

EXTENDED DEMOGRAPHY

AMXEDITOR – PLUGIN

EXTENDED DEMOGRAPHY	1
1. Introduction.....	2
2. AD_Reference Table.....	4
3. New Messages on AD_Message Table.	6
4. Fields Added on C_Country Table.	7
5. Capture Sequence on Table C_Country.	8
6. New Table C_Community	9
7. New Tables C_Municipality and C_Parish	11
8. Fields Added on C_Region Table.	14
9. Fields Added on C_Location.	16
10. Country-Community-Region-Municipality-Parish Window.....	17
11. Business Partner Location Extended Example.	19
A1. Plugin Installation.....	21

Author : Luis Amesty Linares
Madrid, Spain August 2015
Revision September 2018
luisamesty@gmail.com

1. Introduction.

This Plugin is related to Demographic Aspects on Idempiere ERP. It is well known that on some countries there is a political division with concepts that go beyond country, region and city.

For example in Spain we talk about Communities, they are related to Group of Provinces that keeps Local Government. They also have a political division for Provinces called Municipalities (Municipality-*Municipio*).

Another example is Venezuela, they have a political division for Provinces (*Estados*) called Municipalities (Municipality-*Municipio*) and a Municipality is also divided on Parishes (Parish-*Parroquia*). Particularity Main Mail office in Venezuela has published a new rule indicating the way postal address is to be written:

La dirección postal ahora se escribe así:	
NOMBRE Y APELLIDO	
DEPARTAMENTO / CARGO	Quando la correspondencia va dirigida a una empresa colocar nombre de la unidad administrativa (gerencia, división, departamento, sección) o a cargo de la persona a quien va dirigido el envío.
LOCALIDAD	Sector, Avenida, calle, carrera, vereda, aldea, barrio, callejón, pasaje, asentamiento, caserio, terreno, urbanización, alacalera, esquina, ciudadela, hacienda, parque residencial, residencias, entre otros.
INMUEBLE	Nombre o número, edificio, bloque, casa, quinta, piso, torre, apartamento, oficina, local, consultorio, entre otros.
PARROQUIA	
MUNICIPIO	
CIUDAD O PUEBLO	
ESTADO	
PAÍS	Si la correspondencia es internacional.
ZONA POSTAL	Vigente en Venezuela.

Communities, Region, Municipality and Parish, can be use for statistic and BI analysis on Sales, Cost, Personnel and other type of transaction results.

Postal Codes is another concern to be covered in future on this plugin, because a default value can be obtained from Region, Provinces, Municipality and Parish. Also Street Names provides a rule for finding zip codes.

In order to accomplish what have been explained before, some tables have to be modified, and some others tables have to be added to implement the new Window and plugin.

Tables	
Modify	Add
C_Country (2)	C_Municipality
AD_Message (1)	C_Parish
C_Location (2)	C_Zipcode
C_Region (2)	C_Community
AD_Reference (1)	

(1) Add New Records (2) Add New Fields

I have been working with Idempiere since version 1.0c, before I made some test on Adempiere 3.70. Right now I am migrating my old Visual FoxPro application with one of my customer using Idempiere 2.0 in VENEZUELA.

A list of Lectures and References related with this Material. Some information, procedures, code and data taken from:

Wiki Page: **Developing plug-ins without affecting the trunk**
http://wiki.idempiere.org/en/Developing_plug-ins_without_affecting_the_trunk
Jan Thielemann Videos in special:
Developing iDempiere 2.0 - Custom Editors (IEditorFactory and IDisplayTypeFactory)
<https://www.youtube.com/watch?v=jVhKnFzsMZo>
DCS-ERP Repository from Orlando Curieles.
https://bitbucket.org/dcs_bitbucket/
Initial Venezuelan Demography.
Redhuan Daniel Oon (red1) Repository.
<https://bitbucket.org/red1/>
Ghintech Location.
<https://bitbucket.org/ghintech/com.ghintech.location>
Carlos Ruiz (CarlosRuiz_globalqss)
https://bitbucket.org/CarlosRuiz_globalqss/

Plugin Source code, documentation and jar files are located on Bitbucket repository:

<https://bitbucket.org/amerpsoft/amerpsoft-editors-com/src/default/>

You may clone it with mercurial:

```
$ hg clone https://bitbucket.org/amerpsoft/amerpsoft-editors-com/src/default/
```

I really appreciate all material, readings and information provided by forum, wiki pages and repositories. This was my first little contribution to the group and I hope it will be useful to you.

2. AD_Reference Table.

AD_Reference Table, it is an Application Dictionary's Table that contains all Small List arrays associated with fields, where it is necessary to select from Short Length selection List. It is used instead of a Table. Normally Tables are used when Selection contains Large List Counts of records.

When defining Tables on Application Dictionary, *AD_Reference* table is used for selection of Field Type on Table's Columns. For example, we can see records among others:

Name	Description
....
Image	Binary Image Data
Integer	10 Digit numeric
List	Reference List
Location (Address)	Location/Address
<u>LocationExtended</u>	<u>Location Extended /Address with Parish and Municipality</u>

Location Reference Type is related with Address Fields, normally associated with *C_Location* table records thru *C_Location_ID* field. This reference selects the type of editor associated with the Table's Field on AD Model. For example:

Integer: is associated with a plain integer number editor.

Date: is associated with a Date Format (MM/DD/YYYY) editor.

Location: is associated with Address Location Field (see Figure 2.1)

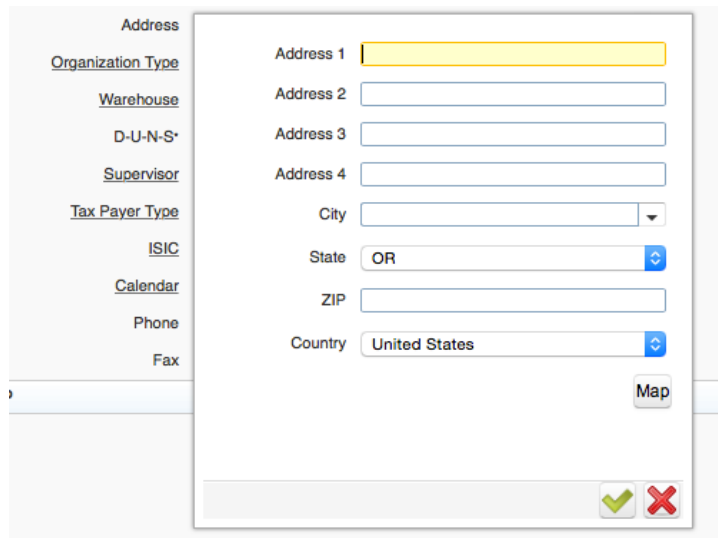


Figure 2.1

LocationExtended Is the name of the new reference to be added to Application Dictionary in order to run Plugin. It must to be defined exactly with this name, because plugin code will find on *AD_Reference* table as it.

When Plugin be completed and running, it can be associated to the *C_Location_ID* field on *C_BPartnerLocation* Table to a *LocationExtended* reference, the address form will be presented as figure 2.2:

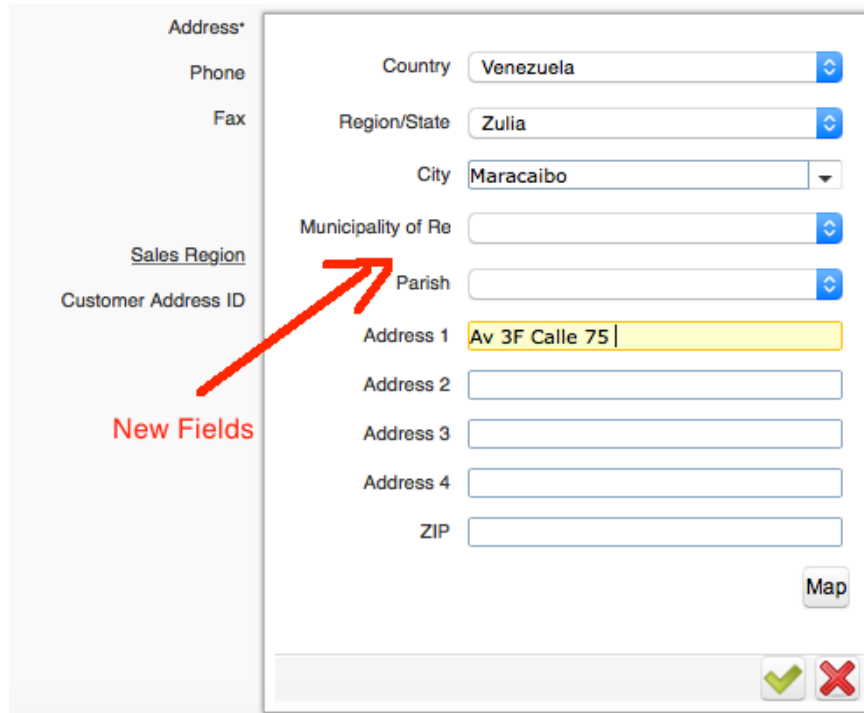
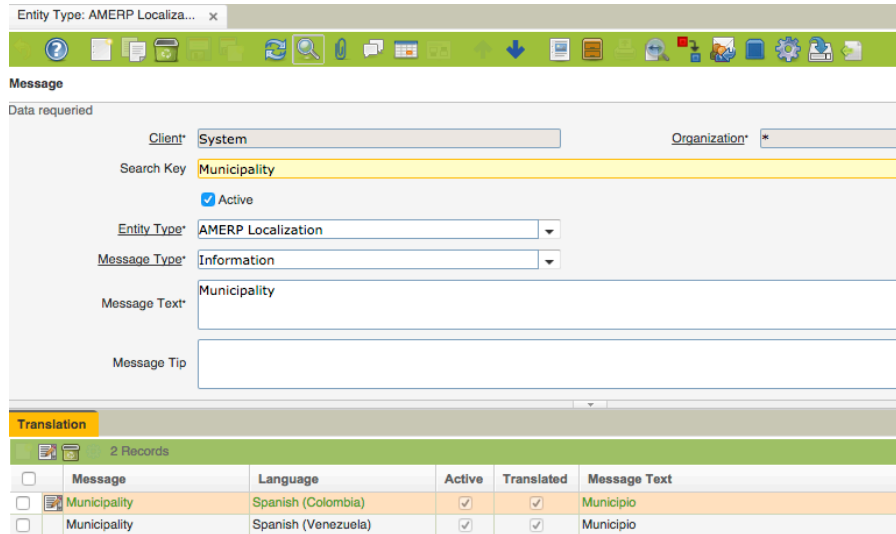


Figure 2.2

3. New Messages on AD_Message Table.

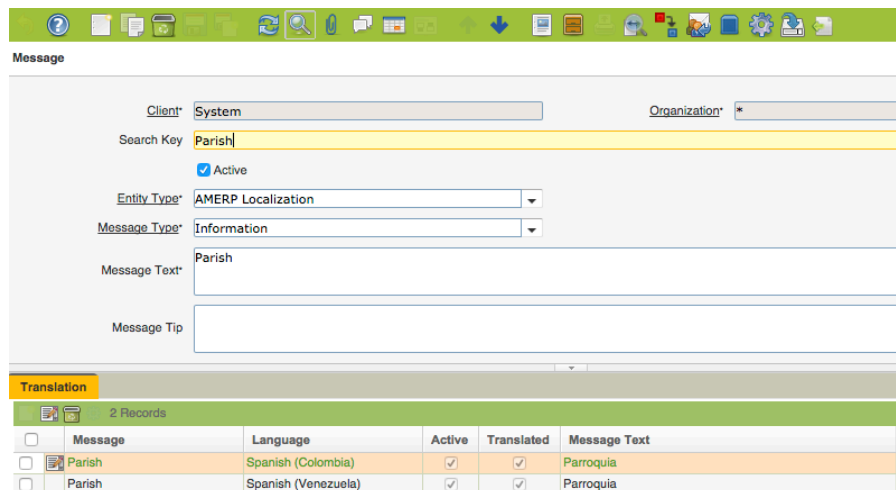
New Messages translations are required to be presented on Plugin Forms. Add new messages Community, Municipality, Parish and Zipcode, and their respective translation to your Localization Language. It must be done using AD window Message: (See examples)



The screenshot shows the 'Message' window in AMERPsoft. The 'Client' is set to 'System' and 'Organization' is empty. The 'Search Key' is 'Municipality'. The 'Entity Type' is 'AMERP Localization' and 'Message Type' is 'Information'. The 'Message Text' is 'Municipality'. Below the form is a 'Translation' table with 2 records.

Message	Language	Active	Translated	Message Text
<input type="checkbox"/> Municipality	Spanish (Colombia)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Municipio
<input type="checkbox"/> Municipality	Spanish (Venezuela)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Municipio

Figure 3.1



The screenshot shows the 'Message' window in AMERPsoft. The 'Client' is set to 'System' and 'Organization' is empty. The 'Search Key' is 'Parish'. The 'Entity Type' is 'AMERP Localization' and 'Message Type' is 'Information'. The 'Message Text' is 'Parish'. Below the form is a 'Translation' table with 2 records.

Message	Language	Active	Translated	Message Text
<input type="checkbox"/> Parish	Spanish (Colombia)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Parroquia
<input type="checkbox"/> Parish	Spanish (Venezuela)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Parroquia

Figure 3.2

4. Fields Added on C_Country Table.

C_Country table contains Records for Countries. Some fields have been added to this table, and they have to be done using Application Dictionary. The fields added are:

System Element	DB Column Name	Description
CountryCode3 (*)	CountryCode3	Country Code 3 Digits Standard
HasCommunity	HasCommunity	Country is divided in Communities Y-N
HasMunicipality	HasMunicipality	Country Regions are divided in Municipalities Y-N
HasParish	HasParish	Country Regions are divided in Municipalities and Parish Y-N

In some Countries the appropriate translation for Region differs, for example:

Colombia: *Departamento*.

Venezuela: *Estado*.

USA: *Estado*.

España: *Provincia*.

Take note for this, when create Field Elements and their translation:

(*) For CountryCode3 inclusion, see Script 'amxeditor.sql', included on Sources.

5. Capture Sequence on Table C_Country.

Capture Sequence indicates the order on which Address Fields are presented to the user when creating or modifying address fields (Location or LocationExtended).

Tokens are surrounded by @ character.

For example:

@CO@ @R@ @C@ @A1@ @A2@ @A3@ @A4@ @P@

Available Tokens:

CO: Country

R: Region

C: City

A1, A2, A3, A4: Four Address Lines.

P: Postal Code

Added Tokens to Plugin:

MU: Municipality

PA: Parish

Idempiere Administrator could change this Value in order to modify the Form's Field Sequence on Window's Address Fields.

Recommended sequence:

@CO@ @A1@ @A2@ @A3@ @A4@ @P@ @R@ @C@ @MU@ @PA@

Mandatory Fields can be identified by the symbol '!'.
For example:

For example:

@CO@ @A1!@ @A2!@ @A3@ @A4@ @P@ @R!@ @C!@ @MU@ @PA@

Address 1, Address 2, Region, City are Mandatory Fields.

6. New Table C_Community

C_Community Table contains the Community Political Territorial Division of The Country. As it will be used for Key reference on *C_Region* table, at least one record for each Country must be created. A SQL file is provided (See amxeditor.sql).

Create Table using PostgreSQL pgAdmin3 app, with this Script:

```
/* CREATE TABLE c_community (COUNTRY'S COMMUNITIES ) */
CREATE TABLE "adempiere"."c_community" (
  "c_community_id" NUMERIC(10,0) NOT NULL,
  "ad_client_id" NUMERIC(10,0) NOT NULL,
  "ad_org_id" NUMERIC(10,0) NOT NULL,
  "isactive" CHAR(1) DEFAULT 'Y'::bpchar NOT NULL,
  "created" TIMESTAMP WITHOUT TIME ZONE DEFAULT now() NOT NULL,
  "createdby" NUMERIC(10,0) NOT NULL,
  "updated" TIMESTAMP WITHOUT TIME ZONE DEFAULT now() NOT NULL,
  "updatedby" NUMERIC(10,0) NOT NULL,
  "name" VARCHAR(60) NOT NULL,
  "description" VARCHAR(255),
  "c_country_id" NUMERIC(10,0) NOT NULL,
  "isdefault" CHAR(1) DEFAULT 'N'::bpchar,
  CONSTRAINT "c_community_pkey" PRIMARY KEY("c_community_id"),
  CONSTRAINT "c_community_isactive_check" CHECK (isactive = ANY (ARRAY['Y'::bpchar, 'N'::bpchar])),
  CONSTRAINT "c_community_isdefault_check" CHECK (isdefault = ANY (ARRAY['Y'::bpchar, 'N'::bpchar])),
  CONSTRAINT "c_communityclient" FOREIGN KEY ("ad_client_id")
    REFERENCES "adempiere"."ad_client"("ad_client_id")
    ON DELETE NO ACTION
    ON UPDATE NO ACTION
    DEFERRABLE
    INITIALLY DEFERRED,
  CONSTRAINT "c_communityorg" FOREIGN KEY ("ad_org_id")
    REFERENCES "adempiere"."ad_org"("ad_org_id")
    ON DELETE NO ACTION
    ON UPDATE NO ACTION
    DEFERRABLE
    INITIALLY DEFERRED,
  CONSTRAINT "ccountry_cregion" FOREIGN KEY ("c_country_id")
    REFERENCES "adempiere"."c_country"("c_country_id")
    ON DELETE NO ACTION
    ON UPDATE NO ACTION
    DEFERRABLE
    INITIALLY DEFERRED
) WITHOUT OIDS;
```

See Application Dictionary Window for Table C_Community:

Table > Column▼

<input type="checkbox"/>	Table	DB Column Name	Reference	Reference Key	Length	Mandatory	Updatable
<input type="checkbox"/>	C_Community_Community	AD_Client_ID	Table Direct		10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	AD_Org_ID	Table Direct		10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	C_Community_ID	ID		10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	C_Community_UU	String		36	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	C_Country_ID	Table	C_Country	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	Created	Date+Time		29	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	CreatedBy	Table	AD_User	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	Description	String		255	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	IsActive	Yes-No		1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	IsDefault	Yes-No		1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	Name	String		60	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	Updated	Date+Time		29	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Community_Community	UpdatedBy	Table	AD_User	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>

See Script 'amxeditor.sql', included on Sources.

7. New Tables C_Municipality and C_Parish

Some countries divide Region on Municipality entities.
This is the Script for create the table.

```
--- C_Municipality TABLE (c_municipality)
CREATE TABLE "adempiere"."c_municipality" (
  "c_municipality_id" NUMERIC(10,0) NOT NULL,
  "ad_client_id" NUMERIC(10,0) NOT NULL,
  "ad_org_id" NUMERIC(10,0) NOT NULL,
  "isactive" CHAR(1) DEFAULT 'Y'::bpchar NOT NULL,
  "created" TIMESTAMP WITHOUT TIME ZONE DEFAULT now() NOT NULL,
  "createdby" NUMERIC(10,0) NOT NULL,
  "updated" TIMESTAMP WITHOUT TIME ZONE DEFAULT now() NOT NULL,
  "updatedby" NUMERIC(10,0) NOT NULL,
  "name" VARCHAR(60) NOT NULL,
  "capital" VARCHAR(60) NOT NULL,
  "c_country_id" NUMERIC(10,0),
  "c_region_id" NUMERIC(10,0),
  "isdefault" CHAR(1) DEFAULT 'Y'::bpchar,
  CONSTRAINT "c_municipality_pkey" PRIMARY KEY("c_municipality_id"),
  CONSTRAINT "c_municipality_isactive_check" CHECK (isactive = ANY (ARRAY['Y'::bpchar, 'N'::bpchar])),
  CONSTRAINT "c_municipalityclient" FOREIGN KEY ("ad_client_id")
    REFERENCES "adempiere"."ad_client"("ad_client_id")
    ON DELETE NO ACTION
    ON UPDATE NO ACTION
  DEFERRABLE
  INITIALLY DEFERRED,
  CONSTRAINT "c_municipalityorg" FOREIGN KEY ("ad_org_id")
    REFERENCES "adempiere"."ad_org"("ad_org_id")
    ON DELETE NO ACTION
    ON UPDATE NO ACTION
  DEFERRABLE
  INITIALLY DEFERRED,
  CONSTRAINT "ccountry_cmunicipality" FOREIGN KEY ("c_country_id")
    REFERENCES "adempiere"."c_country"("c_country_id")
    ON DELETE NO ACTION
    ON UPDATE NO ACTION
  DEFERRABLE
  INITIALLY DEFERRED,
  CONSTRAINT "cregion_cmunicipality" FOREIGN KEY ("c_region_id")
    REFERENCES "adempiere"."c_region"("c_region_id")
    ON DELETE NO ACTION
    ON UPDATE NO ACTION
  DEFERRABLE
  INITIALLY DEFERRED
) WITHOUT OIDS;
```

Note:

PRIMARY KEY for C_Municipality Table is c_municipality_id.

Some countries also, divide Municipality on Parish entities.

This is the Script for create the table.

```
CREATE TABLE "adempiere"."c_parish" (  
  "c_parish_id" NUMERIC(10,0) NOT NULL,  
  "ad_client_id" NUMERIC(10,0) NOT NULL,  
  "ad_org_id" NUMERIC(10,0) NOT NULL,  
  "isactive" CHAR(1) DEFAULT 'Y'::bpchar NOT NULL,  
  "created" TIMESTAMP WITHOUT TIME ZONE DEFAULT now() NOT NULL,  
  "createdby" NUMERIC(10,0) NOT NULL,  
  "updated" TIMESTAMP WITHOUT TIME ZONE DEFAULT now() NOT NULL,  
  "updatedby" NUMERIC(10,0) NOT NULL,  
  "name" VARCHAR(60) NOT NULL,  
  "c_country_id" NUMERIC(10,0) NOT NULL,  
  "c_region_id" NUMERIC(10,0) NOT NULL,  
  "c_municipality_id" NUMERIC(10,0) NOT NULL,  
  "isdefault" CHAR(1) DEFAULT 'N'::bpchar,  
  CONSTRAINT "c_parish_pkey" PRIMARY KEY("c_parish_id"),  
  CONSTRAINT "c_parish_isactive_check" CHECK (isactive = ANY (ARRAY['Y'::bpchar, 'N'::bpchar])),  
  CONSTRAINT "c_parishclient" FOREIGN KEY ("ad_client_id")  
    REFERENCES "adempiere"."ad_client"("ad_client_id")  
    ON DELETE NO ACTION  
    ON UPDATE NO ACTION  
    DEFERRABLE  
    INITIALLY DEFERRED,  
  CONSTRAINT "c_parishorg" FOREIGN KEY ("ad_org_id")  
    REFERENCES "adempiere"."ad_org"("ad_org_id")  
    ON DELETE NO ACTION  
    ON UPDATE NO ACTION  
    DEFERRABLE  
    INITIALLY DEFERRED,  
  CONSTRAINT "ccountry_cparish" FOREIGN KEY ("c_country_id")  
    REFERENCES "adempiere"."c_country"("c_country_id")  
    ON DELETE NO ACTION  
    ON UPDATE NO ACTION  
    DEFERRABLE  
    INITIALLY DEFERRED,  
  CONSTRAINT "cmunicipality_cparish" FOREIGN KEY ("c_municipality_id")  
    REFERENCES "adempiere"."c_municipality"("c_municipality_id")  
    ON DELETE NO ACTION  
    ON UPDATE NO ACTION  
    DEFERRABLE  
    INITIALLY DEFERRED,  
  CONSTRAINT "cregion_cparish" FOREIGN KEY ("c_region_id")  
    REFERENCES "adempiere"."c_region"("c_region_id")  
    ON DELETE NO ACTION  
    ON UPDATE NO ACTION  
    DEFERRABLE  
    INITIALLY DEFERRED  
) WITHOUT OIDS;
```

Note:

PRIMARY KEY for C_Parish Table is c_parish_id.

Finally take care of Adequate Name and Description on AD using Upper and Lower Cases on AD Tables.

C_Municipality Table looks like this on AD:

[Table](#) > [Column](#) ▼

<input type="checkbox"/>	Table	DB Column Name	Reference	Reference Key	Length	Mandatory	Updatable
<input checked="" type="checkbox"/>	C_Municipality_C_Municipality	AD_Client_ID	Table Direct		10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	AD_Org_ID	Table Direct		10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	C_Country_ID	Table	C_Country	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	C_Municipality_ID	Table Direct		10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	C_Municipality_UU	String		36	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	C_Region_ID	Table	C_Region	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	Created	Date+Time		29	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	CreatedBy	Table	AD_User	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	IsActive	Yes-No		1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	IsDefault	Yes-No		1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	Name	String		60	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	Updated	Date+Time		29	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	UpdatedBy	Table	AD_User	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	C_Municipality_C_Municipality	capital	String		60	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

C_Parish Table looks like this on AD:

[Table](#) > [Column](#) ▼

<input type="checkbox"/>	Table	DB Column Name	Reference	Reference Key	Length	Mandatory	Updatable	S
<input checked="" type="checkbox"/>	C_Parish_C_Parish	AD_Client_ID	Table Direct		10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	AD_Org_ID	Table Direct		10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	C_Country_ID	Table	C_Country	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	C_Municipality_ID	Table		10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	C_Parish_ID	ID		10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	C_Parish_UU	String		36	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	C_Region_ID	Table	C_Region	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	Created	Date+Time		29	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	CreatedBy	Table	AD_User	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	IsActive	Yes-No		1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	IsDefault	Yes-No		1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	Name	String		60	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	Updated	Date+Time		29	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	C_Parish_C_Parish	UpdatedBy	Table	AD_User	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

8. Fields Added on C_Region Table.

The table *C_Region* is the second level on demographic structure. On this new proposal *C_Community* is the New second level, nevertheless in order to be compatible with Standard Address structure on Idempiere, Community and Region are both Second Level, but on *C_Region* table a Community ID has to be indicated if Idempiere Administrator desire to use it.

See Figure 8.1 For the New Demographic Structure of Plugin:

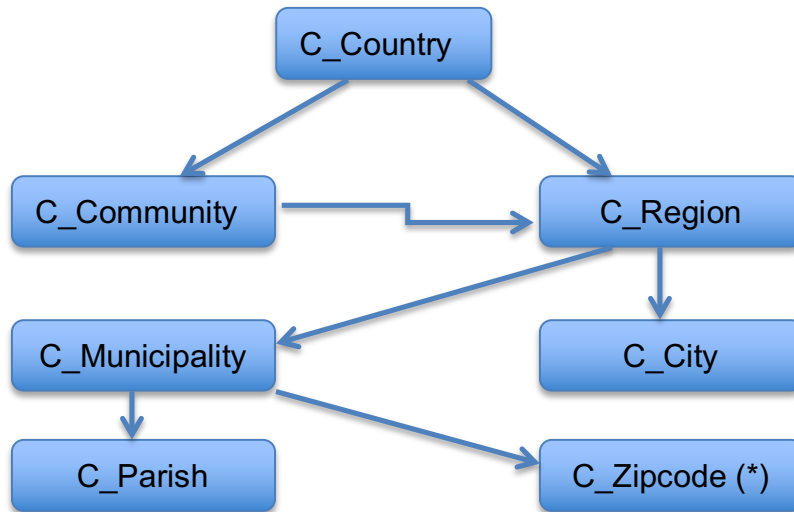


Figure 8.1
(*) Future Development

A new Field (*C_Community_ID*) is added to *C_Region* Table. This Field Accept Null values, because some country may not use this feature. See Figure 8.2.

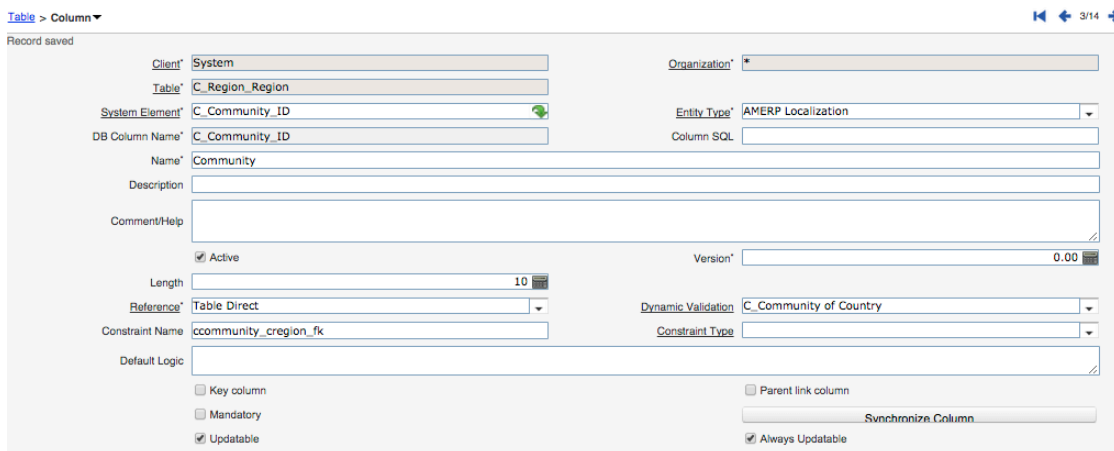
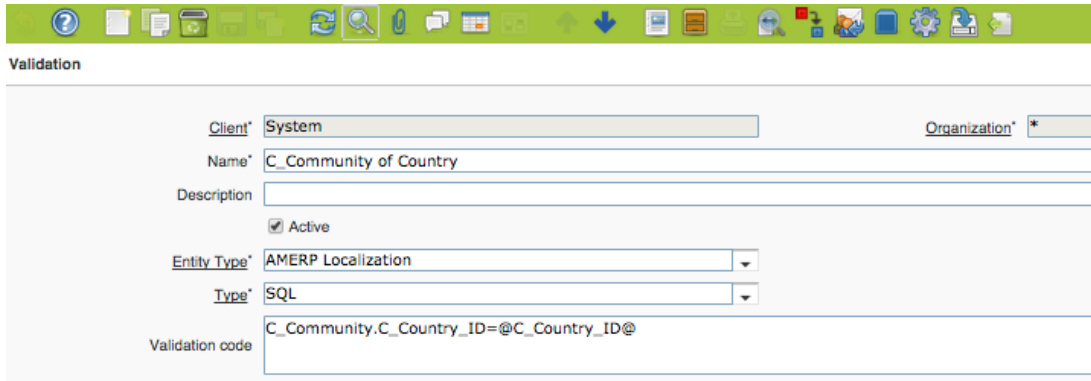


Figure 8.2

A new Validation Rule is created in order to accept only Communities from selected Country. See figure 8.3.



The screenshot shows the 'Validation' configuration window. The fields are as follows:

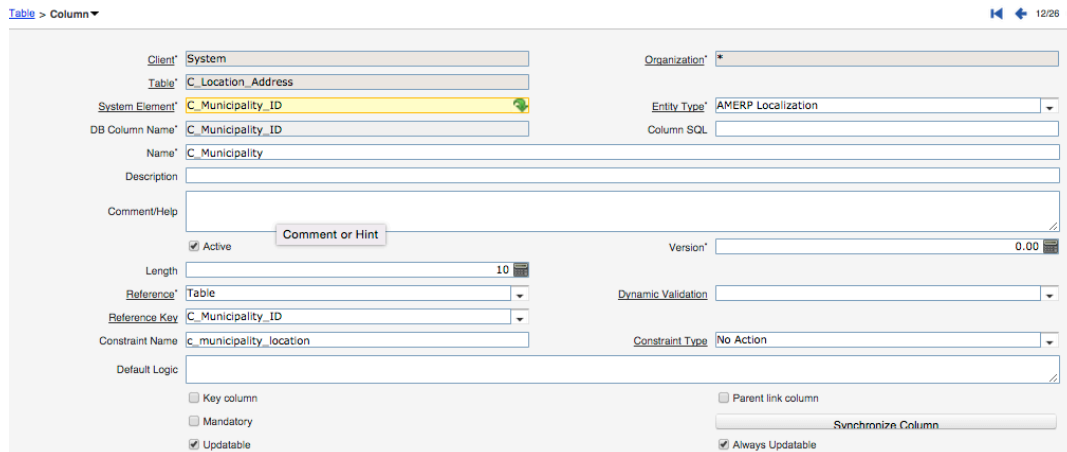
Field	Value
Client*	System
Organization*	*
Name*	C_Community of Country
Description	
Active	<input checked="" type="checkbox"/>
Entity Type*	AMERP Localization
Type*	SQL
Validation code	C_Community.C_Country_ID=@C_Country_ID@

Figure 8.3

9. Fields Added on C_Location.

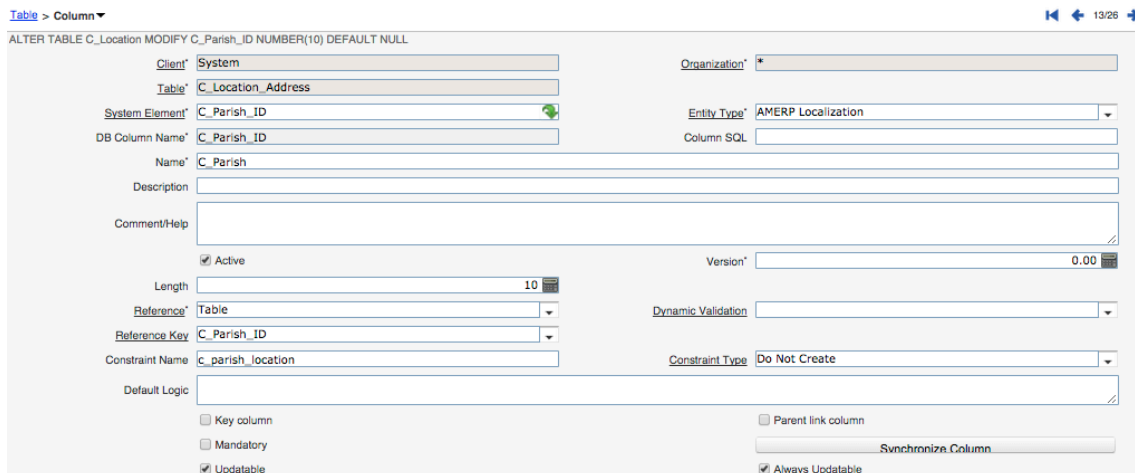
C_Location Table contains the all addresses included on Business Partners, Employees, Warehouses, Organization Info, and any other table containing **Location** or **LocationExtended** Reference Fields.

New fields added are *C_Municipality_ID* and *C_Parish_ID*, both have been mentioned before. See Figures 9.1 and 9.2 for AD window on Table *C_Location*.



The screenshot shows the 'Table > Column' configuration window for the *C_Location* table. The 'System Element' is set to *C_Municipality_ID*. The 'DB Column Name' is *C_Municipality_ID*, and the 'Name' is *C_Municipality*. The 'Length' is 10. The 'Reference' is set to 'Table' with 'Reference Key' *C_Municipality_ID*. The 'Constraint Name' is *c_municipality_location* and the 'Constraint Type' is 'No Action'. The 'Default Logic' is empty. The 'Active' checkbox is checked. The 'Version' is 0.00. The 'Always Updatable' checkbox is checked. The 'Synchronize Column' button is visible.

Figure 9.1.



The screenshot shows the 'Table > Column' configuration window for the *C_Location* table. The 'System Element' is set to *C_Parish_ID*. The 'DB Column Name' is *C_Parish_ID*, and the 'Name' is *C_Parish*. The 'Length' is 10. The 'Reference' is set to 'Table' with 'Reference Key' *C_Parish_ID*. The 'Constraint Name' is *c_parish_location* and the 'Constraint Type' is 'Do Not Create'. The 'Default Logic' is empty. The 'Active' checkbox is checked. The 'Version' is 0.00. The 'Always Updatable' checkbox is checked. The 'Synchronize Column' button is visible.

Figure 9.2

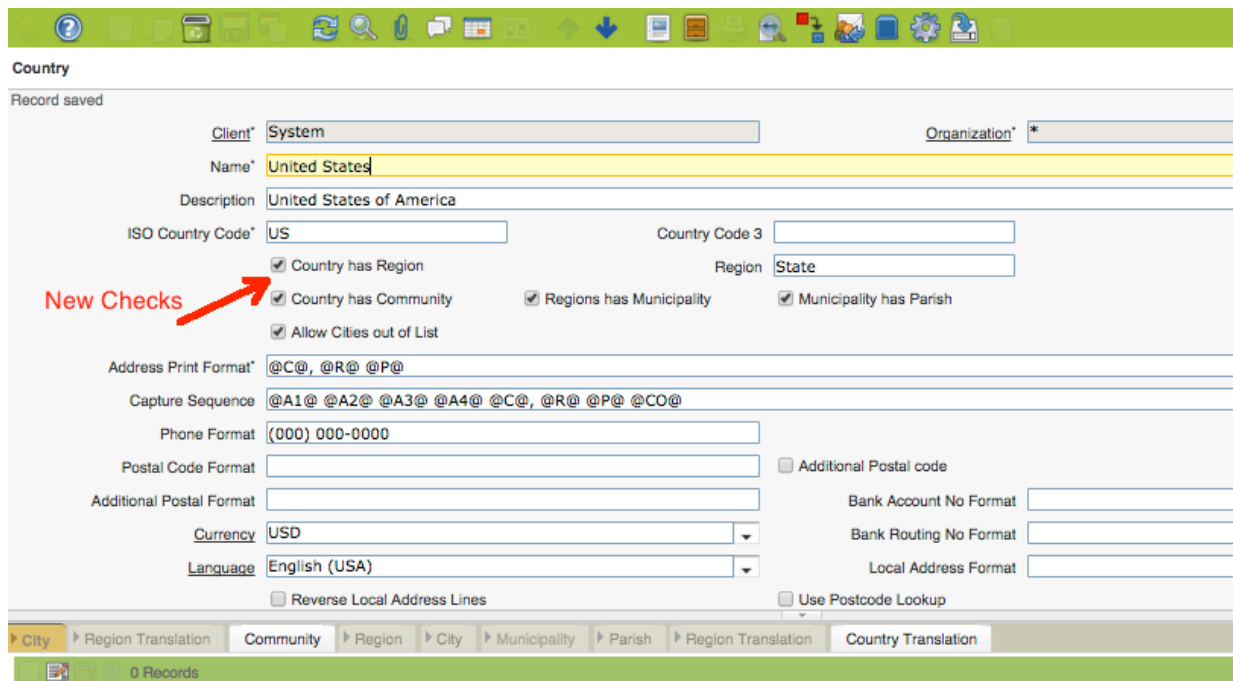
Both Fields may contain Null values in order to be compatible with Idempiere Address Standard.

Field *C_City_ID* may contain Null Value, because some Country can be configured with 'Allow Cities out of List' feaure. A City String Field is Provided for Storing values when this happens.

10. Country-Community-Region-Municipality-Parish Window.

Finally a New Window is created to perform extended address and Demographic Structure for the Countries. It has tried to develop the window so that it can be used as Standard Country-Region-City one. But also the Idempiere Administrator can perform the construction of new Communities, Municipalities and Parishes.

It is shown below the main Window, and will explain some fields that has to be set for Country in order to perform adequate update of actual Demography Structure.



Country

Record saved

Client* System Organization* *

Name* United States

Description United States of America

ISO Country Code* US Country Code 3

☒ Country has Region Region State

☒ Country has Community ☒ Regions has Municipality ☒ Municipality has Parish

☒ Allow Cities out of List

Address Print Format* @C@, @R@ @P@

Capture Sequence @A1@ @A2@ @A3@ @A4@ @C@, @R@ @P@ @CO@

Phone Format (000) 000-0000

Postal Code Format

Additional Postal Format

Currency USD

Language English (USA)

☐ Reverse Local Address Lines ☐ Use Postcode Lookup

Bank Account No Format

Bank Routing No Format

Local Address Format

City Region Translation Community Region City Municipality Parish Region Translation Country Translation

0 Records

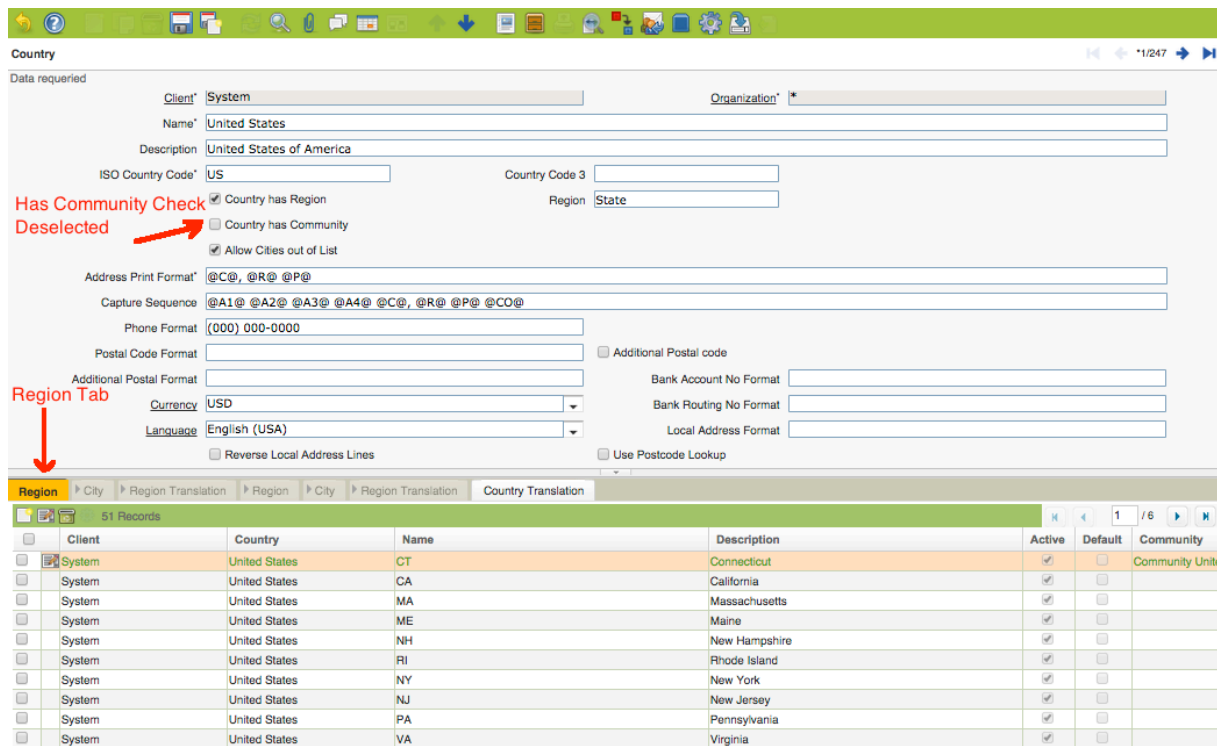
Figure 10.1

New Fields Added:

- Country has Region
- Country has Community
- Regions has Municipality
- Municipality has Parish

Idempiere Administrator may perform Community input through database, but just in case it is necessary to include the new Country's Communities using the Window, the 'Country has Community' check has to be set in order to have Community Tab available and then include Communities.

After completing income communities, regions have to be associated with their respective communities. In order to do this job, Idempiere Administrator has to deselect 'Country has Community' check in order to have Standard Region Tab available. Having this Region Tab Visible, Regions can be updated in order to set Community associated with them. See Figure 10.2 and 10.3.



Country

Data required

Client* System Organization* *

Name* United States

Description* United States of America

ISO Country Code* US Country Code 3 Region State

Has Community Check Deselected

Country has Region ☒ Country has Community ☐ Allow Cities out of List ☒

Address Print Format* @C@, @R@ @P@

Capture Sequence* @A1@ @A2@ @A3@ @A4@ @C@, @R@ @P@ @CO@

Phone Format* (000) 000-0000

Postal Code Format Additional Postal code ☐

Bank Account No Format Bank Routing No Format Local Address Format

Currency* USD

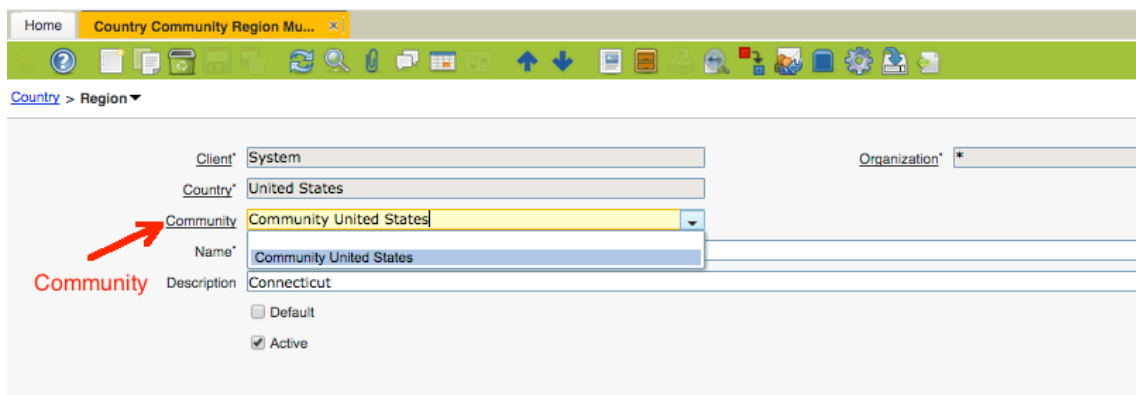
Language* English (USA)

Reverse Local Address Lines ☐ Use Postcode Lookup ☐

Region Tab

Client	Country	Name	Description	Active	Default	Community
System	United States	CT	Connecticut	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Community Unit
System	United States	CA	California	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
System	United States	MA	Massachusetts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
System	United States	ME	Maine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
System	United States	NH	New Hampshire	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
System	United States	RI	Rhode Island	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
System	United States	NY	New York	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
System	United States	NJ	New Jersey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
System	United States	PA	Pennsylvania	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
System	United States	VA	Virginia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Figure 10.2



Home Country Community Region Mu...

Country > Region

Client* System Organization* *

Country* United States

Community* Community United States

Name* Community United States

Description* Connecticut

Default ☐ Active ☒

Figure 10.3

Complete Community association for all Regions and then set again 'Country has Community' Check. Community Tab will be visible again and Idempiere Administrator can perform Extended Demography Structure.

Community -> Region -> (Municipality – City) → Parish

11. Business Partner Location Extended Example.

Once Plugin is installed as it is shown on A1 section, some AD modifications must be done before changes been observed. One example is Business Partner Address, on Business Partner Location Tab.

Get into Idempiere as System Administrator and locate Business Partner Location Table: ***C_BParter_Location***.

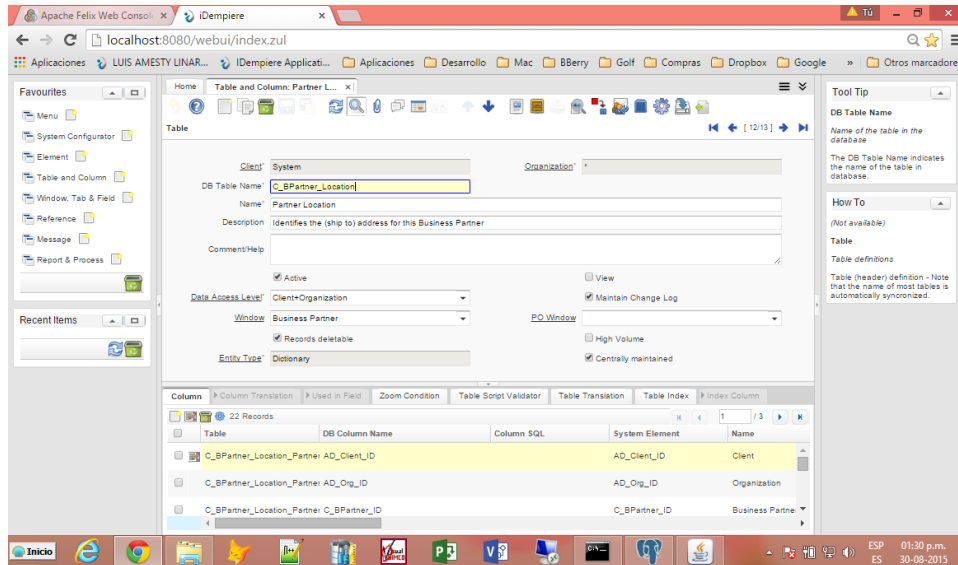


Figure 11.1

Modify ***C_location_ID*** Field, and set Reference as LocationExtended, as it was explained on Chapter 2.

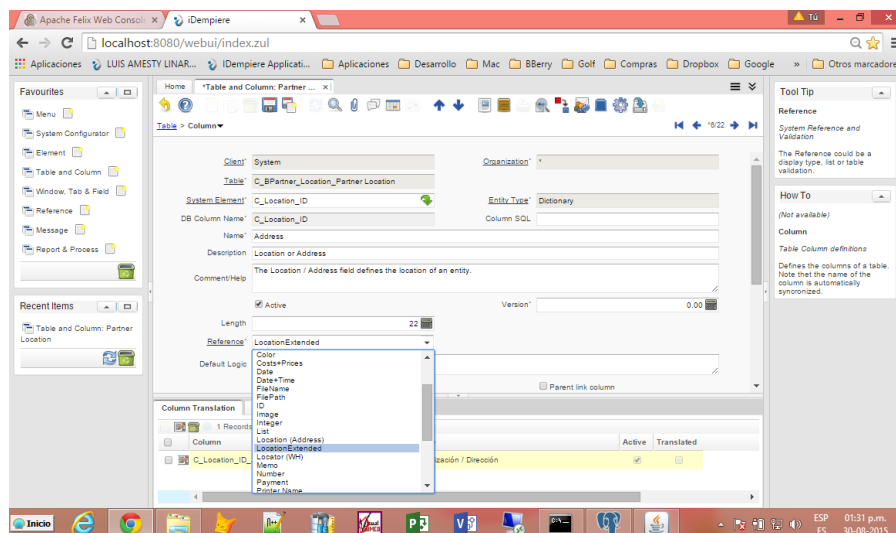


Figure 11.2

Now, you may test plugin. Get into Idempiere as SuperUser and Garden World; go to Business Partner Windows, and Location Tab. Modify Country to which was selected on Chapter 5, like Venezuela. For this example Capture Sequence was set as:

@CO@ @A1@ @A2@ @A3@ @A4@ @P@ @R@ @C@ @MU@ @PA@

Figure 11.3 shows changes observed on

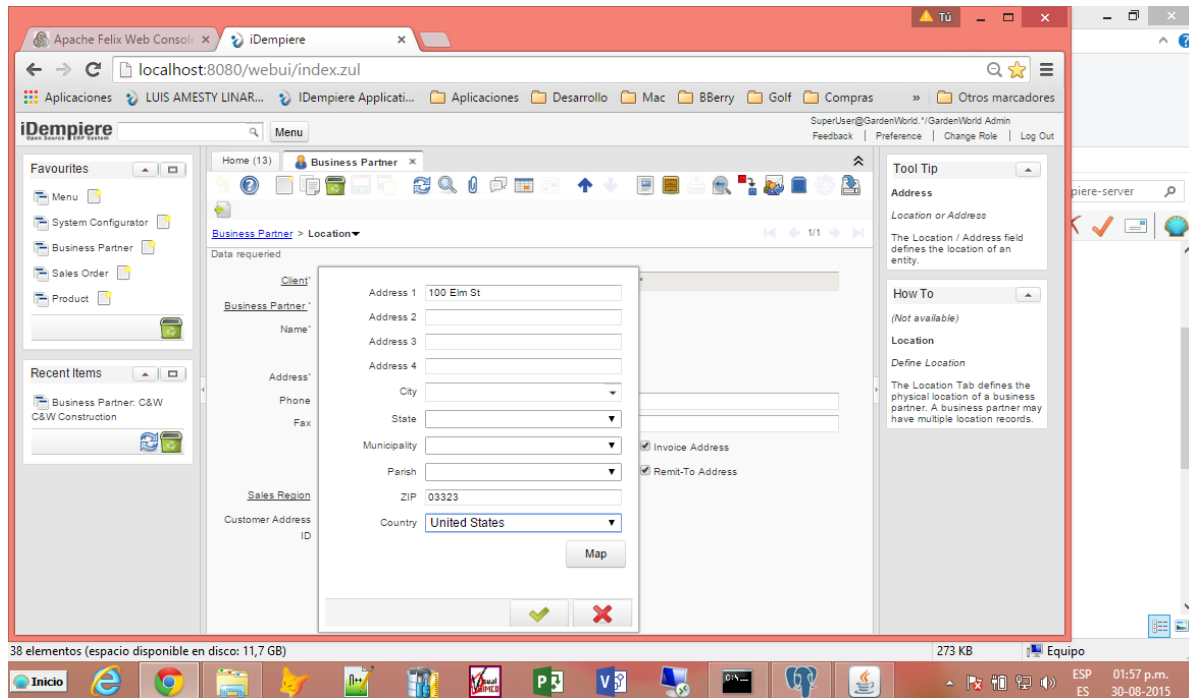


Figure 11.3

A1. Plugin Installation.

Follow these steps:

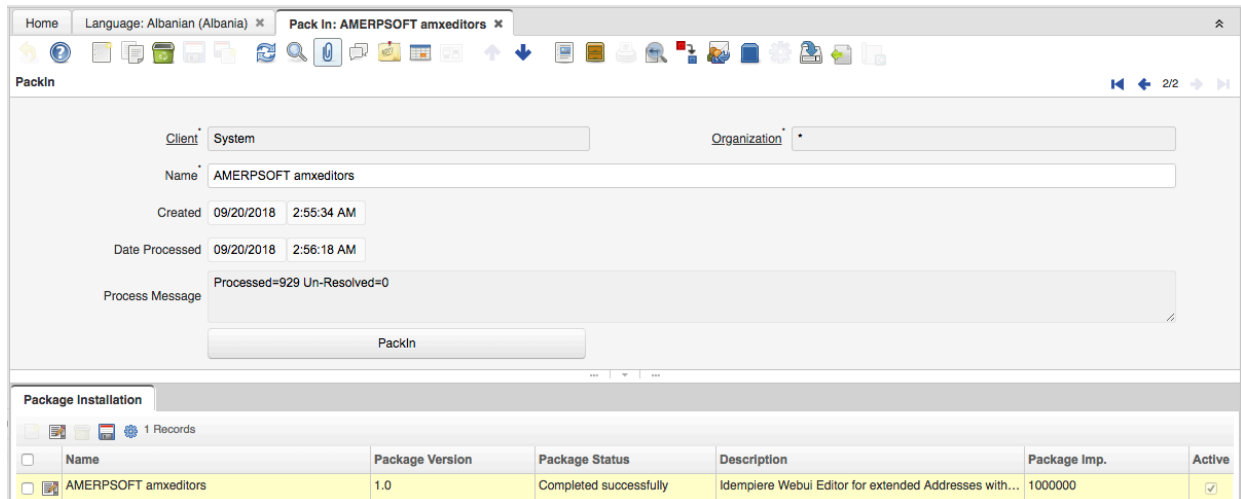
1. Pack In AMERP amxeditor.zip
2. Set es_VE as System language
3. Create Language extension for es_VE or xx_XX
4. Add country code 3 digits
5. Pack IN Venezuela Extended Demography
6. Install Plugin using Apache Felix Web Console
7. Restart Server
8. Modify **C_BPartner_Location** Table
9. Modify Country Record

1. Pack IN AMERP amxeditor.zip

Download 'AMERP amxeditor.zip' from repository:

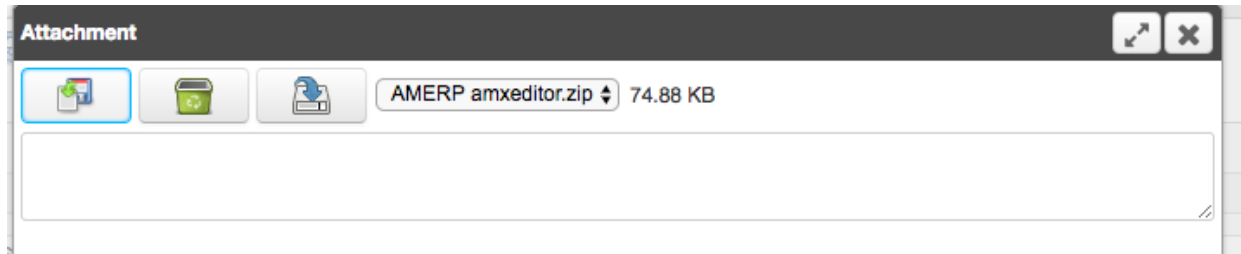
<https://bitbucket.org/amerpsoft/amerpsoft-editors-com/downloads/>

Create Pack In record and Attach: 'AMERP amxeditors.zip'



Name	Package Version	Package Status	Description	Package Imp.	Active
AMERPsoft amxeditors	1.0	Completed successfully	Idempiere Webui Editor for extended Addresses with...	1000000	<input checked="" type="checkbox"/>

Pack In '**AMERP amxeditor.zip**'



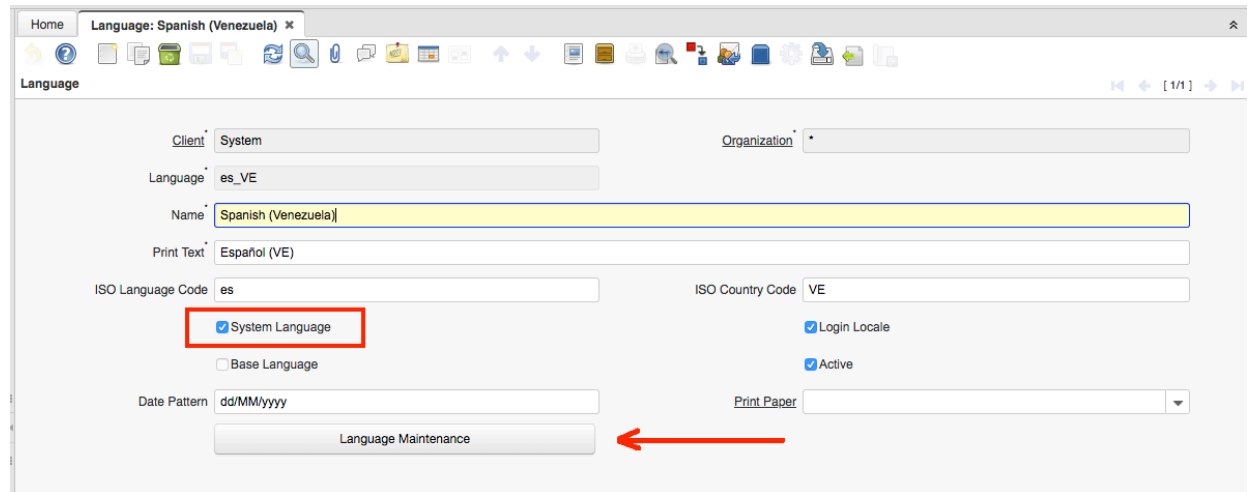
Attach '**AMERP amxeditor.zip**' file

2. Set es_VE as System language

Login idempiere as System in English

Go to Menu: /System Admin/General Rules/System Rules/Language

On Window Language: Locate es_VE or your preferred Language xx_XX



Language es_VE

On Window Language: Check System Language

On Window Language: Execute 'Language Maintenance' Process

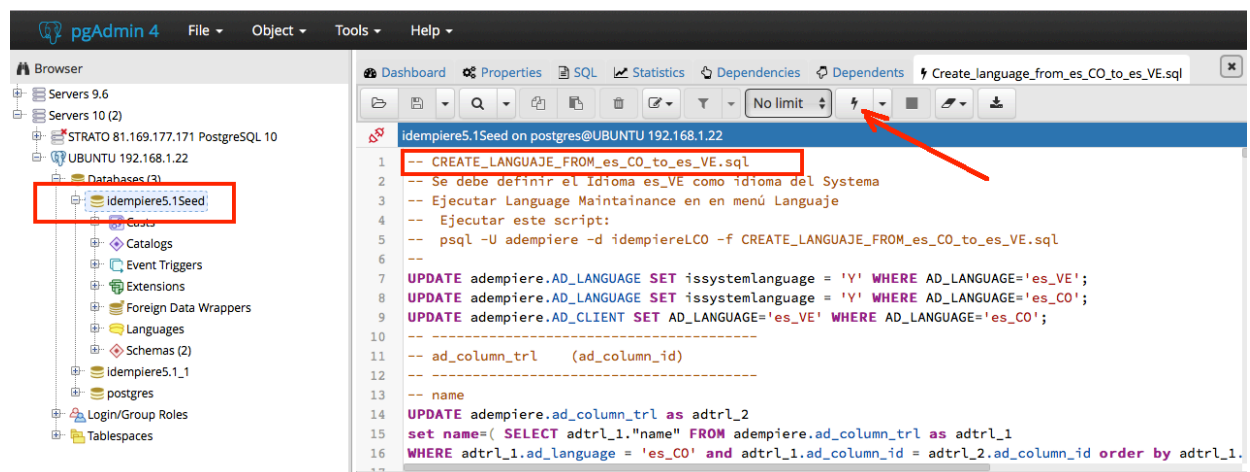
3. Create Language extension for es_VE or xx_XX

Download '[Create_language_from_es_CO_to_es_VE.sql](https://bitbucket.org/amerpssoft/amerpssoft-editors-com/downloads/)' Script from Repository

<https://bitbucket.org/amerpssoft/amerpssoft-editors-com/downloads/>

Execute Query from PostgreSQL environment

You may edit this Query for your favourite Language xx_XX

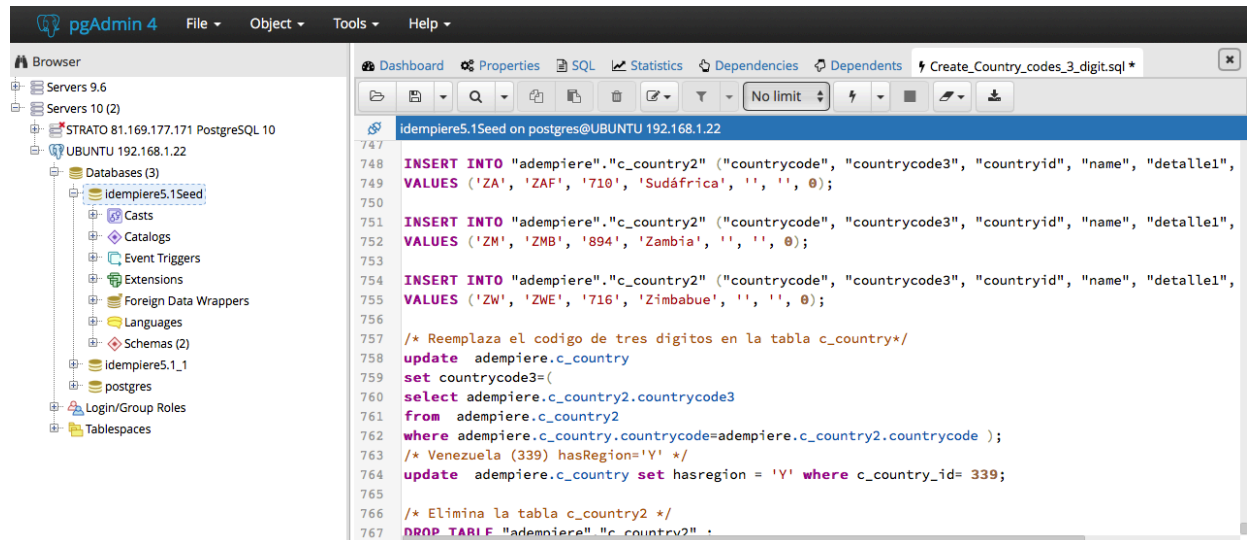


```

1  -- CREATE_LANGUAGE_FROM_es_CO_to_es_VE.sql
2  -- Se debe definir el idioma es_VE como idioma del Sistema
3  -- Ejecutar Language Maintenance en en menú Lenguaje
4  -- Ejecutar este script:
5  -- psql -U adempiere -d idempiereLCO -f CREATE_LANGUAGE_FROM_es_CO_to_es_VE.sql
6  --
7  UPDATE adempiere.AD_LANGUAGE SET issystemlanguage = 'Y' WHERE AD_LANGUAGE='es_VE';
8  UPDATE adempiere.AD_LANGUAGE SET issystemlanguage = 'Y' WHERE AD_LANGUAGE='es_CO';
9  UPDATE adempiere.AD_CLIENT SET AD_LANGUAGE='es_VE' WHERE AD_LANGUAGE='es_CO';
10
11  -- ad_column_trl (ad_column_id)
12  --
13  -- name
14  UPDATE adempiere.ad_column_trl as adtrl_2
15  set name=( SELECT adtrl_1.name FROM adempiere.ad_column_trl as adtrl_1
16  WHERE adtrl_1.ad_language = 'es_CO' and adtrl_1.ad_column_id = adtrl_2.ad_column_id order by adtrl_1.
  
```

4. Add country code 3 digits

Download Script '**Create_Country_codes_3_digit.sql**' from Repository
 Execute Query from PostgreSQL environment
 This Fill countryCode3 Fields on **C_Country** Table



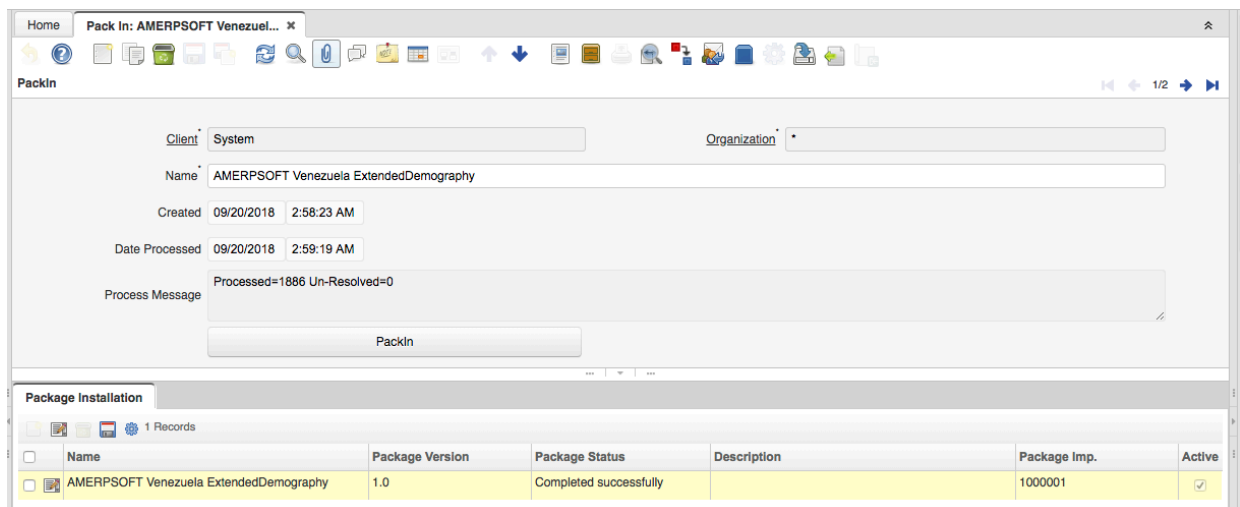
```

747
748 INSERT INTO "adempiere"."c_country2" ("countrycode", "countrycode3", "countryid", "name", "detalle1",
749 VALUES ('ZA', 'ZAF', '710', 'Sud frica', '', '', 0);
750
751 INSERT INTO "adempiere"."c_country2" ("countrycode", "countrycode3", "countryid", "name", "detalle1",
752 VALUES ('ZM', 'ZMB', '894', 'Zambia', '', '', 0);
753
754 INSERT INTO "adempiere"."c_country2" ("countrycode", "countrycode3", "countryid", "name", "detalle1",
755 VALUES ('ZW', 'ZWE', '716', 'Zimbabwe', '', '', 0);
756
757 /* Reemplaza el codigo de tres digitos en la tabla c_country*/
758 update adempiere.c_country
759 set countrycode3=(
760 select adempiere.c_country2.countrycode3
761 from adempiere.c_country2
762 where adempiere.c_country.countrycode=adempiere.c_country2.countrycode );
763 /* Venezuela (339) hasRegion='Y' */
764 update adempiere.c_country set hasregion = 'Y' where c_country_id= 339;
765
766 /* Elimina la tabla c_country2 */
767 DROP TABLE "adempiere"."c_country2" ;
    
```

5. Pack IN Venezuela Extended Demography

Download '**Venezuela ExtendedDemography.zip**' from repository:
<https://bitbucket.org/amerpssoft/amerpssoft-editors-com/downloads/>

Create Pack In record and Attach: '**Venezuela ExtendedDemography.zip**'



Client: System Organization: *

Name: AMERPSOFT Venezuela ExtendedDemography

Created: 09/20/2018 2:58:23 AM

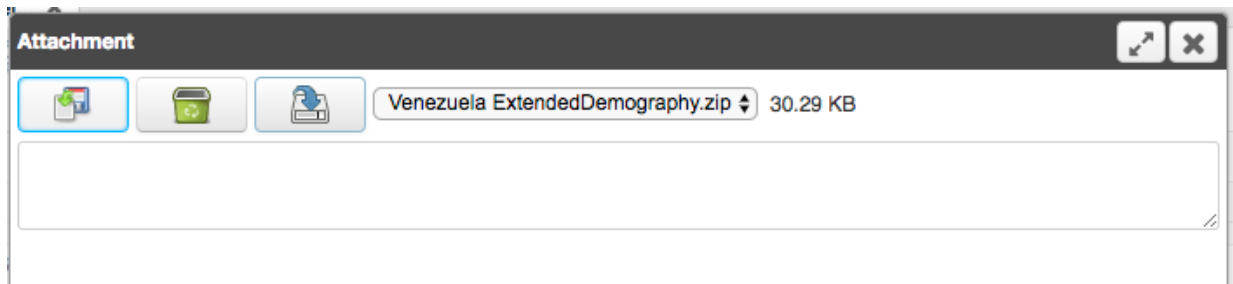
Date Processed: 09/20/2018 2:59:19 AM

Process Message: Processed=1886 Un-Resolved=0

Pack In

Name	Package Version	Package Status	Description	Package Imp.	Active
AMERPSOFT Venezuela ExtendedDemography	1.0	Completed successfully		1000001	<input checked="" type="checkbox"/>

Pack In '**Venezuela ExtendedDemography.zip**'

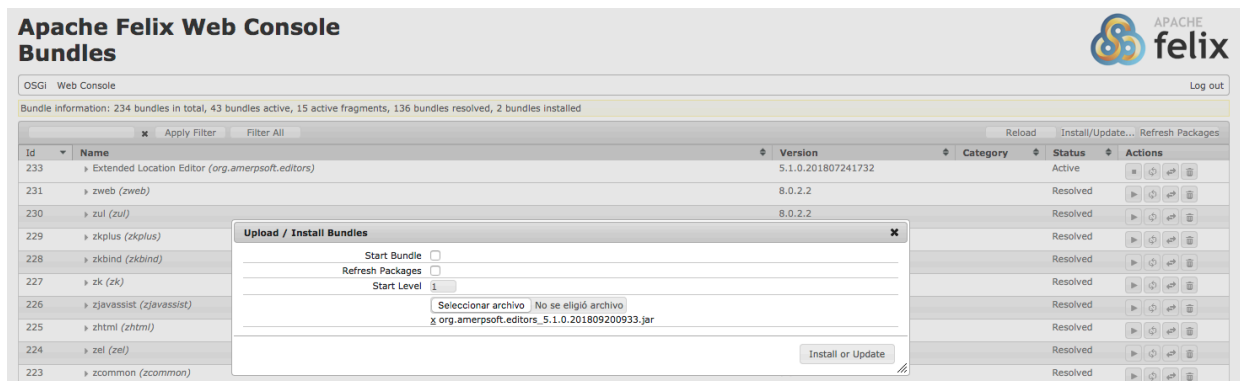


Attach '**Venezuela ExtendedDemography.zip**' file

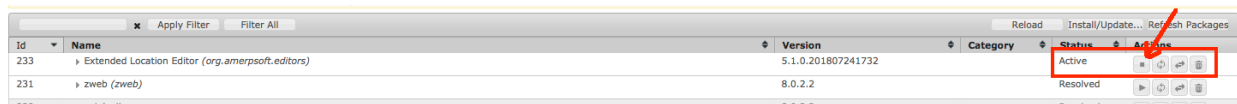
You may look at '**GeografiaVenezolanaCompleta.sql**'
And make your Country Extended Demography Pack In.

6. Install Plugin using Apache Felix Web Console

Download '**org.amerpsoft.editors_5.1.0.201809200933.jar**' from repository:
<https://bitbucket.org/amerpsoft/amerpsoft-editors-com/downloads/>
May be another version, check last one.



Verify plugin is updated and running.



7. Restart Server

You must restart Idempiere Server in order to accomplish the changes.

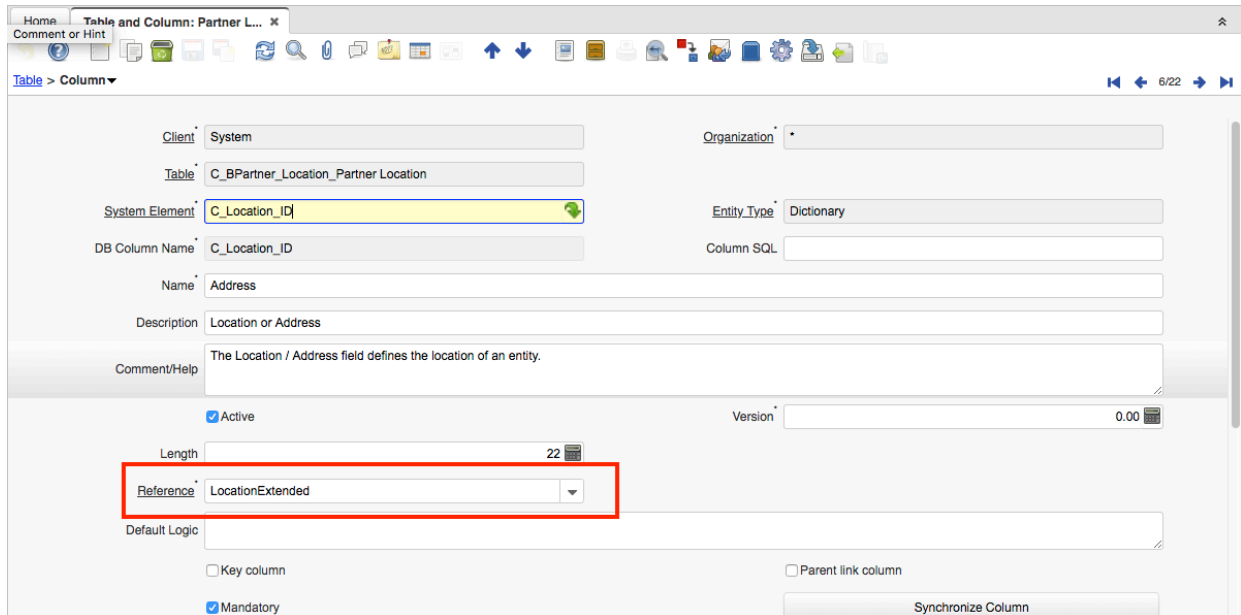
8. Modify C_BPartner_Location Table

Login idempiere as System in English
Go to Menu: /Application Dictionary/ Table and Column

On Window Table and Column: Locate C_BPartner_Location Table

On Tab Column: Locate C_Location_ID Field

Change Reference to '**LocationExtended**'



9. Modify Country Record

Login idempiere as System in English

Go to Menu: /System Admin/General Rules/System Rules/Country Community ...

This is the new window for Country Maintenance added from plugin.

Check:

- Country has Community
- Country Regions has Municipality
- Country Municipality has Parish

Modify Capture Sequence as explained on Chapter 5:

@CO@ @A1!@ @A2@ @A3@ @A4@ @R!@ @MU@ @PA@ @C@, @P@

This sequence indicates plugin order on Field capture.

Home Country Community Region Mu... x

Country [1/1]

Client: System Organization: *

Name: Venezuela

Description: Venezuela

ISO Country Code: VE Country Code 3: VEN

☒ Country has Region Region:

☒ Country has Community ☒ Country Regions has Municipality ☒ Country Municipality has Parish

☒ Allow Cities out of List

Address Print Format: @C@, @P@

Capture Sequence: @CO@ @A1!@ @A2@ @A3@ @A4@ @R!@ @MU@ @PA@ @C@, @P@

Phone Format:

Postal Code Format: ☐ Additional Postal code

Capture Sequence