

## Integration Overview

### Workspace ONE for Android

Android applications can be integrated with the VMware Workspace ONE® platform, by using its mobile software development kit. An application that has been integrated can use the features of the platform, such as:

- Detection of device compromise.
- Encrypted storage of application data on the device.
- Single sign-on authentication with enterprise services.

This document is part of the Workspace ONE Integration Guide for Android set.

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## Introduction

Android applications can be integrated with the Workspace ONE platform, by using its mobile software development kit. An application that has been integrated can use the features of the platform.

The Workspace ONE mobile Software Development Kit (SDK) can be integrated to different levels, depending on requirements.

## Client Integration

Client integration is the lowest level, and requires the least work by the application developer.

Client integration makes available the following features:

- Enrolment status.
- User information.
- Partial SDK profile.
- Device compromise detection, i.e. detection of rooted status.

None of these features require user interaction in the application. Client integration doesn't require modification of the application user interface.

## Framework Integration

Framework is the level of integration above Client, and requires more work by the application developer.

Framework integration makes available the following features:

- Enrolment status.
- User information.
- Full SDK profile.
- Device compromise detection.
- Single Sign On (SSO) for apps.
- End user authentication.
- Inactivity lock.
- Application data encryption.
- Copy paste restrictions.

Some of these features require user interaction in the application. Framework integration will require modifications to the application user interface. Branding

can be applied to the SDK user interface, to make it appear as part of the application whole.

## Networking Integration

Networking is the level of integration above Framework, and requires more work by the application developer.

Networking integration makes available the following features:

- All Framework integration features.
- Tunneling of application data.
- NTLM and Basic Authentication.
- Certificate-based authentication.

Networking integration is based on Framework integration and requires modifications to the application user interface.

## Privacy Module

The Workspace ONE Privacy Module is independent of Client, Framework, and Networking integration.

## Operational Data

VMware collects a limited set of information from the Workspace ONE SDK to operate and support the SDK within third-party apps, such as notifying customers about feature removal or platform compatibility. This data is anonymized and analyzed in aggregate, and cannot be used to identify the application containing the SDK or end user. This data is sent to [scapi.vmware.com](https://scapi.vmware.com). Please refer to [VMware's Privacy Notices](#) online for more information about VMware data collection and privacy policies.

## Tasks and Documentation

Integration of an Android application with the Workspace ONE platform includes a number of tasks for the application developer. Instructions for these tasks are given in a set of documents: the Workspace ONE Integration Guide for Android.

## Integration Guide Structure

The Workspace ONE Integration Guide for Android is a particular set of documents. Other documents exist, either legacy or maintained outside the Integration Guide set.

Documents in the Integration Guide set contain:

- Step-by-step instructions.
- Snippets of Java and Kotlin code.
- Discussion of features.
- Explanatory diagrams.
- Screen capture images.

Some documents include instructions for tasks in the Workspace ONE management console. These will be for a simplified version of the task that is focussed on a particular integration activity. They aren't intended to replace the system administrator documentation.

At time of writing, the following documents in the Integration Guide set are available.

## Integration Preparation Guide

The Integration Preparation guide includes instructions for tasks to complete before starting integration, for example:

- Install the mobile application via Workspace ONE.
- Obtain the software development kit.

Note that it is recommended to install the application via Workspace ONE before integration work begins. An alternative could be to complete Client or Framework integration first but this isn't recommended. The rationale is as follows.

Installing the application will require the following steps:

- Installing the Workspace ONE Intelligent Hub on a developer device.
- Generating a signed Android Package (APK) for the application.
- Uploading the APK file to the Workspace ONE management console.

- Installing the application from the Hub.

It should be easier to do these steps, and verify correct execution, with a known working mobile application. The other way round, integration then installation, is a kind of big bang approach in which everything has to have been done right or nothing works.

## Base Integration Guide

The Base Integration guide includes instructions for:

- Client integration.
- Framework integration.

## Branding Integration Guide

The Branding Integration guide includes instructions for user interface customisation tasks, including the following.

- Implement static application branding.
- Set a notification icon.
- Configure dark mode selection.
- Support enterprise branding.
- Implement dynamic branding.

Most tasks are for customization of the SDK user interface, so that it appears as part of the application whole. The guide also includes instructions for how to access branding resources in the enterprise management console that could be used to customize the application user interface.

## Links

The integration guides are available

- in Markdown format, in the repository that also holds the sample code:  
<https://github.com/vmware-samples/workspace-ONE-SDK-integration-samples>
- in Portable Document Format (PDF), on the VMware website.  
<https://developer.vmware.com/web/sdk/Native/airwatch-android>

The VMware website also has links to other integration resources, including earlier versions of the Developer Guide documentation, other technical documentation, and the SDK itself. You will require a My Workspace One login in order to download the SDK. Speak with your Workspace ONE representative for access.

The following table lists the guides and gives links to their published locations in different formats.

Document	Markdown	PDF
Integration Overview (this document)	<a href="#">IntegrationOverview.md</a>	<a href="#">IntegrationOverview.pdf</a>
Integration Preparation Guide	<a href="#">IntegrationPreparation.md</a>	<a href="#">IntegrationPreparation.pdf</a>
Base Integration Guide	<a href="#">BaseIntegration.md</a>	<a href="#">BaseIntegration.pdf</a>
Branding Integration Guide	<a href="#">Branding.md</a>	<a href="#">Branding.pdf</a>

## Integration Paths Diagram

The following diagram shows the tasks involved in integrating an Android application with the Workspace ONE platform. The document in the Integration Guide for Android set that includes the instructions for each task is also indicated, where there is a current document in the set.

The Privacy Module is independent of the Client, Framework, Networking path.

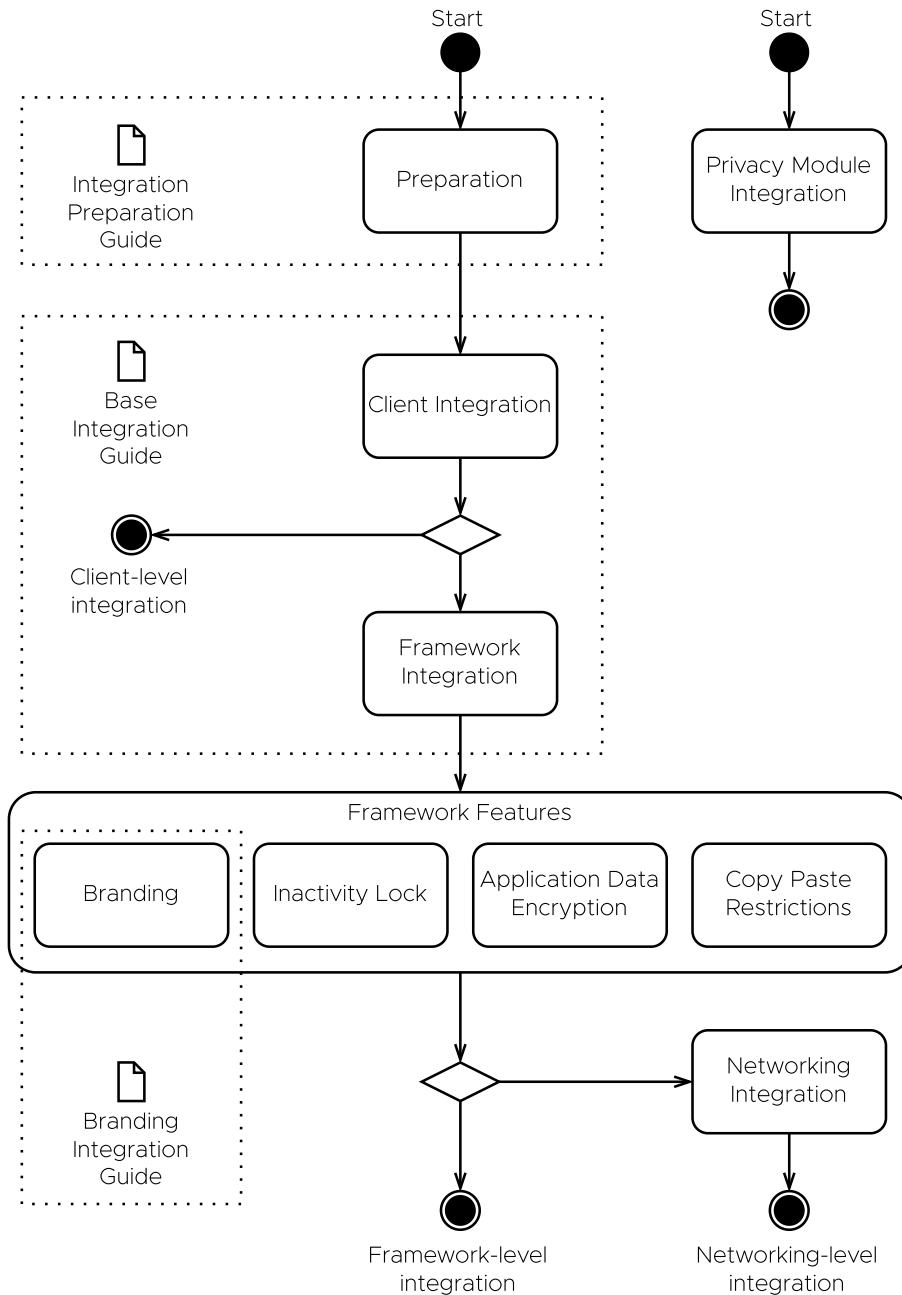


Diagram 1: Workspace ONE for Android Integration Paths



## Document Information

### Published Locations

This document is available

- in Markdown format, in the repository that also holds the sample code:  
<https://github.com/vmware-samples/...IntegrationOverview.md>
- in Portable Document Format (PDF), on the VMware website:  
<https://developer.vmware.com/...IntegrationOverview.pdf>

### Revision History

03jul2020 First publication, for 20.4 SDK for Android.  
22jul2020 Updated for 20.7 SDK for Android.  
11oct2020 Updated URL paths to default branch main.

### Legal

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