Create Vertical and Customize Applications with Barista

Part 2: Creating Vertical Applications

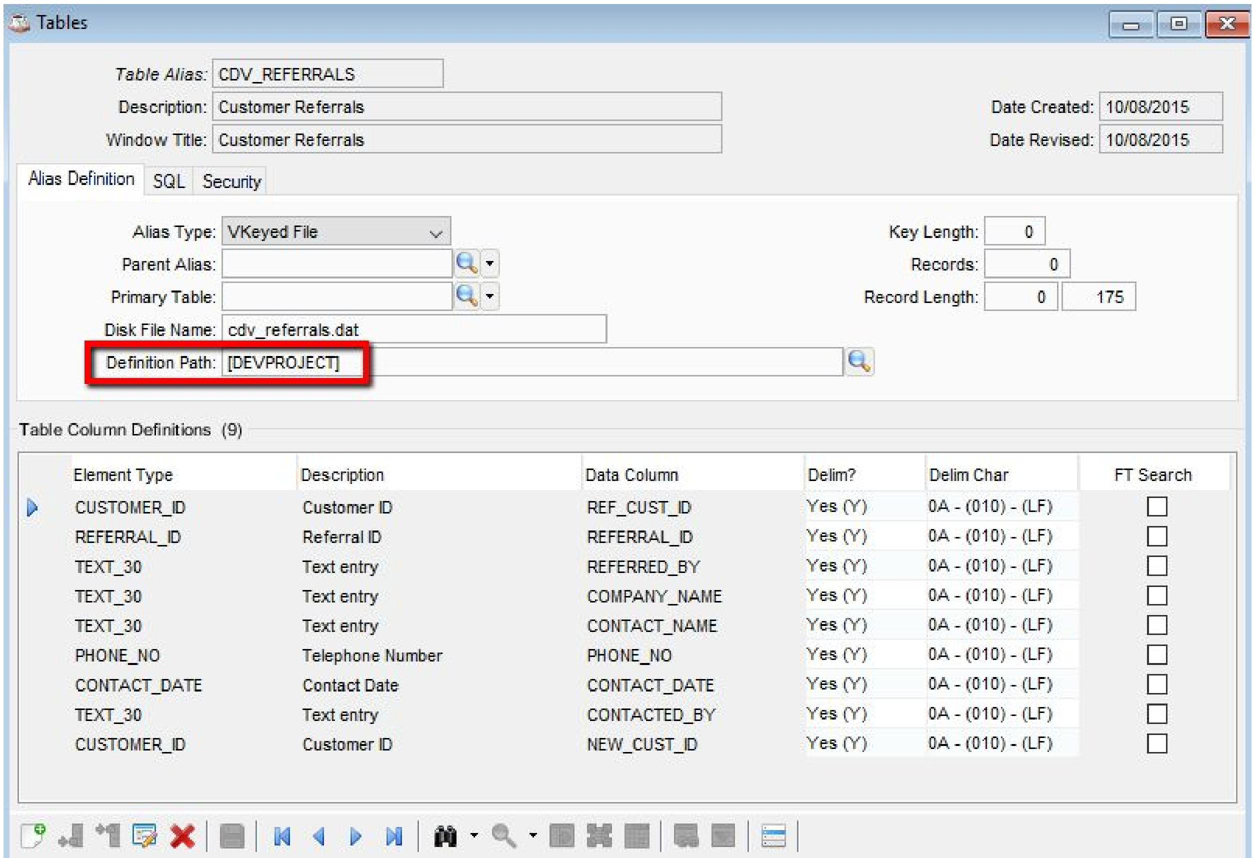
Once you have installed Barista and created an application/project file structure, you can begin your development. All of the data associated with your project is saved or will be backed up into the various project directories, providing both portability and security.

Specifically, portability means you can install applications in numerous locations by copy/pasting the directory structure (c:/devproject, in our example) to a given site and then run the Barista Install Application Wizard to check for conflicts and install/synchronize the application into Barista.

Because project data resides in its own directory structure, it is also secure in the sense that it will not be lost or overlaid if you elect to re-install Barista.

The steps below illustrate vertical development that augments and interfaces with AddonSoftware. We will create a Customer Referrals table and report, using the devproject created earlier, with an emphasis on where Barista saves the various files within the devproject directory structure. These examples assume a working knowledge of Barista development. Visit http://www.basis.com/products/devtools/barista/documentation/ for additional Barista documentation.

We begin in the Barista Development menu, in the Tables form, to create the definition for a Customer Referrals table. Once you have defined the basic table information, entered the columns for the table in the detail grid, created one or more keys, and created the physical table, you can view, edit, and run the associated form. We will use the DEVPROJECT stbl and Client Development (CDV) module specified for the devproject application (Note: Barista uses "[+DEFAULT]" for the default Definition Path, and "DEV" for the default Product ID. *Be sure to change these to valid values for your project.*)



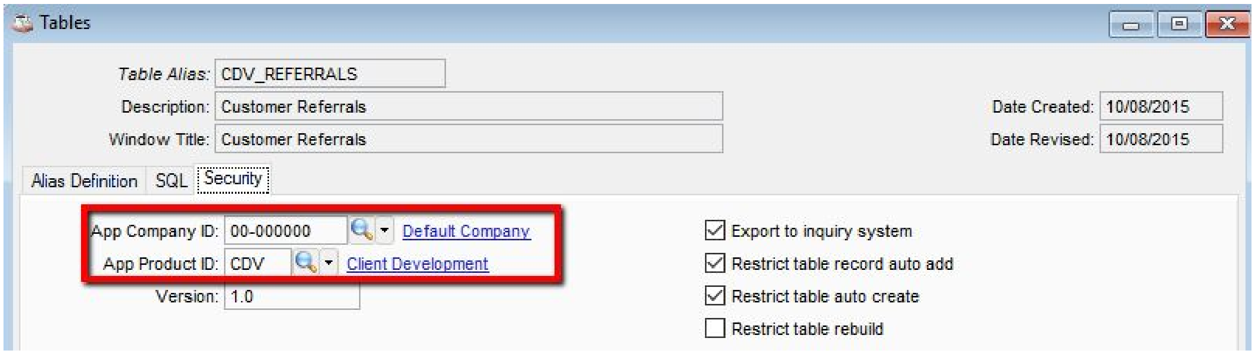
Tables

Table Alias:	CDV_REFERRALS
Description:	Customer Referrals
Window Title:	Customer Referrals
Date Created:	10/08/2015
Date Revised:	10/08/2015

Alias Type:	VKeyed File
Parent Alias:	
Primary Table:	
Disk File Name:	cdv_referrals.dat
Definition Path:	[DEVPROJECT]
Key Length:	0
Records:	0
Record Length:	0 175

Table Column Definitions (9)

Element Type	Description	Data Column	Delim?	Delim Char	FT Search
CUSTOMER_ID	Customer ID	REF_CUST_ID	Yes (Y)	0A - (010) - (LF)	□
REFERRAL_ID	Referral ID	REFERRAL_ID	Yes (Y)	0A - (010) - (LF)	□
TEXT_30	Text entry	REFERRED_BY	Yes (Y)	0A - (010) - (LF)	□
TEXT_30	Text entry	COMPANY_NAME	Yes (Y)	0A - (010) - (LF)	□
TEXT_30	Text entry	CONTACT_NAME	Yes (Y)	0A - (010) - (LF)	□
PHONE_NO	Telephone Number	PHONE_NO	Yes (Y)	0A - (010) - (LF)	□
CONTACT_DATE	Contact Date	CONTACT_DATE	Yes (Y)	0A - (010) - (LF)	□
TEXT_30	Text entry	CONTACTED_BY	Yes (Y)	0A - (010) - (LF)	□
CUSTOMER_ID	Customer ID	NEW_CUST_ID	Yes (Y)	0A - (010) - (LF)	□



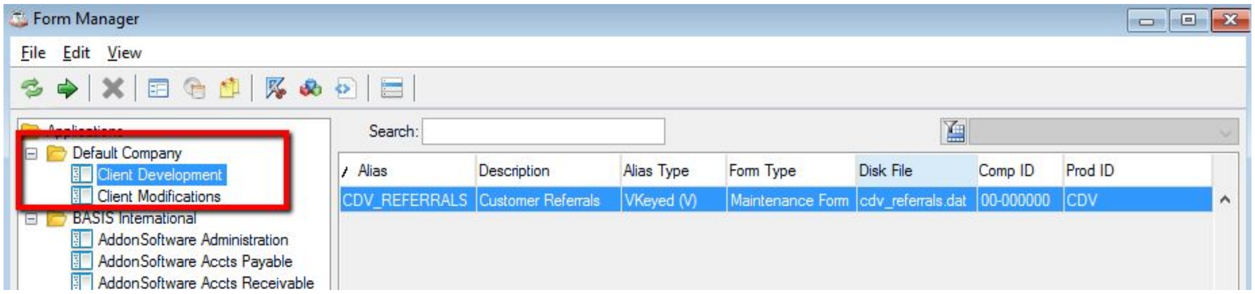
Tables

Table Alias:	CDV_REFERRALS
Description:	Customer Referrals
Window Title:	Customer Referrals
Date Created:	10/08/2015
Date Revised:	10/08/2015

App Company ID:	00-000000 Default Company
App Product ID:	CDV Client Development
Version:	1.0

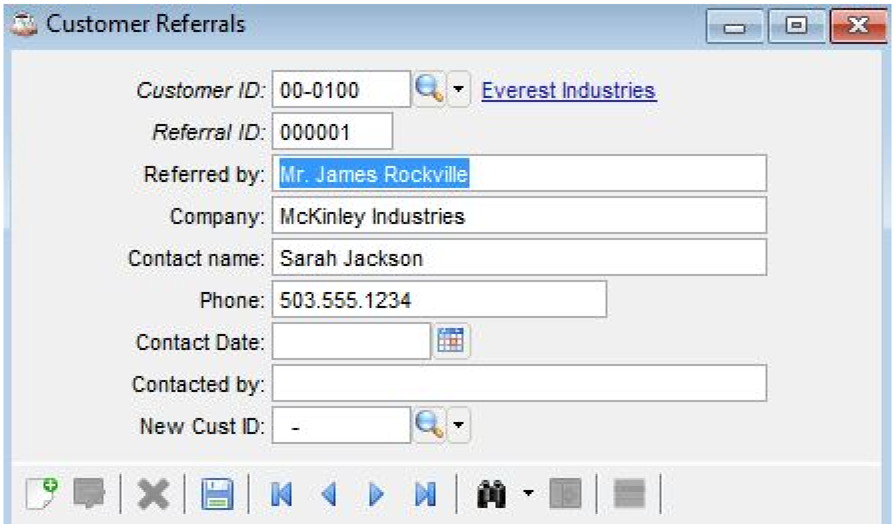
☑ Export to inquiry system
☑ Restrict table record auto add
☑ Restrict table auto create
□ Restrict table rebuild

The Form Manager contains tree nodes for both of the modules defined with the devproject application. Selecting the Client Development module shows the new table definition. With some minor cosmetic work on the form, it is ready to run:



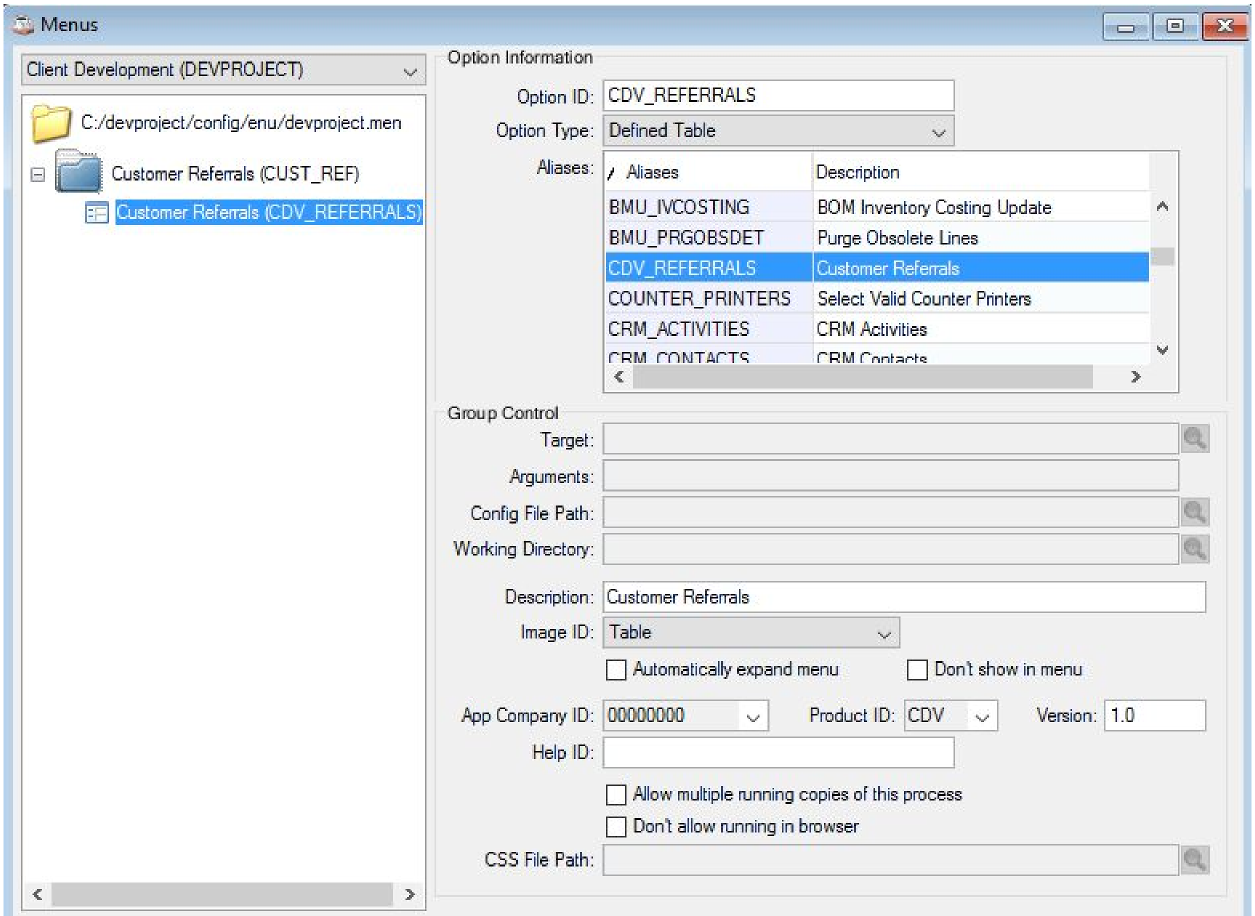
- Applications
  - Default Company
    - Client Development
    - Client Modifications
  - BASIS International
    - AddonSoftware Administration
    - AddonSoftware Accts Payable
    - AddonSoftware Accts Receivable

Alias	Description	Alias Type	Form Type	Disk File	Comp ID	Prod ID
CDV_REFERRALS	Customer Referrals	VKeyed (V)	Maintenance Form	cdv_referrals.dat	00-000000	CDV



Customer ID:	00-0100 Everest Industries
Referral ID:	000001
Referred by:	Mr. James Rockville
Company:	McKinley Industries
Contact name:	Sarah Jackson
Phone:	503.555.1234
Contact Date:	
Contacted by:	
New Cust ID:	-

We can add our new form to the Barista menu as well, again making sure to use the Company ID and Product ID from devproject.



Menus
Client Development (DEVPROJECT)
C:/devproject/config/enu/devproject.men
Customer Referrals (CUST_REF)
Customer Referrals (CDV_REFERRALS)

Option Information

Option ID: CDV_REFERRALS

Option Type: Defined Table

Aliases:

Aliases	Description
BMU_IVCOSTING	BOM Inventory Costing Update
BMU_PRGOBSDET	Purge Obsolete Lines
CDV_REFERRALS	Customer Referrals
COUNTER_PRINTERS	Select Valid Counter Printers
CRM_ACTIVITIES	CRM Activities
CRM_CONTACTS	CRM Contacts

Group Control

Target:

Arguments:

Config File Path:

Working Directory:

Description: Customer Referrals

Image ID: Table

□ Automatically expand menu □ Don't show in menu

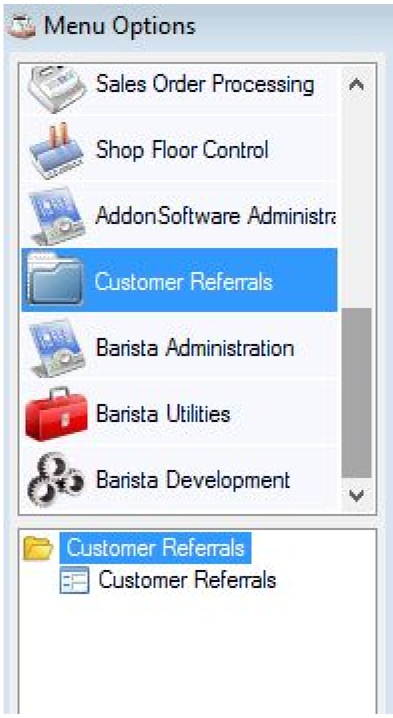
App Company ID: 00000000 Product ID: CDV Version: 1.0

Help ID:

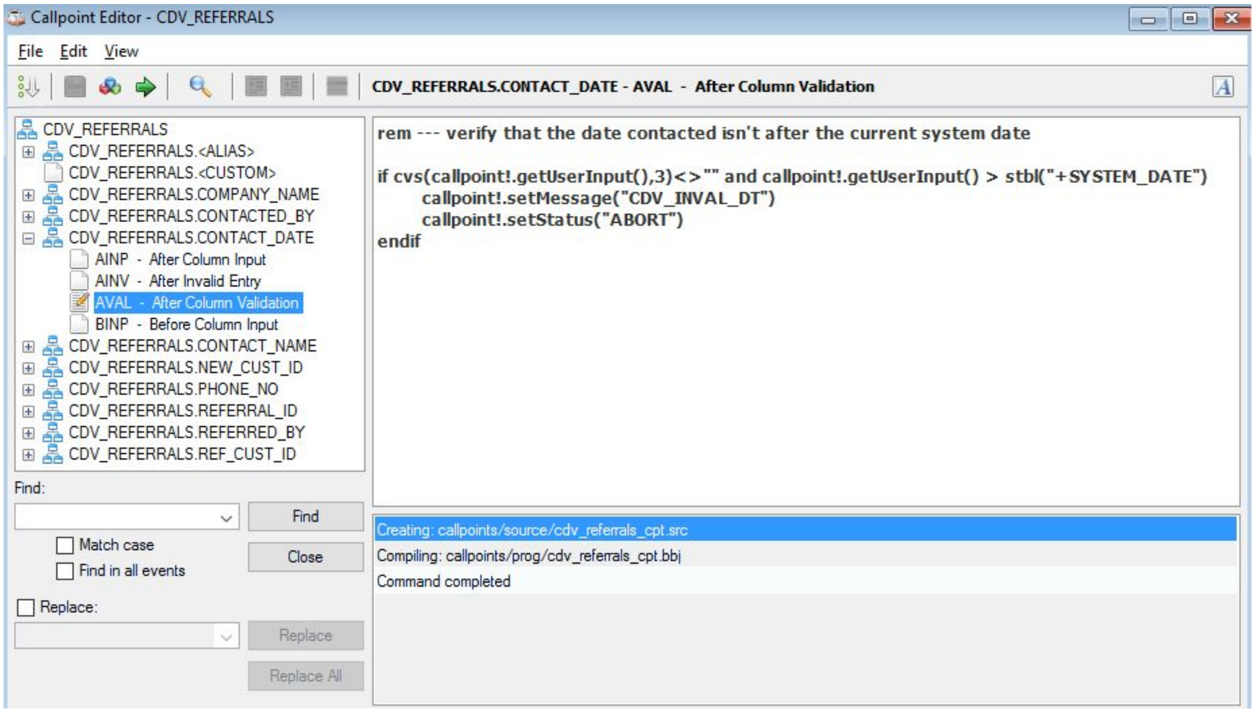
□ Allow multiple running copies of this process

□ Don't allow running in browser

CSS File Path:



Next, we'll enhance the form by adding code to the After Validation (AVAL) callpoint for the contacted date. With this code, we'll retrieve the contacted date just entered, and verify that it is not greater than the current system date. If it is, we will display a system message and abort the entry:


Callpoint Editor - CDV_REFERRALS
File Edit View
CDV_REFERRALS.CONTACT_DATE - AVAL - After Column Validation
CDV_REFERRALS
CDV_REFERRALS.<ALIAS>
CDV_REFERRALS.<CUSTOM>
CDV_REFERRALS.COMPANY_NAME
CDV_REFERRALS.CONTACTED_BY
CDV_REFERRALS.CONTACT_DATE
AINP - After Column Input
AINV - After Invalid Entry
AVAL - After Column Validation
BINP - Before Column Input
CDV_REFERRALS.CONTACT_NAME
CDV_REFERRALS.NEW_CUST_ID
CDV_REFERRALS.PHONE_NO
CDV_REFERRALS.REFERRAL_ID
CDV_REFERRALS.REFERRED_BY
CDV_REFERRALS.REF_CUST_ID
Find:
Find
☐ Match case
☐ Find in all events
Close
☐ Replace:
Replace
Replace All

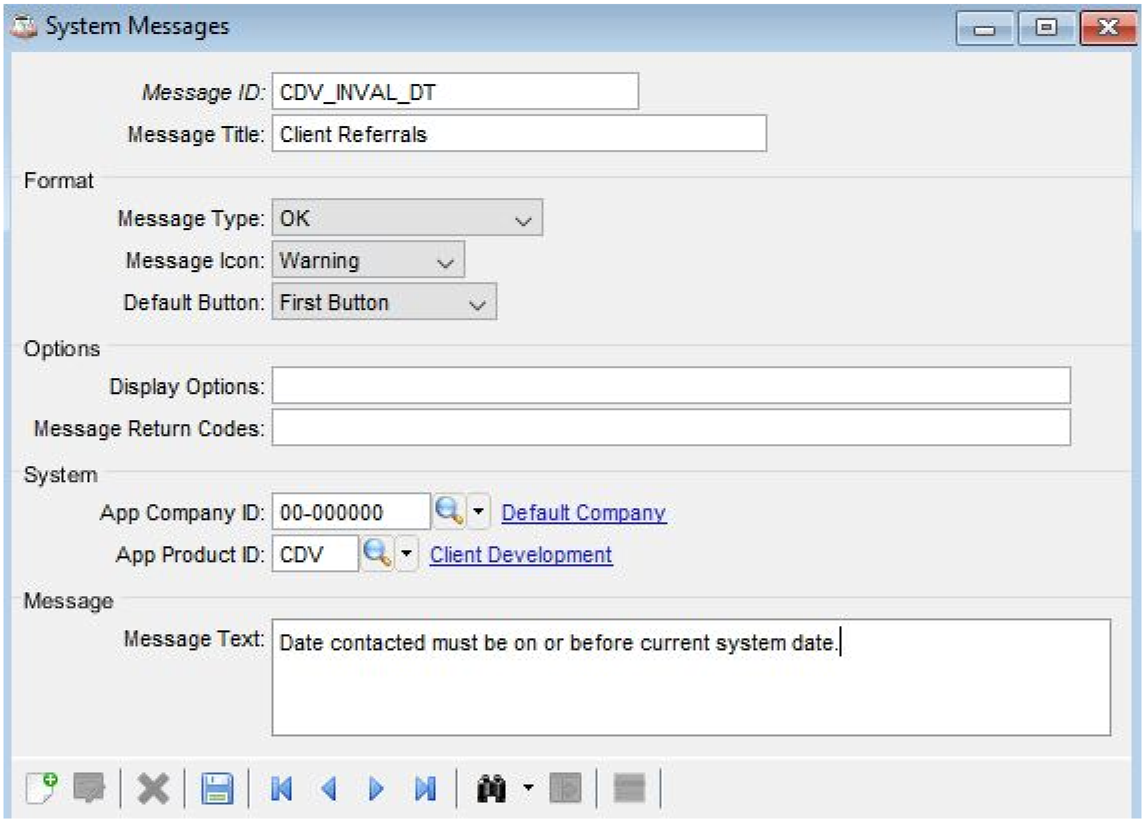
```
rem --- verify that the date contacted isn't after the current system date

if cvs(callpoint!.getUserInput(),3)<>"" and callpoint!.getUserInput() > stbl("+SYSTEM_DATE")
      callpoint!.setMessage("CDV_INVAL_DT")
      callpoint!.setStatus("ABORT")
endif
```

```
Creating: callpoints/source/cdv_referrals_cpt.src
Compiling: callpoints/prog/cdv_referrals_cpt.bbj
Command completed
```

Important note: When coding callpoints or back-end programs where alternate keys are used, use the knum=<"KEY_NAME"> syntax rather than knum=<int>. Using named keys ensures that keys added during custom development can successfully merge with keys that may be part of a new version of Addon.

We create the message via the Barista Administration, System Messages form:



System Messages

Message ID: CDV_INVAL_DT

Message Title: Client Referrals

Format

Message Type: OK

Message Icon: Warning

Default Button: First Button

Options

Display Options:

Message Return Codes:

System

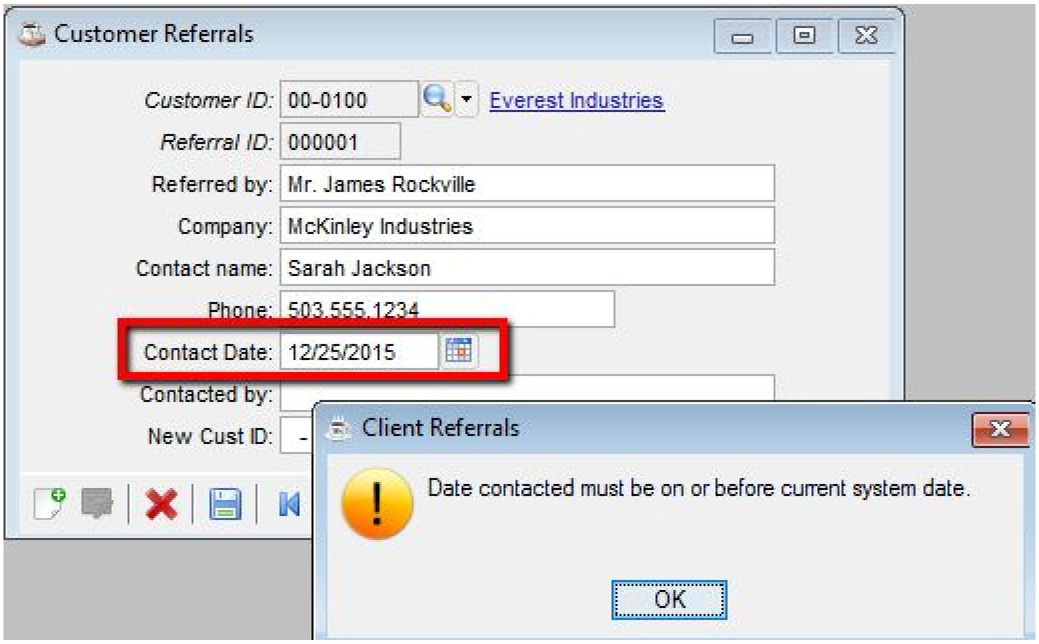
App Company ID: 00-000000 Default Company

App Product ID: CDV Client Development

Message

Message Text: Date contacted must be on or before current system date.

Our form now warns the user about invalid dates:



Customer Referrals

Customer ID: 00-0100 Everest Industries

Referral ID: 000001

Referred by: Mr. James Rockville

Company: McKinley Industries

Contact name: Sarah Jackson

Phone: 503.555.1234

Contact Date: 12/25/2015

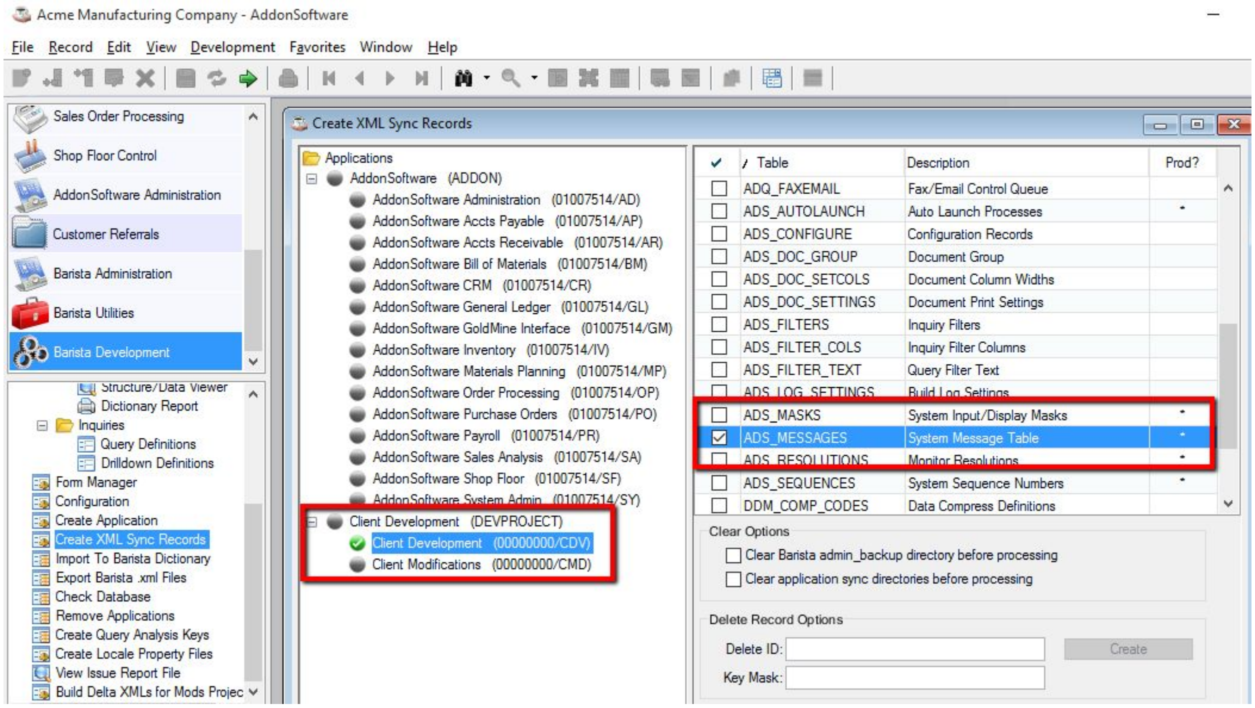
Contacted by:

New Cust ID:

Client Referrals

Date contacted must be on or before current system date.

The callpoint definition file is saved in the data/cdf/ directory of our devproject structure, but the system message was added to a Barista Administrative table. In order to ensure that the message is included with the application when porting it elsewhere or syncing back into a new Barista install, we need to run the Create XML Sync Records program found in the Barista Development menu. This utility creates xml versions of the selected Barista Administrative records. Any record that contains a Company and Product ID will generate an xml in the corresponding application's data/sync directory. All non-application-specific records will be backed up in Barista's admin_backup directory. Copy these as needed to your application's data/sync directory.



Applications
- AddonSoftware (ADDON)
  - AddonSoftware Administration (01007514/AD)
  - AddonSoftware Accts Payable (01007514/AP)
  - AddonSoftware Accts Receivable (01007514/AR)
  - AddonSoftware Bill of Materials (01007514/BM)
  - AddonSoftware CRM (01007514/CR)
  - AddonSoftware General Ledger (01007514/GL)
  - AddonSoftware GoldMine Interface (01007514/GM)
  - AddonSoftware Inventory (01007514/IV)
  - AddonSoftware Materials Planning (01007514/MP)
  - AddonSoftware Order Processing (01007514/OP)
  - AddonSoftware Purchase Orders (01007514/PO)
  - AddonSoftware Payroll (01007514/PR)
  - AddonSoftware Sales Analysis (01007514/SA)
  - AddonSoftware Shop Floor (01007514/SF)
  - AddonSoftware System Admin (01007514/SY)
- Client Development (DEVPROJECT)
  - ✓ Client Development (00000000/CDV)
  - Client Modifications (00000000/CMD)

✓	Table	Description	Prod?
☐	ADQ_FAXEMAIL	Fax/Email Control Queue	
☐	ADS_AUTOLAUNCH	Auto Launch Processes	•
☐	ADS_CONFIGURE	Configuration Records	
☐	ADS_DOC_GROUP	Document Group	
☐	ADS_DOC_SETCOLS	Document Column Widths	
☐	ADS_DOC_SETTINGS	Document Print Settings	
☐	ADS_FILTERS	Inquiry Filters	
☐	ADS_FILTER_COLS	Inquiry Filter Columns	
☐	ADS_FILTER_TEXT	Query Filter Text	
☐	ADS_LOG_SETTINGS	Build Log Settings	
☐	ADS_MASKS	System Input/Display Masks	•
☑	ADS_MESSAGES	System Message Table	•
☐	ADS_RESOLUTIONS	Monitor Resolutions	•
☐	ADS_SEQUENCES	System Sequence Numbers	•
☐	DDM_COMP_CODES	Data Compress Definitions	

Clear Options

☐ Clear Barista admin_backup directory before processing

☐ Clear application sync directories before processing

Delete Record Options

Delete ID:

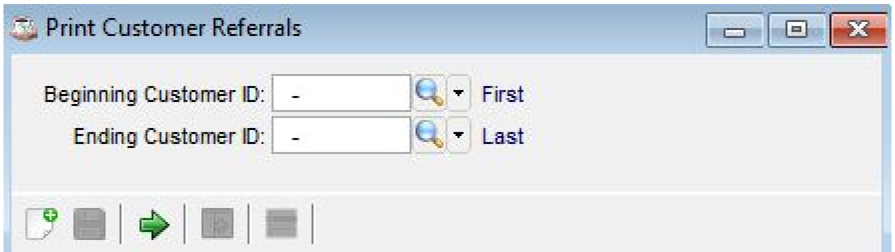
Key Mask:

Create

The message record we created for our form contains our CDV Product ID, so the backup saves this xml in devproject/data/sync/. Now, when installing at a new site, or re-syncing after a fresh Barista install, Barista will process the contents of the devproject/data/sync/ directory, and write a record to the System Message table based on this xml.

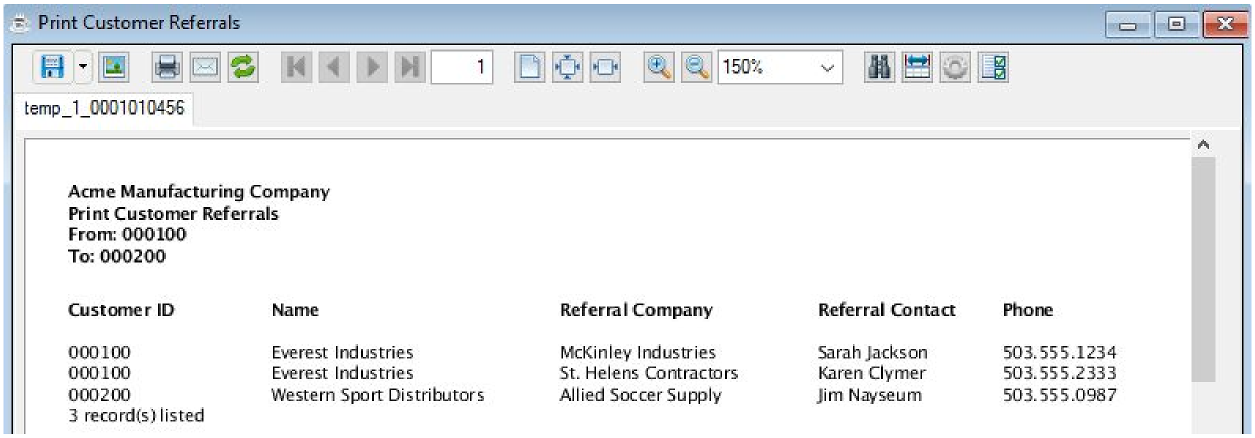
```
<?xml version='1.0' encoding='UTF-8' ?>
<meta name='barista_version' content='15.0' />
<barista_admin_record>
      <barista_record_table>ADS_MESSAGES</barista_record_table>
      <msg_id>CDV_INVAL_DT        </msg_id>
      <msg_title>Client Referrals</msg_title>
      <msg_type>0</msg_type>
      <msg_icon>48</msg_icon>
      <msg_default_but>000</msg_default_but>
      <asc_comp_id>00000000</asc_comp_id>
      <asc_prod_id>CDV</asc_prod_id>
      <msg_text>Date contacted must be on or before current system date.[$0a$]
</msg_text>
</barista_admin_record>
```

The last step in our vertical development is to create a report that lists referrals, using an Option Entry form to specify the desired customer ID range for the list. We will use the document_base.src file that comes with Barista (located in <barista install>/sys/lib/) and modify it for our purposes. We need to copy/paste the file into devproject/prog/, and give it the same name as the "Run program" used in the Option Entry form.



Beginning Customer ID: - First

Ending Customer ID: - Last



```
Acme Manufacturing Company
Print Customer Referrals
From: 000100
To: 000200

Customer ID         Name                        Referral Company          Referral Contact    Phone

000100              Everest Industries          McKinley Industries       Sarah Jackson       503.555.1234
000100              Everest Industries          St. Helens Contractors    Karen Clymer        503.555.2333
000200              Western Sport Distributors  Allied Soccer Supply      Jim Nayseum         503.555.0987
3 record(s) listed
```

After this initial development, the files in the devproject application are distributed as follows:

C:/devproject/	**File**
callpoints/prog	cdv_referrals_cpt.bbj
callpoints/source	cdv_referrals_cpt.src
config/	devproject.syn
config/enu/	devproject.men
data/	cdv_referrals.dat
data/arc/enu/	cdv_referrals.arc
	cdv_ref_rpt.arc
data/bar/	cdv_referrals.xml

	cdv_ref_rpt.xml
data/cdf	cdv_referrals.cdf
data/def/enu/	cdv_referrals.def
	cdv_ref_rpt.def
data/sync/	ads_messages~cdv_inval_dt.xml
lib/	<empty>
prog/	cdv_ref_rpt.src
prop/	<empty>

This directory structure contains everything we need to install the devproject application at a different site, or to re-sync it in our own development environment after a fresh Barista install.

See also:

Part 1: Create and Synchronize Barista Applications
Part 3: Customizing and Installing Applications