the conflict can be done, after which linking would then continue. This halts the linking process until the dialog box is closed. Enabling this option prevents the dialog box from displaying, thereby allowing the linking process to run to completion without user interaction - conflicts are logged as encountered and then resolved after the linking process is finished. This option is forced to be enabled when Offline Linking is enabled.

Date to terminate existing recurring: When linking, the existing recurring in Sedona is terminated and new recurring is created based on the services in Manitou. This option allows a date other than the current date to be selected. Note that when offline linking, this is the date that will be used, even if the Accounting Linker is run at a later date.

Date to begin new recurring: Either the current date or the actual start date in the monitoring service can be used as the start date of the new recurring. If “start date in monitoring service” is selected:

- The current date is used if the monitoring service start date is empty.
- The termination date from the service is used as the new recurring's end date.

Typically, the best course of action would be to populate the start date of all applicable services with a specific date, use that date as the “date to terminate existing recurring”, and use the start date in monitoring service as the date to begin new recurring.

Note that when offline linking, "current date" means the date on which the Accounting Linker is run, even if at a later date.

Only for dealer ID range: If linking only customers of a single dealer or range of dealers, enable this option and enter the applicable dealer IDs in the from/to fields.

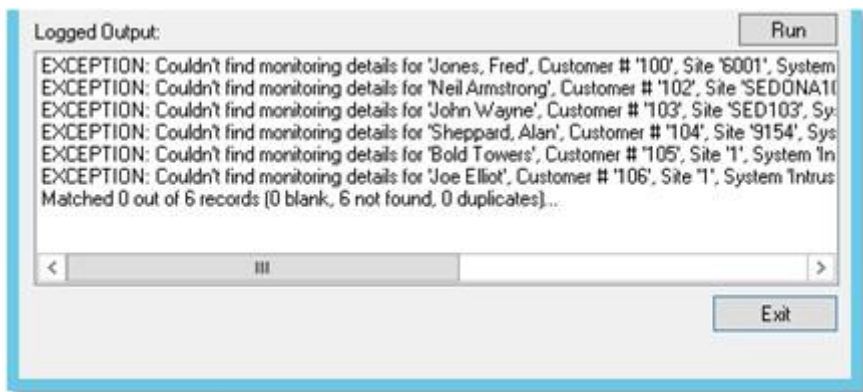
Offline output file is only available when offline linking, and specifies the file name and location of the JSON file that will ultimately be used as the input to the Accounting Linker. When the linking process is run here, this file will be created and populated with the data required by the Accounting Linker, which will perform the actual linking.

Error files: Enable the errors that should be logged to a file and choose the file name and location.

- **Multiple Match:** This report includes instances in which the system found more than one potential match for the account in Manitou. Any exceptions in this report must be resolved before linking can occur.
- **Missing Match:** This report contains exceptions where a matching account in Sedona could not be found.
- **No contract ID:** This report contains exceptions where a Sedona account does not point to a Manitou customer (reverse scan only).
- **Address Mismatch:** This report contains exceptions where a unique match was found in Sedona, but the address in Sedona didn't match the address in Manitou.
- **Cust Name Mismatch:** This report is generated if the **Replace Cust Name/Addr (If Same As Site)** option is enabled. This shows exceptions where the customer name in Sedona and Manitou did not match.
- **System Link Error:** This report is generated once the top-level link between accounts is established and attempted to match all of the systems of the accounts. When several unsuccessful attempts are made to match everything, the exceptions are listed in this report.

Company ID: This specifies the Sedona company ID as set up in Supervisor Workstation | Maintenance | Accounting Companies.

Run: Once all options have been set as desired, click Run to start the linking process. Depending on the number of accounts, this may take many hours. As the linking progresses, messages may appear in the **Logged Output** window of the form. When complete, it displays how many accounts were linked out of the total number of accounts. When offline linking, this will create the offline output file rather than perform the actual linking. When complete, the offline file can be used as the input file to the Accounting Linker which will perform the actual linking.



Forward Scan Exception Messages

When a forward scan is used, one of the following exception messages might occur:

- **Exception: More than one match for Alarm ID** – More than one match in Sedona was found for the specified Manitou account.
- **Exception: Couldn't link Alarm ID to SedonaOffice Customer because the systems of the site point to more than one Alarm Account** – (Note that this exception can only happen when the **Sedona Source Field** is not **Site/Site Number**, which should never be the case for new integrations.) In Sedona, at the top level, there is a customer record that has potentially many site records beneath it, which each have potentially many system records beneath the site records. Manitou accounts are tied to site records in Sedona and then match the system records for each account. The field in Sedona that contains the monitoring customer ID is at the system level and this is what is used to locate matches.

For example, Manitou contains a customer ID of 123, which is found in a site's system. Normally, this would be a successful match. However, that same site has another system that points to a monitoring customer ID of 456. The Manitou account which should be tied cannot be determined so this error message is generated. The Central Station must audit their data to make sure all systems of every site all point to the same customer ID or no customer ID.

- **Exception: Couldn't find details for Alarm ID** – A match in SedonaOffice could not be found for the specified Manitou account.
- **Exception: System [X] of Customer ID [X] in SedonaOffice has a mapping, but there are not systems defined for Manitou account [X]** – A system record exists in Sedona, and a way has been found to map it from the rules specified in the rules dialog, but there are no systems defined in Manitou.
- **Exception: System [X] of Customer ID [X] in SedonaOffice has mapping, but all systems in Manitou account [X] are already linked** – A system record exists in Sedona and a way has been found to map it from the rules specified in the rules dialog, but all the systems in Manitou have been linked to something else.
- **Exception: System [X] of Customer ID [X] in SedonaOffice has mapping, but**

it doesn't match to any unlinked systems in Manitou account [X] – A system record exists in Sedona and a way has been found to map it from the rules specified in the rules dialog, but there are no unlinked systems in Manitou that meet the criteria to match it to.

- **Exception: System [X] of Customer ID [X] in SedonaOffice does not have a mapping, and it cannot be reasonably matched to an unlinked system in Manitou** – A system record exists in Sedona that has no mapping rules, and it cannot be determined which system in Manitou it should link to without additional rules specified.
- **Exception: Failed to link Contract ID [X] (Error [X], Link State [X])** – An unexpected error was experienced (typically a database error) while attempting to link a Sedona account.

Reverse Scan Exception Messages

When a reverse scan is used, one of the following exception messages might occur:

- **Exception: No account ID specified for [X], Customer # [X], Site [X], System [X]** – No customer ID was specified in the specified Sedona account, so it cannot look for a match in Manitou.
- **Exception: Couldn't find monitoring details for [X], Customer # [X], Site [X], System [X] (Alarm ID: [X])** – A customer ID was specified in the Sedona account, but that customer ID in Manitou could not be found.
- **Exception: More than one match for [X], Customer # [X], Site [X], System [X], ([X] Matches)** – More than one customer/system in Manitou matches the “matching criteria” in the listed Sedona customer/site/system.

Integration “In Action”

The following sections explain how Manitou interacts with Sedona in day-to-day operations. One more setup item must be mentioned first, though. The correct version of the SedonaRemoteControl.dll that corresponds to the installed version of the Sedona client must be copied to the Manitou folder of each workstation on which the Manitou and Sedona clients are installed. It is through this dll that the Manitou client communicates with the Sedona client.

“Common Fields”

One of the accounting company setup options is “Update Common Fields”. The “common fields” consist of the name and address information as a whole, plus the individual contact points explained below. Note that the Manitou address labels may be different based on country setup.

Manitou	Sedona
Name Address 1 Address 2 City State Zip Code	Name Address 1 Address 2 City State Zip
First contact point of type “phone”	Phone 1
Second contact point of type “phone”	Phone 2
First contact point of type “fax”	Fax
First contact point of type “e-mail”	E-Mail

If so optioned in integration setup, when any of the common fields are changed in Manitou, the corresponding field in Sedona is updated, but only if the data exactly matched before the change. In regard to name and address, all fields must exactly match for a change to any field to propagate to Sedona. In regard to contact points, each one is processed individually.

Entering a New Customer (Central Station Owned)

Customer Setup Method

☒ Create a new Customer
☐ Create a new Customer based on an existing Customer

New Customer Information

Customer ID: ABC-123 Auto Generated
A/R Company: SedonaCloud
A/R Number: *
Name: *

Premises Type: Commercial *
Country: United States of America *
Language: English (American) *
Time Zone: Mountain Time (US & Canada) *

Note: This section applies only to a “Central Station owned” customer that is direct-billed by and for the Central Station. “Dealer owned” customers (where the Central Station bills the dealer) would not have A/R information entered at this point and are covered later.

When entering a new Manitou customer that will either be tied to an existing Sedona site or pushed into Sedona as a new site, the appropriate A/R Company is selected from the drop-down list. Next, the A/R Number look-up is performed by clicking the magnifying glass.

Link A/R Customer

Select Company

A/R Company: SedonaCloud

Create New

A/R Number (Leave blank to auto-assign):

Create

Search For Existing

☐ Name

☐ Address

☒ City

☐ None

kenosha

Search

Select Account

Jump to A/R Number: 48103-58443

A/R Number	Customer Name	Address	City	Customer ID
48103-58443	Scott Test Customer Site N...	1000 Main St	Kenosha	

OK

Cancel

If the integration direction is Manitou to Accounting, and the Sedona site does not yet exist, click the **Create** button to auto-assign the A/R Number using the next available account number in Sedona. The lookup form is immediately closed and the A/R Number field is populated with “*(AUTO)”. When the new customer is first saved, the account will be created in Sedona, after which Manitou will show the account number that got assigned.

If the integration direction is Accounting to Manitou, the customer information must be entered in Sedona first, so the **Create New** portion of the form is disabled.

Search for Existing is used to find the appropriate site in Sedona. The search can be filtered by Name, Address, or City. Selecting None will return all accounts available to be linked. However, no more than 200 accounts will be shown at one time. Additional filtering may be necessary to limit the total number displayed so that the desired account is included in the results. Once the desired account is located, select that line and click **OK**. The lookup form is closed and the A/R Number and Name fields are populated with the information from Sedona.

After the remainder of the **New Customer Information** has been entered/verified, click the **Next** button. The “normal” customer information screen is then shown.

Customer

Customer ID: ABC-123 625720

Name: Scott Test Customer Site Name

Type: Commercial

Related Type: Normal

Account Type: Normal Account

Address

Street1: 1000 Main St

Street2: Unit 3

City: Kenosha State: Wisconsin

Zip Code: 53142

Cross Street: Subdivision:

Country: United States of America

Language: English (American) A/R Company: SedonaCloud

Time Zone: Central Time (USA & Canada) A/R Number: 48103-58443 *

If the customer is tied to an existing Sedona site, the “common fields” (address information here and contact points on Details screen) are pre-populated from the information in Sedona. If any of the pre-populated information needs to be different on the Manitou side, it should be changed before the new customer is first saved, thereby causing Manitou and Sedona to be purposely out of sync, so updating one side knows not to update the other.

If the customer is new to Sedona, the A/R Number will still show “* (AUTO)”. The name, address, and “common” contact points entered here will be pushed into Sedona when the new customer is first saved.

Note that the A/R Number is comprised of the Sedona customer number plus the Sedona customer site ID (<customer number>-<site ID>). This format may be referenced in this or other documentation as a “two-tiered” account number because it is comprised of two components.

Systems

Manitou systems can be tied to Sedona systems. If the integration direction dictates that Manitou will push changes into Sedona, and the Manitou customer is currently tied to Sedona, adding a new system in Manitou will automatically create the system in Sedona and tie the two together.

Following is an example Manitou system screen:

Customer System

 System Number: 1

Description: System 1

System Type: Event Monitoring

System ID: 114456 Event Monitoring

Panel Type: Panel B

Panel Type Comments: This is Panel B

Max Transmitters: 16

Max Areas: 16

Max Zones: 16

Max Devices: No Limit

Max Users: 16

In the above example, the System ID is populated with the Customer System Id from Sedona. A value in this field indicates the Manitou system is tied to the corresponding Sedona system.

When pushing a new system to Sedona, the following table shows the field mappings that are used. The **Use Manitou system description as system ID in SedonaOffice** integration option dictates if the Manitou customer ID or the system's description will be pushed into the Sedona system's alarm account (system ID) field.

Manitou System	Sedona System
Customer ID or System Description	Alarm Account (System ID)
System Type Description	System Code
Panel Type Description	Panel Type Code
“Manitou Default”	Warranty Code
Current date	Warranty Date
“Manitou Default”	Service Level Code
The name as entered under the Monitoring Company	Alarm Company Code
“Manitou Default”	Service Company Code
“Manitou Default”	Secondary Service Company Code 1
“Manitou Default”	Secondary Service Company Code 2
“Manitou Created”	System Comments
<Serial number>-<System number>	External Link

NOTE: As seen in the table above, the Manitou Monitoring Company name is used to find the appropriate Sedona Alarm Company Code, which corresponds to the “Monitored By” field on the Sedona system. If a matching company code does not exist at the time a system is pushed to Sedona, a new Alarm Company record is created using the Manitou Monitoring Company name. Because the new alarm company was not created from the Sedona client, the integration type and other information may not be as desired. That alarm company record must then be edited to set all fields as desired. To prevent this scenario from happening, it should be ensured that the appropriate Alarm Company exists prior to the first system being pushed from Manitou.

A Manitou system can be manually linked to or unlinked from a Sedona system using the system lookup dialog. Click the magnifying glass next to the System ID description field:

System ID:	114456	Event Monitoring	
------------	-------------------------------------	---	---

The lookup dialog is displayed:

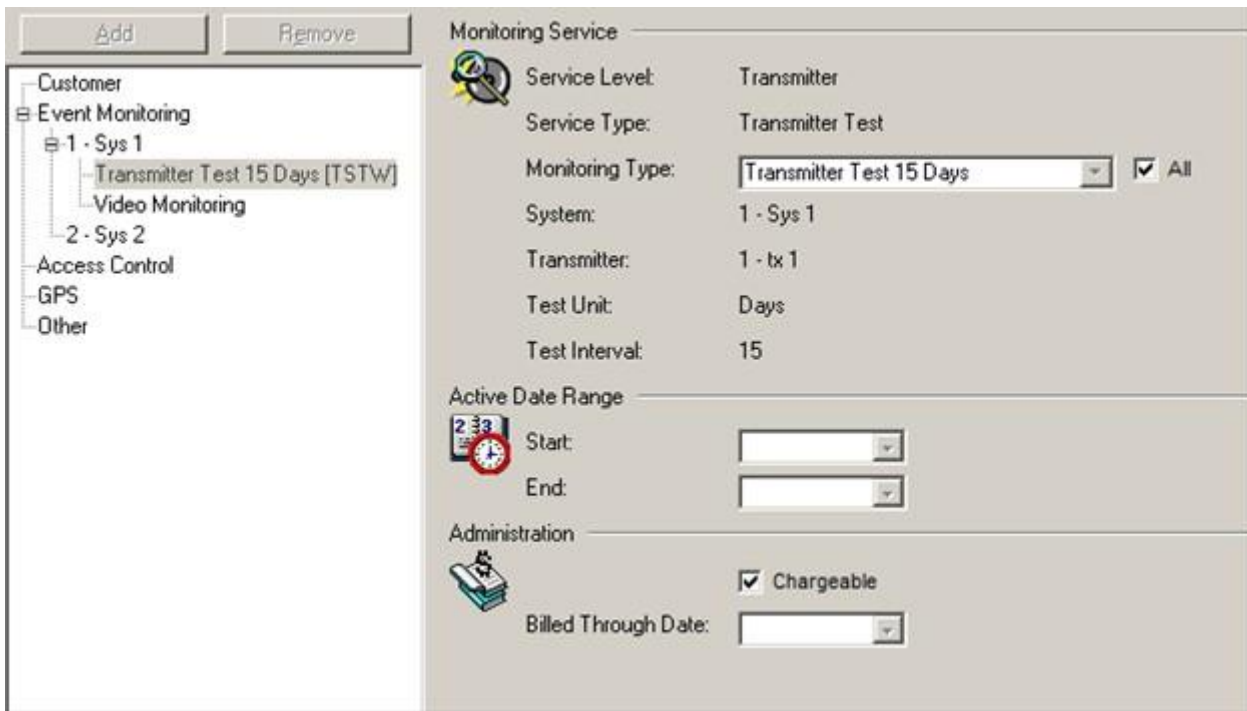
System	Description	Panel Type	Status	Other
(Unlink System)				

If the Manitou and Sedona systems are currently linked, “(Unlink System)” is displayed. If that is selected and OK is pressed in the lookup dialog, the linking will be removed and the System ID fields will be empty. If the accounting company's interface type is "Manitou to accounting", the SedonaOffice system will be made 'inactive' if it is not already.

If there are any Sedona systems available to be linked, they will be displayed in the dialog. Selecting one and pressing OK will link the selected Sedona system to the Manitou system. At that time, the Manitou system description can be optionally replaced with the description from Sedona. If the accounting company's interface type is "Manitou to accounting", the SedonaOffice system will be made 'active' if it is not already.

Monitoring Services

Monitoring services correspond to recurring charges in Sedona and are found on the Services form. If the integration direction is Accounting to Manitou, a recurring item should be entered in Sedona to match each billable service in Manitou (Manitou will not initiate any of the recurring updates). The remainder of this section assumes that the integration direction dictates that Manitou will push changes into Sedona.



The screenshot shows a software interface for configuring a monitoring service. On the left is a tree view with the following structure:

- Customer
 - Event Monitoring
 - 1 - Sys 1
 - Transmitter Test 15 Days [TSTW]
 - Video Monitoring
 - 2 - Sys 2
 - Access Control
 - GPS
 - Other

The right pane, titled 'Monitoring Service', contains the following configuration details:

- Service Level:** Transmitter
- Service Type:** Transmitter Test
- Monitoring Type:** Transmitter Test 15 Days (dropdown menu)
- All:** ☒
- System:** 1 - Sys 1
- Transmitter:** 1 - tx 1
- Test Unit:** Days
- Test Interval:** 15
- Active Date Range:**
 - Start:** (dropdown menu)
 - End:** (dropdown menu)
- Administration:**
 - Chargeable:** ☒
 - Billed Through Date:** (dropdown menu)

For a monitoring service to create recurring charges in Sedona, it must be marked as Chargeable, its underlying monitoring type must have been assigned a valid billing (item) code from Sedona, and that item code in Sedona must have a default rate greater than zero. In the above example, the Chargeable option is checked and the billing code TSTW is shown in square brackets after the monitoring service in the tree pane.

If a customer is active when a monitoring service is added, modified, or removed, the changes to Sedona recurring are made immediately upon saving the customer information. If a customer is not active when monitoring service changes are made, Sedona recurring is not updated until the customer is made active. Following is a list of scenarios and the effect they have on Sedona recurring. When “services” are mentioned, the assumption is that they are chargeable and have a valid billing code in Sedona. When a new recurring entry is created, it is assumed “associated” with the corresponding service.

- **Change customer status to active:** Existing services with an end date that is blank or equal to or greater than the current date create recurring items in Sedona. If the start date is blank or less than the current date, the current date is used.
- **Change customer status from active:** Sedona recurring for all actively billed services is cancelled as of the current date and is disassociated from the Manitou services.

The remaining scenarios assume the customer is active. Changes made to services of customers that are not active have no immediate effect on Sedona recurring.

- **A new service is added, or an existing service is changed from not chargeable to chargeable:** A Sedona recurring entry is added. If the start date is blank, the current date is used. Note that if a start or end date is entered, it cannot be prior to the current date.
- **An existing billable service is removed or is changed to not chargeable:** The associated Sedona recurring entry is cancelled and disassociated from the service.

- **Only the end date is changed on an existing billable service:** The associated Sedona recurring entry is updated. This includes adding or removing the end date, as well as simply changing an existing end date.
- **The monitoring type or start date is changed on an existing billable service:** The associated Sedona recurring entry is cancelled and disassociated from the service, and a new recurring entry is created.

There are two “hidden” options (not accessible through Supervisor Workstation) in the MOPTIONS table that specify how service start/end dates should be handled. These options can be used to override the default behavior mentioned above.

- **OPTIONNO 122 – SVCDATESOVRDFLT:** If OPTBOOL is set to 1, the entered service dates are allowed to override the default behavior of starting/ending the service no earlier than the current date. This means that starting/ending dates prior to the current date will be pushed into Sedona rather than forcing the pushed dates to be no earlier than the current date.
- **OPTIONNO 134 – NONPROCUTOFFDAY:** This option can be used to bypass prorating functionality by forcing the service start date to be the first day of a month and the service end date to be the last day of a month.
 - When OPTINT is set to zero (the default value), the service dates will function as normal - exact service dates pushed to accounting which will use the applicable prorating functionality.
 - To bypass prorating, OPTINT is set to the cutoff day of the month after which the service will begin on the first of the next month or end on the last day of the current month (SVCDATESOVRDFLT must be enabled in this case). For example, setting this option to 15 will have the following effects (note that the current date is used when the start date is left blank).
 - Start dates from the 1st to the 14th of the month will get pushed as the first of that month.
 - Start dates from the 15th to the end of the month will get pushed as the first of the next month.
 - End dates from the 1st to the 14th of the month will get pushed as the last day of the previous month.
 - End dates from the 15th to the end of the month will get pushed as the last day of the current month.

Accounting Status

When a Manitou customer is linked to accounting, the Customer Status section includes the accounting site’s status and shows if there are open service tickets:

Customer Status

Start Date 09/25/2019

Alarm
OK

Monitoring
Active - 09/25/2019 14:50

Service
Full

Accounting Status
Active/Recurring

Service Tickets
4 tickets(s)

Accounting Functions

When a Manitou customer is linked to accounting, an additional “Accounting” menu item is available:

LOCALCUSTINSEDONA1 - Local customer 1 linked to Sedona

Open Tickets

Ticket No.	Type	Status	Date
1012	Service	In Progress	9/30/2019 3:30 PM
1013	Service	Scheduled	10/1/2019 8:00 AM
1014	Service	Scheduled	10/2/2019 1:00 PM
1017	Service	Scheduled	10/1/2019 1:00 PM

Rows: 10 • 1-4 of 4

Service History

VIEW SERVICE TICKET

System No.	Document No.	Description	Entry Type	No.	Problem Area	Symptom Code	Fault Code	Resolution Code	Before	After	Date	Time	User ID	Sell To
LOCALCUSTINSEDONA1	1012				Kapped Trouble			N/A						
LOCALCUSTINSEDONA1	1013				Add Equipment			N/A						
LOCALCUSTINSEDONA1	1014				Low Battery			N/A						
LOCALCUSTINSEDONA1	1017				AC Power Failure			N/A						

SHOW ALL

Accounting

System 1 - Burg system

Area 1
No O-C Service - No O-C Service

This form shows the open service tickets and service history from Sedona. There are three functions here that can open a Sedona client and go directly to the requested screen. However, to open the Sedona client from here, the user must have the proper credentials.

In Supervisor Workstation, User setup, there is an Accounting Access field in the Security Restrictions section:

User

User ID:

Name:

Contact Point:

Extension:

Security Restrictions

User Group:

Permission Profile:

Dealer:

Branch:

Access:

Alarm Handling:

Accounting Access:

Options

High Priority: ☐

Locales

- If “<User Group’s Access>” is selected, the Sedona login ID/password as entered under the user’s User Group will be used. This option can be used to reduce the number of logins required in Sedona when multiple Manitou users have the same accounting permissions.

User Groups

User Group:

Description:

Security Restrictions

Dealer:

Branch:

Access:

Alarm Handling:

Accounts User ID:

New accounting users can be added by pressing the ellipses (...) button and entering the ID and password.

- If “Own ID/PassWord” is selected, the user’s Manitou ID and password will be used to login to Sedona. A Sedona user with the same ID and password as Manitou must already exist for this to work.
- If “Not Allowed” is selected, the Sedona client will not be opened.

Open Customer Accounting/New Service Ticket:

Open Tickets

Open Customer Accounting

Ticket No.	Type	Status	Date
1012	Service	In Progress	9/30/2019 3:30 PM
1013	Service	Scheduled	10/1/2019 8:00 AM
1014	Service	Scheduled	10/2/2019 1:00 PM
1017	Service	Scheduled	10/1/2019 1:00 PM

The upper right-hand corner of the Open Tickets form contains two icons that will open a Sedona client. The left icon will go directly to the customer form, and the right icon will go directly to the form that allows a new service ticket to be entered for this customer.

View Service Ticket:

Open Tickets

VIEW SERVICE TICKET

Ticket No.	Type	Status	Date
1012	Service	In Progress	9/30/2019 3:30 PM
1013	Service	Scheduled	10/1/2019 8:00 AM
1014	Service	Scheduled	10/2/2019 1:00 PM
1017	Service	Scheduled	10/1/2019 1:00 PM

Rows: 10 1-4 of 4

Service History

VIEW SERVICE TICKET

System No.	Document No.	Description	Entry Type	No.	Problem Area	Symptom Code	Fault Code	Resolution Code	Before	After	Date	Time	User ID	Sell To
LOCALCUSTINSEDONA1	1012				Keypad Trouble			N/A						

The center of the upper portion of the Service History form contains the VIEW SERVICE TICKET link. When a single ticket is selected in the upper form, this link becomes enabled and will go directly to the details of the selected ticket.

Manitou Maintenance Issue creating Sedona Service Ticket

Manitou can be configured in the Supervisor Workstation so that when a Maintenance issue is entered on a linked customer, a service ticket in Sedona is created at the same time.

There must be a system in SedonaOffice on the customer. Service Tickets are linked to these. It will fail if there is no system found.

In Supervisor Workstations select the **Maintenance** menu, select **Accounting Companies**. Select the Manitou to Accounting company and click Edit. There are two options available, Create SO service ticket from Maint issue and under that Resolve Maint issue after creating ticket. The second option is only available if the box for Create SO service ticket from Maint issue is selected.

Accounting Company



Company ID:

MAN2SEDCP

Interface type:

Manitou CS to Accounting

Application:

Sedona

Name:

BoldQA Alarm Company

DSN:

User:

Password:

Server:

Default Accounting Branch:

☐ Create SO service ticket from maint issue

☐ Resolve maint issue after creating ticket

☒ Update common fields
 ☒ Account ID required
 ☒ Force Account ID to be unique
 ☐ Force services to be one-to-one with recurring
 ☒ Push Customer Changes

In the web client when a maintenance issue is created on a customer a Sedona service ticket will be created at the same time

Maintenance Issue Details			
Logged	Jul 08, 2021 06:52:10	Last Action	Notes
Person			
Description	Keypad Trouble maint #1 - Service Ticket Number: 1027 - Service Ticket Id: 13		
Issue	107499		
Technician	On Site	No	
Priority	Not Assigned		

If the option to Resolve maint issue after creating ticket is also selected the Manitou Maintenance Issue will be immediately resolved as soon as the Sedona Service ticket is confirmed as created. The Manitou Maintenance issue can then be found by filtering for Resolved issues.

Integrating Manitou Maintenance Types with Sedona Service Tickets

In order for the service ticket to be created correctly in Sedona the Maintenance Service Types Subtypes needs to match up with the SV_Problem Codes in Sedona. If selecting a Maintenance Service Type in Manitou that doesn't have a matching Problem_Id in Sedona an error will occur.

```
7/7/2021 17:34:00 00013 00018 1 20000 Router Caught Exception while handling
integration call [CreateSvcTkt]: The SedonaCloud server returned error BadRequest "Bad Request" on
request:
[POST https://sdksupport.boldgroup.solutions:4443/qa/api/serviceticket]

{"validationError":["The ProblemId 3 is no
```

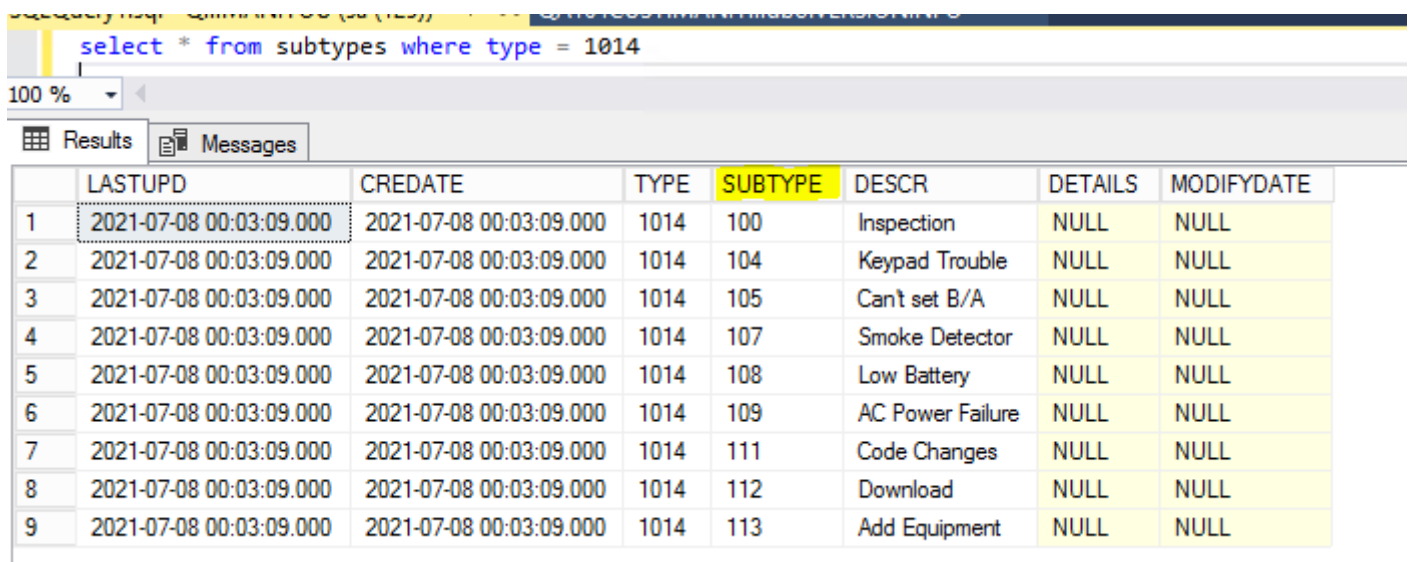
The formula to have the Manitou Maintenance Service Types Subtypes match Sedona Service Ticket Problem Type is this formula:

Manitou Maintenance Subtype number - 98 = Sedona Problem_Id number

In Manitou the Subtype number can be found by running this query:

Select * from SUBTYPES where TYPE = 1014

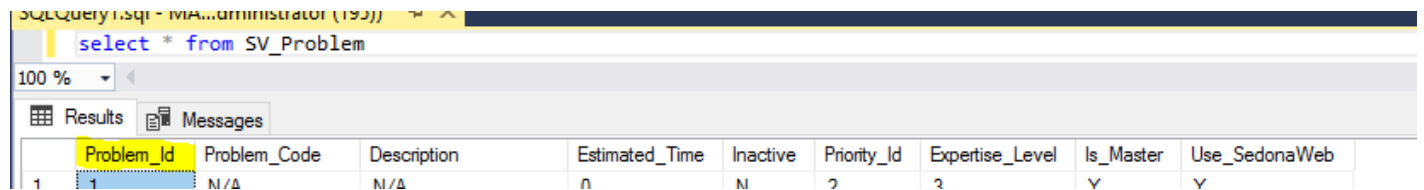
Subtypes for Manitou will start at 100



The screenshot shows a database query interface. At the top, a SQL query is entered: `select * from subtypes where type = 1014`. Below the query, there are tabs for 'Results' and 'Messages'. The 'Results' tab is active, displaying a table with 9 rows of data. The table has columns: LASTUPD, CREFATE, TYPE, SUBTYPE, DESCR, DETAILS, and MODIFYDATE. The SUBTYPE column is highlighted in yellow. The data rows show various maintenance subtypes for type 1014, starting from 100 and ending at 113.

	LASTUPD	CREFATE	TYPE	SUBTYPE	DESCR	DETAILS	MODIFYDATE
1	2021-07-08 00:03:09.000	2021-07-08 00:03:09.000	1014	100	Inspection	NULL	NULL
2	2021-07-08 00:03:09.000	2021-07-08 00:03:09.000	1014	104	Keypad Trouble	NULL	NULL
3	2021-07-08 00:03:09.000	2021-07-08 00:03:09.000	1014	105	Can't set B/A	NULL	NULL
4	2021-07-08 00:03:09.000	2021-07-08 00:03:09.000	1014	107	Smoke Detector	NULL	NULL
5	2021-07-08 00:03:09.000	2021-07-08 00:03:09.000	1014	108	Low Battery	NULL	NULL
6	2021-07-08 00:03:09.000	2021-07-08 00:03:09.000	1014	109	AC Power Failure	NULL	NULL
7	2021-07-08 00:03:09.000	2021-07-08 00:03:09.000	1014	111	Code Changes	NULL	NULL
8	2021-07-08 00:03:09.000	2021-07-08 00:03:09.000	1014	112	Download	NULL	NULL
9	2021-07-08 00:03:09.000	2021-07-08 00:03:09.000	1014	113	Add Equipment	NULL	NULL

In Sedona the Problem_Id can be found by running this query: Select * from SV_PROBLEM



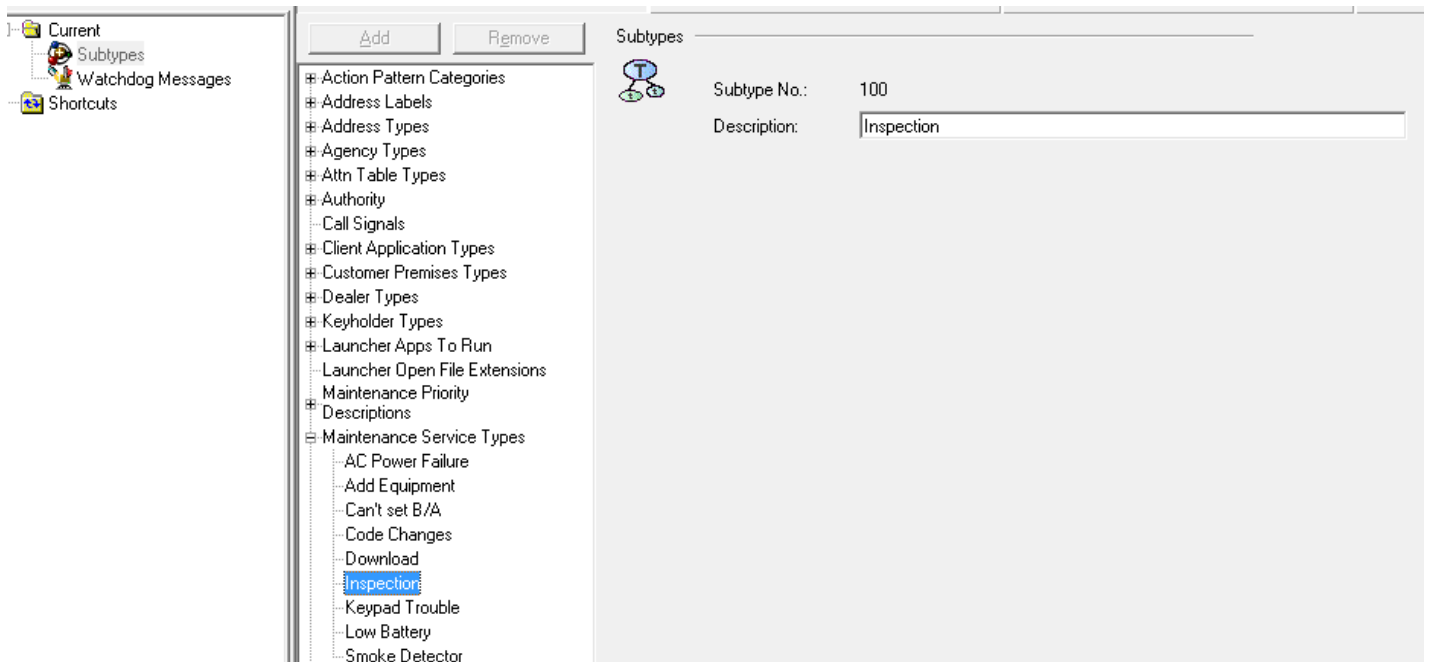
The screenshot shows a SQL query window with the text 'select * from SV_Problem'. Below the query, the 'Results' tab is active, displaying a single row of data from the SV_PROBLEM table. The columns are: Problem_Id (1), Problem_Code (N/A), Description (N/A), Estimated_Time (0), Inactive (N), Priority_Id (2), Expertise_Level (2), Is_Master (Y), and Use_SedonaWeb (Y).

	Problem_Id	Problem_Code	Description	Estimated_Time	Inactive	Priority_Id	Expertise_Level	Is_Master	Use_SedonaWeb
1	1	N/A	N/A	0	N	2	2	Y	Y

The Problem_Id in Sedona is **auto-generated**.

The easiest way to ensure the Manitou Maintenance Service Types match what is in Sedona Problem codes is to update the existing descriptions for the Manitou Maintenance Service Types in Supervisor Workstation that match the SubType and Problem_Id based on the formula above, and create "dummy" subtypes if there is an inconsistency in the auto-generated Problem_Id in Sedona.

Supervisor Workstation>Maintenance>Setup>SubTypes. Expand Maintenance Service Types.



Looking at the examples above, the Sedona Problem_Id skips numbers. To get around this in Manitou you create "dummy" Maintenance Service Types for the missing numbers. After saving you can go back and delete the "dummy" subtypes so that they don't show in the list of options to choose from when putting in a Maintenance Issue.

Example:

The first Subtype for Maintenance Issue Type when input in Supervisor Workstation will start at 100 which based on the formula will equal to Problem_Id 2 (Manitou Subtype - 98)

The next Problem_Id in Sedona then skips 3-5. To get around this "dummy" subtypes are input in Supervisor Workstation. Then the accurate subtype for Keypad Trouble is entered (Subtype 104-98 = Problem_Id 6), etc. Once everything is in, save the Subtypes. Edit the Subtypes and delete the "dummy" ones that were created.

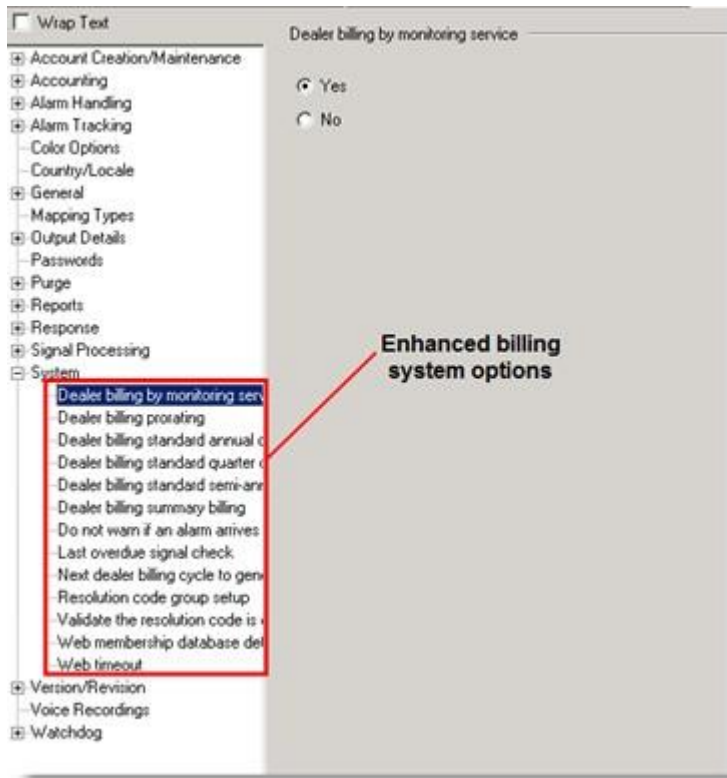
Dealer Billing

Manitou can be configured to have the Central Station bill dealers through Sedona. Also, a

dealer's customers can be billed through Sedona on behalf of the dealer.

Dealer Billing Setup

Before Dealer Billing can be used, several options must be set in Supervisor Workstation. Under the **Tools** menu, select **Options**. The **Options** form appears.



Select the **System** menu to expand the menu options. The following options apply to dealer billing:

- Dealer billing by monitoring service
- Dealer billing prorating
- Dealer billing standard annual cycle
- Dealer billing standard quarter cycle
- Dealer billing standard semi-annual cycle
- Dealer billing summary billing
- Next dealer billing cycle to generate

Dealer billing by monitoring service: Enabling this option creates charges for the customers by monitoring service rather than class code. Selecting **Yes** will license enhanced billing, which will then enable non-monthly billing cycles, prorated charges, table-based pricing, time-based pricing, and deferred income tracking. This option must be set to "Yes" for dealer billing through Sedona.

Dealer billing prorating: If this option is selected, data entry changes that affect billing will cause prorated charges to be created based on when services start and/or end. If there is no start date entered and the service is marked as chargeable, the service will begin at the time of entry. If a start date is specified, the service will start on that date. Please note that the date cannot be set prior to the current date. Users can also start or end a service by making changes in the chargeable status or choosing a different monitoring type code. Additionally, changes in a customer's status will cause prorated adjustments for all active services. For instance, if a customer with a **Pending** status is changed to an **Active** status, it will trigger the prorated billing as of the active date. This also applies to a customer's dealer setting by stopping billing for the original dealer and starting billing for the new dealer unless it is detected that the new dealer is within the same master dealer and the sub-dealers are being billed at the same master level.

Dealer billing standard annual, quarter, and semi-annual cycle: These options control when the annual, quarter, and semi-annual "standard" cycles should occur. For example, if the quarterly billing cycle is set to start in January, quarterly charges will be billed in January, April, July, and October. Setting a cycle to **Any** indicates that there is no standard for that cycle, causing new charges to be billed at the next billing cycle and then at the appropriate interval thereafter.

Dealer billing summary billing: This option specifies whether or not dealer invoice items will be posted to Sedona in a summary format. If not summarizing, every charge will be individual. If summarizing, forward-dated charges for the entire billing period will be summarized by billing code and price. Charges that cannot be summarized will be listed individually after the summary.

Next dealer billing cycle to generate: Select the year and month for the next billing cycle to start. In this example, the billing cycle will begin in April 2009.

A screenshot of a software dialog box titled "Next dealer billing cycle to generate". Inside the dialog, there are two dropdown menus. The first is labeled "Year:" and has "2009" selected. The second is labeled "Month:" and has "April" selected. The dialog box has a light gray background and a standard Windows-style border.

When finished, click **Save**.

Dealer Information

When the Central Station is billing a dealer through Sedona, the dealer entity is tied to a Sedona site in the same manner a customer is tied.

Add Dealer

Dealer ID:

Name:

Type:

A/R Company:

A/R Number:

Country:

Language:

Time Zone:

The “Add Dealer” dialog has the same fields and functionality for A/R Company and A/R Number as the New Customer entry form. The only difference here is that only accounting companies with an integration direction of “Dealer Billing” can be selected.

An existing dealer that is currently unlinked can be tied to Sedona in the same manner by adding an A/R Company and using the A/R Number lookup dialog.

Dealer Billing Rates

The **Billing Rates** form allows a rate table to be attached to a billing charge. In the **Billing Charges** form (discussed later), these rate tables are used to calculate variable rates based on quantity, rather than having only a single price regardless of quantity. For instance, if a service exists for monitoring basic alarms, the Central Station can create a rate table based on the number of alarms. Note that global rate tables that apply to all dealers can be set up under the Monitoring Company (the entry form is the same). Entering the same rate table on a dealer will override the global. When on a dealer, the global rate tables can be seen for reference but cannot be modified.

Billing Rates

 Rate Code:

Description:

Calculation Type:

	Min Quantity	Base Price	Additional Price
	0	\$0.00	\$0.03
	1000	\$30.00	\$0.04
▶	10000	\$390.00	\$0.05

Calculation Type: This option can be **Dealer**, **Customer**, or **Dealer Services**. Dealer and

Customer options determine how the quantity is allocated. For example, assume dealer D has two customers, A and B. Customer A receives 5 signals over the limit in the last month, and Customer B receives 6 signals over the limit. If the rate table associated with the billing charge for those signal overages is using the Dealer Calculation, then all 11 signals would be charged to dealer D at the rate for 11 signals specified in the table. If the rate table is using the Customer Calculation, then dealer D would be charged for 5 signals at the rate for 5 signals, plus 6 signals at the rate for six signals.

The Calculation Type of “Dealer Services” is used only by recurring charges, and flags the calculation process to use the count of monitoring services rather than the count of active + inactive customers. This is illustrated later in the Dealer Billing Generate examples. If a rate table marked with “Dealer Services” is used by any charge other than recurring, it functions the same way as “Dealer”.

Min Quantity: When calculating a charge using a rate table, only one row will apply to a given calculation. The quantity to be billed, hereafter referred to as QTB, is used to determine which row applies to the calculation. The calculation process will find the row with the highest Min Quantity that is equal to or lower than the QTB. In the above table, a QTB of 0-999 will use the first row, a QTB of 1000-9999 will use the second row, and a QTB of 10,000+ will use the third row.

Base Price: This is the starting charge for all quantities applicable to the row. Any Additional Price may be added to this.

Additional Price: This is the charge added to the Base Price for each quantity over the minimum. In the above table, a QTB of 1007 would be charged \$30.00 base plus \$0.04 x 7 for a total of \$30.28.

The above table is defining that the first 1000 signals are billed at 3 cents each, the next 9000 signals are billed at 4 cents each, and then any signals over 10,000 are billed at 5 cents each.

Following is another example of how rate tables can be used.



The screenshot shows a software window titled "Billing Rates". It contains the following fields:

- Rate Code:** 2
- Description:** False Alarms
- Calculation Type:** Dealer (selected from a dropdown menu)

Below these fields is a table with the following structure:

	Min Quantity	Base Price	Additional Price
▶	2	\$5.00	\$10.00
*			

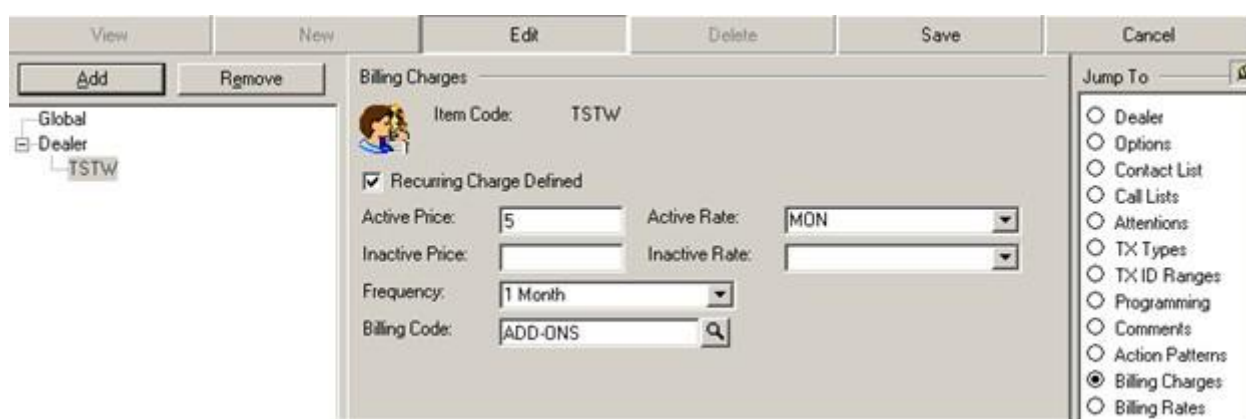
In this scenario, if all the dealer’s customers in total have at least 2 false alarms, the \$5.00 base price is charged. If the total number of false alarms of all the dealer’s customers is more than 2, \$10.00 is charged for each false alarm over 2. If the calculation type were “customer”, each of the

dealer's customers with 2 or more false alarms would have a charge for \$5.00 plus \$10.00 for each over 2.

Dealer Billing Charges

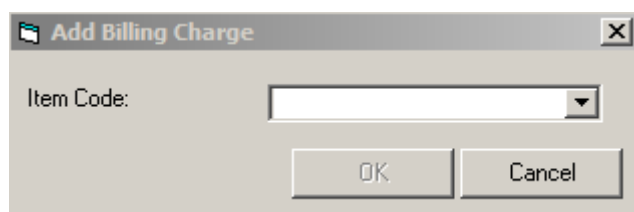
Dealers can be billed recurring charges, one-time charges, charges based on number of signals, and charges based on the amount of time spent handling alarms. Note that global billing charges that apply to all dealers can be set up under the Monitoring Company (the entry forms are the same). Entering the same billing charge on a dealer will override the global.

To enter a new billing charge, the Add button over the tree pane is clicked while in edit mode on the dealer Billing Charges screen. Note that the global billing charges can be seen here for reference but cannot be modified.



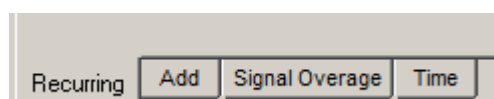
The screenshot shows the 'Billing Charges' screen in edit mode. At the top, there are tabs: View, New, Edit (selected), Delete, Save, and Cancel. Below the tabs are buttons: Add, Remove, and a 'Jump To' dropdown menu. On the left is a tree pane with 'Global', 'Dealer', and 'TSTW' (selected). The main area shows 'Item Code: TSTW' and a 'Recurring Charge Defined' checkbox which is checked. Below this are fields for 'Active Price' (5), 'Active Rate' (MON), 'Inactive Price', 'Inactive Rate', 'Frequency' (1 Month), and 'Billing Code' (ADD-ONS). The 'Jump To' dropdown on the right has a list of options: Dealer, Options, Contact List, Call Lists, Attentions, TX Types, TX ID Ranges, Programming, Comments, Action Patterns, Billing Charges (selected), and Billing Rates.

The Add Billing Charge dialog is then displayed:



The screenshot shows the 'Add Billing Charge' dialog box. It has a title bar with a close button. Inside, there is a label 'Item Code:' followed by a dropdown menu. At the bottom are 'OK' and 'Cancel' buttons.

The drop-down is populated with the monitoring types that have a billing code. Upon selecting the desired item code and clicking OK, the different types of charges can be entered by selecting the appropriate tab(s) at the bottom. At least one type of charge must be entered before the billing charge information can be saved.



The screenshot shows the bottom of the 'Add Billing Charge' dialog, which has four tabs: 'Recurring' (selected), 'Add', 'Signal Overage', and 'Time'.

Recurring charges:

Billing Charges

 Item Code: MON-TAXABLE

☒ Recurring Charge Defined

Active Price: Active Rate:

Inactive Price: Inactive Rate:

Frequency:

Billing Code: 

Recurring Charge Defined must be checked for recurring charges to take effect.

Active Price: Specifies the price charged for each active account. This is only used if an Active Rate table is not specified.

Active Rate: The active accounts will be charged according to the specified rate table. This takes precedence over the Active Price. If the specified rate table has a calculation type of “customer”, it will be treated as if the calculation type is “dealer”.

Inactive Price: Specifies the price charged for each inactive account. This is only used if an Inactive Rate table is not specified.

Inactive Rate: The inactive accounts will be charged according to the specified rate table. This takes precedence over the Inactive Price. If the specified rate table has a calculation type of “customer”, it will be treated as if the calculation type is “dealer”.

Frequency specifies the interval at which the item is billed. Options are 1, 3, 6, and 12 months.

Billing Code specifies which Sedona billing code will be used. If no code is specified, billing code DEFAULT is used.

Add charges:

Billing Charges



Item Code: MON-TAXABLE

☐ Add Charge Defined

Add Price:

Add Rate:

Billing Code:



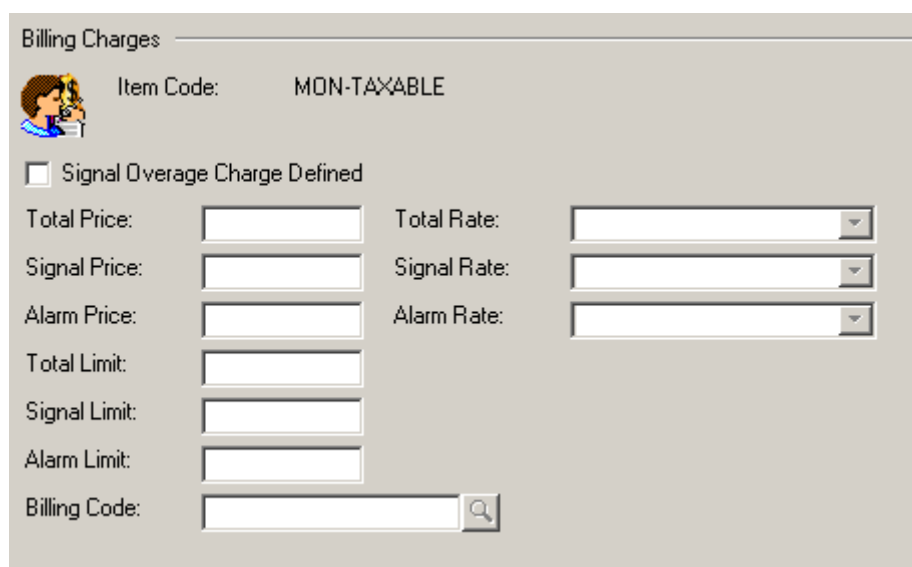
Add Charge Defined must be checked for add charges to take effect.

Add Price: Specifies the one-time add price charged for the item. This is only used if an Add Rate table is not specified.

Add Rate: The item will incur a one-time charge according to the specified rate table. This takes precedence over the Add Price. If the specified rate table has a calculation type of “dealer services”, it will be treated as if the calculation type is “dealer”.

Billing Code specifies which Sedona billing code will be used. If no code is specified, billing code DEFAULT is used.

Signal Overage charges:



Billing Charges

Item Code: MON-TAXABLE

☐ Signal Overage Charge Defined

Total Price: Total Rate:

Signal Price: Signal Rate:

Alarm Price: Alarm Rate:

Total Limit:

Signal Limit:

Alarm Limit:

Billing Code:

Signal Overage Charge Defined must be checked for signal overage charges to take effect.

Total Price: Specifies the price charged for each (signal + alarm) over the Total Limit. This is only used if a Total Rate table is not specified.

Total Rate: The total overages will be charged according to the specified rate table. This takes precedence over the Total Price. If the specified rate table has a calculation type of “dealer services”, it will be treated as if the calculation type is “dealer”.

Signal Price: Specifies the price charged for each signal (not handled by an operator) over the Signal Limit. This is only used if a Signal Rate table is not specified.

Signal Rate: The signal overages will be charged according to the specified rate table. This takes precedence over the Signal Price. If the specified rate table has a calculation type of “dealer

services”, it will be treated as if the calculation type is “dealer”.

Alarm Price: Specifies the price charged for each alarm (handled by an operator) over the Alarm Limit. This is only used if an Alarm Rate table is not specified.

Alarm Rate: The alarm overages will be charged according to the specified rate table. This takes precedence over the Alarm Price. If the specified rate table has a calculation type of “dealer services”, it will be treated as if the calculation type is “dealer”.

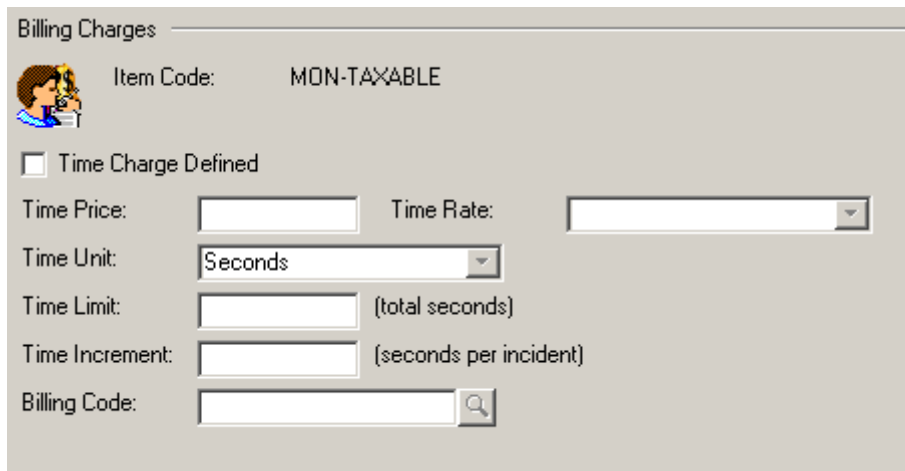
Total Limit specifies the number after which the total of signals + alarms will be considered an overage.

Signal Limit specifies the number after which signals will be considered an overage.

Alarm Limit specifies the number after which alarms will be considered an overage.

Billing Code specifies which Sedona billing code will be used. If no code is specified, billing code DEFAULT is used.

Time charges:



Billing Charges

Item Code: MON-TAXABLE

☐ Time Charge Defined

Time Price: Time Rate:

Time Unit:

Time Limit: (total seconds)

Time Increment: (seconds per incident)

Billing Code:

Time Charge Defined must be checked for time-based charges to take effect. Although just called “time charges” these are actually “time overage charges” similar to signal overage charges. Only the time over the limit is charged – not the total time of the alarm.

Time Price: Specifies the price charged for each Time Unit over the limit. This is only used if a Time Rate table is not specified.

Time Rate: The times will be charged according to the specified rate table. This takes precedence over the Time Price. If the specified rate table has a calculation type of “dealer

services”, it will be treated as if the calculation type is “dealer”.

Time Unit: Specifies if the charges will be based on seconds or minutes. If based on minutes, the time is rounded up to the nearest whole minute (4 minutes, 1 second would be billed at 5 minutes).

Time Limit: Specifies the threshold in seconds over which a time charge will be created. For example, if the Time Limit is 90 seconds, an alarm handled for 90 seconds or less would not have a time charge created. An alarm handled for 91 seconds would have a time charge for 1 second, subject to modification by the Time Increment and Time Unit.

Time Increment: Specifies the increment in seconds by which the original handled time will be calculated (rounded up). For example, if the Time Increment is 30 seconds, an alarm handled for 35 seconds would be rounded up to the next highest increment of 30 seconds, which in this case is 60 seconds.

Note that the increment is applied before the limit is checked. Not that the following is a realistic example, but it shows how rounding affects the original handled time. If the increment is 30 seconds and the limit is 75 seconds, an alarm handled for 65 seconds would be rounded up to 90 seconds, which would then be 15 seconds over the limit. If the Time Unit were seconds, 15 seconds would be billed. If the Time Unit were minutes, the 15 seconds would be rounded up to 1 minute and 1 minute would be billed.

Billing Code specifies which Sedona billing code will be used. If no code is specified, billing code DEFAULT is used.

Prorating

Enhanced billing must be licensed to activate dealer billing prorating functionality. If prorating is active, a database table is used to store the information necessary to create prorated charges. Prorate entries are created when a customer status changes and when services are added and deleted. Because these entries are created real-time, it is highly recommended to decide whether or not prorating will be used before actually going live with dealer billing. If prorating is enabled while dealer billing is live, the prorate entries for the current period will not exist prior to being enabled, likely causing that period’s billing to not be as expected.

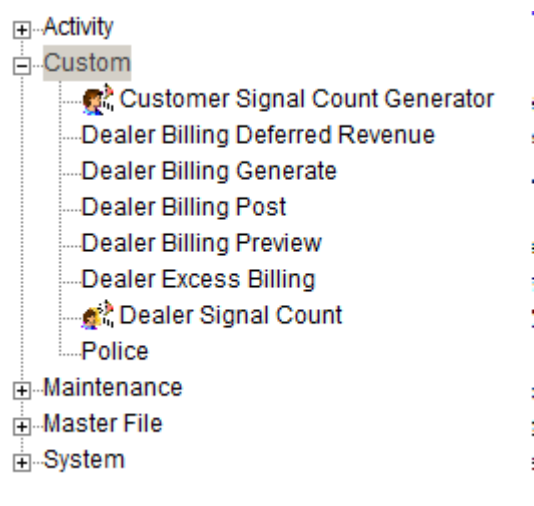
Prorated billing does not look directly at the start date of an account, but looks at the prorate table entries. If a service was in place when the customer changes from not active to an active status, then it will bill the service from the start date. If the service was added later, it will bill from the date that the service was added, unless a specific start date was entered on the service.

Prorated credits are taken for the portion of the already-billed period that is being cancelled. For example, if 10 days into March a service is cancelled, assuming it was billed through the end of March already (on a monthly frequency), 21 out of 31 days will be credited. It is the remaining

days (not including the day of the change) divided by the total days of that specific period that will be credited. Rate tables have no bearing on credits, as they are used only to calculate charges. Actual billed days are used to calculate credits.

Generating Dealer Billing

Generating the billing and posting the invoices is accomplished through several reports in the Custom section:



Customer Signal Count Generator

If any signal overage or time charges will be billed, the Customer Signal Count Generator is run first. This will compile the appropriate signal information and write it to a database table that is then used by the Dealer Billing Generate report. The report output lists any exceptions that were found. This step is skipped if there is no billing based on signals.

07/25/2019 10:52

ID: BOLD

Customer Signal Count Generator

07/01/2019 00:00:00 Thru 07/26/2019 00:00:00
[Mountain Time (US & Canada)]

<u>Customer ID</u>	<u>Dealer</u>	<u>System</u>	<u>Bill Code</u>	<u>Error Message</u>
DEFAULT		1	MON	Signal overage billing information not found!
DEFAULT		1	MON	Time overage billing information not found!
204	DLR1	1	MON	Signal overage billing information not found!
204	DLR1	1	MON	Time overage billing information not found!
204	DLR1	2	MON	Signal overage billing information not found!
204	DLR1	2	MON	Time overage billing information not found!

Dealer Billing Deferred Revenue

The Dealer Billing Deferred Revenue will be tracked when enhanced billing is licensed. The report will display the necessary deferred revenue adjustments that need to be made. The

adjustments must be entered manually into Sedona.

07/25/2019 12:14

ID: BOLD

Dealer Billing Deferred Revenue Report

DLRBILLEDINSEDCLOUDSDK - Dealer Billed in SedCloud SDK

<u>Date</u>	<u>Amount</u>
09/01/2019	48.20
Total Deferred:	48.20

Grand Totals

<u>Date</u>	<u>Amount</u>
09/01/2019	48.20
Total Deferred:	48.20

Dealer Billing Generate

This is the report that calculates all the charges for all the applicable dealers and stages the information in a database table, awaiting verification and posting. Any exceptions listed on the report can be corrected, if so desired, and the Generate run again. This can be repeated until all exceptions have been satisfactorily resolved.

07/25/2019 11:43

ID: BOLD

Dealer Billing Generate Report

Billing Date: 09/01/2019
Activity Start Date: 07/01/2019 00:00:00
Activity End Date: 07/26/2019 00:00:00

<u>Dealer</u>	<u>Customer ID</u>	<u>Date</u>	<u>Message</u>
DLR1			Dealer is not linked to accounting. No invoice lines will be generated.
DLR2			Dealer is not linked to accounting. No invoice lines will be generated.

Dealer Billing Preview

This report will list all transactions that are ready to be posted to Sedona for the most recent Dealer Billing Generate. This preview can be run as many times as needed, and should be the last report run before running the Dealer Billing Post. It is of utmost importance that this report be scrutinized for possible billing errors, because once the billing is posted, it cannot be reversed without manual changes in Sedona.

07/25/2019 11:46

ID: BOLD

Dealer Billing Preview

Order By: Customer
Show: Dealer Details

DLRBILLEDINSEDCLOUDSDK - Dealer Billed in SedCloud SDK

Customer ID	Name	Charge Type	Service	Billing Code	From	To	Qty	Price	Amt
3RDPARTY1	Customer 1 of 3rd Party Billed Dealer	Recurring	Alarms Only	DLRCUST	09/01/2019	09/30/2019	1	15.15	15.15
3RDPARTY2	3rd Party Billed Customer 2	Recurring	Alarms Only	DLRCUST	09/01/2019	09/30/2019	1	2.75	2.75
3RDPARTY3	3rd Party Billed Customer 3	Recurring	Alarms Only	DLRCUST	09/01/2019	09/30/2019	1	15.15	15.15
3RDPARTY4	3rd Party Customer 4	Recurring	Alarms Only	DLRCUST	09/01/2019	09/30/2019	1	15.15	15.15
Total:									48.20

Dealer Billing Post

The final step in the dealer billing process, this posts the staged transactions to Sedona. Selecting an invoice date during report parameter entry will post the billing to Sedona using that exact date.

07/25/2019 12:11

ID: BOLD

Dealer Billing Post Report

Invoice Date: 07/26/2019

Billing Date: 08/01/2019

DLRBILLEDINSEDCLOUDSDK

Total invoice lines created: 4

Successfully created all invoices for dealer. Posting the invoices.

Finalization

Successfully posted the invoices. Updating billing cycle to next month.

Summary

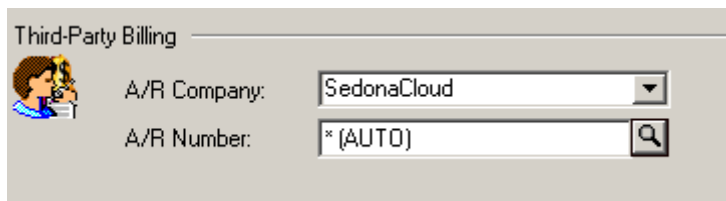
Total		
Invoiced	\$	48.20
Deferred	\$	48.20
Net Invoiced	\$	0.00
Deferred Revenue Realized	\$	0.00
Net Revenue	\$	0.00

Dealer Third-Party Billing

The customers of a dealer can be billed through Sedona on behalf of the dealer. This is referred to

as third-party billing because it is the dealer's invoice (not the Central Station's invoice) being sent to their customers. This can be done regardless if the dealer itself is being billed by the Central Station through Sedona or not.

The Options screen of the dealer contains the Third-Party Billing information.



Third-Party Billing

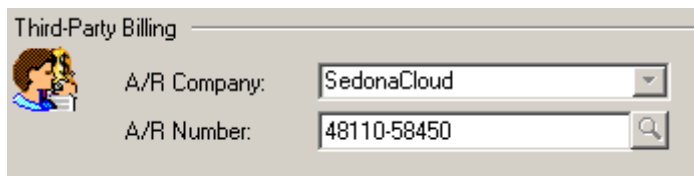
 A/R Company: SedonaCloud

A/R Number: * (AUTO)

This information is entered in the same manner as for a customer. The only stipulation here is that none of the dealer's customers can currently be linked to any accounting company when the third-party A/R information is first entered.

Adding this information does not update any customer information. Each of the dealer's customers that should get an invoice must be manually linked to Sedona.

Example Third-Party Billing A/R information of a dealer:



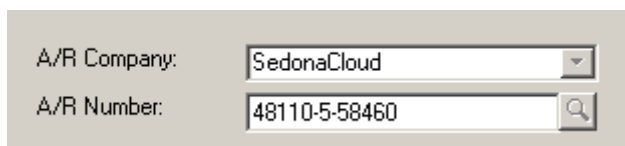
Third-Party Billing

 A/R Company: SedonaCloud

A/R Number: 48110-58450

Note that the dealer's third-party A/R Number has the same two-tiered format as a Central Station owned customer's A/R Number (<customer number>-<site ID>).

Customers of the dealer being billed on behalf of the dealer would then have A/R information similar to the following:



A/R Company: SedonaCloud

A/R Number: 48110-5-58460

Note that the A/R Number is comprised of the Sedona customer number (which will match the customer number in the dealer's two-tiered third party billing A/R Number) plus a sequence number under that customer number plus the Sedona customer site ID (<customer number>-<sequence>-<site ID>). This format may be referenced in this or other documentation as a "three-tiered" account number because it is comprised of three components.

Changes to Manitou information of third-party billed customers update Sedona in the same

manner as changes to Central Station owned customers (name & address, phone numbers, monitoring services -> recurring, etc.). The generating of third-party invoices is performed in Sedona in the same manner as Central Station owned customers.