

HP Anywhere

Windows

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HP Anywhere Architecture for Developers

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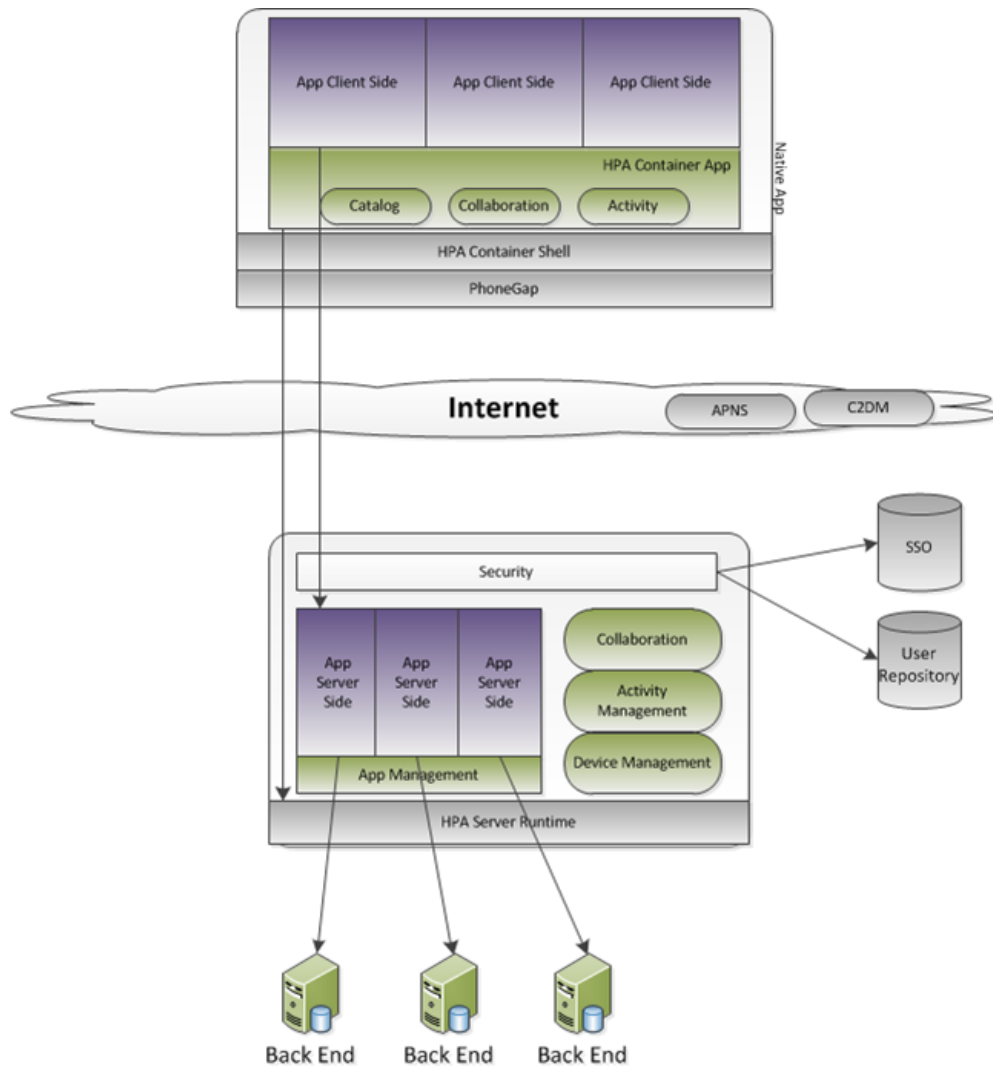
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HP Anywhere Architecture for Developers

HP Anywhere is a container-based platform that enables you to:

- Develop modern, client-side HTML5 SPAs (Single Page Apps). You can use HP Anywhere client JavaScript APIs that expose native device capabilities (camera, GPS, and so on) to develop your apps.
- Develop server-side proxies in Java that connect the client side to the enterprise backends. You can use HP Anywhere server-side APIs to obtain access to security, collaboration, and activity services.



HP Anywhere architecture comprises:

Client Side

HP Anywhere is a cross-form factor native application for Android and iOS devices. It uses [PhoneGap](#) to run on all of these permutations. The HP Anywhere container shell, which is part of HP Anywhere, runs content that is loaded from the HP Anywhere server via the internet.

The HP Anywhere container application contains the HP Anywhere application (containing navigation, the My Apps screen, the catalog, collaboration areas, and so on).

When a user opens an app, the HP Anywhere container application launches the client side of that app, opening it within a contained iframe.

You can use any Web UI framework when developing an app. Each iframe has a source URL pointing to the relative path for the app's server side.

After the app user interface opens, the included API performs REST calls to the app's backend.

You can use PhoneGap's capabilities to access a device's native functionality

The integration of PhoneGap with HP Anywhere enables your apps to use native device functionality. To use PhoneGap APIs, you add the prefix, `window.parent`, to the objects. For example, you can access a device's native camera using the following code:

```
window.parent.navigator.camera.getPicture(onSuccess, onFail, { quality: 50,  
destinationType: window.parent.Camera.DestinationType.FILE_URI });  
function onSuccess(imageURI) {  
var image = document.getElementById('myImage');  
image.src = imageURI;  
}  
function onFail(message) {  
alert('Failed because: ' + message);  
}
```

Cloud Services

HP Anywhere uses APNS (Apple Push Notification Service) and C2DM (Google Cloud 2 Device Messaging) to push notifications to client devices.

Server Side

The server-side Web container (Tomcat) runs both the HP Anywhere runtime server and the apps.

The HP Anywhere server side handles:

- security management
- app management
- collaboration
- the HP Anywhere application
- other services consumed by the apps

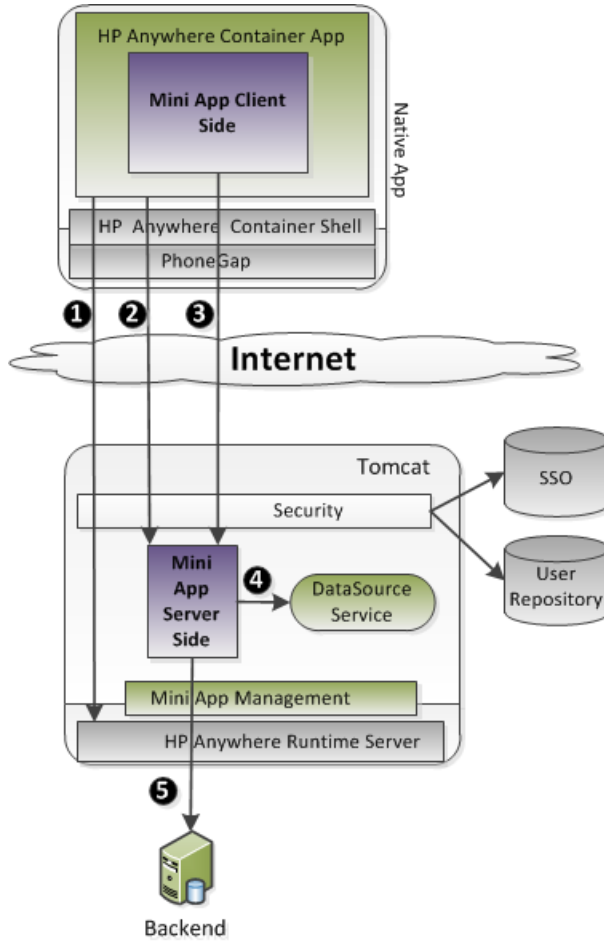
Apps—Server Side

A WAR file contains the entire app:

- Static content
- Services, that serve as a proxy to the backend and handle data (requests and responses) in realtime

HP Anywhere Flow

The following diagram provides an overview of the HP Anywhere flow:



- 1 The HP Anywhere container application logs into the HP Anywhere runtime server using a security token. Authorization may be provided using SSO or basic authentication.
- 2 The HP Anywhere client opens an iframe and loads the static content from the app server.
- 3 The app client calls the server-side backend.
- 4 The app server resolves the backend address using a data source service.
- 5 The app server performs the actual call the backend server.

