

GeneXus[™]
The power of doing

Integration

GeneXus™ 16



Of all that we saw in the introduction referred to integration, here we will only delve into two aspects: the integration with ODATA and the Artificial Intelligence api to integrate with the services provided by the most important providers of cognitive services.



Services

SOAP

OPEN API (Rest)

+

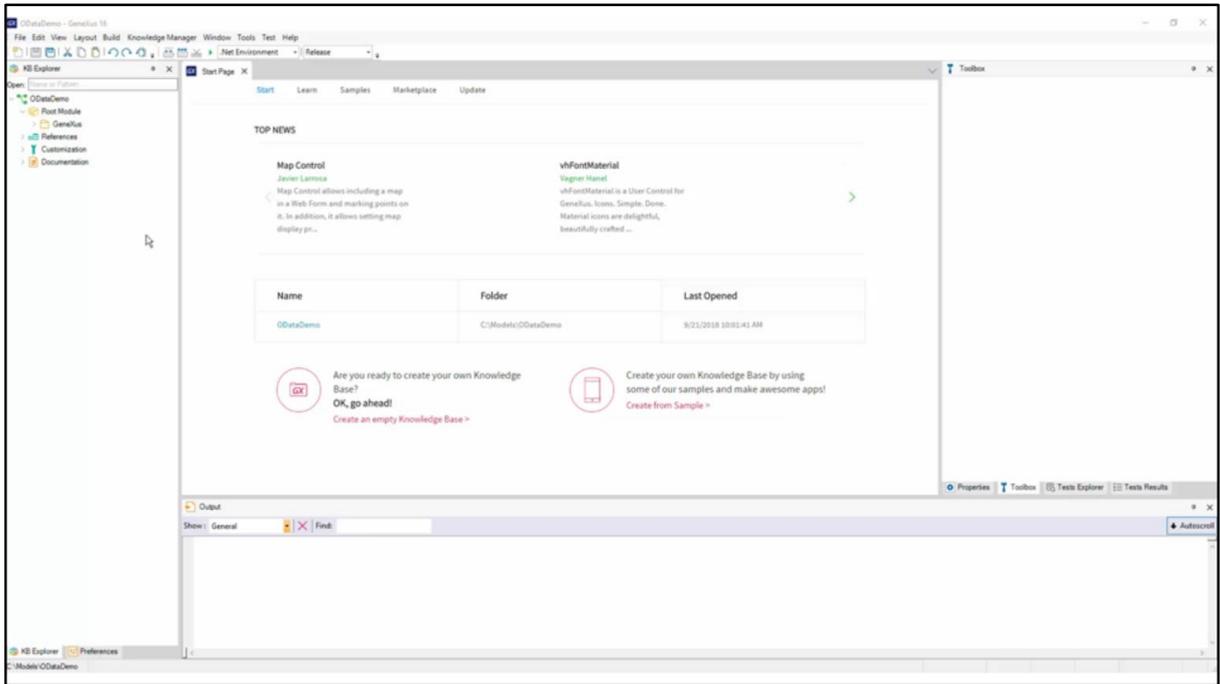
Services through Data Stores

ODATA



Data View → Transaction → Attributes → for each





Artificial Intelligence

Artificial Intelligence

IBM Watson

Microsoft Cognitive Services

SAP Leonardo

Google Cloud Services

Amazon Web Services

Artificial Intelligence

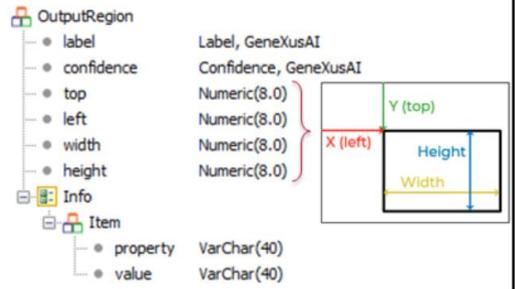
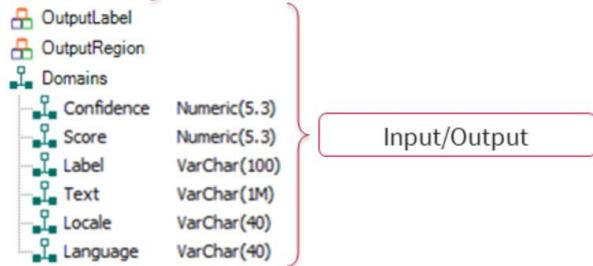
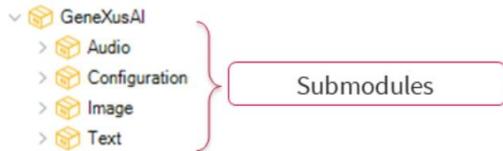
The screenshot shows the GeneXus 16 application window. The menu bar includes File, Edit, View, Layout, Build, Knowledge Manager, Window, Tools, Test, and Help. The Knowledge Manager menu is open, displaying options: Export, Import, Team Development, Manage Modules, and View Last Imports. A list of modules is shown below the menu:

- Chatbot (2.1.0.126994)**
GeneXus Chatbot module is a basic set of interfaces and implementations of data structures and algorithms needed to implement a Chatbot solution.
- GeneXusAI (1.1.0.126994)**
GeneXusAI contains a common set of Artificial Intelligence tasks, including audio, text and image. An **Install** button is visible next to this module.
- GeneXus (2.1.1.127083)**
GeneXus Core Module is a basic set of interfaces and implement data structures and algorithms to solve common programming us

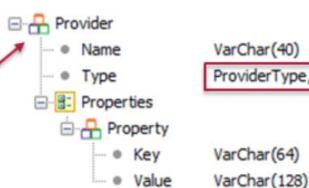
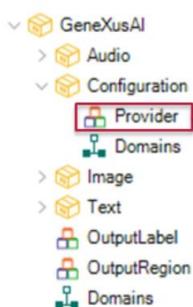
To the right of the module list is a tree view under the heading **MyKB**:

- > Main Programs
- > Root Module
- > References
 - > GeneXus
 - > **GeneXusAI** (highlighted with a red box)
 - > Customization
 - > Documentation

Artificial Intelligence



Artificial Intelligence



VarChar(40)
 ProviderType, GeneXusAI.Configuration

ProviderType	
Name	Description
Amazon	Amazon Web Services
Baidu	Baidu AI Services
Google	Google Cloud Services
IBM	IBM Watson Services
Microsoft	Microsoft Azure Cognitive Services
SAP	SAP Leonardo Services

```

&provider.Name = '!watson-tts'
&provider.Type = ProviderType.IBM
    
```

Every service has its own configuration properties.
 e.g. TextToSpeech for Watson use User/Pass

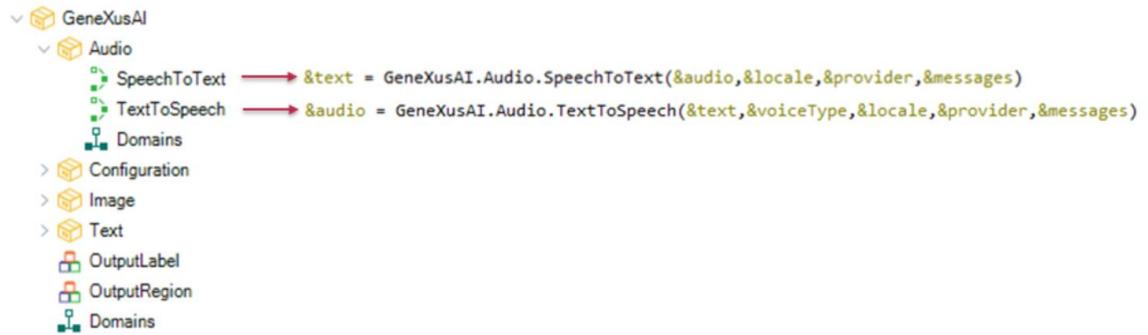
```

&prop = new()
&prop.Key = PropertyKey.Username
&prop.Value = '!****'
&provider.Properties.Add(&prop)

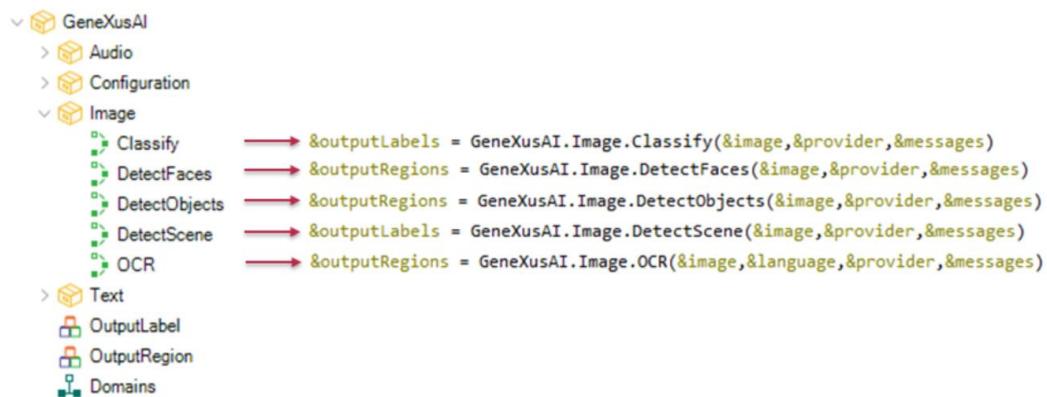
&prop = new()
&prop.Key = PropertyKey.Password
&prop.Value = '!****'
&provider.Properties.Add(&prop)
    
```

PropertyKey	
Name	Description
Key	Service Access Key
Username	Service Access Username
Password	Service Access Password
Deploy	Service Deploy Identifier

Artificial Intelligence



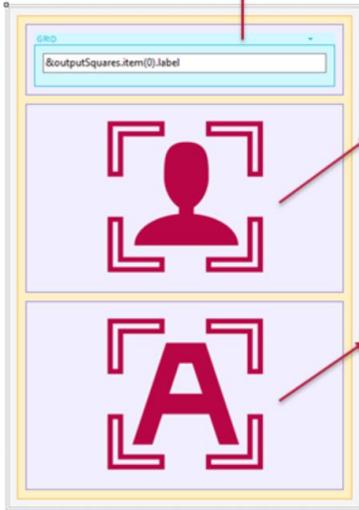
Artificial Intelligence





Proof of Concept

Artificial Intelligence



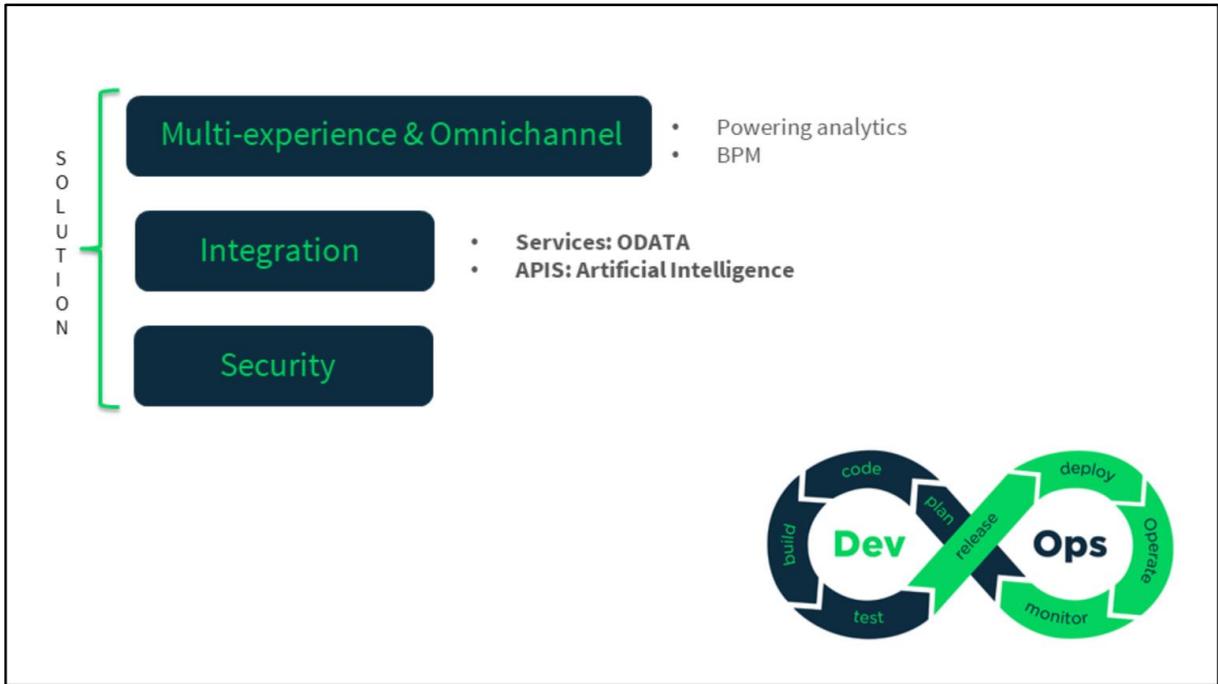
Control Info	
Control Type	SD Image Map
Auto Grow	False
Image	GXAI_Cam_Placeholder
Horizontal Coordinate Attribute	&outputSquares
Horizontal Coordinate Field Specifier	item(0).left
Vertical Coordinate Attribute	&outputSquares
Vertical Coordinate Field Specifier	item(0).top
Size Attribute	&outputSquares
Size Field Specifier	item(0).size

```

Event 'DetectFaces'
Composite
  if NOT &image.IsEmpty()
    &outputRegions = DetectFaces(&image,&provider,&Messages)
    do 'Reload'
  else
    msg("Nothing to recognize faces")
  endif
EndComposite
Endevent

Sub 'Reload'
  Grid1.SetBackgroundImage(&image)
  &outputSquares = SquareRegions(&outputRegions)
  Grid1.Refresh()
EndSub

Event 'OCR'
Composite
  if NOT &image.IsEmpty()
    &outputRegions = OCR(&image,&language,&provider,&Messages)
    do 'Reload'
  else
    msg("Nothing to recognize characters")
  endif
EndComposite
Endevent
  
```



In this section we saw these aspects of integration.

In what follows we will enter into the third great point in what it does to the developed solution: the security aspects, added to how to improve the data analysis with reporting, and the changes in BPM.

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