## All Tutorials

fork and edit tutorial (https://github.ibm.com/MFPSamples/DevCenter/tree/master/tutorials/en/foundation/6.3/all-tutorials.md) | report issue (https://github.ibm.com/MFPSamples/DevCenter/issues/new)

Below are all available tutorials for IBM MobileFirst Platform Foundation 7.1

# Setting up your development environment (../setting-up-your-development-environment/)

Set up your development environment to work with IBM MobileFirst Platform Foundation.

- Setting up your MobileFirst development environment (../setting-up-your-development-environment/setting-mobilefirst-development-environment/)
- Setting up your iOS development environment (../setting-up-your-development-environment/settingios-development-environment/)
- Setting up your Android development environment (../setting-up-your-development-environment/setting-android-development-environment/)
- Setting up your BlackBerry 6 and 7 development environment (../setting-up-your-development-environment/setting-blackberry-6-7-development-environment/)
- Setting up your BlackBerry 10 development environment (../setting-up-your-development-environment/setting-blackberry-10-development-environment/)
- Setting up your Windows Phone 8 development environment (../setting-up-your-development-environment/setting-windows-phone-8-development-environment/)

### Hello World (../hello-world/)

Create your first MobileFirst app and preview it in different mobile operating systems.

- Creating your first hybrid application (../hello-world/creating-your-first-hybrid-application/)
- Creating your first native iOS MobileFirst application (../hello-world/creating-first-native-ios-mobilefirst-application/)
- Creating your first native Android MobileFirst application (../hello-world/creating-first-native-android-mobilefirst-application/)
- Creating your first native Windows Phone 8 MobileFirst application (../hello-world/creating-first-native-windows-phone-8-mobilefirst-application/)
- Previewing your application's web resources (../hello-world/previewing-applications-web-resources/)
- Previewing your application on iOS (../hello-world/previewing-application-ios/)
- Previewing your application on Android (../hello-world/previewing-application-android/)
- Previewing your application on BlackBerry 6 and 7 (../hello-world/previewing-application-blackberry-6-7/)
- Previewing your application on BlackBerry 10 (../hello-world/previewing-application-blackberry-10)
- Previewing your application on Windows Phone 8 (../hello-world/previewing-application-windowsphone-8/)
- Previewing your application in Windows 8 (../hello-world/previewing-application-windows-8/)
- Previewing your application on Mobile Web and Desktop Browser (../hello-world/previewing-

### Client-side development (../client-side-development-basics/)

Use basic MobileFirst APIs to develop your apps, build a multi-page application, work with the user interface framework, and debug and optimize your apps.

- Learning MobileFirst hybrid client-side API (../client-side-development-basics/learning-mobilefirst-hybrid-client-side-api/)
- Building a multi-page application (../client-side-development-basics/building-multi-page-application/)
- Working with UI frameworks (../client-side-development-basics/working-ui-frameworks/)
- Debugging applications (../client-side-development-basics/debugging-applications/)
- Optimizing your application for various environments (../client-side-development-basics/optimizing-application-various-environments/)
- General information when developing for iOS (../client-side-development-basics/general-information-developing-ios/)
- General information when developing for Android (../client-side-development-basics/general-information-developing-android/)
- General information when developing for BlackBerry 6 and 7 (../client-side-development-basics/general-information-developing-blackberry-6-7/)
- General information when developing for BlackBerry 10 (../client-side-development-basics/general-information-developing-blackberry-10/)
- General information when developing for Windows Phone 8 (../client-side-development-basics/general-information-developing-windows-phone-8/)
- General information when developing Mobile Web applications (../client-side-development-basics/general-information-developing-mobile-web-applications/)
- General information when developing desktop applications (../client-side-development-basics/general-information-developing-desktop-applications/)

## Server-side development (../server-side-development/)

Develop the server code (adapters) that your mobile app requires to integrate with enterprise back-end applications and cloud services.

- Adapters overview (../server-side-development/adapter-framework-overview/)
- HTTP adapter Communicating with HTTP back-end systems (../server-side-development/http-adapter-communicating-http-back-end-systems/)
- SQL adapter Communicating with SQL database (../server-side-development/sql-adapter-communicating-sql-database/)
- Cast Iron adapter Communicating with Cast Iron (../server-side-development/cast-iron-adapter-communicating-cast-iron/)
- JMS adapter Communicating with JMS (../server-side-development/jms-adapter-communicatingjms/)
- Invoking adapter procedures from hybrid client applications (../server-side-development/invoking-adapter-procedures-hybrid-client-applications/)
- Invoking adapter procedures from native iOS Swift applications (../server-side-development/invoking-adapter-procedures-native-ios-swift-applications/)

- Invoking adapter procedures from native iOS applications (../server-side-development/invoking-adapter-procedures-native-ios-applications/)
- Invoking adapter procedures from native Android applications (../server-side-development/invoking-adapter-procedures-native-android-applications/)
- Invoking adapter procedures from native Windows Phone 8 applications (../server-side-development/invoking-adapter-procedures-native-windows-phone-8-applications/)
- Invoking adapter procedures from native Java Platform, Micro Editions (Java ME) applications
  (../server-side-development/invoking-adapter-procedures-native-java-platform-micro-editions-java-applications/)
- Advanced adapter usage and mashup (../server-side-development/advanced-adapter-usage-mashup/)
- Using Java in adapters (../server-side-development/using-java-adapters/)

### Advanced client-side development (../advanced-client-side-development/)

Implement different features in your mobile app, such as controls, skins, offline access, translation, and encryption of sensitive data. Develop your client application by using native APIs.

- Overview of client technologies (../advanced-client-side-development/overview-client-technologies/)
- Common UI controls (../advanced-client-side-development/common-ui-controls/)
- Supporting multiple form-factors using skins (../advanced-client-side-development/supporting-multiple-form-factors-using-skins/)
- Enabling translation (../advanced-client-side-development/enabling-translation/)
- Using Direct Update to quickly update your application (../advanced-client-side-development/using-direct-update-quickly-update-application/)
- Using CLI to create, build, and manage MobileFirst project artifacts (../advanced-client-side-development/using-cli-create-build-manage-project-artifacts/)
- Remote controlled client-side log collection (../advanced-client-side-development/remote-controlledclient-side-log-collection/)

## Working offline (../working-offline/)

Create apps that can run offline.

- Working offline (../working-offline/working-offline/)
- Storing sensitive data in encrypted cache (../working-offline/storing-sensitive-data-encrypted-cache/)
- JSONStore (../working-offline/jsonstore/)

# Adding native functionality to hybrid applications with Apache Cordova (../adding-native-functionality/)

Use Apache Cordova with IBM MobileFirst Platform Foundation, and use native pages in hybrid applications.

- Apache Cordova overview (../adding-native-functionality/apache-cordova-overview/)
- iOS Using native pages in hybrid applications (../adding-native-functionality/ios-using-native-pages-hybrid-applications/)
- iOS Adding native functionality to hybrid application with Apache Cordova plugin (../adding-native-

functionality/ios-adding-native-functionality-hybrid-application-apache-cordova-plugin/)

- Android Using native pages in hybrid applications (../adding-native-functionality/android-using-native-pages-hybrid-applications/)
- Android Adding native functionality to hybrid application with Apache Cordova plugin (../adding-native-functionality/android-adding-native-functionality-hybrid-application-apache-cordova-plugin/)
- Windows Phone 8 Using native pages in hybrid applications (../adding-native-functionality/windows-phone-8-using-native-pages-hybrid-applications/)
- Windows Phone 8 Adding native functionality to hybrid application with Apache Cordova plugin
  (../adding-native-functionality/windows-phone-8-adding-native-functionality-hybrid-application-apache cordova-plugin/)
- iOS Adding native UI elements to hybrid applications (../adding-native-functionality/ios-adding-native-ui-elements-hybrid-applications/)
- Android Adding native UI elements to hybrid applications (../adding-native-functionality/android-adding-native-ui-elements-hybrid-applications/)
- Windows Phone 8 Adding native UI elements to hybrid applications (../adding-native-functionality/windows-phone-8-adding-native-ui-elements-hybrid-applications/)

### **Notifications (../notifications/)**

Send notifications to your mobile apps with IBM MobileFirst Platform Foundation

- Push notifications in hybrid applications (../notifications/push-notifications-hybrid-applications/)
- Push notifications in native iOS applications (../notifications/push-notifications-native-ios-applications/)
- Push notifications in native Android applications (../notifications/push-notification-native-android-applications/)
- Push notifications in native Windows Phone 8 applications (../notifications/push-notification-nativewindows-phone-8-applications/)
- SMS Notifications (../notifications/sms-notifications/)
- Two-way SMS communication (../notifications/two-way-sms-communication/)

## Authentication and security (../authentication-security/)

Protect your applications and adapter procedures against unauthorized access by using authentication, login modules, and device provisioning.

- Authentication concepts (../authentication-security/authentication-concepts/)
- Form-based authentication (../authentication-security/form-based-authentication/)
- Adapter-based authentication (../authentication-security/adapter-based-authentication/)
- Custom Authenticator and Login Module (../authentication-security/custom-authenticator-login-module/)
- Using LDAP Login Module to authenticate users with LDAP server in hybrid applications
  (../authentication-security/using-ldap-login-module-authenticate-users-ldap-server-hybrid-applications/)
- WebSphere LTPA-based authentication (../authentication-security/websphere-ltpa-basedauthentication/)
- Device provisioning concepts (../authentication-security/device-provisioning-concepts/)
- Custom device provisioning (../authentication-security/custom-device-provisioning/)

- Application Authenticity Protection (../authentication-security/application-authenticity-protection/)
- Offline Authentication (../authentication-security/offline-authentication/)
- Client X.509 Certificate Authentication and User Enrollment (../authentication-security/client-x-509-certificate-authentication-user-enrollment/)
- Using the MobileFirst Server to authenticate external resources (../authentication-security/using-mobilefirst-server-authenticate-external-resources/)

### Advanced topics (../advanced-topics/)

Develop by using shells, use geo-location services, remotely load dynamic content, test your apps with the Mobile Test Workbench, and more.

- Shell development concepts (../advanced-topics/shell-development-concepts/)
- Location services in hybrid applications (../advanced-topics/location-services-hybrid-applications/)
- Location services in native Android applications (../advanced-topics/location-services-native-android-applications/)
- Location services in native iOS applications (../advanced-topics/location-services-native-iosapplications/)
- Integrating server-generated pages in hybrid applications (../advanced-topics/integrating-server-generated-pages-hybrid-applications/)
- Using MobileFirst application as a container for server-generated pages (../advanced-topics/using-mobilefirst-application-container-server-generated-pages/)
- Container for advanced pages (../advanced-topics/container-advanced-pages/)
- Accelerating application development by reusing resources (../advanced-topics/acceleratingapplication-development-reusing-resources/)
- Testing MobileFirst Platform applications with IBM MobileFirst Platform Test Workbench (../advanced-topics/testing-mobilefirst-mobile-applications-mobile-test-workbench/)
- Device Enrollment (../advanced-topics/device-enrollment/)
- Working with iBeacons (../advanced-topics/working-with-ibeacons/)

### Moving to production (../moving-production/)

Move the apps that you create from your development environment to the production environment.

- Moving from development environment to stand-alone QA and production servers (../moving-production/moving-development-environment-stand-alone-qa-production-servers/)
- Operational Analytics (../moving-production/operational-analytics/)
- Reports and analytics (../moving-production/reports-analytics/)
- Distributing mobile applications with Application Center (../moving-production/distributing-mobile-applications-application-center/)

## Starter Application samples (../starter-application-sample/)

- Starter Application sample application (../starter-application-sample/)
- Dojo Showcase sample application (../starter-application-sample/running-dojo-based-sample)