

# Deploying Application on salesforce.com

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This session will discuss possible approach and techniques to integrate CA 2E, IBM i Web service server and salesforce.com to generate, deploy and expose an IBM i application via salesforce.com

# Agenda

- What is Cloud/salesforce.com
- Overview/Demo
- Q&A



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# What is Cloud and salesforce.com

- Cloud computing fundamentally means, using a program/business logic stored on a computer somewhere else and accessed over internet.
- Leading cloud service providers are Amazon, IBM, CA, salesforce etc.
- salesforce.com Inc. is a global cloud computing company.

# Benefits of integrating 2E and salesforce.com

- Some of the benefits of combining 2E and salesforce.com are
  - ❑ Rapidly build best in class business application using CA 2E
  - ❑ bandwidth flexibility to meet business demands
  - ❑ Modern GUI with modern application access tools to access the application
  - ❑ Fast to deploy – useful tools to build your GUI and automated process
  - ❑ Disaster recovery – cloud service provider takes care of it
  - ❑ Platform independent – any device with internet connection



# WSDL file

- We used an externally available web service that provides stock quote for any company.
  - <http://www.webs servicex.net/stockquote.asmx>
- Downloaded its WSDL file and edited it.



# Creating classes

- A class is a template or blueprint from which objects are created.
- It is very easy to create APEX classes that make the callout to Web Service.
- Click on your Name → Setup → Develop → Apex Classes to view or create new classes.
- Upload the modified WSDL to salesforce where the WSDL will be parsed and corresponding APEX class will get created.



# Creating classes

https://cs11.salesforce.com/01p?retURL=%2Fui%2Fsetup%2FSetup%3FSetupid%3D... Apex Classes ~ salesforce.c...

File Edit View Favorites Tools Help

salesforce 14

Search

Sandbox: SFDCCAPP

Niraj Kumar Upad... Help & Training GetOrder2E

Home Chatter Files Order Reports Dashboards +

Quick Find

Expand All | Collapse All

Force.com Home

System Overview

Personal Setup

- My Personal Information
- Email
- Import
- Desktop Integration
- My Chatter Settings

App Setup

- Customize
- Create
- Develop

Apex Classes

- Apex Triggers
- Apex Test Execution
- API
- Components
- Custom Settings
- Email Services
- Pages
- Sites
- Static Resources
- Tools
- Remote Access

Deploy

- Schema Builder

## Apex Classes

Force.com Apex Code is an object oriented programming language that allows developers to develop on-demand business applications on the Force.com platform.

**Percent of Apex Used: 1.07%**  
You are currently using 32,175 characters of Apex Code (excluding comments and @isTest annotated classes) in your organization, out of an allowed limit of 3,000,000 characters. Note that the amount in use includes both Apex Classes and Triggers defined in your organization.

[Estimate your organization's code coverage](#)

[Compile all classes](#)

View: **All** Create New View

A B C D E F **G** H I J K L M N O P Q R S T U V W X Y Z Other | All

Developer Console New **Generate from WSDL** Run All Tests Schedule Apex

Action	Name ↑	Namespace Prefix	Api Version	Status	Size Without Comments	Last Modified By	Override Log Filters
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	<a href="#">getorder</a>		25.0	Active	2,570	Niraj Kumar Upadhyay, 8/13/2012 3:58 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	<a href="#">getorderXsd</a>		25.0	Active	5,269	Niraj Kumar Upadhyay, 8/13/2012 3:58 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	<a href="#">GetQuoteDemo</a>		29.0	Active	2,279	Niraj Kumar Upadhyay, 10/22/2013 10:56 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	<a href="#">GetQuoteDemoContrl</a>		29.0	Active	2,914	Niraj Kumar Upadhyay, 10/25/2013 3:58 AM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	<a href="#">GetQuoteLogin</a>		29.0	Active	373	Niraj Kumar Upadhyay, 10/25/2013 7:41 AM	<input type="checkbox"/>
<a href="#">Edit</a>	<a href="#">GraphData</a>	ca_agile	23.0	Active	587	Kevin McGuire, 6/23/2012 5:22 PM	<input type="checkbox"/>
<a href="#">Edit</a>	<a href="#">GraphDataPoint</a>	ca_agile	23.0	Active	190	Kevin McGuire, 6/23/2012 5:22 PM	<input type="checkbox"/>
<a href="#">Edit</a>	<a href="#">GridRow</a>	ca_agile	23.0	Active	599	Kevin McGuire, 6/23/2012 5:22 PM	<input type="checkbox"/>
<a href="#">Edit</a>	<a href="#">GridRowControllerTest</a>	ca_agile	23.0	Active	481	Kevin McGuire, 6/23/2012 5:22 PM	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Security</a>	<a href="#">GridSObject</a>	ca_agile	23.0	Active	635	Kevin McGuire, 6/23/2012 5:22 PM	<input type="checkbox"/>

Chat

# Understanding Classes

The screenshot displays the Salesforce Developer Console interface. The top navigation bar includes the Salesforce logo, a search bar, and user information for Niraj Kumar Upadhyay. The left sidebar contains navigation links for Home, Chatter, Files, Order, Reports, and Dashboards. Below these are sections for Force.com Home, System Overview, Personal Setup, and App Setup. The main content area shows the 'Apex Class' 'GetQuoteDemo'. It includes a 'Quick Find' bar, a 'Back to List: Apex Classes' link, and buttons for Edit, Delete, Download, Security, and Show Dependencies. The class details table shows the Name as 'GetQuoteDemo', Namespace Prefix, Code Coverage as 0%, and Created/Modified by Niraj Kumar Upadhyay on 10/22/2013. The 'Class Body' tab is selected, displaying the following Apex code:

```
1 //Generated by wsdl2apex
2
3 public class GetQuoteDemo {
4     public class GetQuote_element {
5         public String symbol;
6         private String[] symbol_type_info = new String[]{'symbol','http://www.webserviceX.NET/',null,'0','1','false'};
7         private String[] apex_schema_type_info = new String[]{'http://www.webserviceX.NET/',true,'false'};
8         private String[] field_order_type_info = new String[]{'symbol'};
9     }
10    public class StockQuoteSoap {
11        public String endpoint_x = 'http://www.webserviceX.net/stockquote.asmx';
12        public Map<String,String> inputHttpHeaders_x;
13        public Map<String,String> outputHttpHeaders_x;
14        public String clientCertName_x;
15        public String clientCert_x;
16        public String clientCertPasswd_x;
17        public Integer timeout_x;
18        private String[] ns_map_type_info = new String[]{'http://www.webserviceX.NET/', 'GetQuoteDemo'};
19        public String GetQuote(String symbol){
20            GetQuoteDemo.GetQuote_element request_x = new GetQuoteDemo.GetQuote_element();
21            GetQuoteDemo.GetQuoteResponse_element response_x;
22            request_x.symbol = symbol;
23            Map<String, GetQuoteDemo.GetQuoteResponse_element> response_map_x = new Map<String, GetQuoteDemo.GetQuoteResponse_element>();
24            response_map_x.put(response_x, response_x);
25            WebServiceCallout.invoke(
26                this,
27                request_x,
28                response_map_x,
29                new String[]{endpoint_x,
30                    'http://www.webserviceX.NET/GetQuote',
31                    'http://www.webserviceX.NET/',
32                    'GetQuote',
33                    'http://www.webserviceX.NET/',
34                    'GetQuoteResponse',
35                    'GetQuoteDemo.GetQuoteResponse_element'}
36            );
37        }
38    }
39 }
```

# User Interface

- salesforce provides VisualForce framework that lets us build custom user interfaces that can be hosted natively on Force.com platform.
- VisualForce framework uses a tag-based mark up language similar to HTML and a VisualForce controller.
- This user interface will be interacting with the Web Service using a controller.
- It is very easy to create pages on salesforce.
- Click on your Name → Setup → Develop → Pages to view or create new pages.
- We can use the “Development Mode” to design and build pages by entering a unique URL. For example, modify the URL as shown below to create a new page called “GetValuesPage”
  - <https://cs11.salesforce.com/066/e?retURL=%2Fapexpages%2Fsetup%2FlistApexPage.apexp>
  - <https://c.cs11.visual.force.com/apex/GetValuesPage>



# User Interface

The image shows a Visualforce page titled "Demo: Get Stock Quote" and its corresponding Apex code in the Visual Studio Code editor.

**Visualforce Page:**

- Header:** "Demo: Get Stock Quote" (Red background)
- Section:** "Stock Quote" (Blue background)
- Form:** "Enter the Company Symbol :
- Section:** "Stock Details for" (Blue background)
- Table:** A table with 13 columns: Last Price, Trade Date, Trade Time, Price Change, Opening Price, High Price, Low Price, Total Volume Traded, Market Cap, Prv Close, Percentage Change, Annual Range, Total Earning, P-E Value.
- Image:** A background image of a hand pointing at a stock market display.

**Apex Code (Visual Studio Code):**

```
1 <apex:page showHeader="false" sidebar="true" Controller="GetQuoteDemoContrl">
2 <style type="text/css">
3   .bPageBlock .pbHeader {
4     background:#A9D0F5 !important;
5     font-weight:bold;
6     font-size:12pt;
7     text-align:float-left;
8   }
9   .bPageBlock .pbBody {
10    background:#FAFAFA !important;
11    font-size:10pt;
12    margin-left:50pt;
13  }
14  .outputText {
15    margin-left:200pt;
16  }
17  .mystyle {
18    background: url({!$Resource.CALOGO});
19    width=220px;
20  }
21  zoom=110%;
22 </style>
23
24 <apex:pageBlock >
25   <apex:image url="{!$Resource.CALOGO}" width="90" height="90" />
```

Position: Ln 1, Ch 1 | Total: Ln 82, Ch 3250

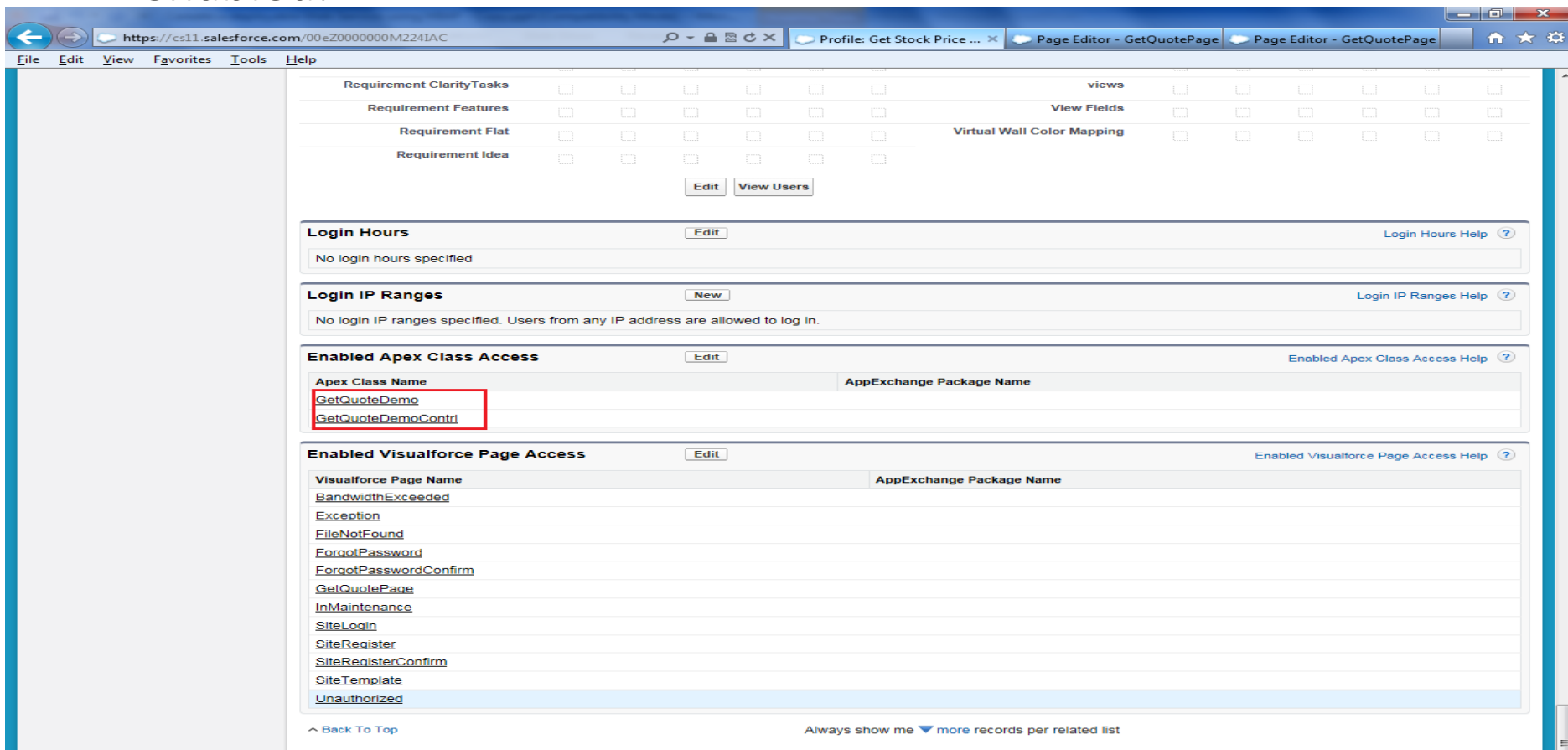
# Controller Class

- A Visualforce controller is a set of instructions that specifies what happens when a user interacts (clicks on a button or a link) with the Visualforce page.
- It is an APEX class and, works as a link between page and the class that makes a callout to the Web Service.

- Force.com sites enable you to create public websites and applications that are directly integrated with your salesforce.com organization—without requiring users to log in with a username and password.
- Sites are hosted on Force.com servers and are built on native Visualforce pages.
- Click on your Name → Setup → Develop → Sites to view or create new Sites.
- Attach the pages to the site and provide a unique URL for the site.

# Public Access Settings

- Make sure all the APEX classes related to this application are enabled.



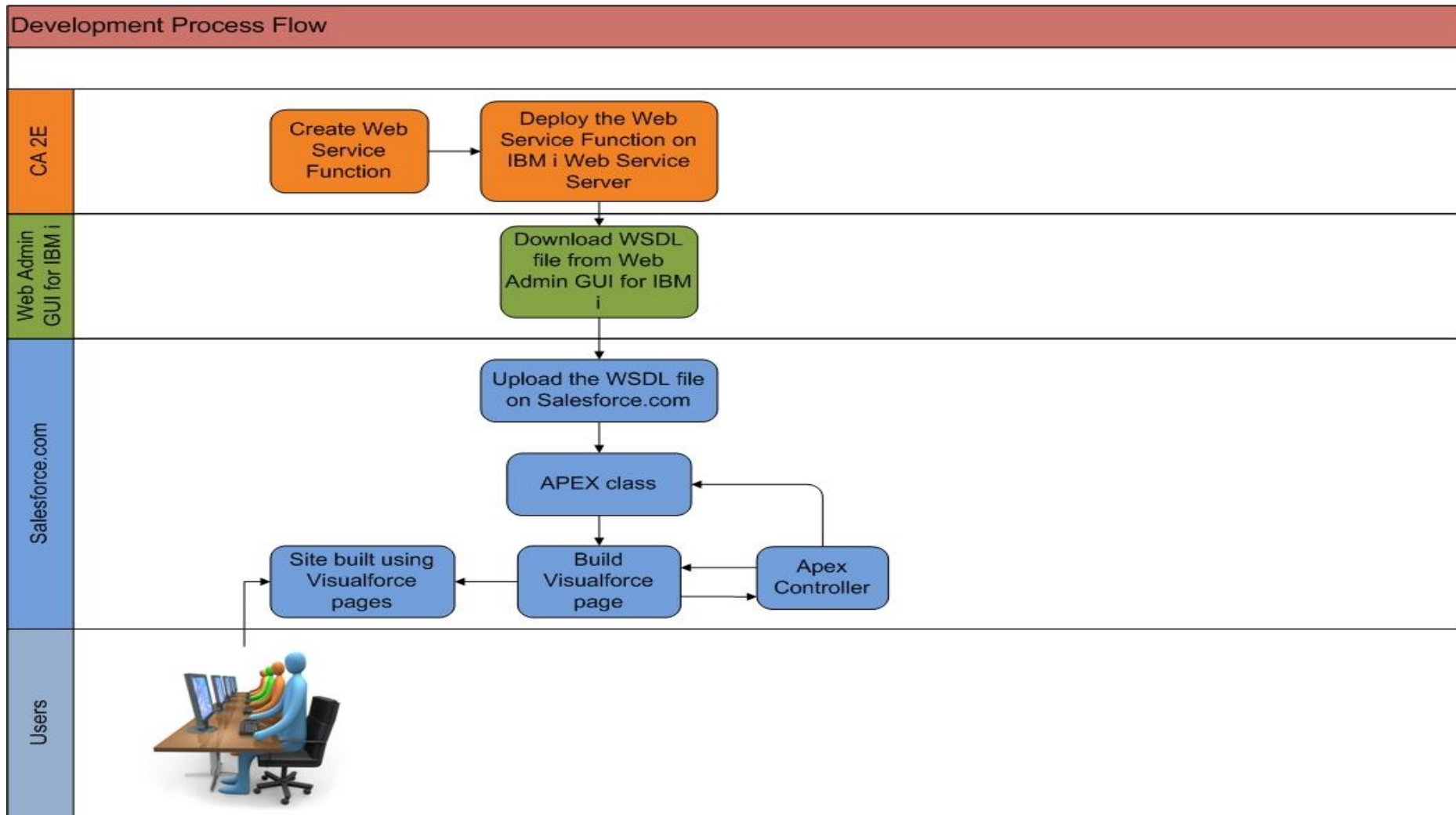
The screenshot shows the Salesforce Public Access Settings page. The browser address bar displays `https://cs11.salesforce.com/00eZ0000000M224IAC`. The page title is "Profile: Get Stock Price ...". The page editor shows the "Get Quote Page" configuration. The "Enabled Apex Class Access" section is highlighted, showing a table with the following data:

Apex Class Name	AppExchange Package Name
<u>GetQuoteDemo</u>	
<u>GetQuoteDemoContrl</u>	

The "Enabled Visualforce Page Access" section is also visible, showing a table with the following data:

Visualforce Page Name	AppExchange Package Name
<u>BandwidthExceeded</u>	
<u>Exception</u>	
<u>FileNotFound</u>	
<u>ForgotPassword</u>	
<u>ForgotPasswordConfirm</u>	
<u>GetQuotePage</u>	
<u>InMaintenance</u>	
<u>SiteLogin</u>	
<u>SiteRegister</u>	
<u>SiteRegisterConfirm</u>	
<u>SiteTemplate</u>	
<u>Unauthorized</u>	

# Overall Flow





# Q&A

