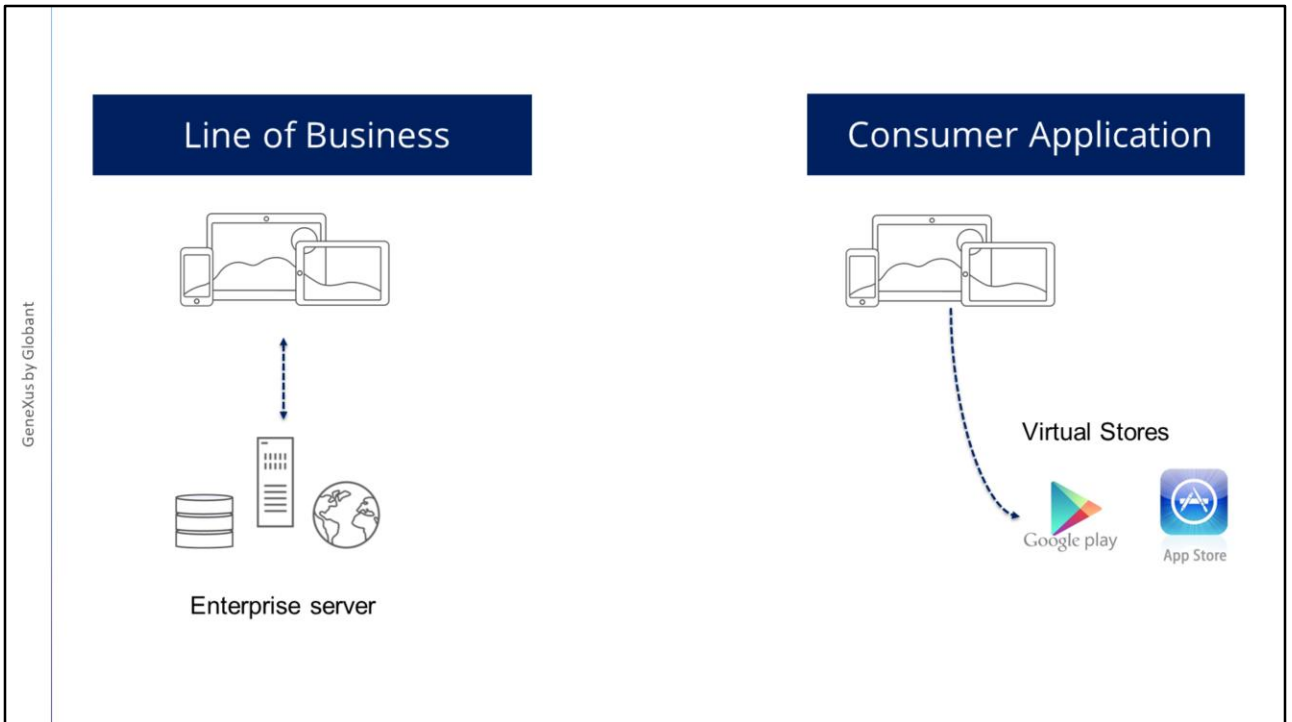


Deployment of a Native Mobile App



Rodolfo Roballo

In this video, we will see how to deploy the components of a native application, including the services on the production server and the compiled file that, depending on the case, will be uploaded to each platform's stores or distributed directly to the user, to then be installed on the device.



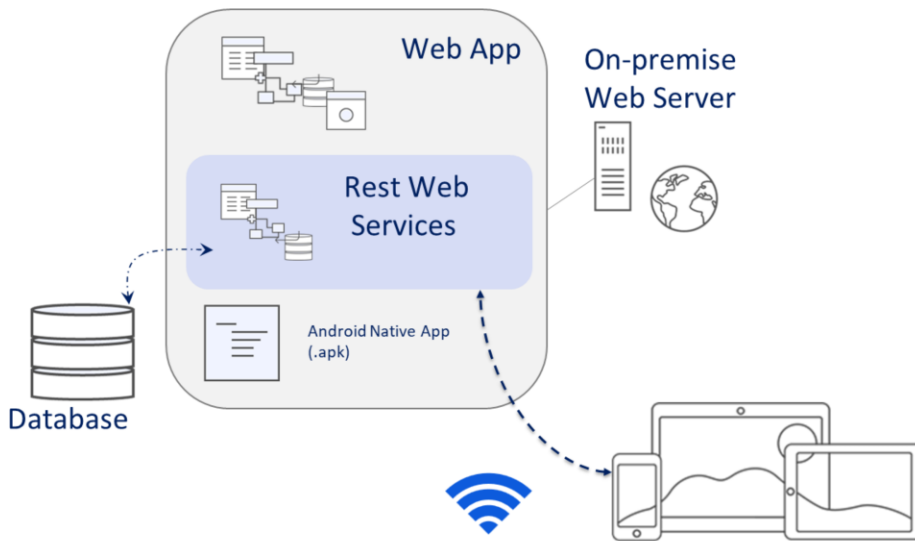
As we saw at the beginning of the course, there are different types of applications depending on their intended use. One of these types are corporate applications for back-office tasks, such as data entry and maintenance, to be performed from the smart device. These applications are called Line of Business applications.

In addition, a major market for mobile applications is that of Personal Use applications, which are called Consumer Applications.

When we develop a native application, we usually deploy or publish it in the online shops offered by the different platforms.

However, many corporate applications cannot be published in online stores because they must only be accessible to the company's members, not to any user.

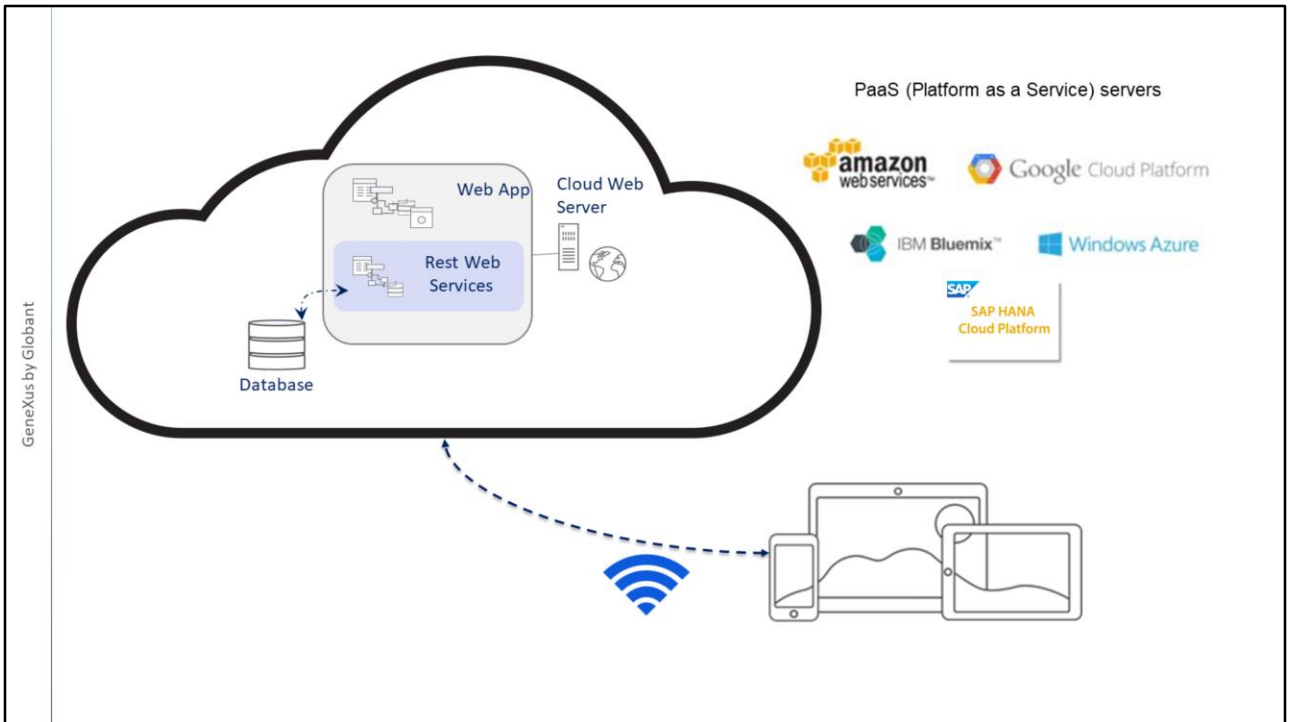
In this case, the application has to be available in one of the company's internal servers, which must be accessible over the Internet.



When we studied the architecture of native mobile applications, we saw that the services must be on a web server and that the compiled application must be installed on the mobile device.

If a private company server is to be used, it must be accessible by the devices so that they can access the REST services. Since the devices connect to these services via WiFi, the company's server must be on the same network as the devices and be accessed through the local network or a VPN as applicable.

In the case of an Android application, we can also copy the compiled native application (.apk) so that it can be downloaded later by the company's employees using the QR code published on its Intranet, or by sending the link to the file.



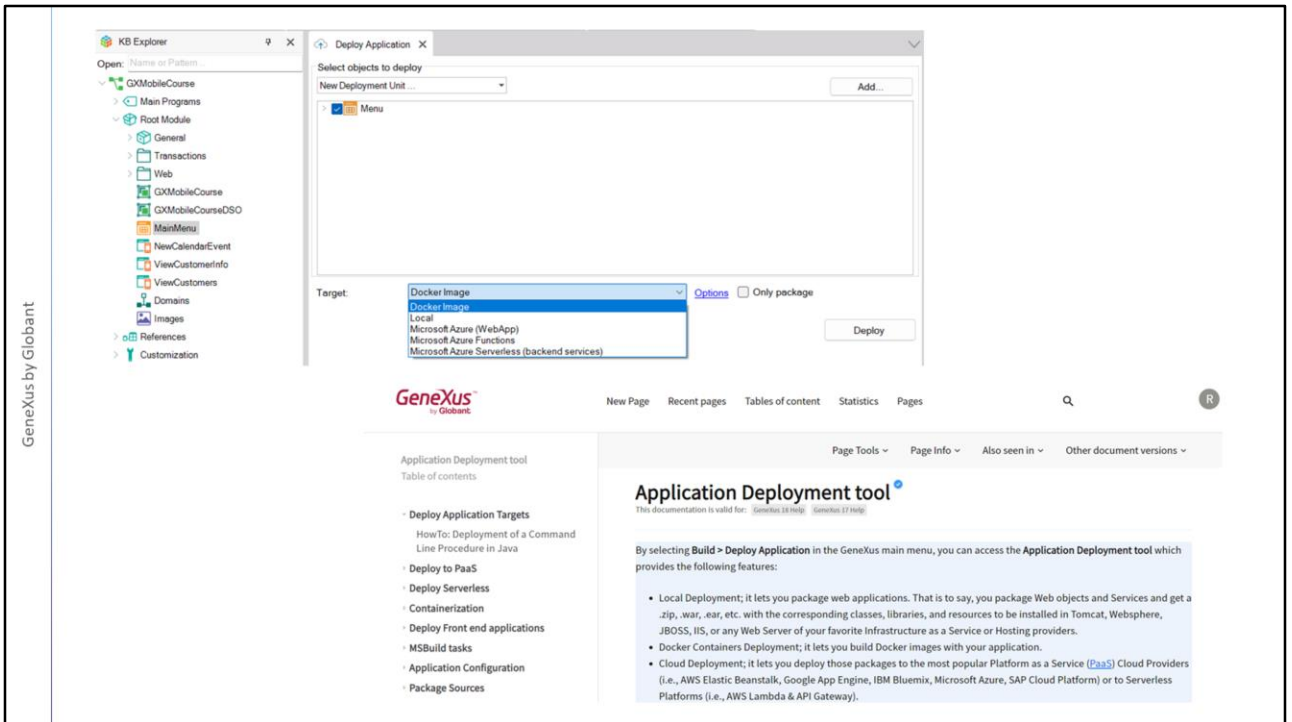
Instead of using a local, publicly accessible enterprise server to host the services, we can also deploy the services in the cloud.

Using Platform as a Service servers, we can export the database, and install the REST services of our application on the web server.

Platform as a Service (PaaS) allows us to develop, run, and manage applications without the complexity of building and maintaining the infrastructure associated with local development and deployment, while also solving security issues and making it easier for native devices to access services over the Internet.



GeneXus makes it easier to deploy the services using the Application Deployment Tool available in the IDE. Let's see how to do this.



To deploy the application services, we use the Application Deployment Tool that can be accessed from the Build / Deploy Application menu.

This option is only available in the Full version of GeneXus because the Trial version is not designed for deploying an application into production.

We just have to drag the main object of our native application to the Deploy Application window and the tool will create a package containing all the REST services and resources associated with our application. The package is assembled according to its destination, as the tool allows us to deploy it locally, or to a Docker container, to a PaaS server or even to a serverless platform.

We will also need to export the files needed to create the production database, for which GeneXus also provides a tool.

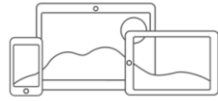
For more information on the use of the Application Deployment Tool and the entire deployment process, please visit the Wiki.

Compiled App Deployment

Compiled native applications, depending on whether they are corporate or public consumer applications, can be distributed in two ways: through an internal enterprise distribution or through each platform's official app store.

For both distribution methods, applications must be compiled with the corresponding SDK, either the Android SDK or the Xcode tool which is only available for the Mac OS.

Line of Business



Available in KB Target Environment



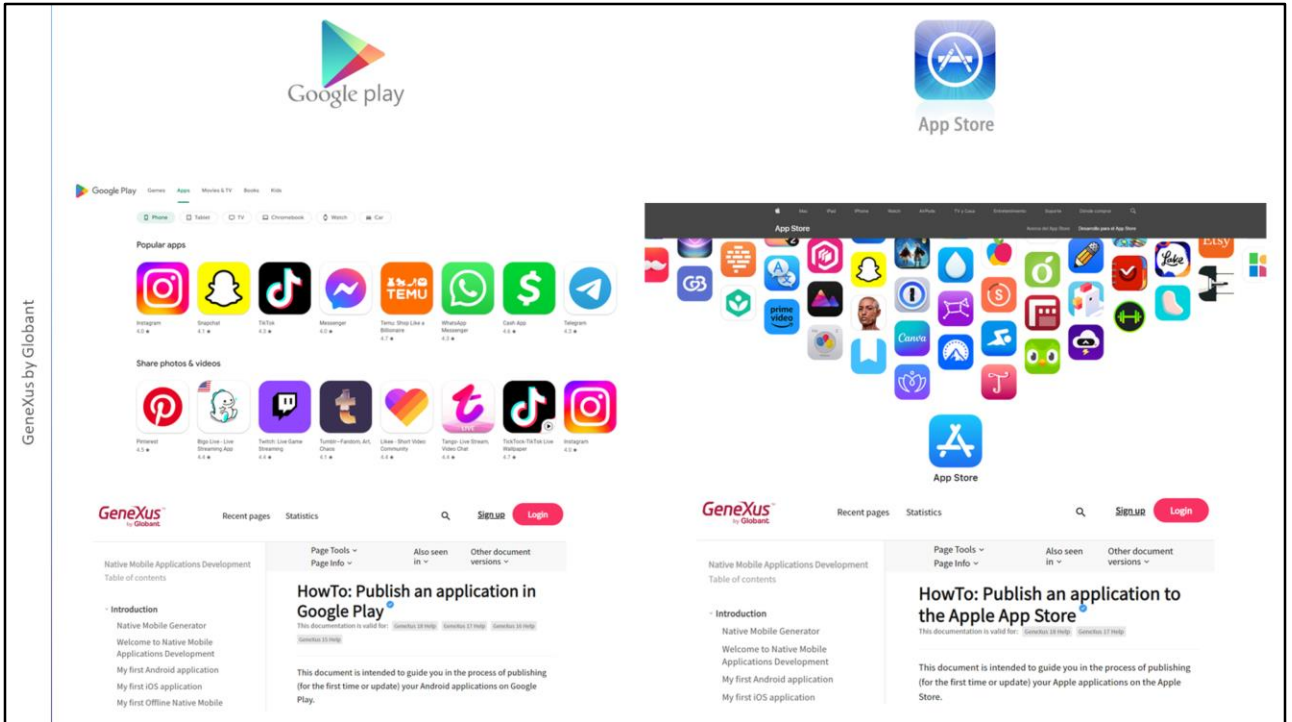
Mac computer + Xcode platform +
Enterprise Program License required:

<http://developer.apple.com/programs/ios/enterprise/>.

In the case of internal distribution within a company, for example, to distribute an application among the employees of the Sales department, the procedure varies according to the platform generated.

For Android, GeneXus creates the apk file that is available in the folder associated with the Target Environment Directory of our application, which can then be distributed in the company.

When generating Apple, a Mac computer with the development environment installed and a license of the iOS Enterprise Program is required. You can get more information on the link on the screen: <http://developer.apple.com/programs/ios/enterprise/>.



If we decide to publish the application, we can do so in the online stores available, which are Google Play for Android applications and Apple Store for iOS.

GeneXus provides an app with the requirements and components that must be uploaded in each store, but the process itself is manual. Remember that in both cases developer accounts are required.

In the wiki you will find step-by-step instructions to publish apps in each store.



In this video, we saw what must be considered to distribute both the services and the compiled application, depending on the native generator used.

First, we saw how to publish the REST services of a corporate application on an on-premise server, and we also saw that it is possible to have all the services in the cloud and use different platform providers as services.

Then we reviewed the different mechanisms for distributing the application to be installed on the device, in the case of corporate distribution.

Lastly, we saw that we can use each platform's stores to publish our apps and reach a massive audience.