# Policy Center

# Lesson Outline

- Data Model
- Extending Entities
- Creating Entities
- Creating Typelist
- Adding Typefilter
- Data Dictionary

# Data Model

# Configuration

3 Tier Architecture

- Data Tier – Data Model Entity
- Presentation Tier – PCF file
- Application Tier – Gosu Class

# Data Tier

- Data Model - set of data objects and information about their relationships

- Every Guidewire data model includes :

  - Entity
  - Entity Field
  - Typelist

# Entity

- Business objects stored in its own database table. Eg : ABContact, ABUser

**ABContact**

ID
Name
CreateTime
PrefersContactByEmail
Score
AssignedUser
AllAddresses
VendorType
…

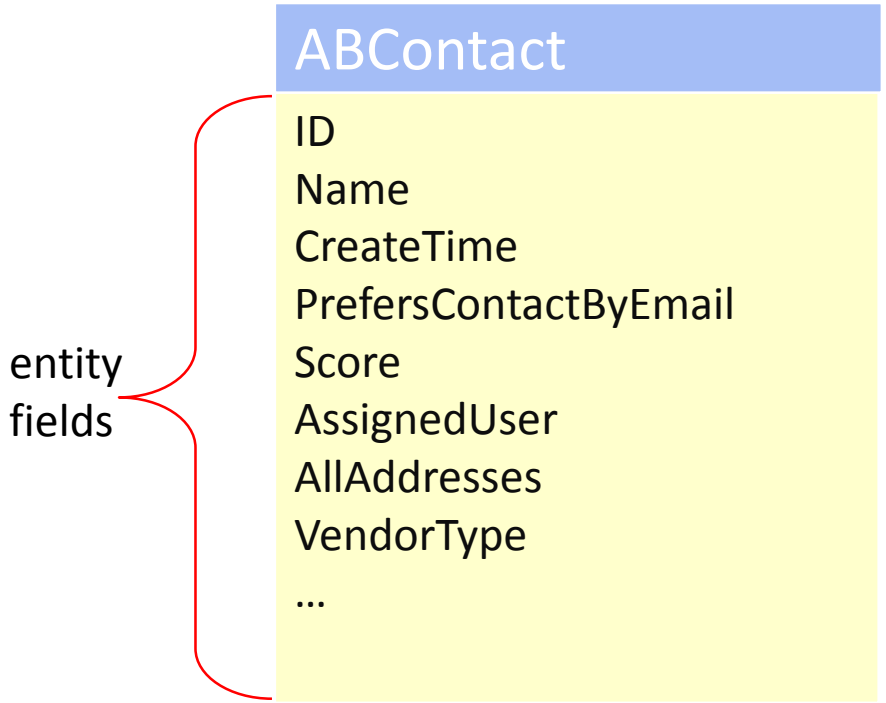
Table - dbo.ab_abcontact*

| | ID | Name | CreateTime | PrefersContact... | Score | AssignedUser |
|---|---|---|---|---|---|---|
| | 64 | United Natural Foods Inc | 9/4/2009 1:51:32 PM | False | NULL | 2 |
| | 65 | 3M | 9/4/2009 1:51:32 PM | False | NULL | 3 |
| | 74 | Express Auto | 9/4/2009 1:51:32 PM | False | 81 | 3 |
| | 75 | European Autoworks | 9/4/2009 1:51:32 PM | True | NULL | 4 |
| | 76 | M B Garage | 9/4/2009 1:51:32 PM | False | NULL | 7 |
| | 77 | Burlingame Saab | 9/4/2009 1:51:32 PM | False | NULL | 2 |
| | 78 | Menlo Park Chevron | 9/4/2009 1:51:32 PM | True | 72 | 6 |
| | 79 | Cupertino's Smog Pro and Auto Repair | 9/4/2009 1:51:32 PM | False | NULL | 2 |
| | 80 | Meinecke Car Care Center | 9/4/2009 1:51:32 PM | False | NULL | 2 |
| | 81 | Morgan Hill Auto Body | 9/4/2009 1:51:32 PM | False | NULL | 2 |
| | 82 | Hollister Muffler and Quick Lube | 9/4/2009 1:51:32 PM | True | NULL | 2 |

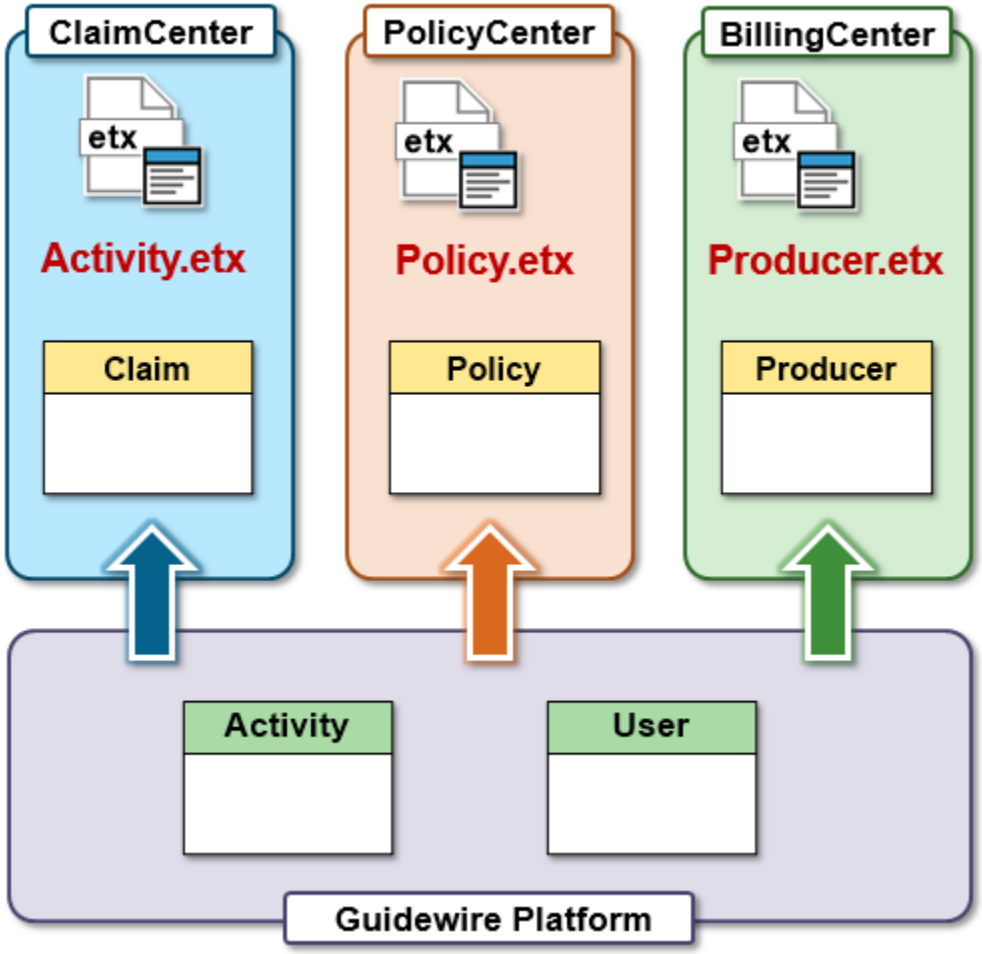
# Entity Fields

- Value (or set of values) used to define the state or nature of a specific instance of the entity. Eg : ABContact's Name field

- Four general types of entity fields
  - Data key – to store data
  - Foreign key – to refer entity
  - Array key – to refer array of entity
  - Type key – to refer typelist



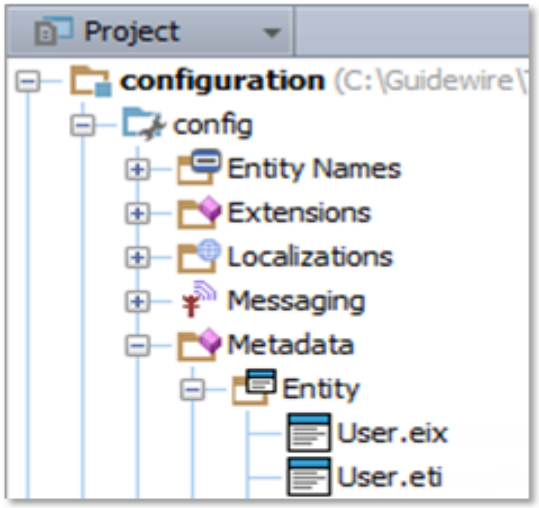
# Layers of Entity



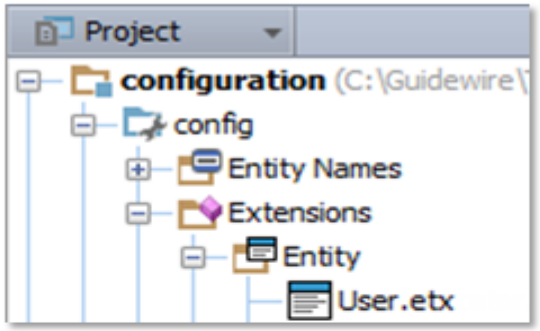

- Platform-level entities “eti” are common to all Guidewire applications
- Application-level entities “eix” are specific to given application
- Entities extensions “etx” are addons to the existing entities

# Project View

…\metadata\entity\




…\extensions\entity




- Read-only files
  - Entity (ETI)
  - Internal entity extension (EIX)

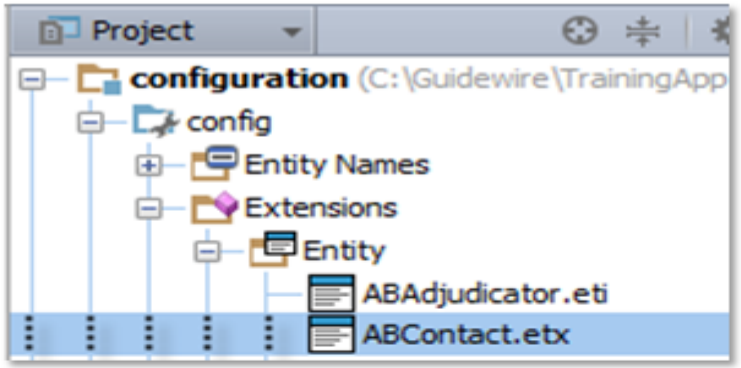

- Editable files
  - Entity (ETI)
  - Entity extension (ETX)

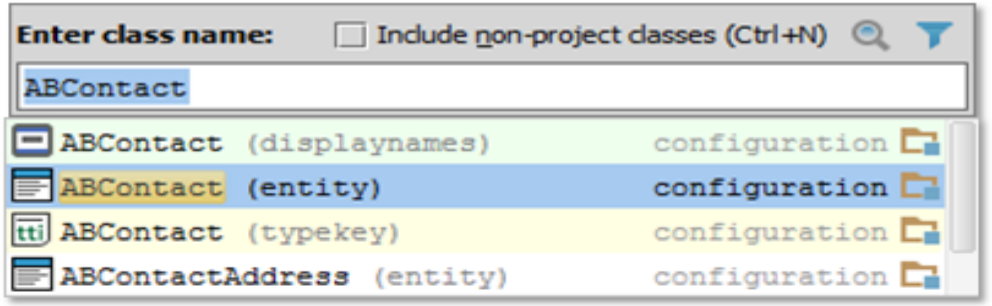
# Extending Entity

# Steps to edit an entity extension

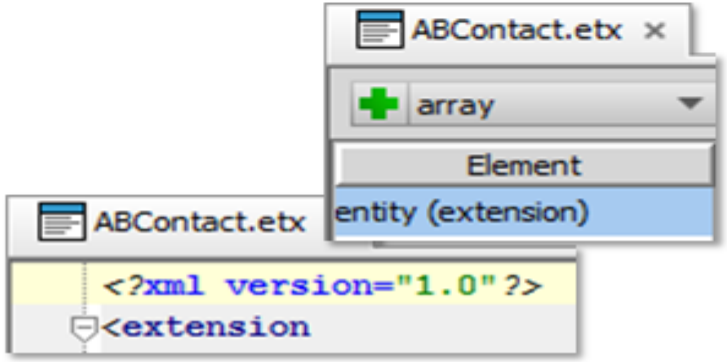
1. Navigate to the entity extension
2. Add elements and specify attribute values
3. Optionally regenerate the dictionary
4. Deploy the extension entity

# Step 1: Navigate to the entity extension

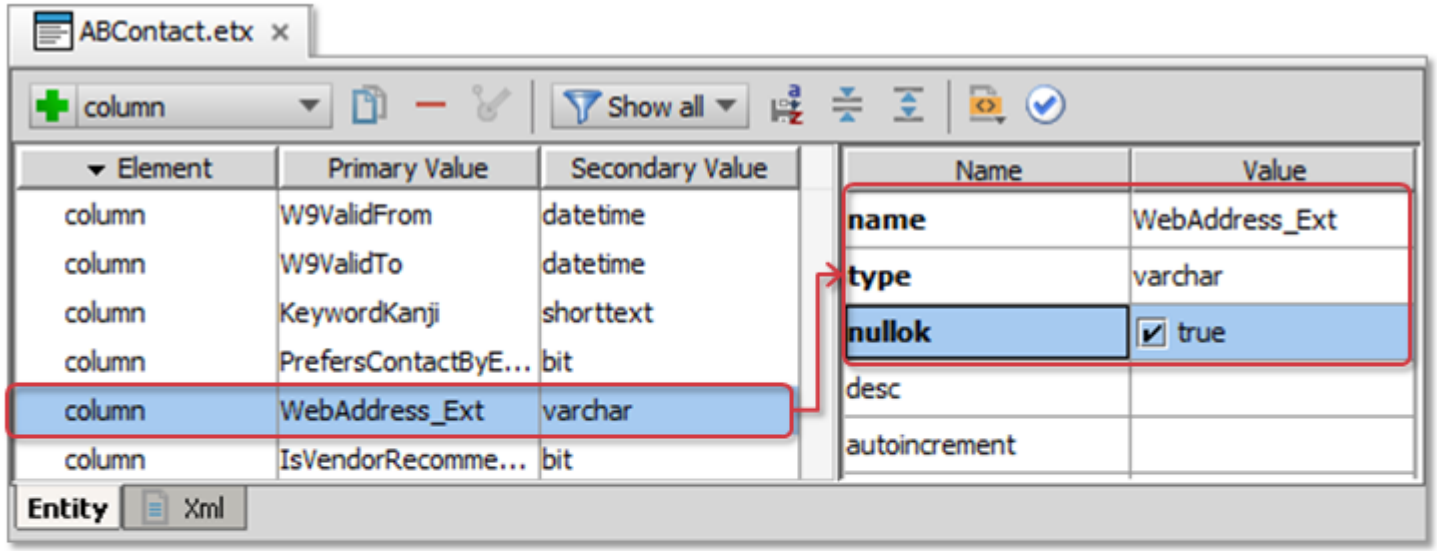



- Navigate to an entity in **…\Extensions\Entity**
  - Project View or using CTRL+N
- Verify that you have selected an entity extension file (ETX)
  - Top element reads entity (extension)
  - XML is <extension />



# Step 2: Add elements and define attributes




- Toolbar to add an element for a field, e.g., <column />
- Define element attributes
  - Name is the name of the field; Use _Ext for field name ending
  - Type is the data type
  - Nullok defaults to false, so set to true in most cases

# Step 3: Optionally regenerate dictionary

- **`gwXX regen-dictionary`**
- Process builds entire entity model including base and custom entities
- Identifies errors in the data model beyond Entity Editor schema validation

```
C:\Guidewire\TrainingApp\bin>gwta regen-dictionary
regen-entity-model-xml:
=======================================================
= Running main class:
  com.guidewire.tools.dictionary.data.EntityModelXmlTool
     [java] --- Guidewire Entity Model In Xml ---
…
ERROR Errors found in ABContact
ERROR Attribute 'value' in element 'columnParam' is required.
ERROR ColumnIsValid - The column "WebAddress_Ext" on entity
      "ABContact" declares an invalid data type, "varchar". null
```

# Step 4: Deploy the entity extension

Restart Server

- Entity Extension


- bin command window
  - **`gwXX dev-stop`**
  - **`gwXX dev-start`**

# Task – Extend Entity

- Create extension BACost.etx to capture the following information.
  - Currency_Ext – varchar of 20 characters
  - Fees_Ext - integer

# Creating Entity

# Steps to create a custom entity

1. Create the entity file
2. Add elements and specify attribute values
3. Optionally regenerate the dictionary
4. Deploy the custom entity

# Task – Create Entity

- Create a new entity named HouseDetails_Ext.eti and add the following elements :
  - HouseNumber – integer
  - HouseName – varchar
  - FoundationDate - dateonly

- Create a new entity named RouteDetails_Ext.eti and add following elements :
  - RoadName – varchar
  - OfficeDistance – integer
  - BusFare – money

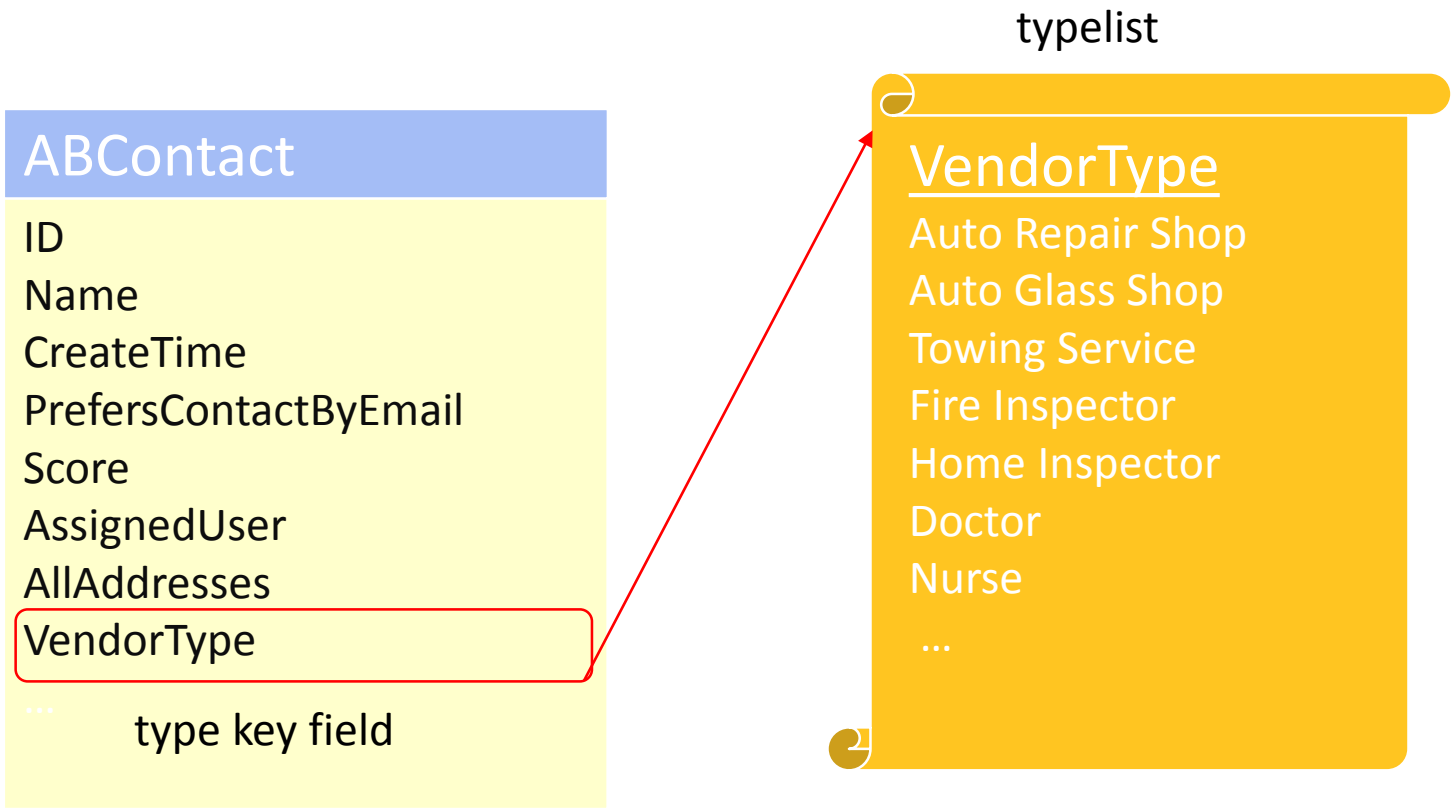
- Add a foreign key from PolicyPeriod to HouseDetails_Ext

- Add an array key from HouseDetails_Ext to RouteDetails_Ext

# Typelist

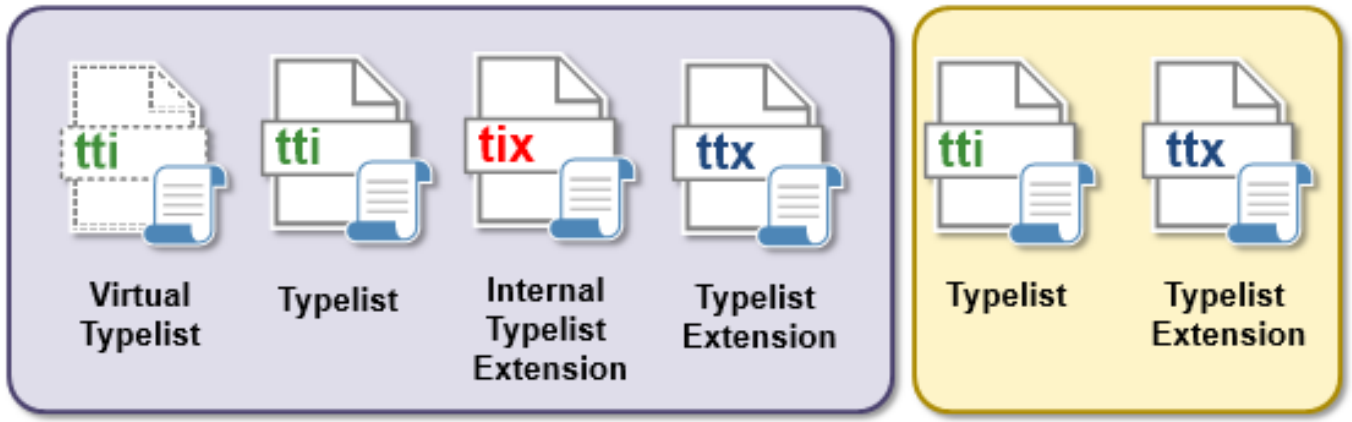
# Typelist

- Predefined list of values that constrains a field



# Kinds of Typelist

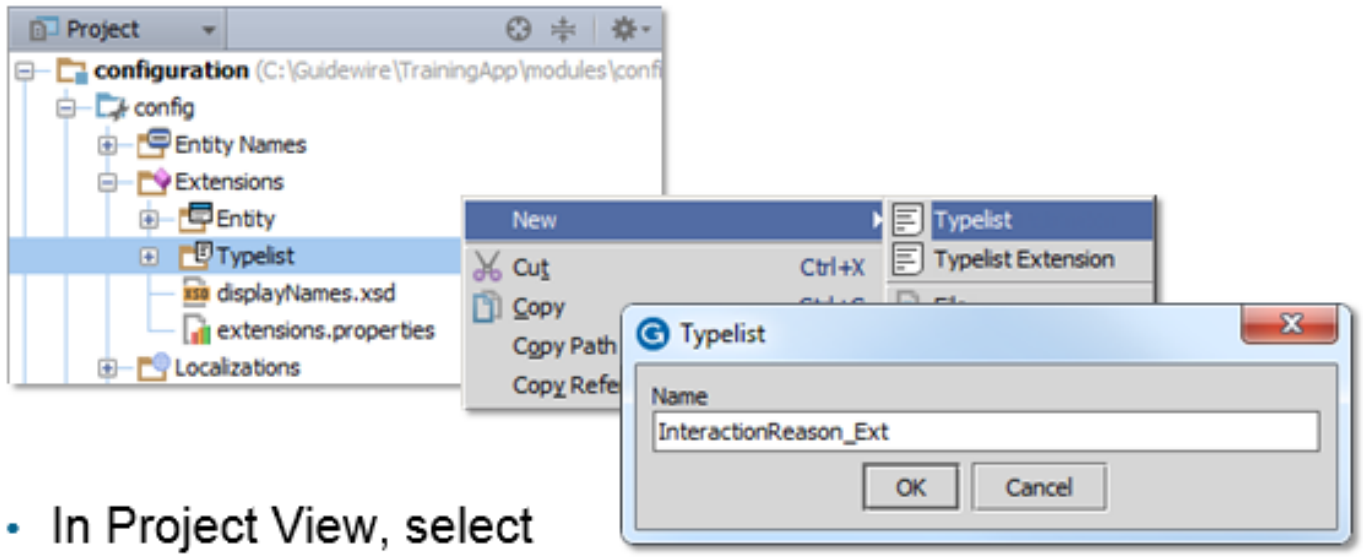
- Internal
  - Internal base application logic
  - Cannot modify or extend
  - Read-only
- Extendable
  - Base application
  - Can modify typelist or typelist extension
- Custom
  - Customer creates as part of custom configuration



# Steps to create a typelist

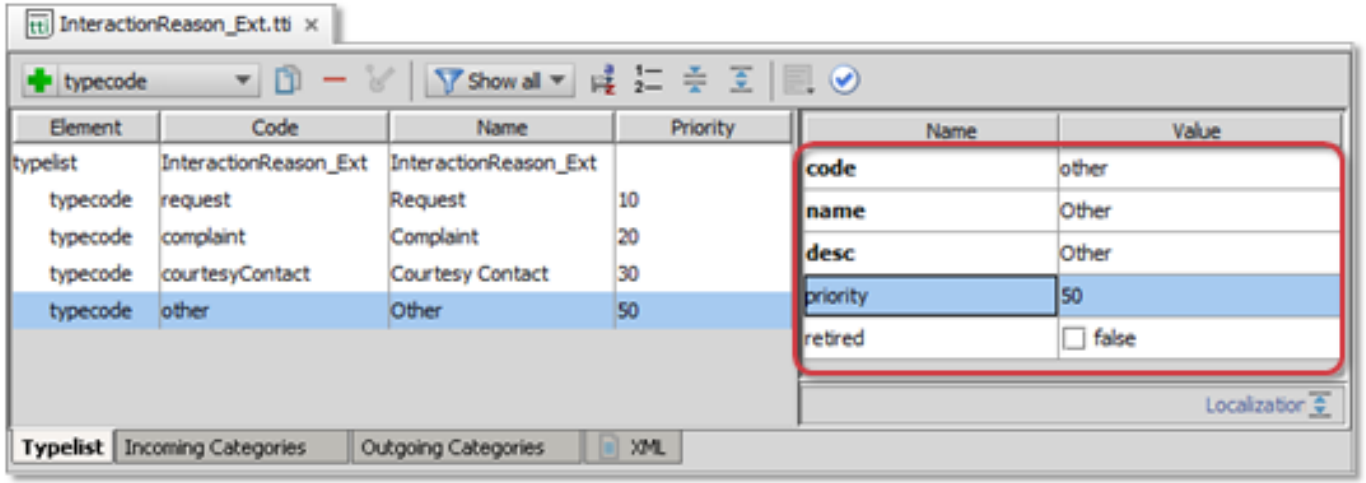
1. Create the typelist file
2. Define typecodes
3. Optionally regenerate the dictionary
4. Deploy the typelist

# Step 1: Create the typelist file




- In Project View, select .../config/Extensions/Typelists
  - Context menu → New → Typelist
- Typelist dialog
  - Naming convention is for custom typelists to end in _Ext
  - Example: InteractionReason_Ext

# Step 2: Define typecodes




- Add new typecodes with toolbar or context menu and define typecode attributes in the Name Value pane
  - Code is internal reference, must be unique within typelist, <=50 characters and contain alphanumeric values
  - Name is the default for when displayed in the user interface and Desc for the data dictionary
  - Priority is the sort order

# Step 3: Optionally regenerate dictionary

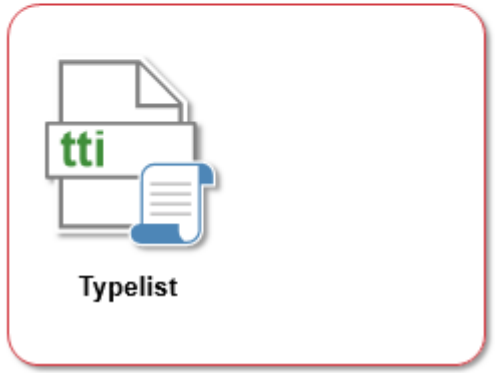
- **gwXX regen-dictionary**
- Process builds entire entity model including base and custom typelists
- Identifies errors in the data model beyond Typelist Editor schema validation

```
C:\Guidewire\TrainingApp\bin>gwta regen-dictionary
regen-entity-model-xml:
=======================================================
= Running main class:
  com.guidewire.tools.dictionary.data.EntityModelXmlTool
     [java] --- Guidewire Entity Model In Xml ---
…
ERROR Errors found in DoctorSpecialtyType
ERROR TypelistCategoriesValidator - Typecode
      DoctorSpecialtyType.Critical Care Medicine refers to a
      non-existent category
```

# Step 4: Deploy the typelist

Restart Server

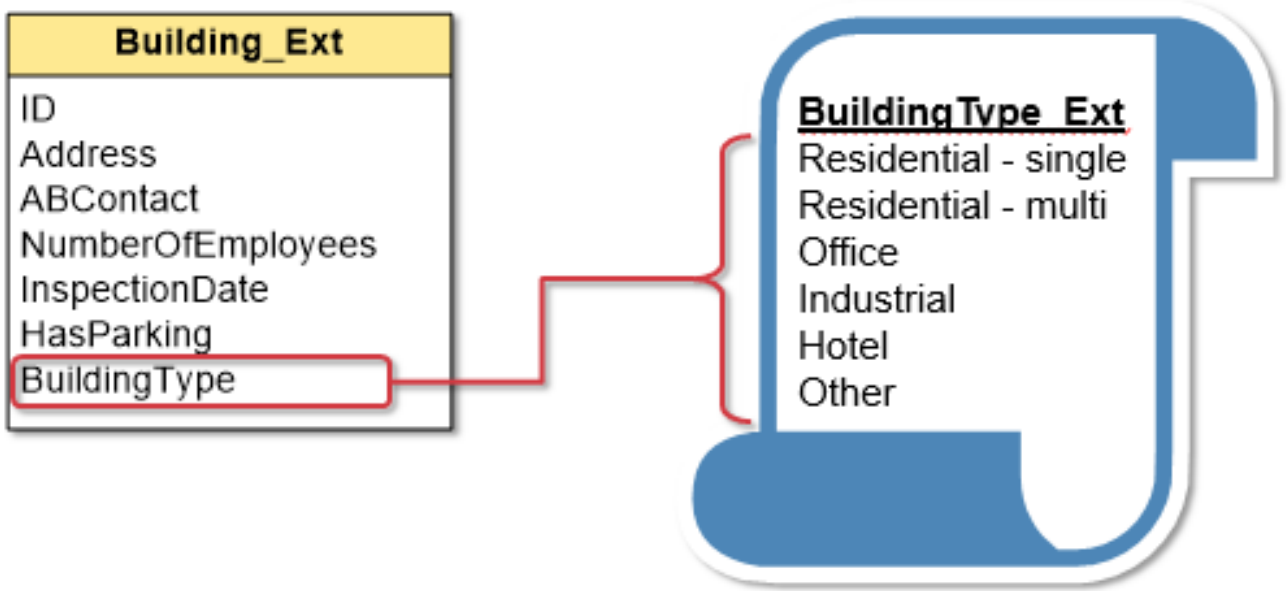
- Typelist



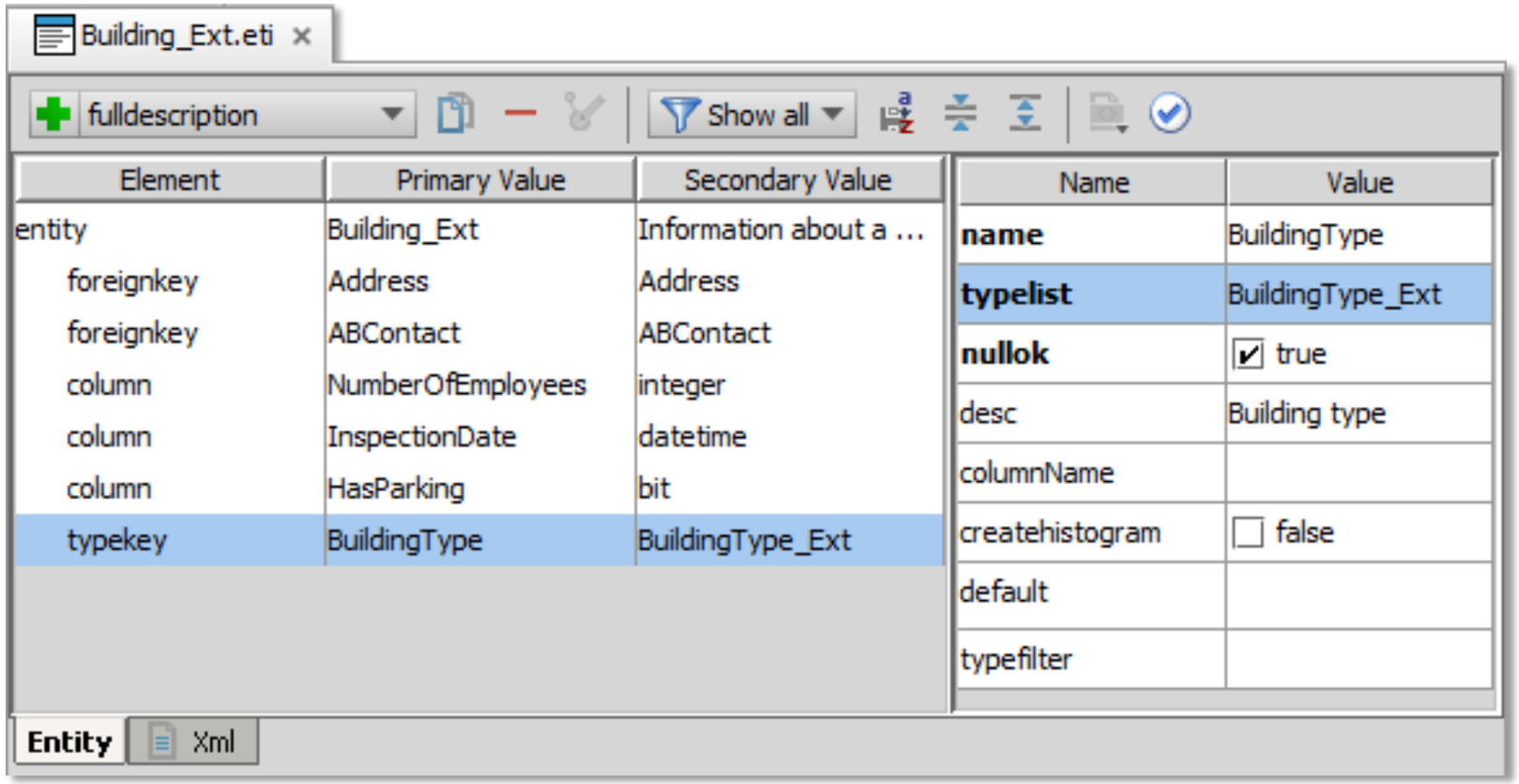

- bin command window
  - **`gwXX dev-stop`**
  - **`gwXX dev-start`**

# Defining Typekey fields

- A **typekey field** is an entity defined field associated with a specific typelist
- Referenced typelist contains typecodes whose values are the only possible value for the typekey field



# Entity configuration: typekey



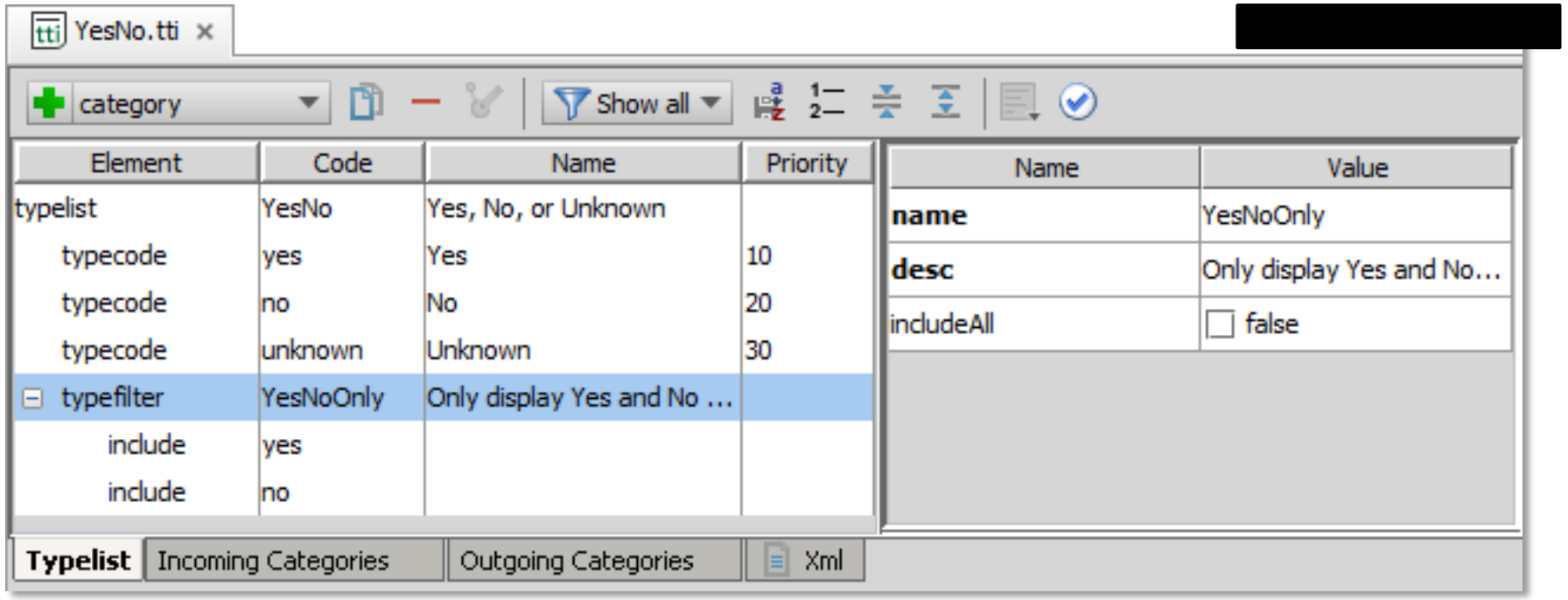
# Task – Create Typelist

- Create a typelist Occupation_Ext.tti and add the following codes:
    - Doctor
    - Nurse
    - Lawyer
    - Police
- Add a typekey in HouseDetails_Ext to refer this typelist

# Type Filter

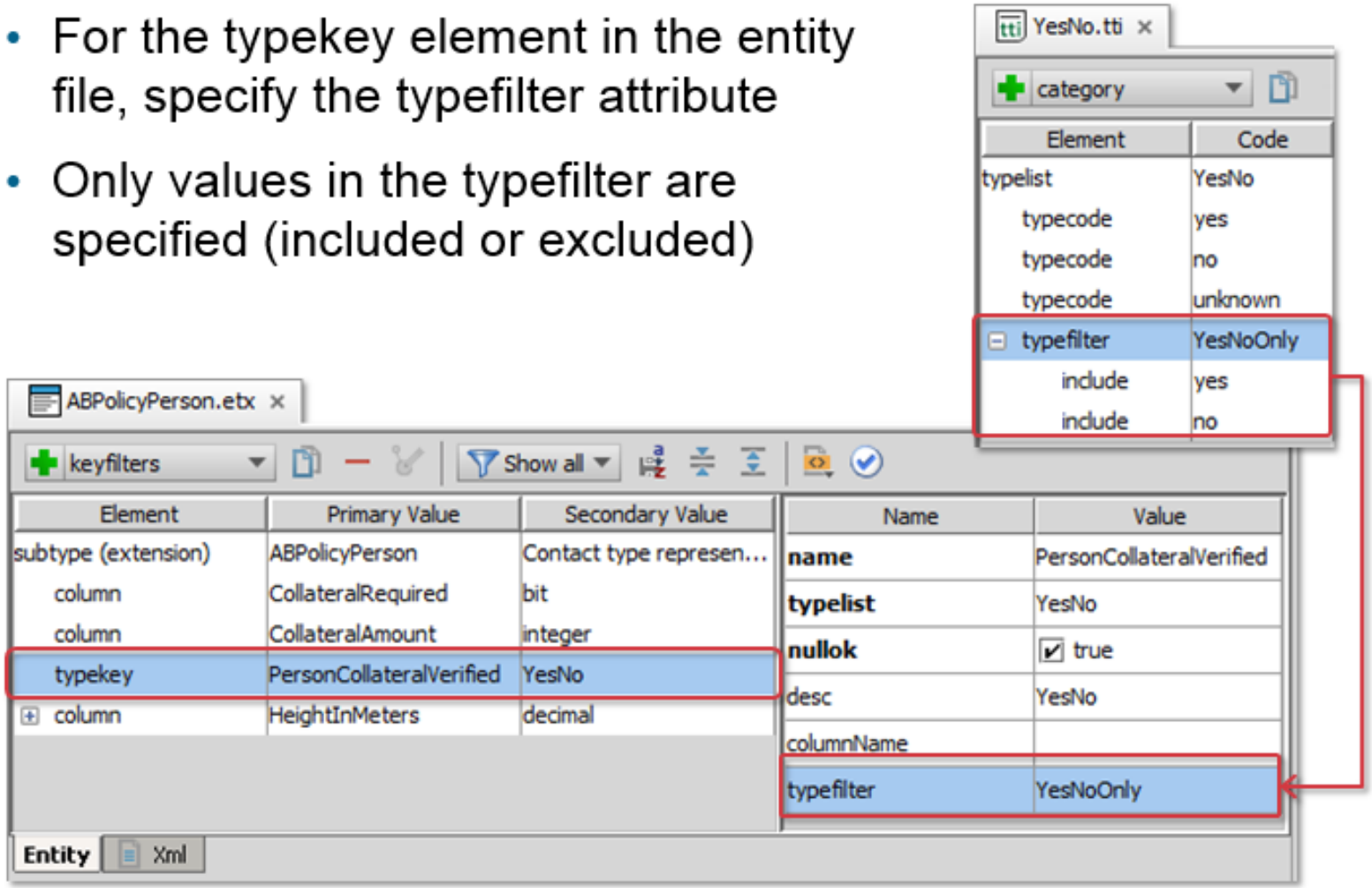
# Typelist filters

- A **typelist filter** defines a subset of typecodes in the typelist
- Configure filters for typelists to filter available typecodes
- Example: YesNoOnly typefilter



# Referencing a typelist filter

- For the typekey element in the entity file, specify the typefilter attribute
- Only values in the typefilter are specified (included or excluded)



# Task – Create Type Filter

- Create typefilter to display occupation related to Hospital
- Refer the typefilter in HouseDetails_Ext

# Data Dictionary

# Data Dictionary

- Documents the entities and typelists in the application

- <install directory>\build\dictionary\data\index.html

  Eg : C:\PolicyCenter\build\dictionary\data\index.html

- To regenerate dictionary, from bin directory, execute:

  gwXX regen-dictionary

# Summary

- Data Modal
  - Entity – eti , eix , etx
  - Entity Fields – define the state or nature of a specific instance of the entity
  - Typelists – tti , tix , ttx

- Extending and Creating Entities
  - Datakey – eg.HouseName
  - Arraykey – eg. RouteDetails
  - Foreignkey – eg. HouseDetails

- Typelist and Typefilters
  - Typekey – eg. Occupation
  - TypeFilter – eg. Hospital

- Data Dictionary - Documents the entities and typelists in the application
  - gwXX regen-dictionary

# Thank You