

# Using Oracle Application Express to Extend the Functionality of Siebel On Demand



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# About Innowave



- Technology Consulting Firm founded in 2005
- Provide unique, innovative solutions using Oracle Applications and Technology
- Integration Experts: Fusion Middleware, SOA Suite, BPEL & Web services
- Implement, upgrade, and enhance Oracle E-Business Suite, JD Edwards, PeopleSoft, and Siebel Applications and related technologies
- Extensive experience and expertise managing global and local implementations across various industry verticals
- Provide clients with proven methodologies, tools, and templates specifically tailored to their requirements

# Agenda



- Challenges to Customizing Siebel On Demand
- Overview of Oracle Application Express (Apex)
- Solution Overview: Using Apex to Extend Siebel On Demand
- Considerations and Challenges
- Summary
- Additional Information
- Q&A



# Challenges to Customizing Siebel On Demand

# Siebel On Demand



- Siebel On Demand vs. Siebel On Premise
  - What is On Demand?
  - Functionality differences
  - Access limitations
  - Customization limitations
- Custom Siebel pages are expensive
- Ongoing support of custom work
- *What do you do if you have a requirement for additional user interfaces or functionality?*

# Extend Siebel On Demand



- Adding new pages and functionality without customizing
- Siebel On Demand is a Web-based solution
  - Direct HTTPS connectivity
  - Allows the configuration of custom links in standard pages
- Exposes Web Services for standard processing
- Single Sign-On Capabilities (v. 14)
  
- Goal: Web-based application that can be seamlessly integrated with Siebel On Demand pages and easily built and managed.



# Overview of Oracle Application Express

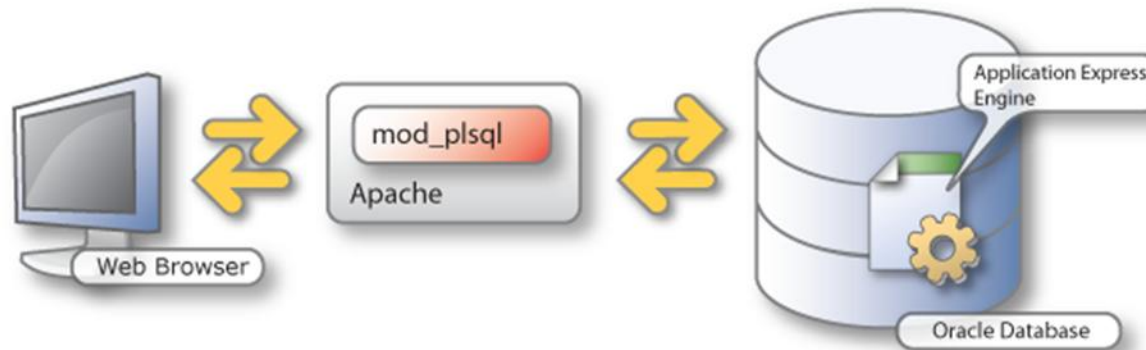
# Oracle Application Express



- What is Oracle Application Express?
  - Formerly HTML DB
  - Web-based application development tool built on an Oracle database.
  - Rapid creation and deployment of Web pages.
  - Standard functionality to call Web Services.
  - Standard functionality to use Single Sign-On.
  - Launched via a URL with parameters passed.
  - Based on wizard-generated Oracle PL/SQL (language of Oracle DB)
  - Can also be hosted by Oracle!



# Apex - Architecture

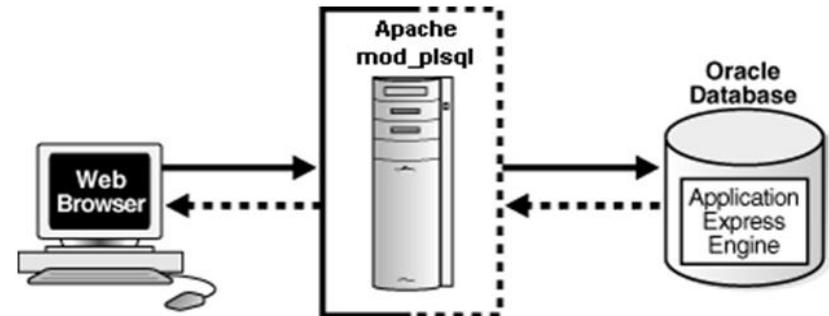


- All Web Pages are built using point-and-click wizards.
- HTML is dynamically created by PL/SQL procedures and functions in the database.

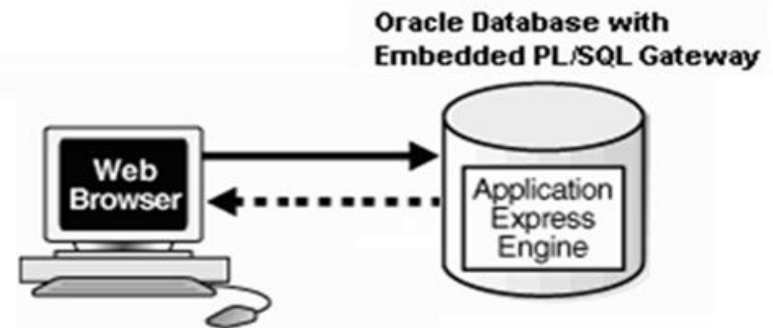
# Apex - Architecture



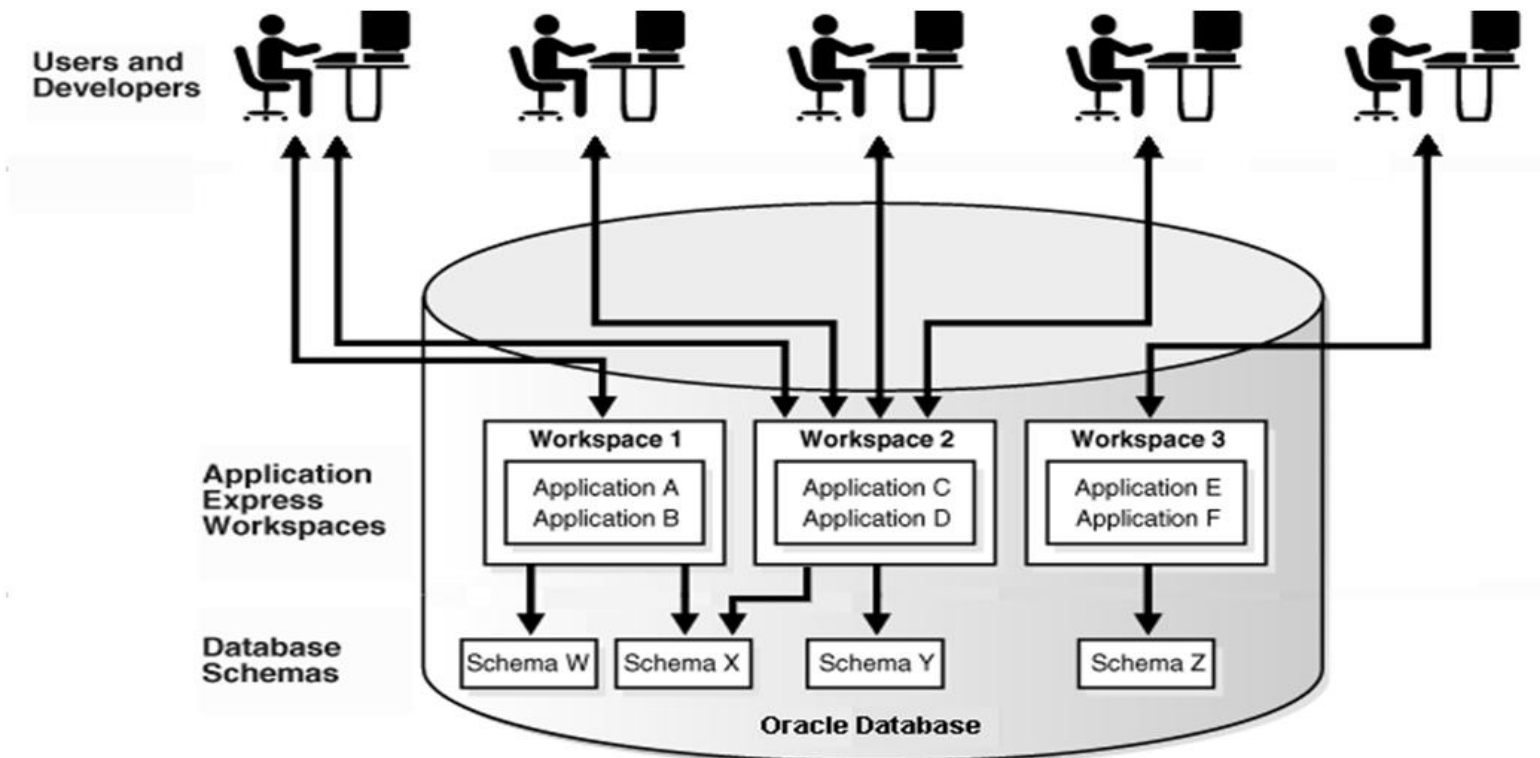
**Versions prior to Oracle Database 11G**



**With Oracle Database 11G or higher /  
Oracle Database 10g Express Edition**



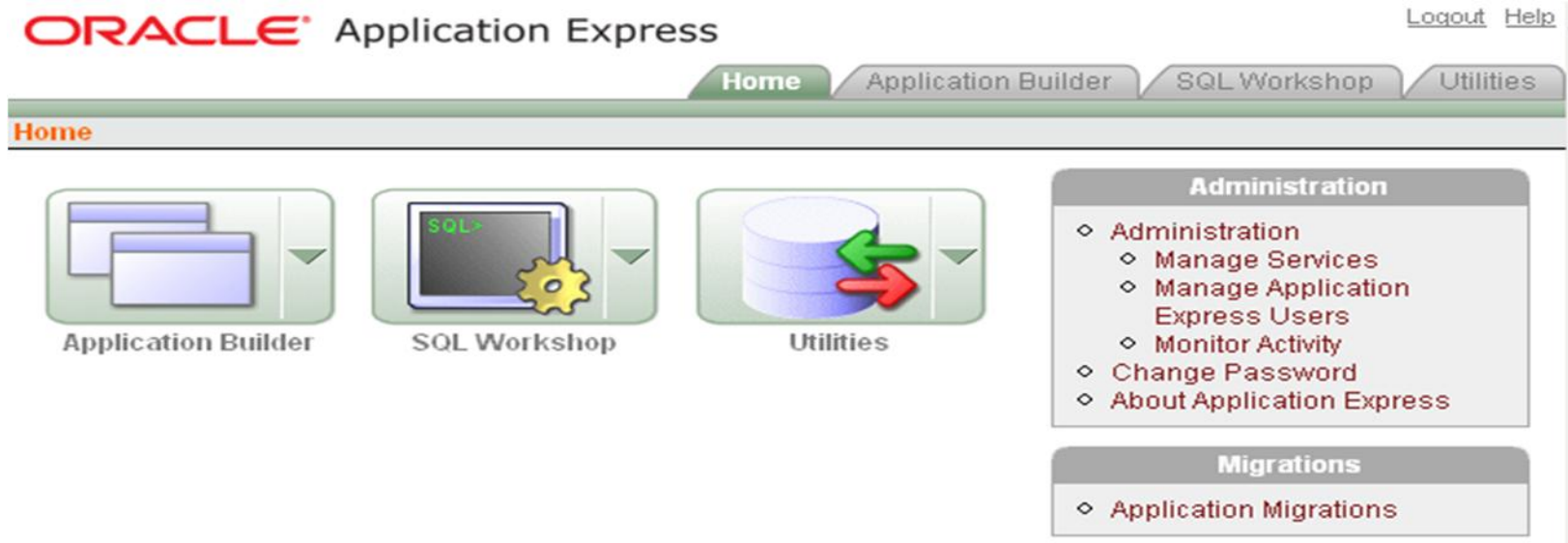
# Apex - Architecture



# Apex – Home Page



- Application Express provides three primary tools.



- **Application Builder** - to create dynamic database driven web applications.
- **SQL Workshop** - to browse your database objects or create queries using the graphical tools.
- **Utilities** - allows data to be loaded and unloaded from flat files, spreadsheets.

# Key features of Apex

- Reporting
- Forms
- Charting
- PDF Printing
- Spreadsheet Upload
- Session State Management
- User Interface Themes
- Flow Control and Navigation
- Conditionality on all Components
- External Interfaces and Extensibility ( Web Services)
- Security

# Apex Demo

- Quick overview of building forms and reports in Apex.

# Build in Apex

## Hypertext linked Reports / Drill down Reports

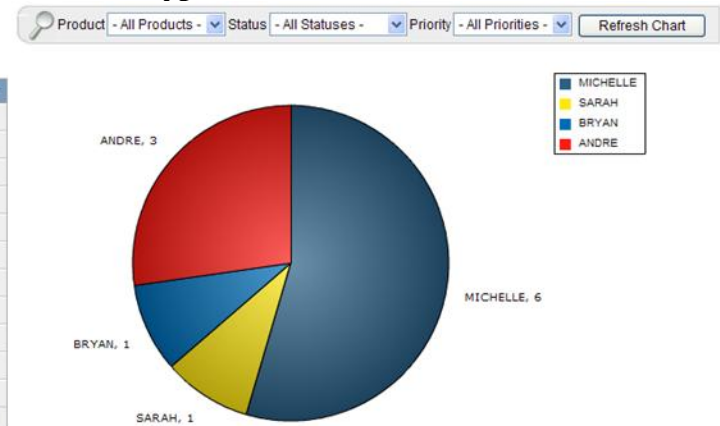
Assigned To User:  Assigned to Group:  Submitted By:   
 Status:  Priority:  Product Name:

Bug #	Subject	Product	Priority	Status	Submitted By	Assigned To	Assigned To Group
1	Unhandled Exception occuring Home page	Store Builder	High	Assigned	MICHELLE	MICHELLE	-
2	Script error in Home page	Store Builder	High	Hold	MICHELLE	MICHELLE	-
3	Search performance is poor	Store Builder	Medium	Wait	MICHELLE	MICHELLE	-
4	Issue with date calculation	Store Builder	High	Assigned	MICHELLE	MICHELLE	-
5	Email validation issue	Store Builder	High	Assigned	MICHELLE	MICHELLE	-
6	Issue with date related SQL	Store Builder	Medium	Assigned	MICHELLE	MICHELLE	-
7	Issue with date field in Reports	Store Builder	Medium	Fixed	MICHELLE	ANDRE	-
8	Expected date error..	Store Builder	Medium	Fixed	MICHELLE	ANDRE	-
9	Issue with AJAX Call	Store Builder	Medium	Fixed	MICHELLE	SARAH	-
10	Javascript error in Home Page	Store Builder	Medium	Fixed	MICHELLE	BRYAN	-
11	VO Error when calling core.dll	Store Builder	Medium	Fixed	MICHELLE	ANDRE	-

row(s) 1 - 11 of 11



## Hypertext Linked charts



## Data entry forms

**Add/Modify Products**

Product Name:

Product Description:

Category:  Product Available:  Y  N

List Price:

## Calendar Report

Previous | Next | Today

February 2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	04	05	06	07	08	
	11	12	13	14	15	
	18	19	20	21	22	
	25	26	27	28	29	

This includes Closed Issues

## PDF Printing

**Application Express 3.0 - PDF Demo**

Department	First Name	Last Name	J
Accounting	Shelley	Higgins	A
Administration	Jennifer	Whalen	A
Executive	Neena	Kochhar	A
	Lex	De Haan	A
Finance	Nancy	Greenberg	F
	Jose Manuel	Urman	A
	Ismael	Souza	A
	Luis	Pooj	A
	Daniel	Faviet	A
	John	Chen	A
Human Resources	Susan	Mavris	H
IT	Alexander	Hunold	P





# Solution Overview: Using Apex to Extend Siebel On Demand



# Overview of Solution

- Client Requirements:
  - Custom “Q&A” application to step through questions and answers as part of Call Center On Demand
  - Results of the Q&A should get assigned as an activity on the account record in Siebel CRM
  - Notes should also be captured in Apex and added to the Siebel account record.
  - 24x7 Uptime for capturing new Accounts and Q&A
  - Order Management capabilities with integration to financial ERP
  - Other integrations between Apex and WMS system
  - User-friendly UI
  - Rapid development capabilities

# Overview of Solution

- Solution
  - Custom application built in Apex to accommodate needs
  - Addressed Siebel On Demand maintenance downtime issue
  - Added basic Order Management capabilities
  - Full SOA solution utilizing Oracle BPEL Process Manager to handle the integrations to ERP, WMS, etc.

# Apex Integration with Siebel

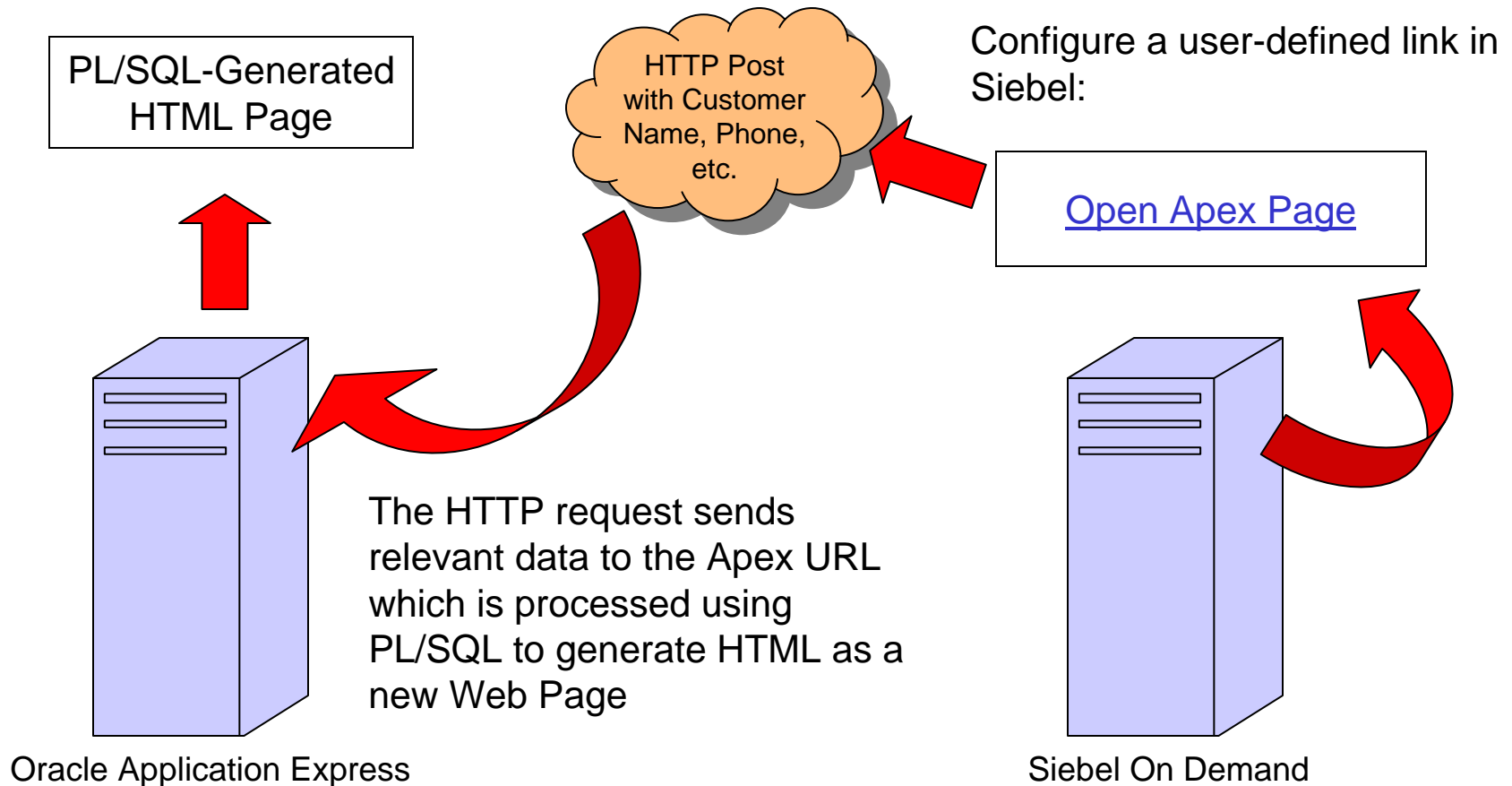
## Siebel → Apex

- Create user-defined Web Links in Siebel to open an Apex Application page and pass data within the URL.
- Single Sign-On tokens can be passed (new feature)

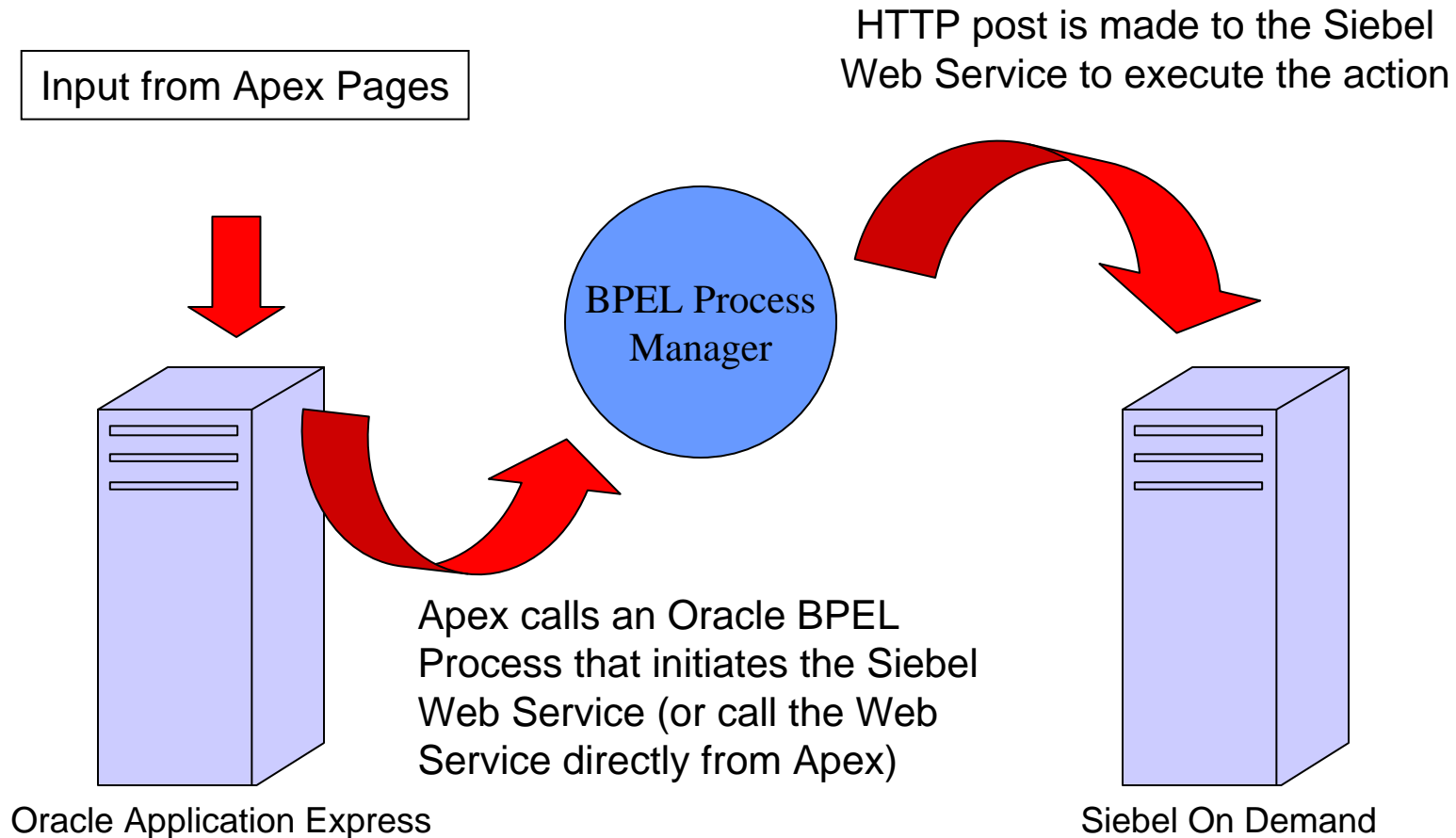
## Apex → Siebel

- Web Services are exposed in Siebel to perform standard functions.
- Apex calls the Siebel Web Services either directly or via other SOA integration utilities based on requirements.

# Opening Apex Pages in Siebel



# Using Siebel Web Services





# Web Links in Siebel

The screenshot shows the Siebel CRM interface in a browser window. The browser's address bar shows 'Web Search'. The Siebel interface has a left-hand navigation pane with a 'Create' menu containing 'Account', 'Appointment', 'Contact', 'Lead', 'Opportunity', 'Service Request', 'Solution', and 'Task'. The main content area displays 'Contact Details' for a contact named 'TEST101'. The contact information is organized into sections:

- Key Contact Information:**
  - Mr./Ms. (blank)
  - First Name: TEST101
  - Middle Name: (blank)
  - Last Name: TEST101
  - Contact Type: End User
  - Account: TEST101 TEST101
  - Primary Phone: 1 (626) 123-1234
  - Secondary Phone: (blank)
  - Main Fax: (blank)
  - Email Address: (blank)
  - Job Title: (blank)
  - Smart Script: [Open Smart Script](#) (indicated by a red arrow)
- Contact Detail Information:**
  - Department: Manager
  - Assistant Name: (blank)
  - Manager Cell Phone: (blank)
  - Assistant Work Phone: (blank)
  - Manager Work Phone: (blank)
  - Assistant Cell Phone: (blank)
  - Best Time to Call: (blank)
  - Private:
  - Never Email:
  - Lead Source: (blank)
  - Source Campaign: (blank)
- Additional Information:**
  - Account ID: O\_777788889999
  - Contact Currency: USD
  - Primary Group: (blank)
  - Time Zone: (blank)
- Billing Address:**
  - Country: (blank)
  - Number/Street: (blank)
  - Address 2: (blank)
  - City: (blank)
  - State: (blank)
  - Zip: (blank)
  - Owner: integration
- Shipping Address:**
  - Country: USA
  - Number/Street: (blank)
  - Address 2: (blank)
  - City: (blank)
  - State: (blank)
  - Zip: (blank)
- Available Section:**
  - Test APEX (Do not use this link): [Launch APEX](#) (indicated by a red arrow)
  - Map Address: [Map](#)

At the bottom right of the interface, there is a blue sidebar area. The 'Modified By' field shows 'Siebel Integration 2/27/2008 05:36 AM'.

# Set Web Links in Siebel



## Step 1: Click on Admin

The screenshot shows the Siebel CRM On Demand interface. The top navigation bar includes links for Customer Care, Training, Admin, My Setup, Deleted Items, Help, and Sign Out. The Admin link is highlighted with a red arrow. Below the navigation bar, the Contacts Homepage is displayed, featuring sections for Contact Lists, Recently Modified Contacts, Contact Tasks, and Contact Analysis By Account. The Contact Tasks section contains a table with columns for Due Date, Priority, Subject, and Primary Contact.

Due Date	Priority	Subject	Primary Contact
9/26/2007	↑	call with tracking number	William Deverson
9/28/2007	↓	Apex order	Jason Palmer
9/28/2007	↑	check if we have 337 for this custome (walk-in)	Mary Chiella
10/1/2007	↓	refund	Delores Foster
10/1/2007	↓	Eico, customer drop off	Jason Hall
10/1/2007	↓	call brian	BRIAN MORRISON
10/3/2007	↑	call back with estimate	Adriana Force
10/4/2007	↑	calling with status!!!!	welington dark
10/4/2007	↑	tracking number	Abraham Grant
10/12/2007	↓	hardcopy of manual needed	Jeanne Danford



# Set Web Links in Siebel



## Step 2: Click on Application Customization

The screenshot displays the Oracle Siebel CRM On Demand Admin Homepage. The page is titled "ORACLE Siebel CRM On Demand" and includes a navigation bar with tabs for Home, Calendar, Communications, Contacts, Service, Reports, Dashboard, and Accounts. The main content area is titled "Admin Homepage" and contains several sections:

- Company Administration**: Manage the company profile and manage global information, including currencies and active languages. Monitor usage and set password policies. Create Homepage alerts.
- User Management & Access Controls**: Manage users and their data visibility for your company, including creating new or updating existing user profiles. Manage public groups that are used implicitly to share records and calendar among multiple users. Define roles to control user's access to data and various application features, and define book hierarchies to manage levels of visibility users have into your company's data.
- Data Management Tools**: Import and Export Tools - Import your company data, export your company data, or view the import and export queues. Batch Delete Queue - View the batch delete requests (active and completed).
- Web Services Integration**: Web Services Administration - View and download web services. Web Services Utilization - Review a summary of services used by your company.
- Application Customization**: Customize application specific to your company; create homepage layouts, homepage layouts, search result layouts, and dynamic page layouts. Change field names, modify picklist values, create custom fields, specify custom picklists, define custom web tabs and applets, set up custom audit trails, and define name record types.
- Data Rules & Assignment**: Define the data rules for your company, including automatic assignment of records, forecasting, and sales methodologies.
- Content Management**: Define your company Product list and hierarchy. View, delete and replace all of your company's Attachments. Manage access to Reports Folders and define visibility to shared custom analyses folders. Define your company's assessments templates.

A red arrow points to the "Application Customization" section.



# Set Web Links in Siebel



## Step 3: Click on Contact

The screenshot shows the Siebel CRM On Demand Admin interface. The main content area is titled 'Application Customization' and contains two columns: 'Record Type Setup' and 'Application Setup'. In the 'Record Type Setup' column, there is a list of record types: Account, Activity, Assessment, Asset, Campaign, **Contact**, and Lead. A large red arrow points to the 'Contact' record type. The 'Application Setup' column contains several sections: 'Custom Web Tabs - Create and manage custom web tabs.', 'My Homepage Layout - Create and manage My Homepage Layouts.', 'My Homepage Custom Report - Enable custom reports to be added to a My Homepage Layout.', and 'Rename Record Types - Change the display name for record types. The new name is reflected in most parts of the user interface, including tabs, standard list names, buttons, and page names.'

# Set Web Links in Siebel



## Step 4 : Under Field Management Click Contact Field Setup

The screenshot shows the Siebel CRM On Demand interface. The main content area is titled "Contact Application Customization" and contains several management sections. A red arrow points to the "Contact Field Setup" link under the "Field Management" section.

- Field Management**
  - Relabel field names, create custom fields, manage picklist values, specify default values for a field or set of values
  - [Contact Field Setup](#)
  - [Contact Team Field Setup](#)
- Page Layout Management**
  - Create and manage page layouts and web applets that can be used on Detail page layouts.
  - [Contact Page Layout](#)
  - [Contact Web Applet](#)
- Cascading Picklists**
  - Define and manage cascading picklists by specifying a parent and a related picklist.
  - [Contact Cascading Picklists](#)
- List Access & Order**
  - Manage default list access and the display order for each role.
  - [Contact List Access & Order](#)
- Dynamic Layout Management**
  - Manage Dynamic Layouts by associating different page layouts with different values of the picklist that controls page display at runtime.
  - [Contact Dynamic Layout](#)
- Search Layout Management**
  - Specify targeted search fields and manage layouts for search results.
  - [Contact Search Layout](#)
- Homepage Layout Management**
  - Create and manage Homepage layouts and specify custom reports to be displayed on the Homepages.
  - [Contact Homepage Layout](#)
  - [Contact Homepage Custom Report](#)
- Lookup Window Setup**
  - Manage the behavior of the Lookup Windows
  - [Contact Lookup Window Setup](#)

# Set Web Links in Siebel



Step 5 : Pass Siebel data in the APEX URL.

The screenshot shows the 'Edit Web Link' dialog box in a Windows Internet Explorer browser window. The dialog is titled 'Edit Web Link - Windows Internet Explorer' and shows the URL: `https://secure-ausombca.crmondemand.com/OnDemand/User/EditWebLink?EWLF.SS_LANG=ENU&C`. The 'Field Display Name' is set to 'Smart Script'. The 'Open in Custom Web Tab' option is selected. The 'URL' field contains the following APEX URL with Siebel data parameters: `https://appxtest.syntaxbrilliant.com/pls/apex/f?p=109:1::::P1_SBL_USER,P1_SBL_CONTACT_ID,P1_CONTACT_LAST,P1_WORK_PHN,P1_EMAIL,P1_SBL_ACCOUNT_ID:%%User id%%,%%id%%,%%Last First Name%%,%%Primary Account Name%%,%%Primary Account Locat%%`. A red arrow points to the 'Smart Script' field in the background Siebel interface.

# Set Web Links in Siebel



Step 6 : Click the link and the Apex page is opened in a new window or within the custom Siebel web tab.

The screenshot shows two browser windows. The left window displays the Siebel CRM 'Contact Details' page for a contact named TEST101. The right window shows the 'Choose Activity' page for the same contact, with a 'Smart Script Troubleshooter' button highlighted. A red arrow points to the 'Launch APEX' link in the 'Available Section' of the contact details page.

**Contact Details Information:**

- Mr./Ms. Primary Phone 1 (626) 123-1234
- First Name TEST101 Secondary Phone
- Middle Name Main Fax
- Last Name TEST101 Email Address
- Contact Type End User Job Title
- Smart Script Open Smart Script
- Account TEST101 TEST101
- Last Call Date
- Customer ID
- Account Integration Id 4597
- Account External Unique Id 4597
- External Unique Id
- Integration ID ABCA-1DTV4E

**Contact Detail Information:**

- Department Assistant Name
- Manager Assistant Work Phone
- Manager Cell Phone Assistant Cell Phone
- Manager Work Phone Best Time to Call
- Manager Email Address Private
- Account ID O\_777788889999 Never Email
- Contact Currency USD Lead Source
- Primary Group Source Campaign
- Time Zone

**Additional Information:**

Billing Address	Shipping Address
Country	Country USA
Number/Street	Number/Street
Address 2	Address 2
City	City
State	State
Zip	Zip

**Available Section:**

- Test APEX (Do not use this link) Launch APEX
- Map Address Map
- Description

# Web Services in Apex

- Web services in Oracle Application Express are based on SOAP (Simple Object Access Protocol).
- Apex provides a user-friendly wizard to set up a connection to a Web Service or you can set it up manually if you prefer.
- Apex pages can then be built to directly call the Web Service that you configured.



# Web Services in Apex

Step 1 : In your application, select Shared Components



Step 2 : The Web Service References option will open the Web Services Wizard



# Web Services in Apex



Step 3 : Specify the WSDL location.

**ORACLE** Application Express

Home > Application Builder > Application 101 > Shared Components > Web Service References > **Create Web Service Reference**

Search UDDI?  < Previous Next >

Choose tModel

**WSDL Location**

WSDL Location

Web Service Details

**Authentication**

Username

Password

Success



# Web Services in Apex

Step 4 : Verify Web Service Details on the next step and click Create Reference to complete the setup.

**ORACLE** Application Express

Home > Application Builder > Application 101 > Shared Components > Web Service References > **Create Web Service Reference**

Search UDDI?

Choose tModel

WSDL Location

**Web Service Details**

Success

**Web Service Details** Cancel < Previous Create Reference

Web Service Name

SOAP URL Endpoint

SOAP Style

Basic Authentication  Yes  No

**Operations**

Operation Name

Input Parameters  
 Output Parameters



# Web Services in Apex



Step 5 : Now select Create Form on Web Service

The screenshot shows the Oracle Application Express interface. At the top, it says "ORACLE Application Express". Below that, there are navigation tabs for "Home" and "Application Builder". A breadcrumb trail reads: "Home &gt; Application Builder &gt; Application 101 &gt; Shared Components &gt; Web Service References &gt; Create Web Service Reference". On the left side, there is a vertical menu with buttons: "Search UDDI?", "Choose tModel", "WSDL Location", "Web Service Details", and "Success". The main content area is titled "Create Web Service Reference" and contains a green checkmark icon followed by the text "Web service reference created.". Below this, there are three icons representing different actions: "View Web Service References", "Create Form on Web Service", and "Create Form and Report on Web Service".



# Web Services in Apex

Step 6 : Choose the Web Service Reference from the drop-down list, select the appropriate Operation and complete the wizard.

**ORACLE** Application Express

Home > Application Builder > Application 101 > Page 1 > Create Page > **Form on Web Service**

Choose Service and Operation

Web Service Reference and Operation

Cancel

Next >

Page and Region Attributes

Input Items

Output Items

Tabs

Confirm

Success

\* Web Service Reference CreditRatingService ▼

\* Operation process ▼

# Web Services in Apex



Step 7 : Run the application and the following page will be displayed, prompting for a Social Security Number to be entered.

A screenshot of an Oracle APEX web page. The page has a white background with a blue header bar. Below the header, there is a form area. The form contains a label "process" in blue text. To the right of the label is a "Submit" button. Below the label, there are two input fields: "SSN" and "Rating". The "SSN" field is a single-line text input, and the "Rating" field is a single-line text input.

# Web Services in Apex

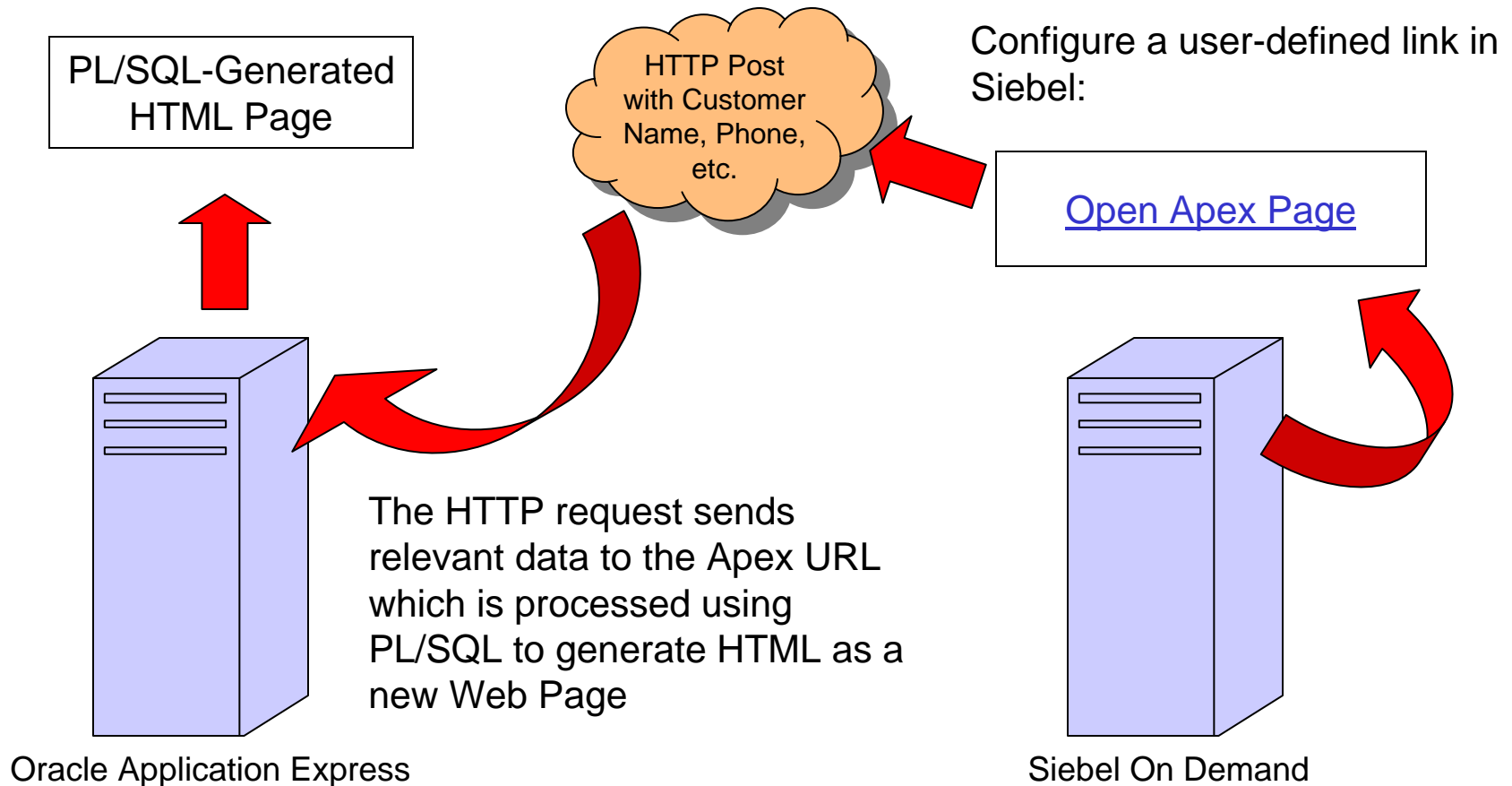


Step 8 : The page will invoke the web service and displays the rating value returned by the process.

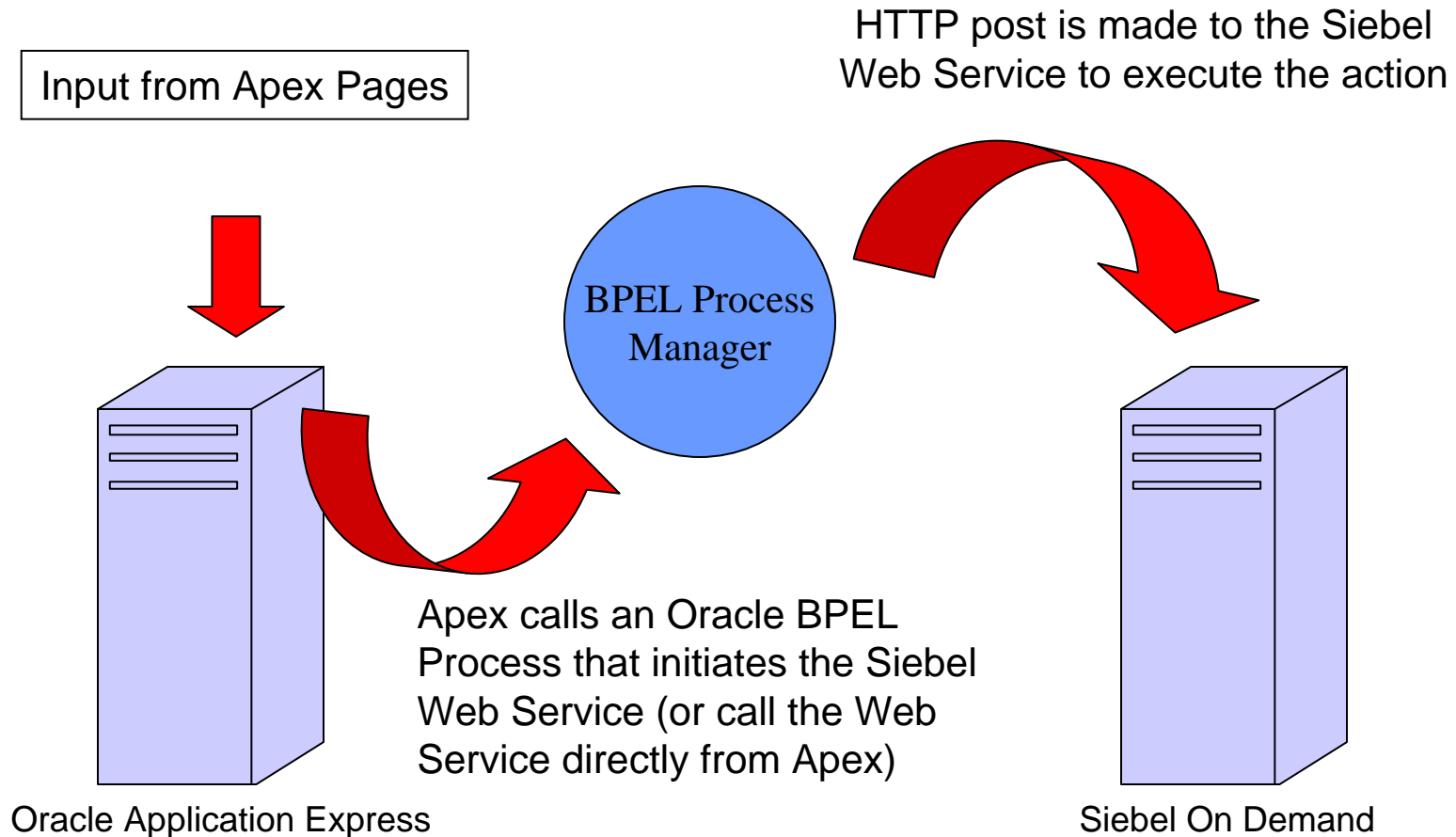
A screenshot of an Oracle APEX page. The page has a white background with a blue header bar. Below the header, there is a section titled "process" in blue text. To the right of this title is a "Submit" button. Below the title, there are two input fields: "SSN" with the value "1234567890" and "Rating" with the value "560".

process		Submit
SSN	1234567890	
Rating	560	

# Revisiting the Solution



# Revisiting the Solution





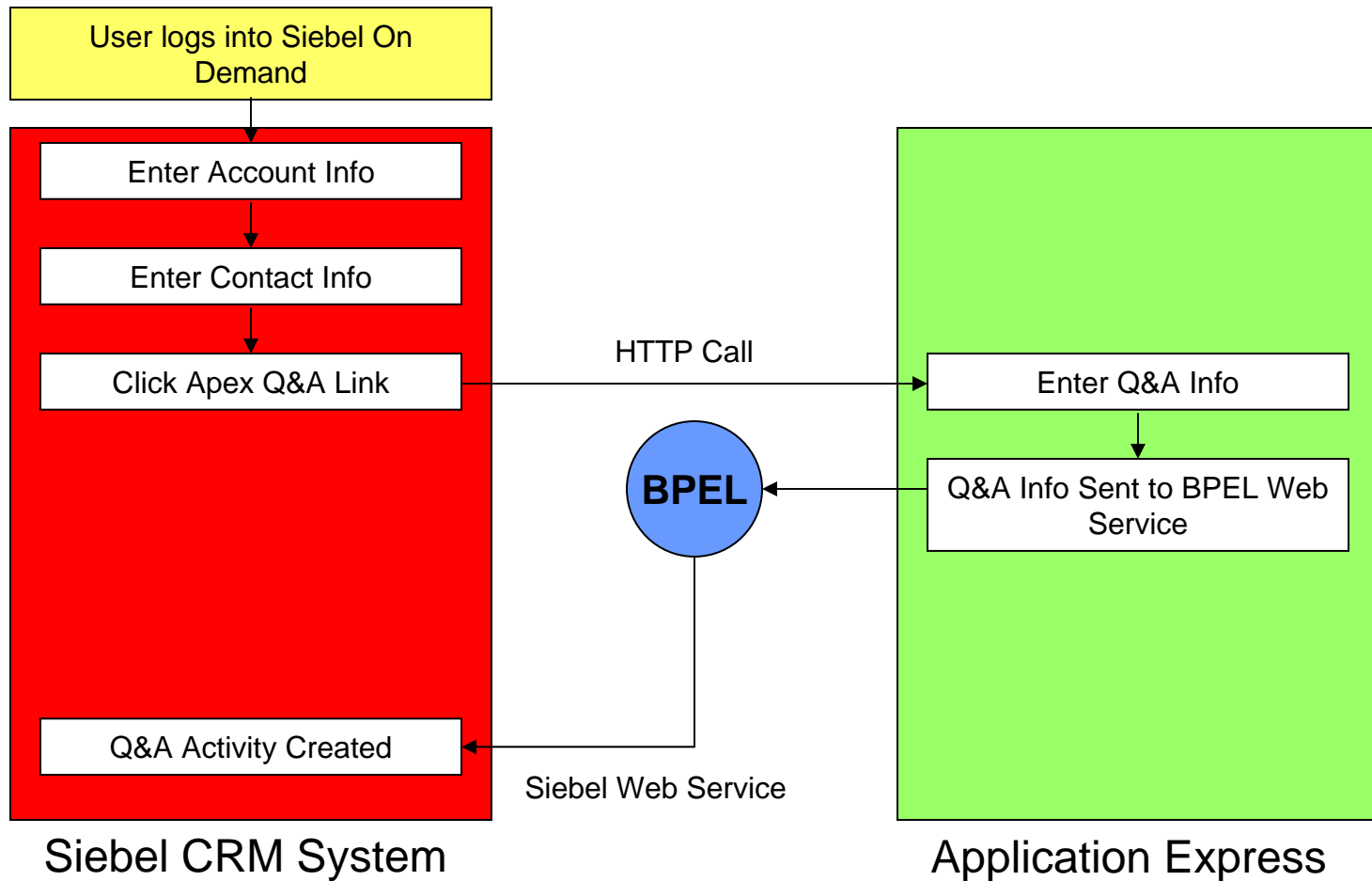
# Considerations and Challenges

# Considerations and Challenges

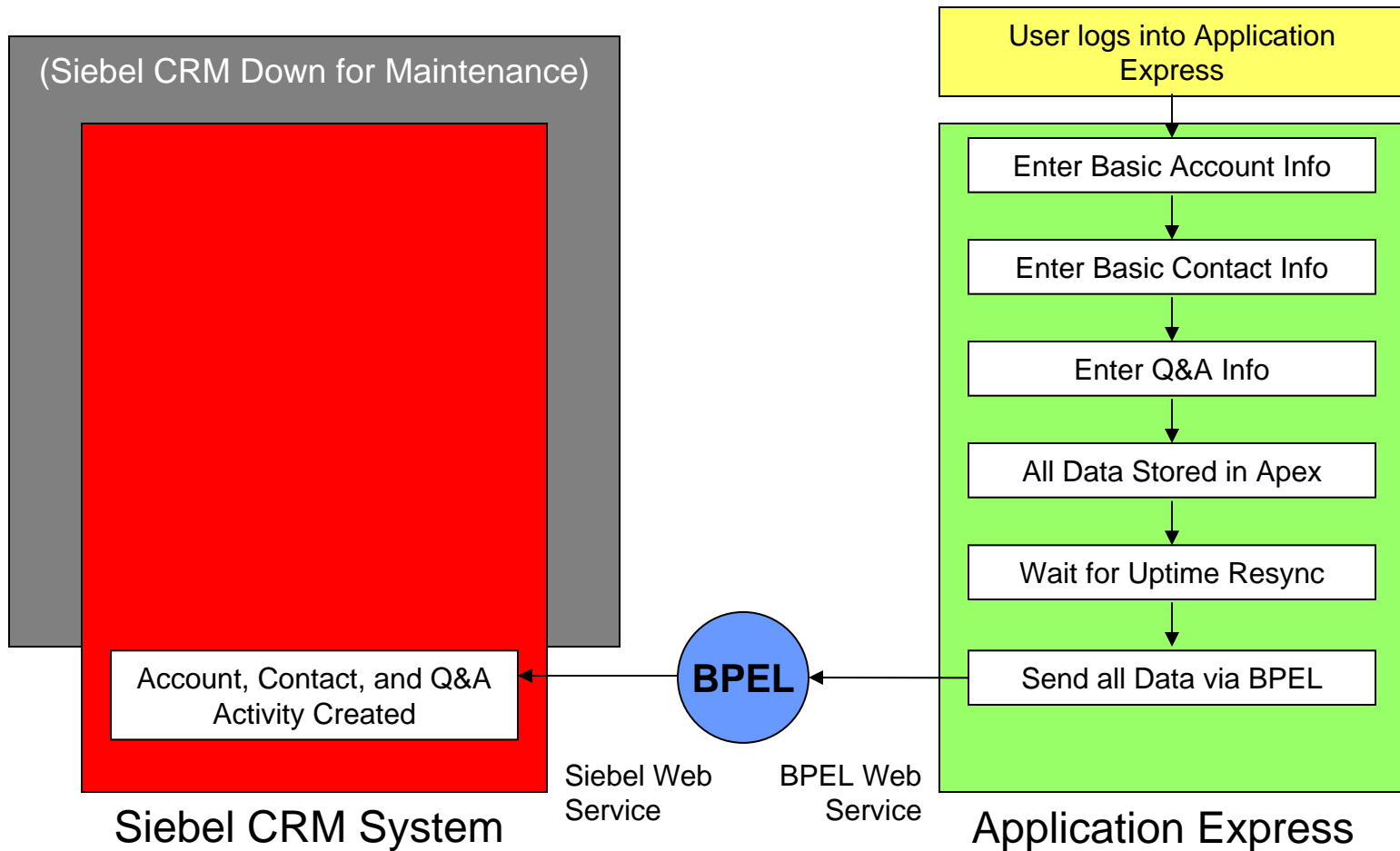
- On Demand Hardware / Architecture Considerations
  - What to request from On Demand?
  - Firewall / security considerations
- Challenges of hosting BOTH Apex and Siebel with Oracle On Demand
- Scalability
- Handling Siebel On Demand “scheduled maintenance downtime”



# Normal Uptime



# Maintenance Downtime





# Summary

# Summary



- Rather than customizing Siebel On Demand, why not use a less-intrusive and cheaper approach to achieve your goals?
- Siebel allows the creation of user-defined Web links on standard Siebel pages and also provides a full set of Web Services to allow outside systems to work with standard Siebel objects.
- Oracle Application Express is an affordable, robust tool that allows quick development of Web Applications, full support of Web Services, and easy access via a simple URL.
- Put these technologies together, and there are convenient options to extending the functionality of Siebel On Demand applications.



# Additional Information

# Helpful Apex Links

- Apex for Oracle10G:  
[http://www.oracle.com/technology/products/database/application\\_express/download.html](http://www.oracle.com/technology/products/database/application_express/download.html)
- Oracle Express Edition:  
<http://www.oracle.com/technology/software/products/database/xe/index.html>
- Access Apex Online using Oracle Apex Free Test Site:  
<http://apex.oracle.com/i/index.html>

# Helpful Siebel On Demand Links

- Siebel On Demand Home Page:  
<http://www.oracle.com/crmondemand/index.html>
- Siebel On Demand Integration Page:  
<http://www.oracle.com/crmondemand/products/integration/index.html>



## Q & A

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