

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 6.3

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/setting-ios-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-windows-phone-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 \(../server-side-development/adapters-framework-overview/\)](#)
- [HTTP adapter – Communicating with HTTP back-end systems \(../server-side-development/http-adapters-communicating-http-back-end-systems/\)](#)
- [SQL adapter – Communicating with SQL database \(../server-side-development/sql-adapters-communicating-sql-database/\)](#)
- [Cast Iron adapter – Communicating with Cast Iron \(../server-side-development/cast-iron-adapters-communicating-cast-iron/\)](#)
- [JMS adapter – Communicating with JMS \(../server-side-development/jms-adapters-communicating-jms/\)](#)
- [Invoking adapter procedures from hybrid client applications \(../server-side-development/invoking-adapters-procedures-hybrid-client-applications/\)](#)
- [Invoking adapter procedures from native iOS Swift applications \(../server-side-development/invoking-adapters-procedures-native-ios-swift-applications/\)](#)

- [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 \(../advanced-client-side-development/remote-controlled-client-side-log-collection/\)](#)

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 \(../notifications/push-notification-native-windows-phone-8-applications/\)](#)
- [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 \(../authentication-security/websphere-ltpa-based-authentication/\)](#)
- [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-ios-applications/)
- 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/accelerating-application-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-samples/)

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

