2011

USER GUIDE

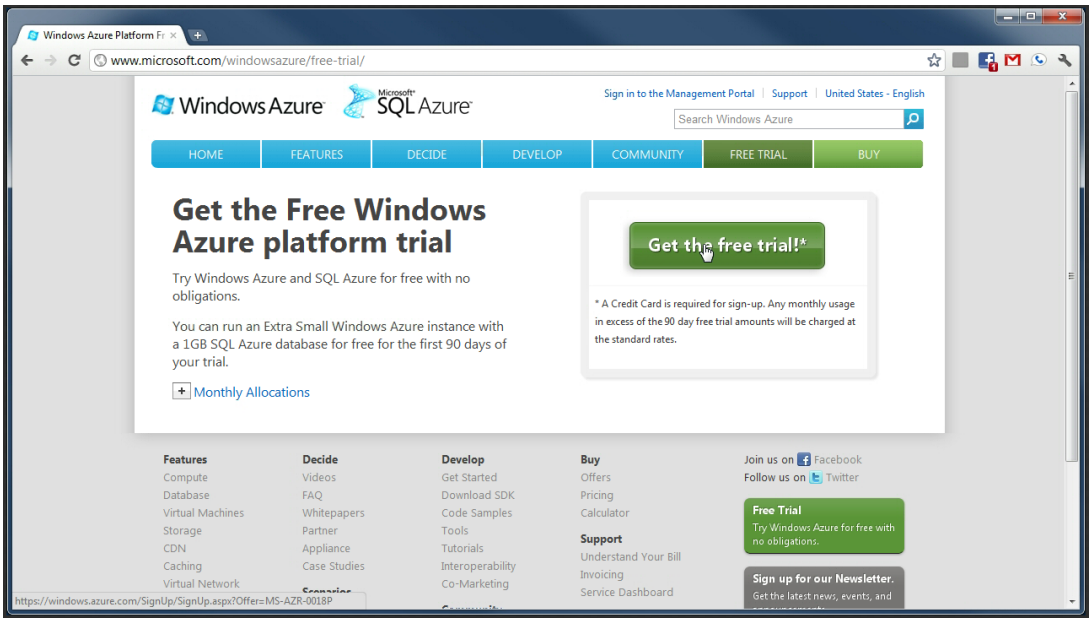
Azure Factory

Contents

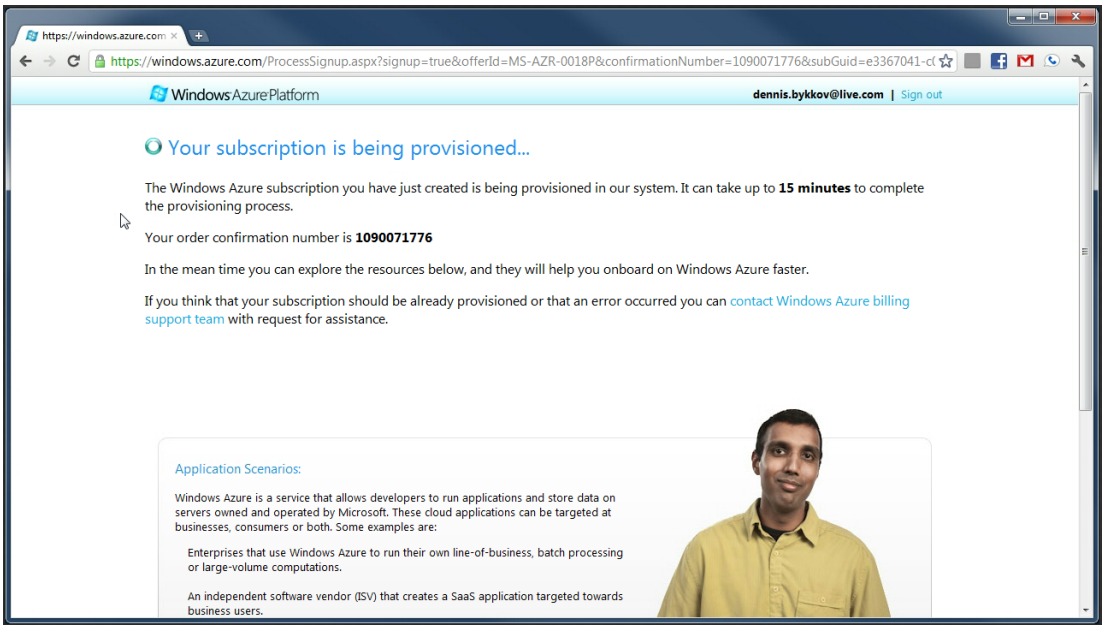
In this article, you will learn how to set up your *Code On Time* application with *SQL Azure* as a backend.

Setting up a Windows Azure Account

The first thing you have to do is head over to http://www.microsoft.com/windowsazure/free-trial/ and press *Get the free trial!* Sign in with your Windows Live ID, or sign up if you don't have one.



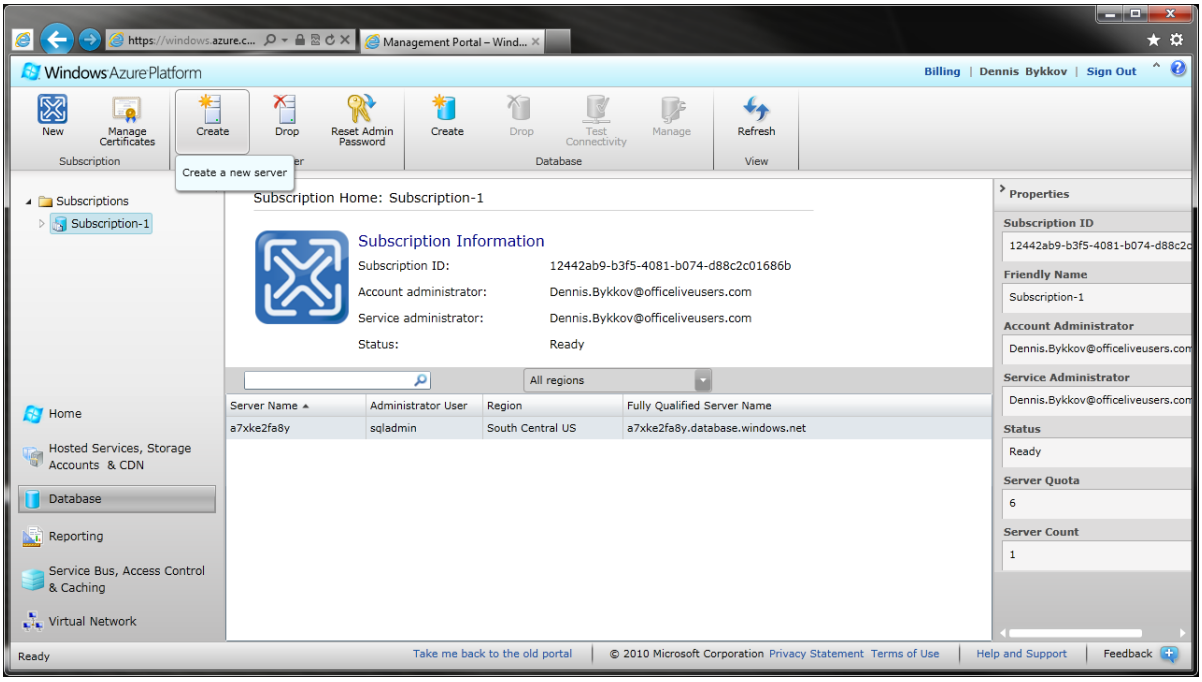
Next, you will need to enter your contact information for *Windows Azure*. Accept the conditions and enter your credit card information. No charges will be made. Finally, accept the *Online Subscription Agreement* and press purchase. You will have to wait up to 15 minutes for your subscription to become enabled.



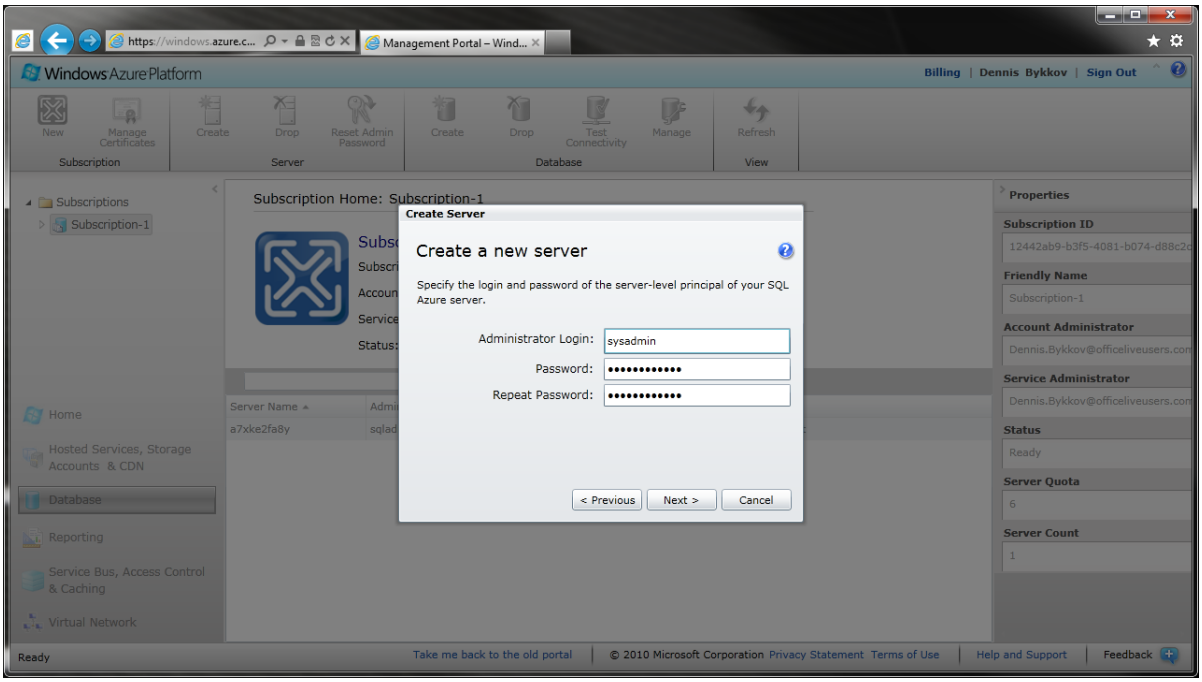
Setting up your Server

Navigate to http://windows.azure.com. You will need to enter service administrator information – this is the person managing the subscription. Confirm, and navigate to the server *Management Portal*. In the bottom left corner, select *Database*.

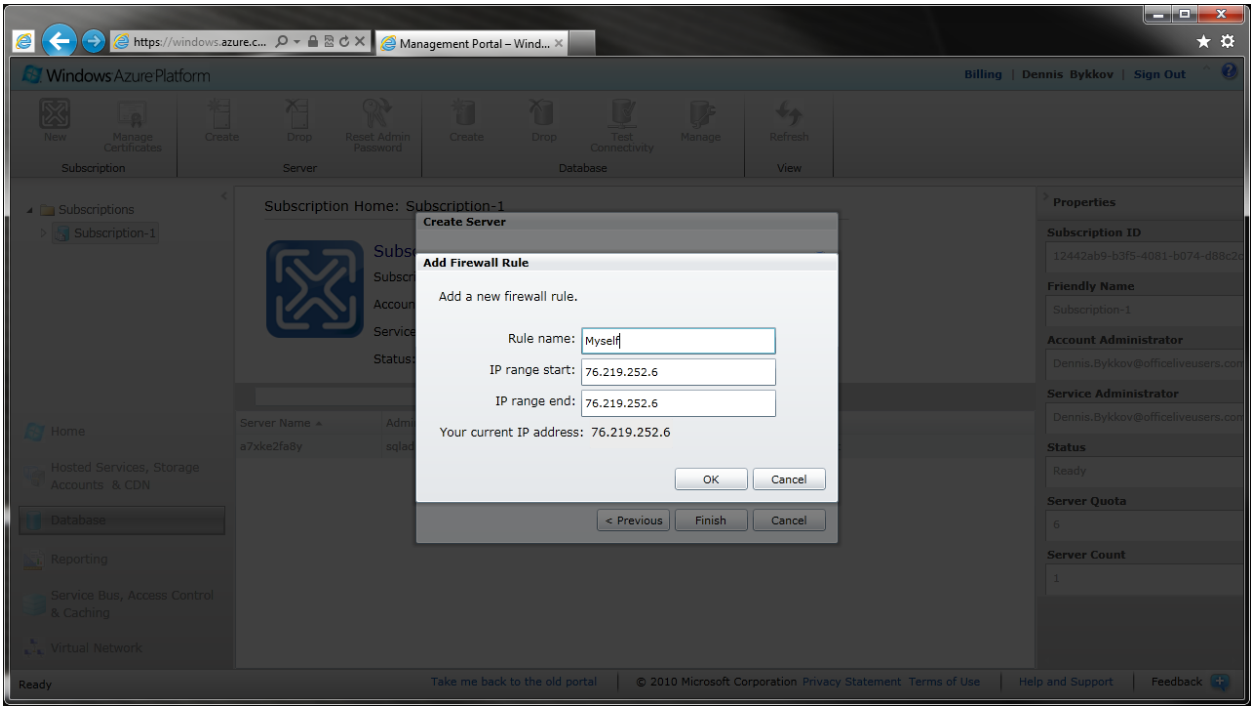
You will first need to create a server. Select your subscription and press *Create* under *Server*.



Select a region for your server, and specify the administrator account.



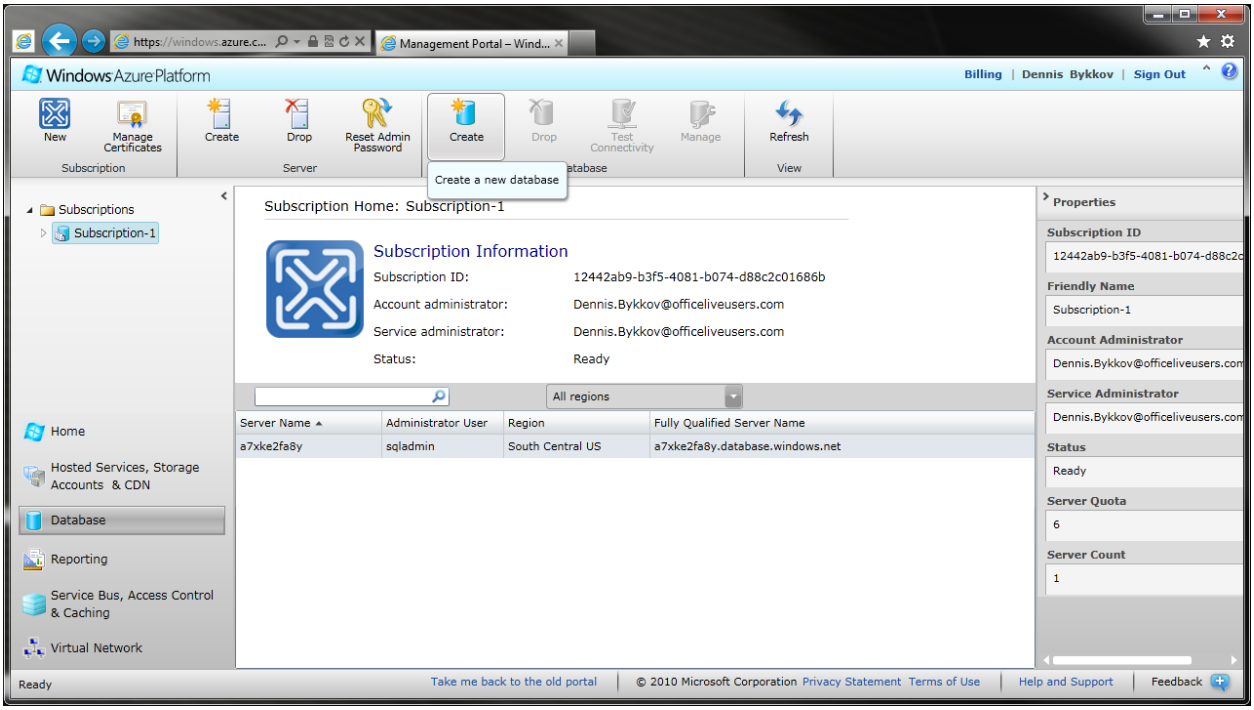
Next, specify a firewall rule to allow your IP to access the server.



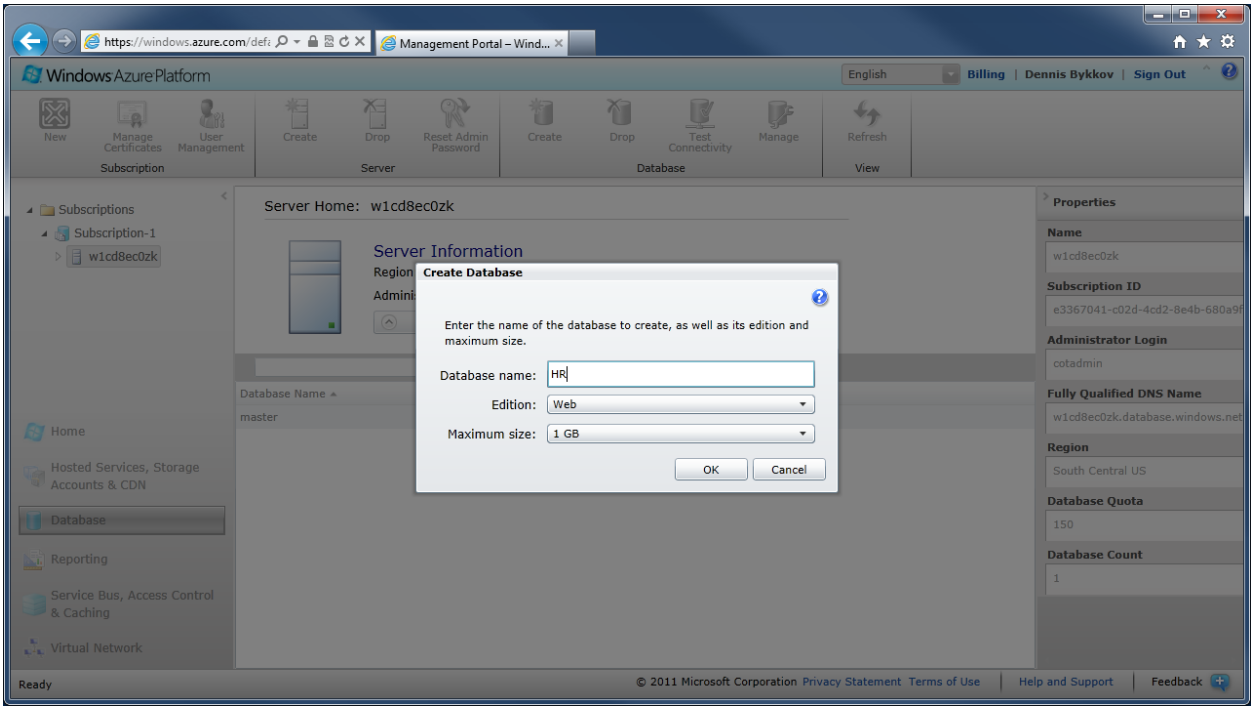
Press *Finish*, and you will have a server listed under your subscription.

Creating a Database

Select your subscription and press *Create* under *Database*.



Give your database a name. Leave *Edition* and *Maximum size* unchanged.

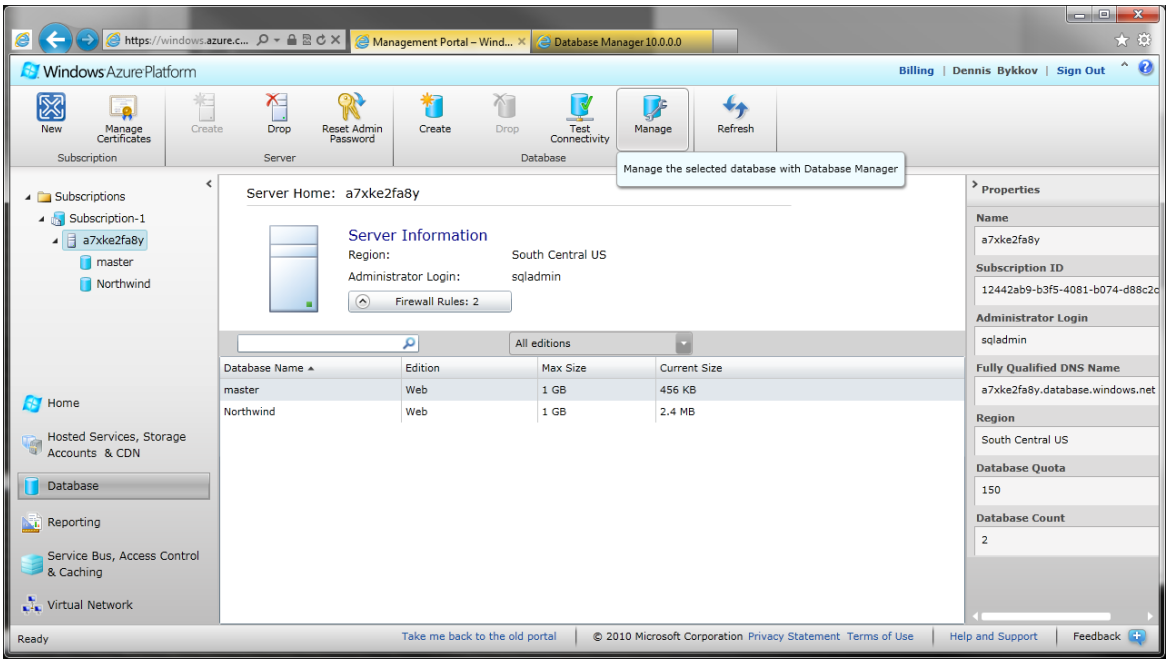


Press *OK*, and the database will be created.

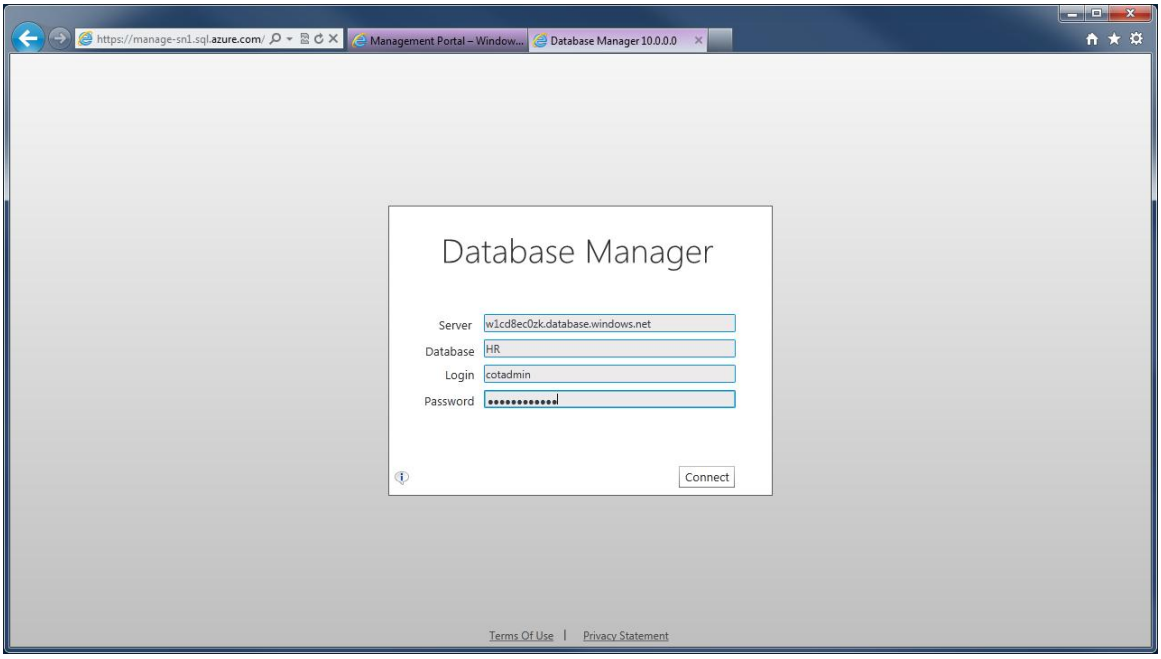
Manage the Database

For the sake of this tutorial, we will use a database called *HR*, with two tables, *Employees* and *Jobs*. You can use the table generation tool in *Code On Time Generator* to create it. Alternatively, you can create it using the *Database Manager*. This section will explain how to use the *Database Manager* to create the tables.

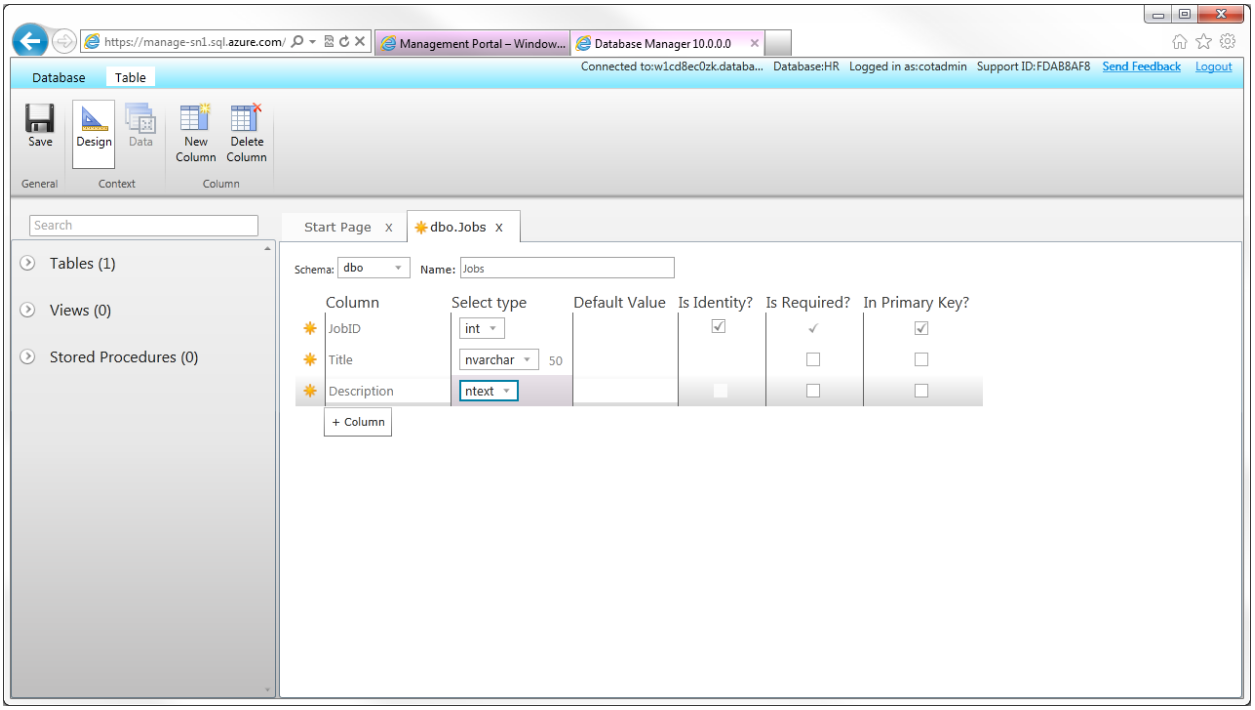
Select your server from the list, and press *Manage* under *Database*.



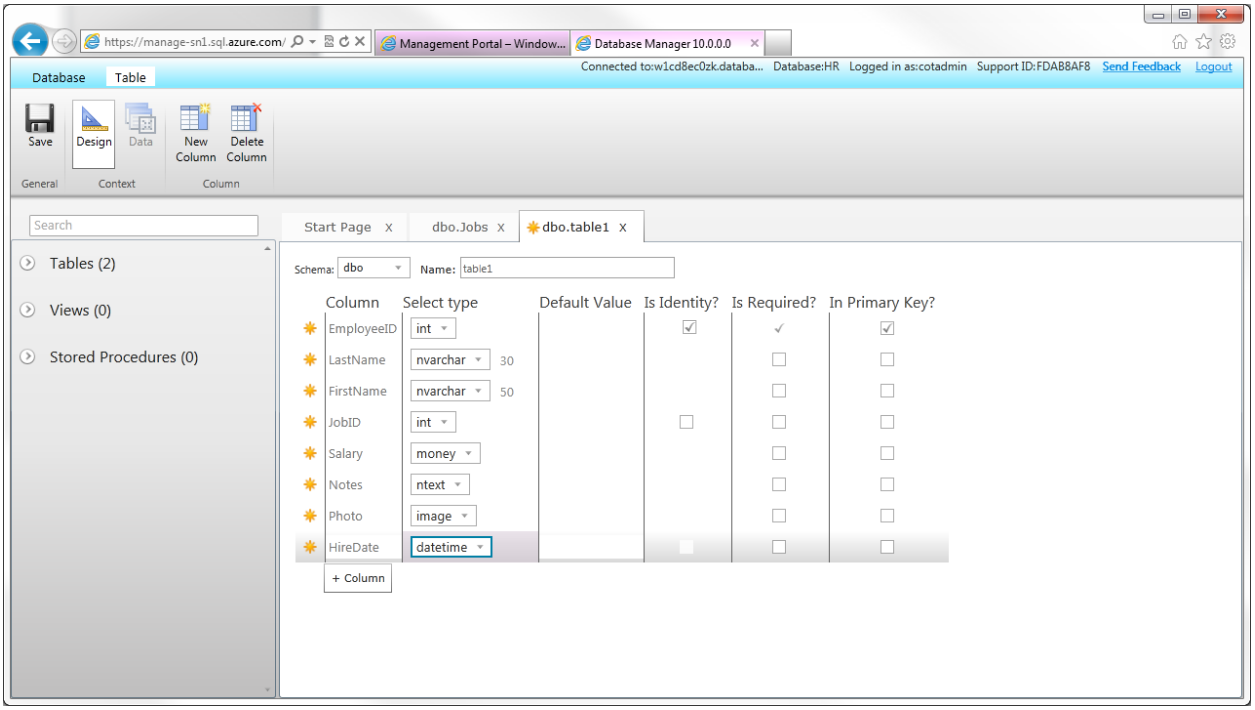
This will take you to the *Database Manager*. Enter your password and press *Connect*.



On the ribbon, press *New Table*. Name the table *Jobs*, with the fields *JobID*, *Title*, and *Description*, as shown below.

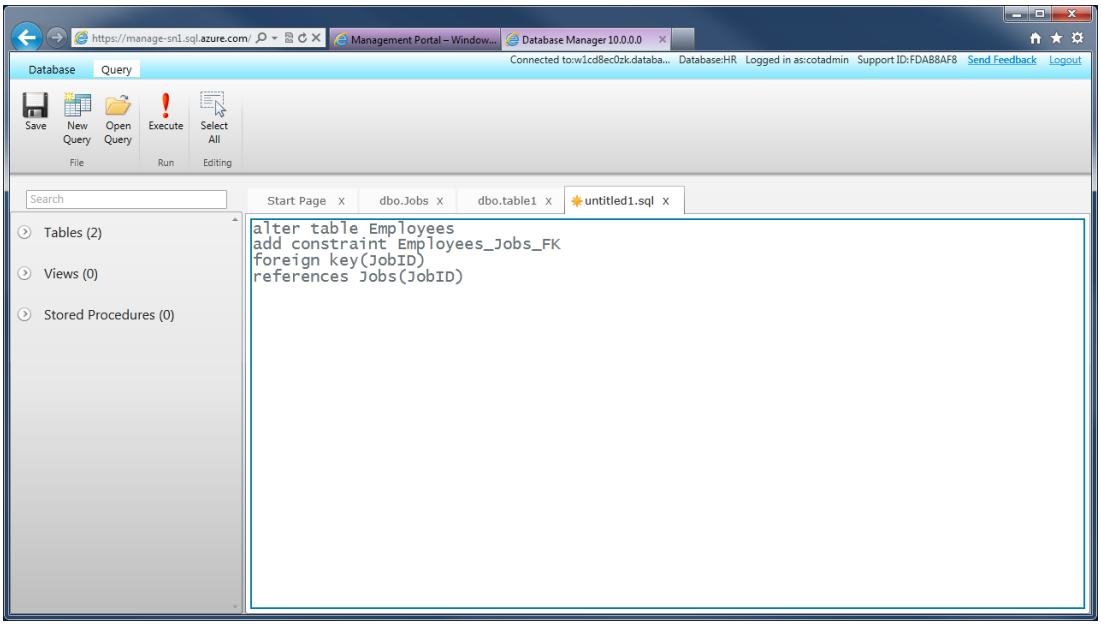


Press *Save* to save the table. Switch back to the *Start Page*, and press *New Table* again. This table will have the name *Employees*, and the fields *EmployeeID*, *LastName*, *FirstName*, *JobID*, *Salary*, *Notes*, *Photo*, and *HireDate* as shown below.

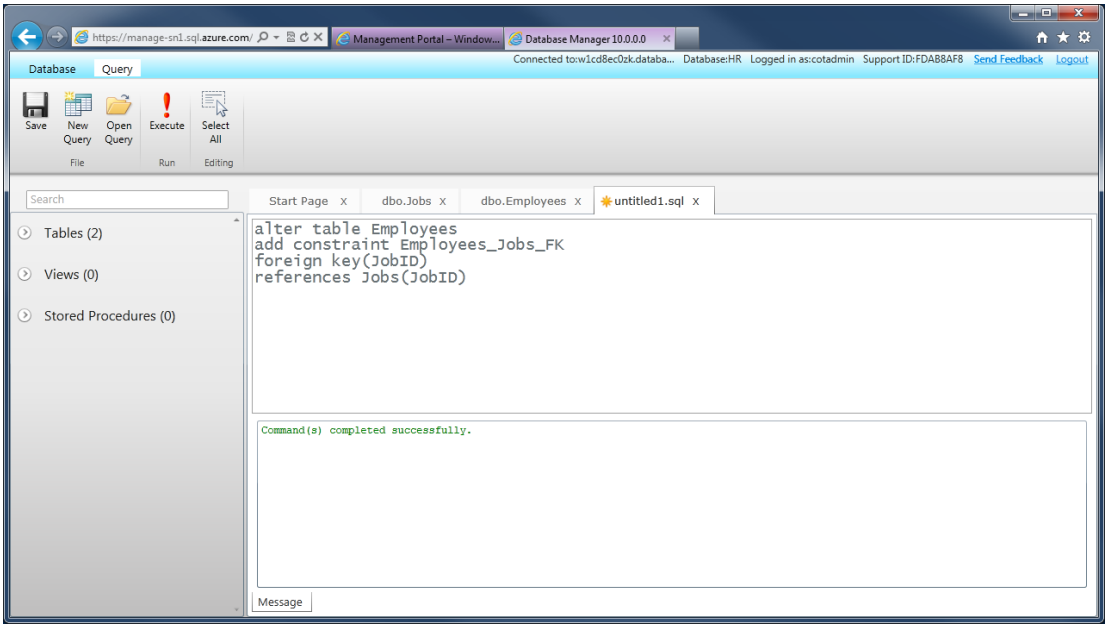


Press *Save* to save the table. Currently, *Database Manager* does not have a tool to create foreign key relationships, so a query must be used. Switch back to *Start Page* and press *New Query*. Enter the following code to add the foreign key relationship:

```
alter table Employees
add constraint Employees_Jobs_FK
foreign key(JobID)
references Jobs(JobID)
```

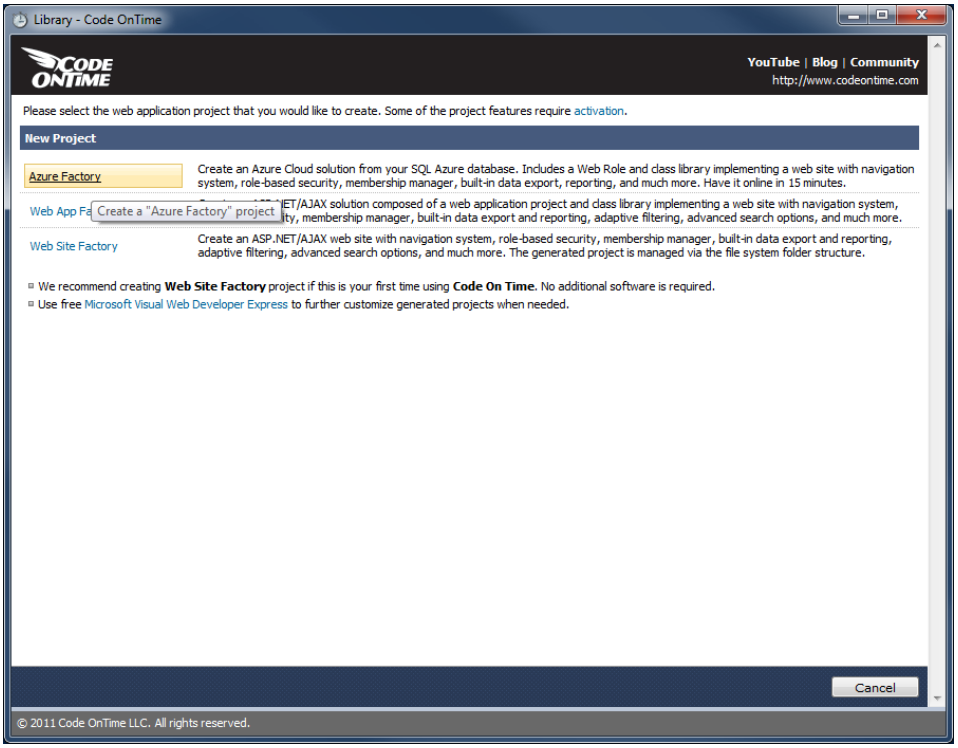


Press *Execute*, and click on *Message* to confirm the success of the query.

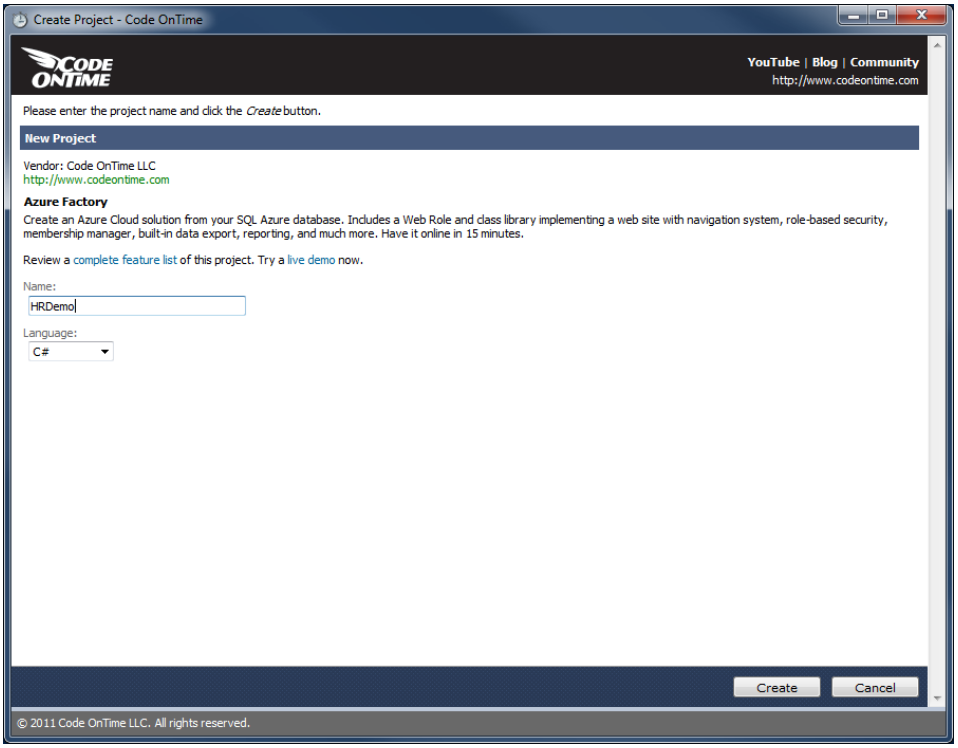


Generating the Azure Factory Project

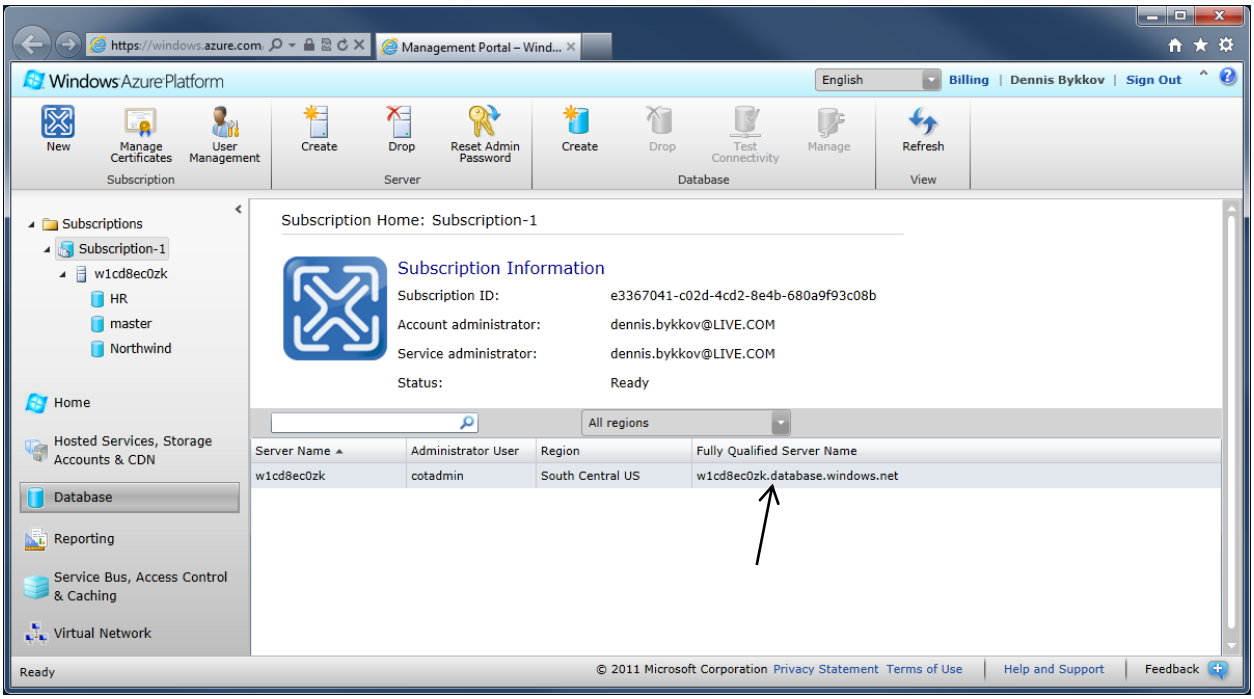
Launch *Code On Time Generator*, and create a new project. Select *Azure Factory*.



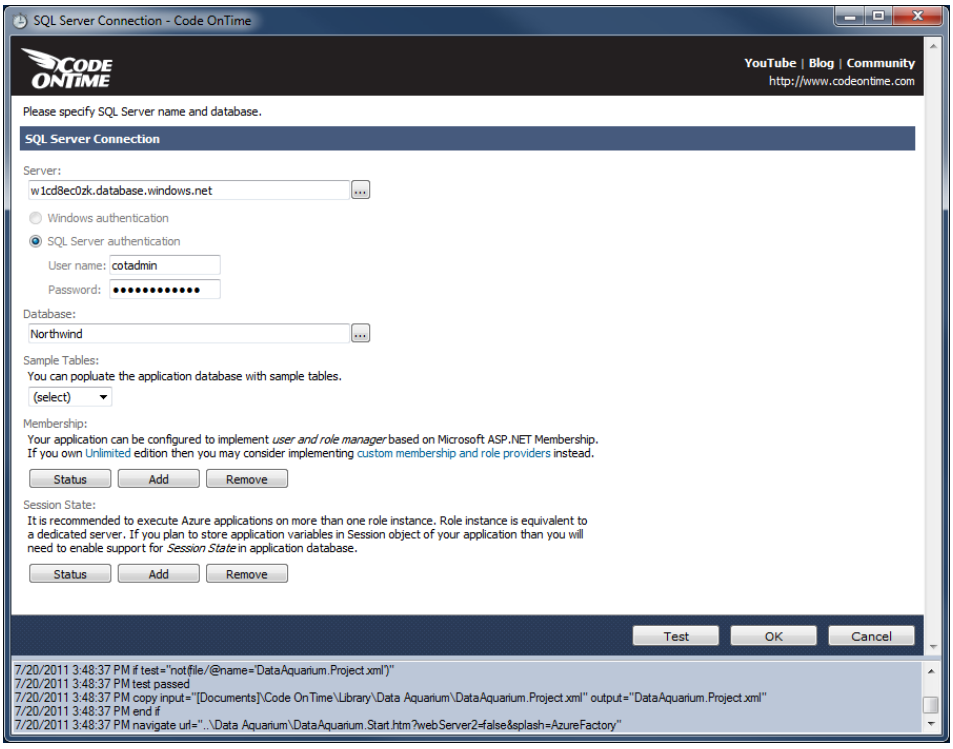
Give the project a name. In our example, we called it “HRDemo”.



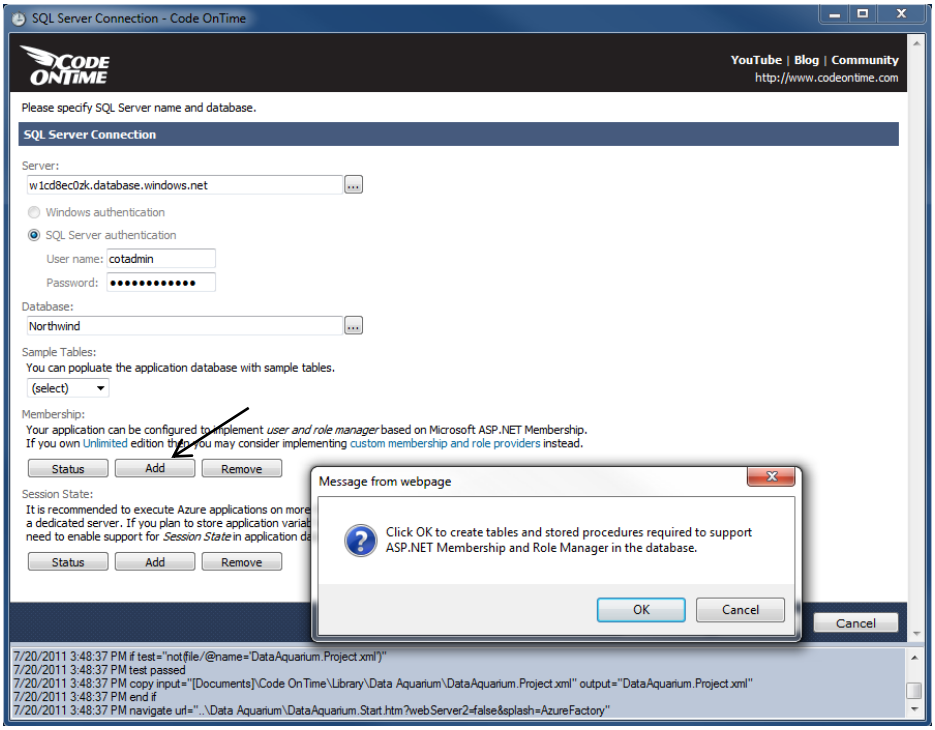
Press *Next* to reach the *Database Connection* page. Click on the "…" button next to the *Connection String* to access the *Connection String Assistant*. You can find your server name by navigating to http://windows.azure.com and clicking on *Database*. Select your subscription, and copy the *Fully Qualified Server Name* from the list.



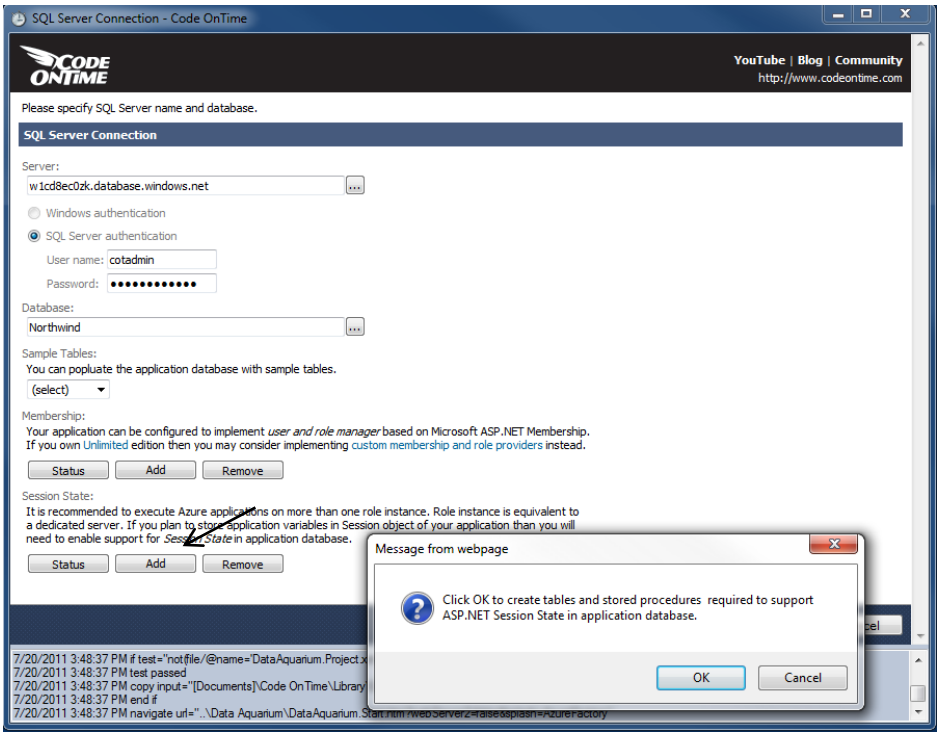
Enter the server name under *Server*, and enter your credentials. Also enter your database name.



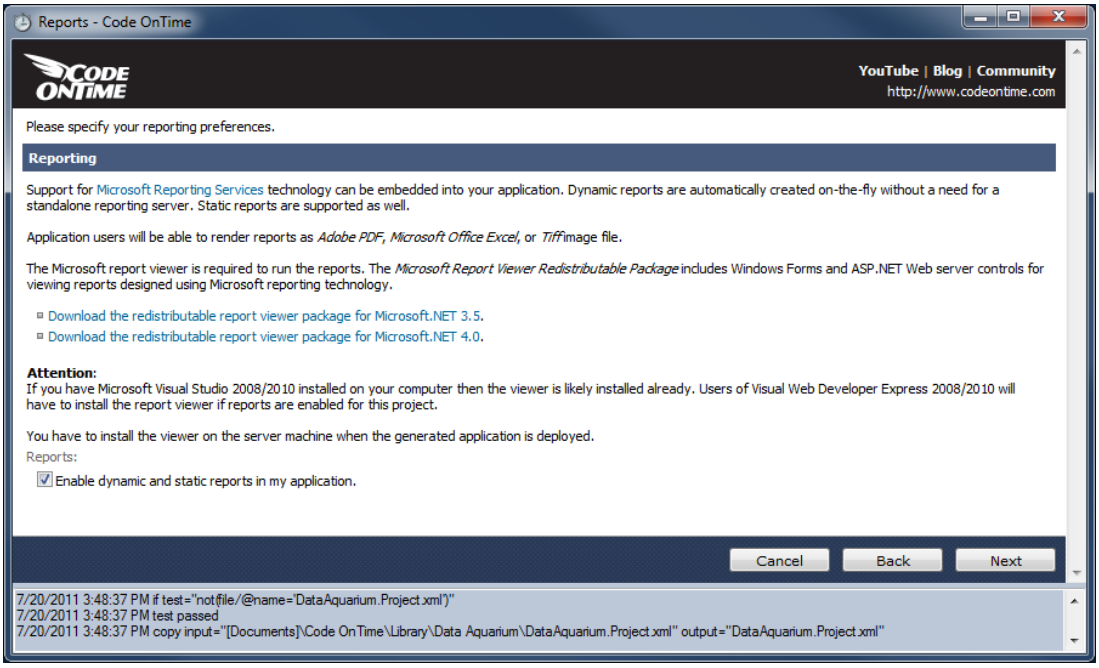
Add a *User and Role Manager* to your application by pressing *Add* under *Membership*.



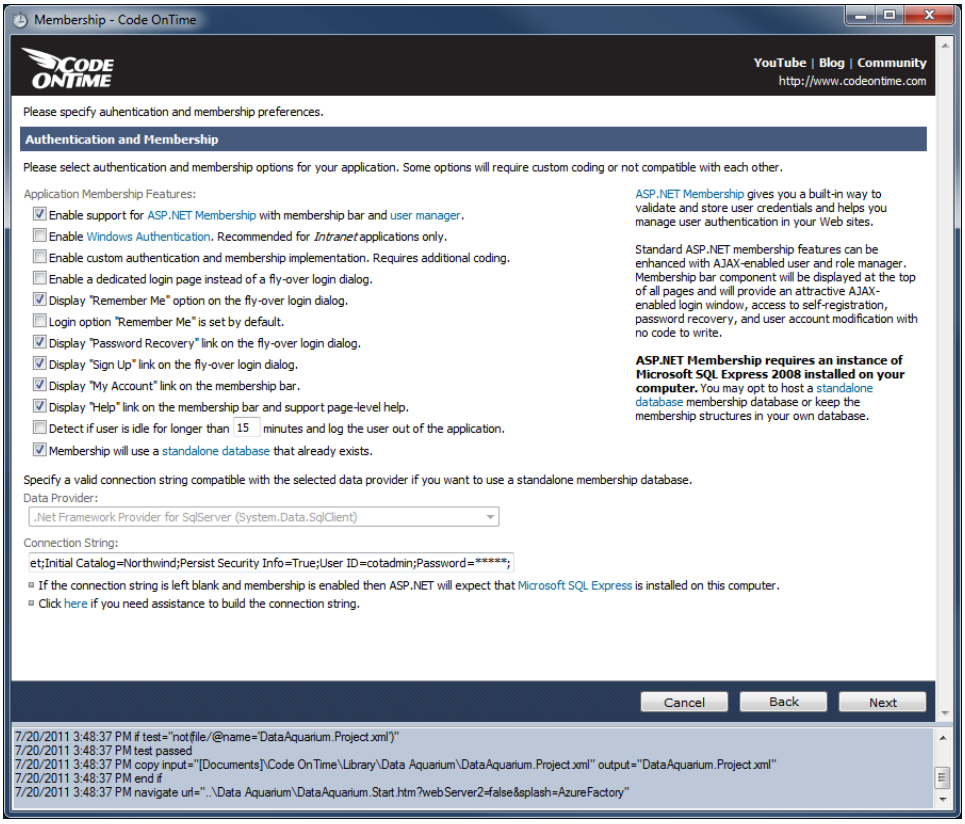
By default, *Azure Factory* applications will run on two instances of Compute servers, as recommended by Microsoft to ensure fault tolerance. This requires *Session State* management in your database. Install *Session State Manager* by pressing *Add* under *Session State*.



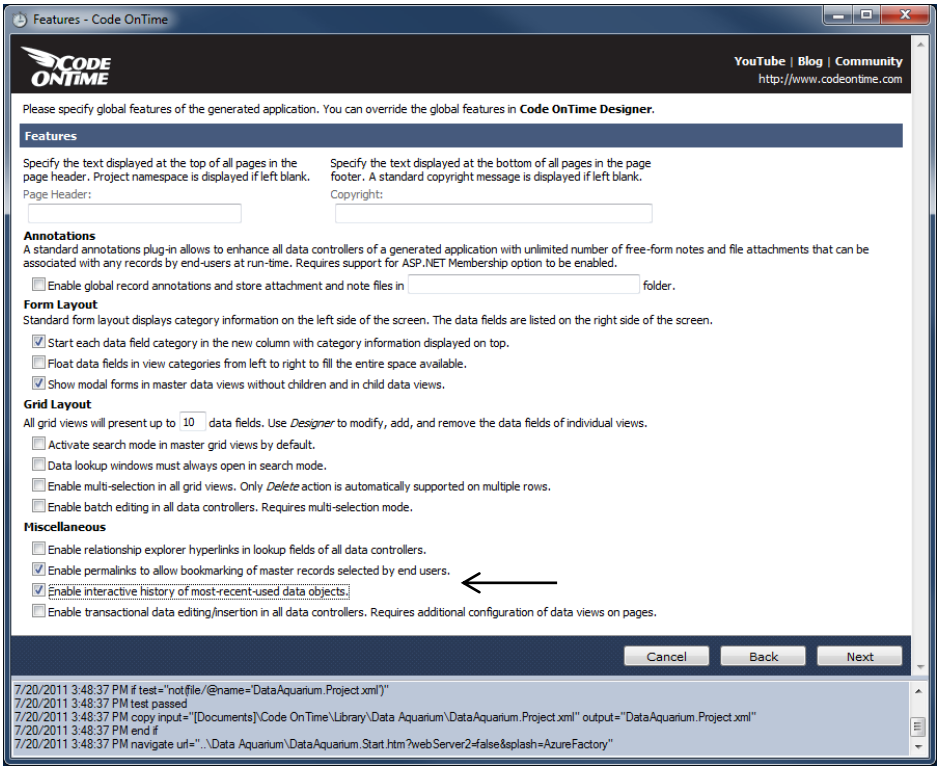
Press *OK* to confirm your connection string options. Press *Next* until you reach the *Reporting* page. Check the checkbox to enable reporting.



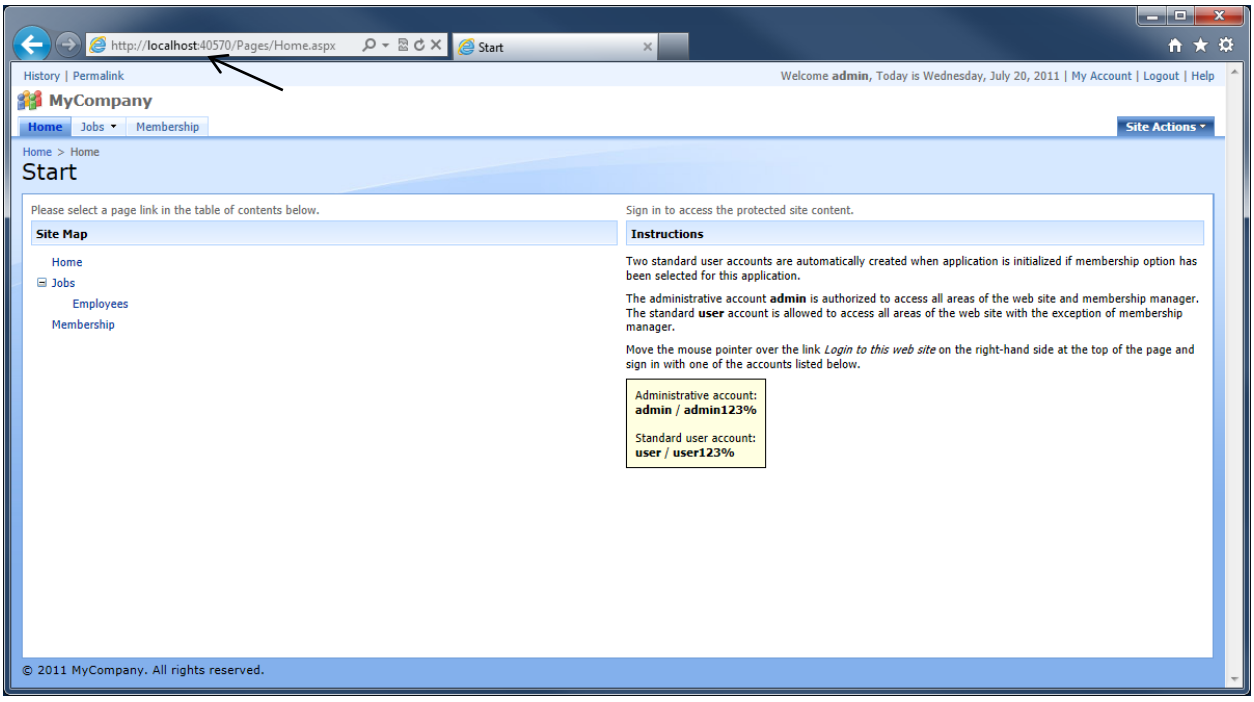
Press *Next* until you reach the *Authentication and Membership* page. If you added *User and Role manager* to your application, *ASP.NET Membership* will be automatically configured.



On the next page, enable *Permalinks* and *Interactive History*.

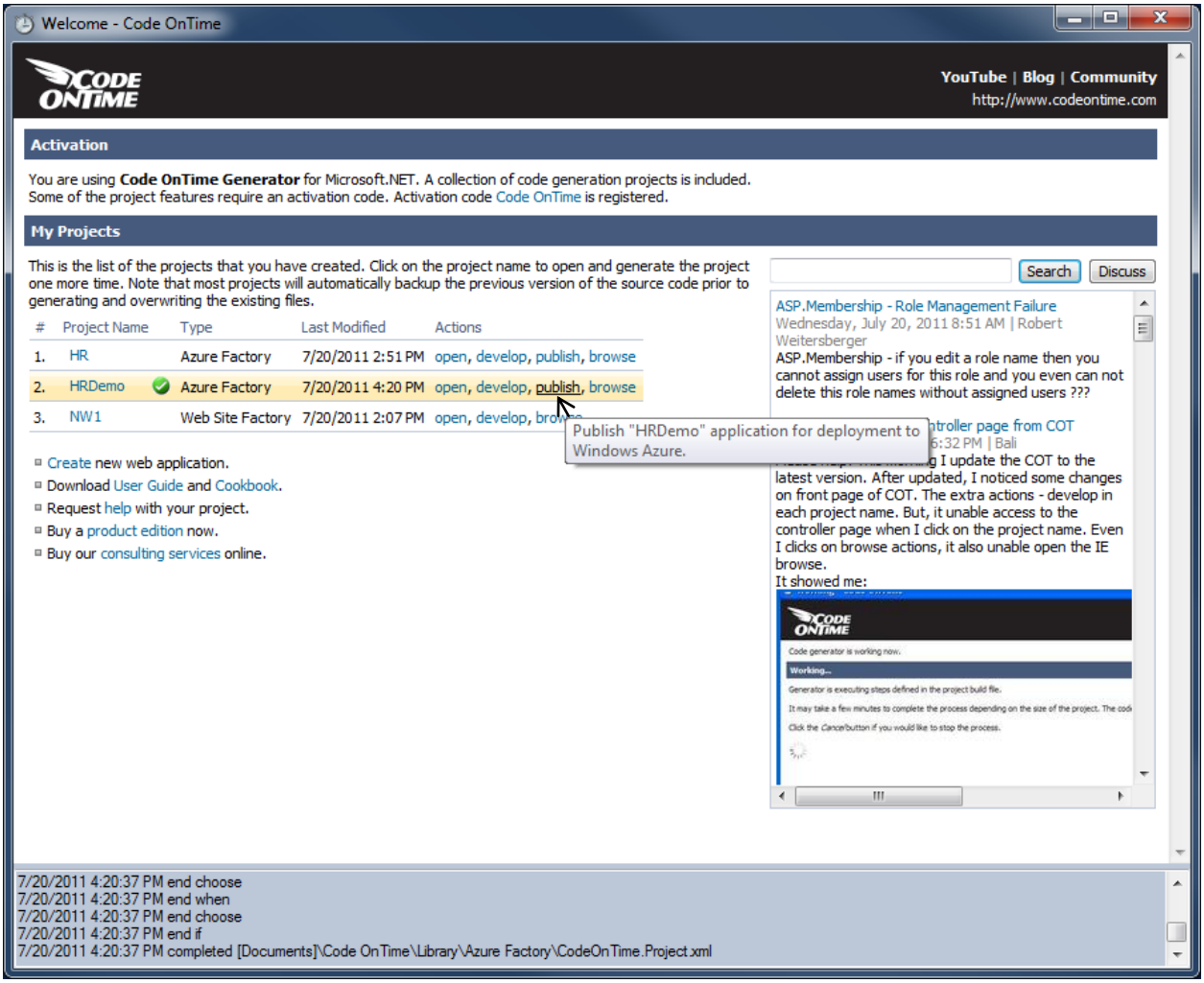


Continue pressing *Next* until code generation begins. Once complete, a web page will load with your generated application. The application will be running locally, but is using *SQL Azure* to access the database.

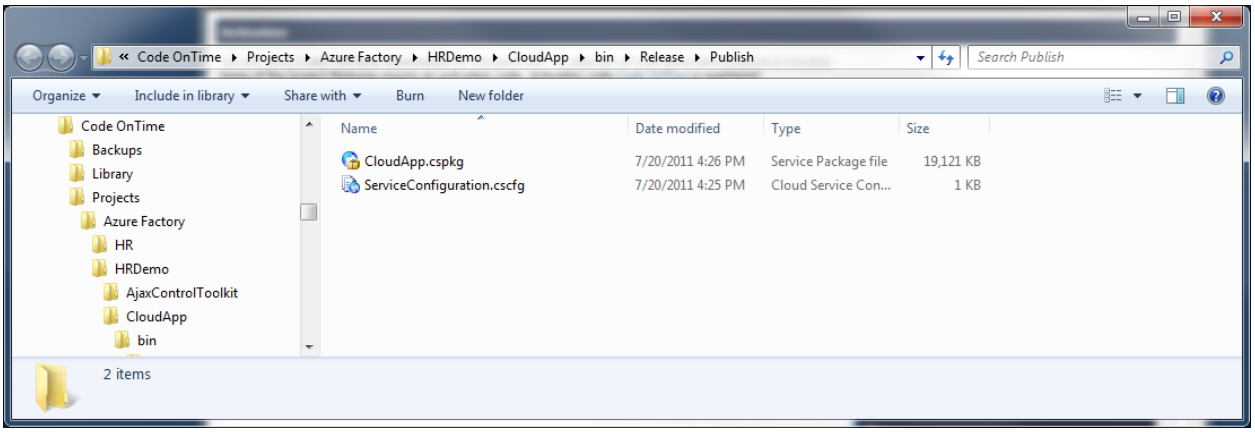


Publishing to Azure

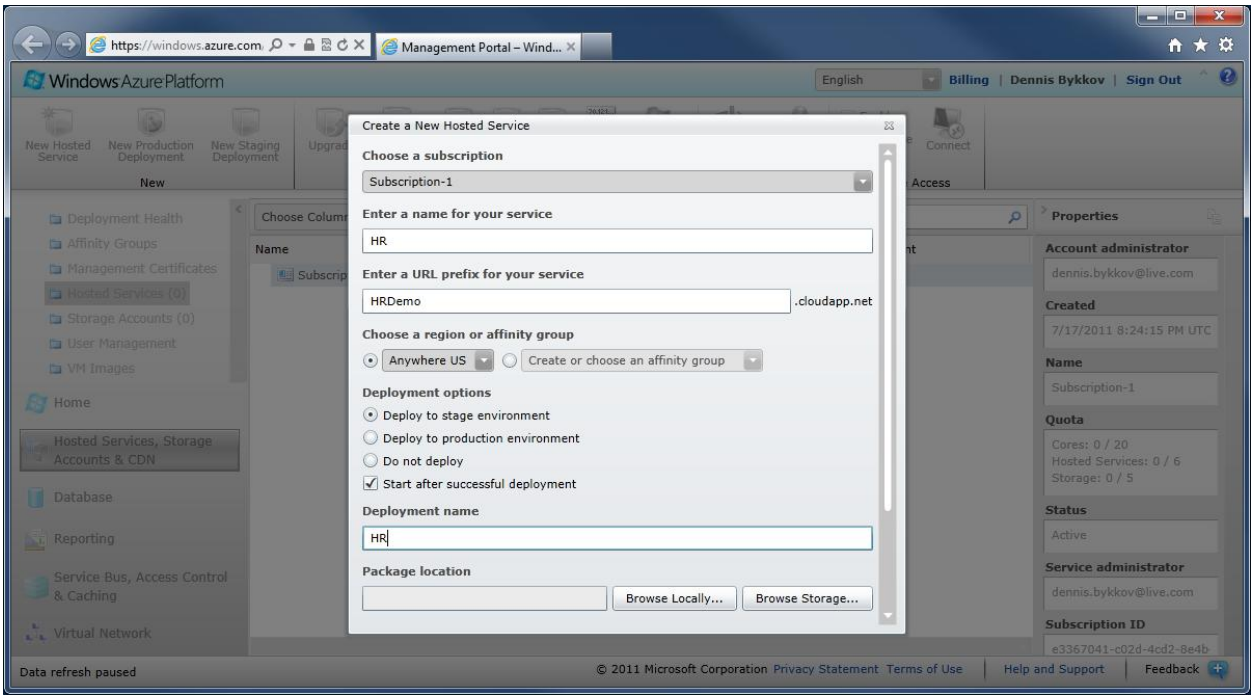
Go back to *Code On Time Generator*. Next to the project name, press *Publish*.



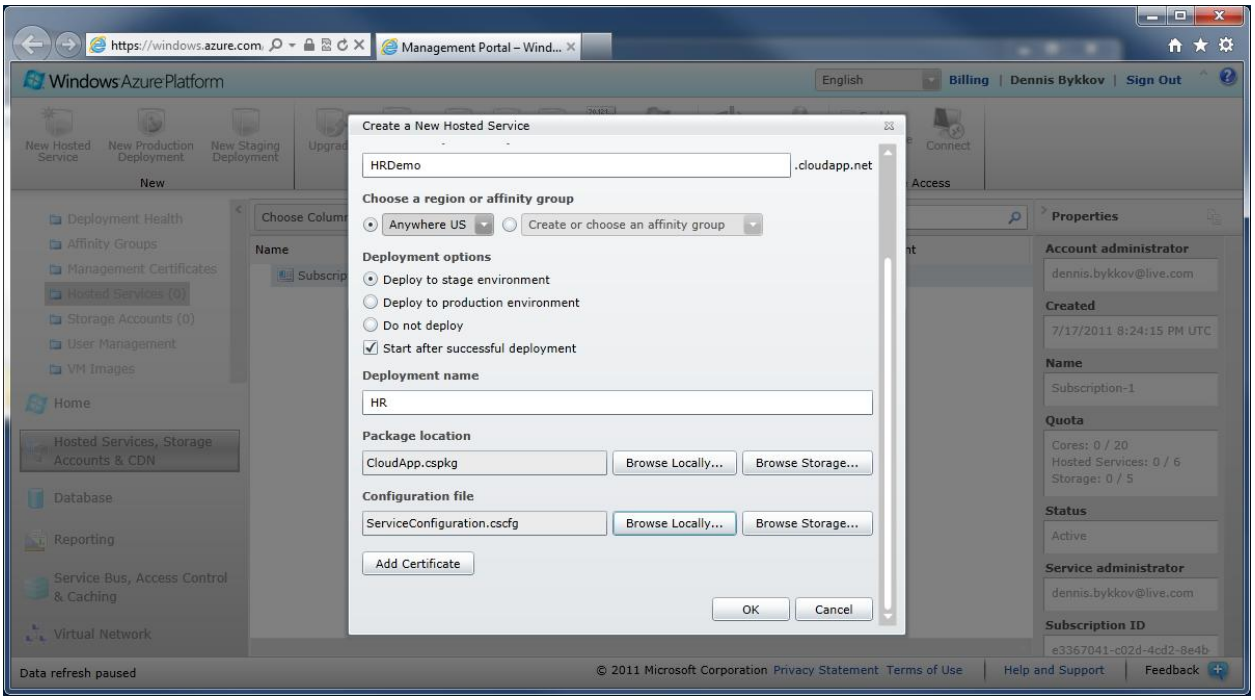
Once publishing is complete, a folder will appear with the published files.



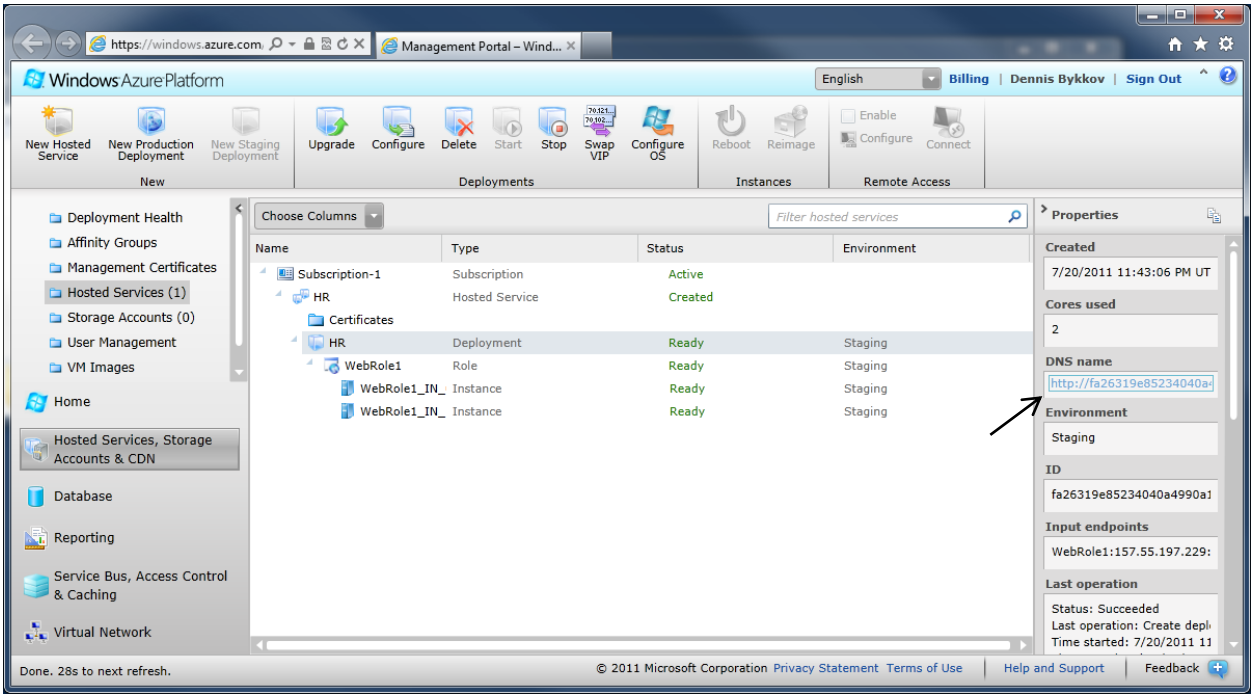
Go to http://windows.azure.com, and select *Hosted Services, Storage Accounts & CDN* in the bottom left corner. In the top left corner, press *New Hosted Service*. Enter a name and URL for your service, choose a region, and specify a deployment name.



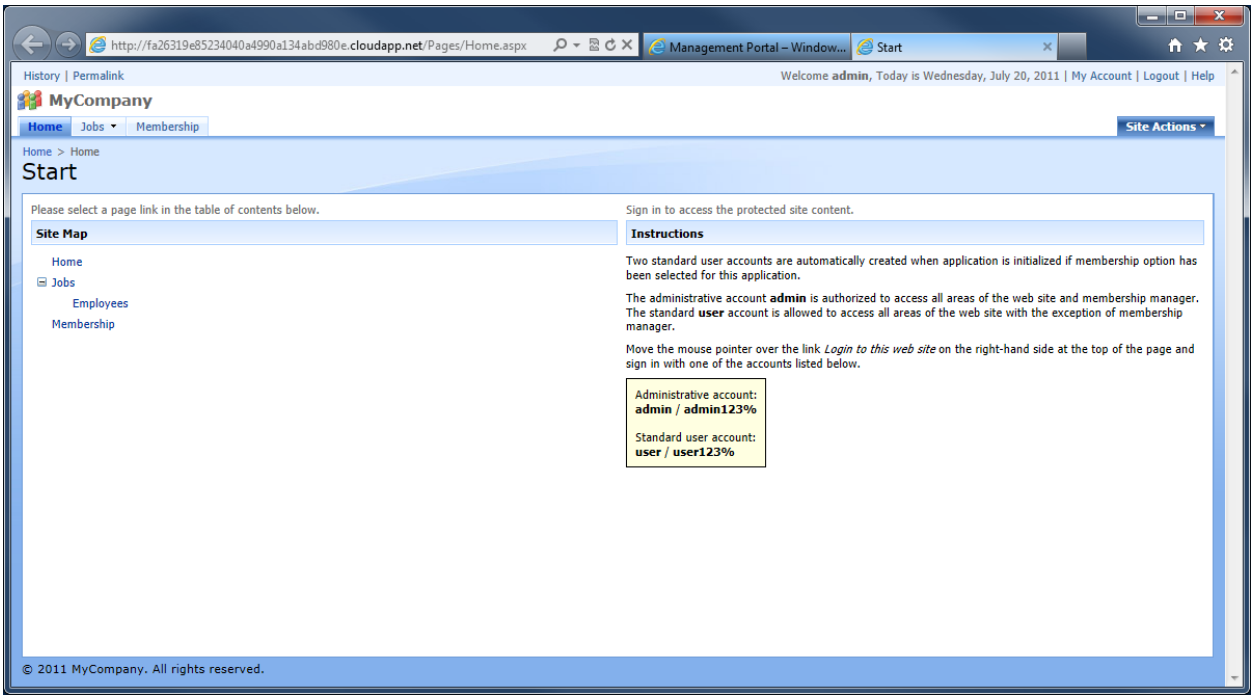
Select the *CloudApp.cspkg* for *Package Location*, and *ServiceConfiguration.cscfg* for the *Configuration File*. Press *OK* to deploy your application to the cloud. This step will take several minutes.



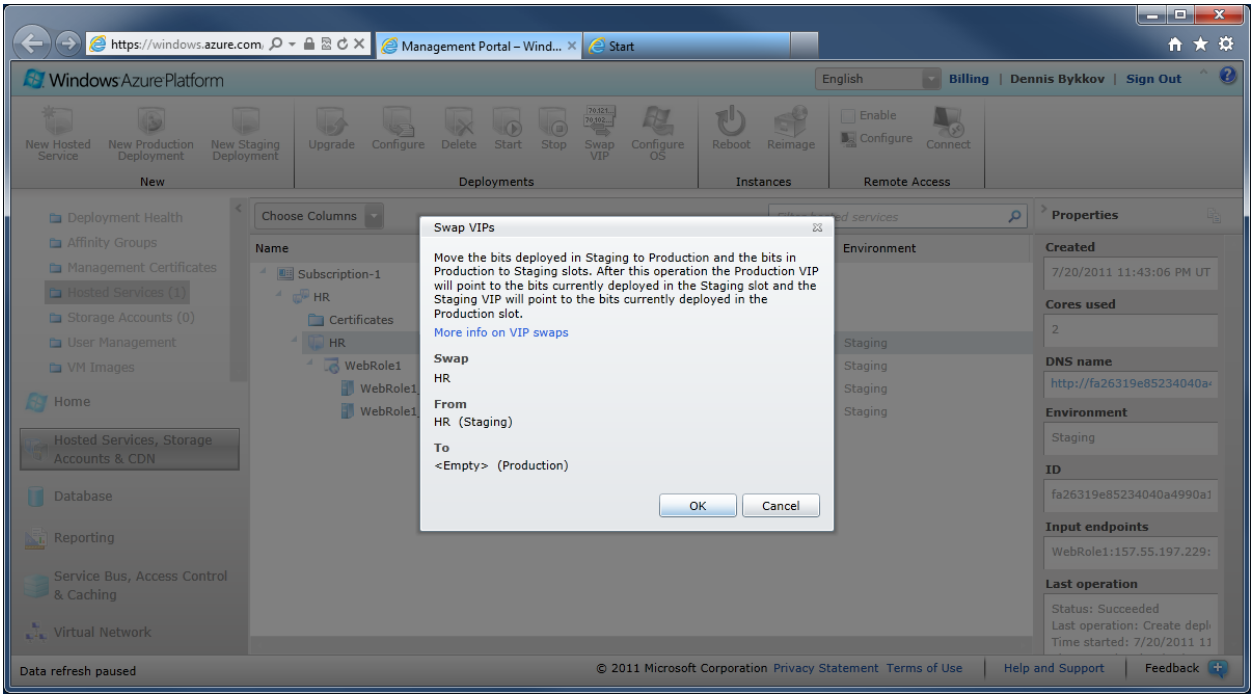
Once deployment is complete, you can click on the deployment and access the website from the *DNS name* on the right side.



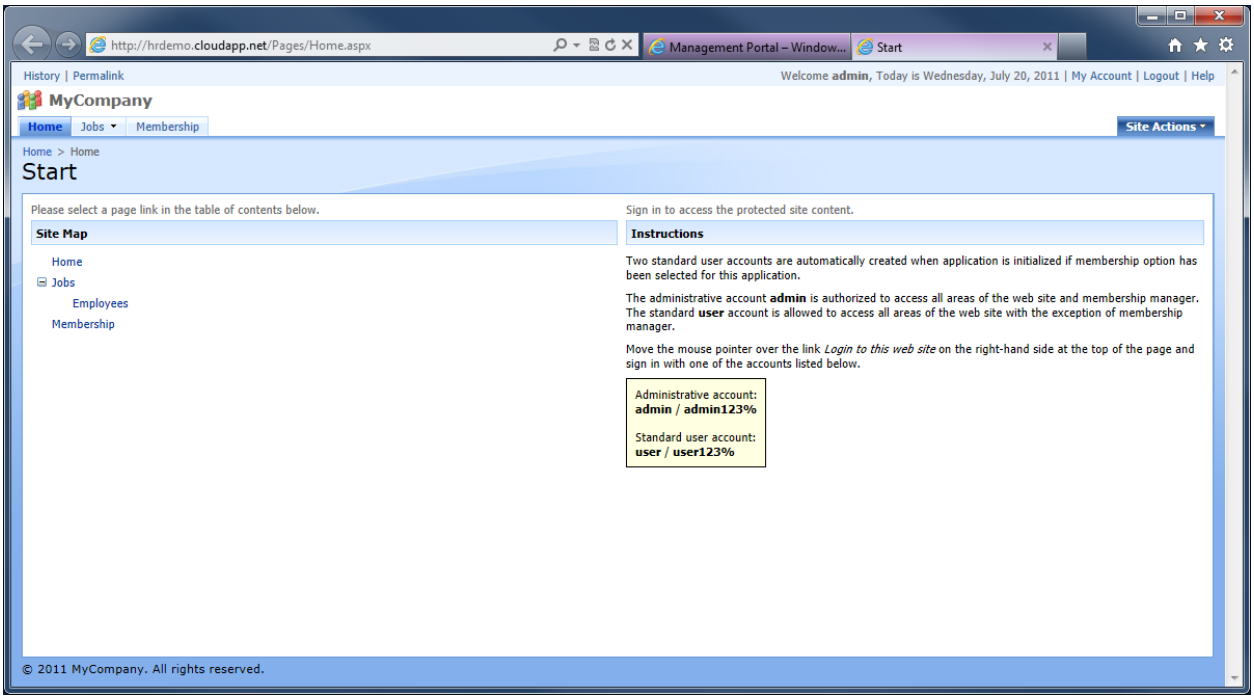
As the environment is still staging, the *URL* displays the *ID* of the deployment.



There is one more step to fully deploying your application – you must change the environment to *Production*. This can be done by pressing the *Swap VIP* button on the ribbon.

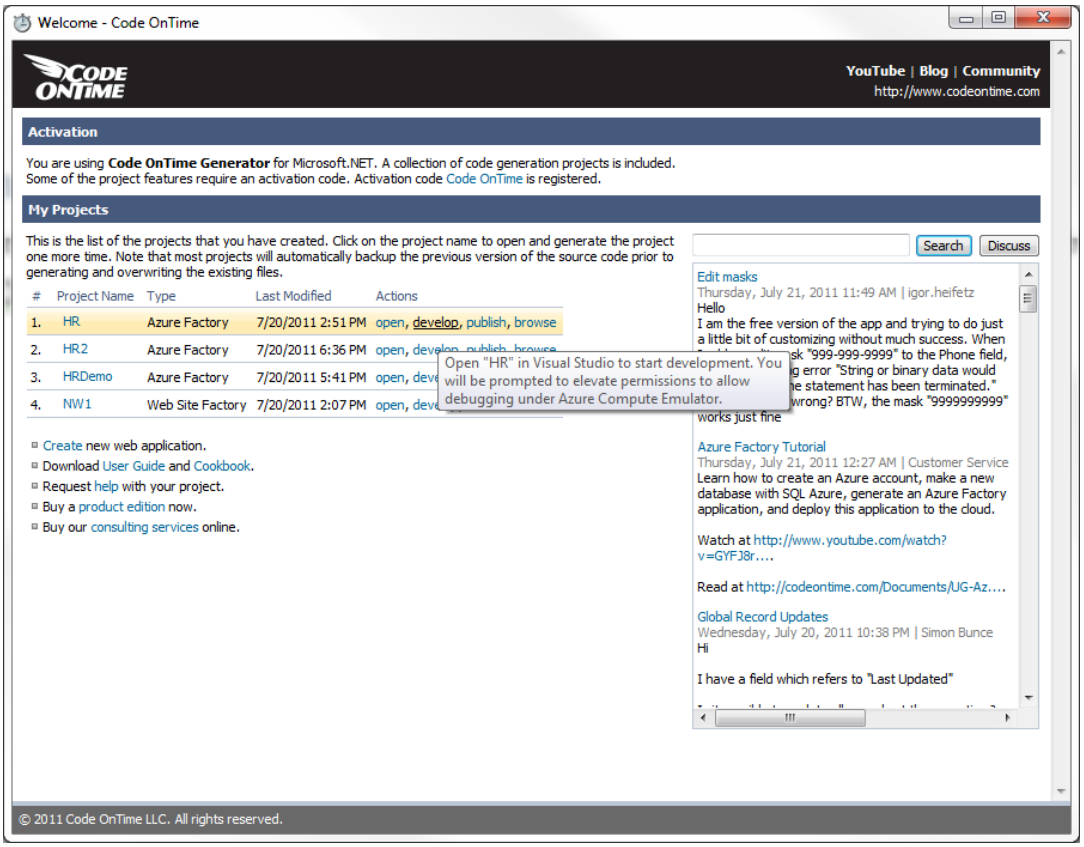


Press *OK* to confirm, and your application will become accessible from the URL specified earlier.

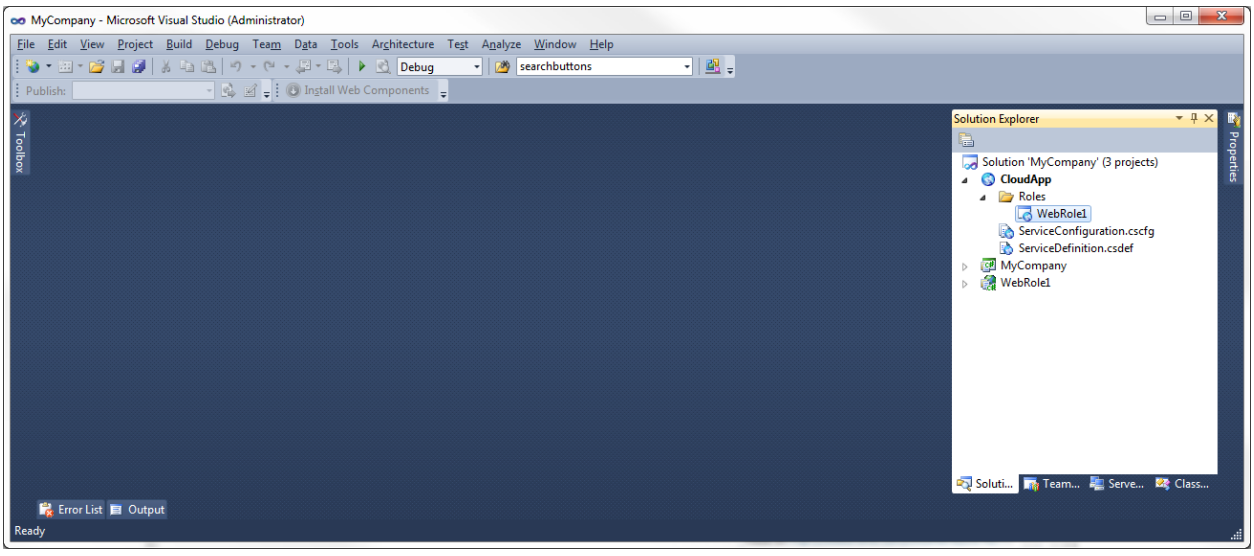


Changing Instance Count and Virtual Machine Size

By default, *Azure Factory* applications use two extra small instances. This can be changed using V*isual Studio*. In *Code On Time Generator*, next to your project name, press *Design*.



Visual Studio needs to run in administrative mode to use the cloud emulator, and this will set off the *User Account Control* screen. Confirm that you want *devenv.exe* to run. Once *Visual Studio* opens, navigate to *CloudApp | Roles | WebRole1*.



Double click on *WebRole1*, and the *Configuration* page will appear. Under *Instances*, you can change the number count and size of the virtual machines of your cloud application. Be sure to check the pricing for the instances, as you will be charged more for larger instances.