

Plan Your Tableau Mobile Deployment

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Mobile business intelligence enables any user to make decisions no matter where they are. We're no longer shackled to our desks; we're on the go, visiting customers, traveling, or walking the shop floor. At Tableau, we knew our approach to mobile had to be different from those of traditional analytics solutions. We focused on fast, easy, beautiful creation and delivery that didn't require a developer or a special server.

With Tableau, any workbook you create is automatically mobile-enabled when accessed from a device. You can pinch to zoom, swipe to scroll, and leverage other touch-optimized interactions like quick filters. You can also edit workbooks and create new views to answer new questions from your data. This works seamlessly in a mobile browser, with an embedded viz in custom mobile apps, and in the Tableau Mobile app itself. While it's straightforward to setup and deploy mobile BI with Tableau, successfully deploying any mobile solution benefits from a little advance planning. In this whitepaper, we cover the most important aspects of mobile deployments that most organizations should consider as they plan to roll out a solution:

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Assemble your mobile deployment team

The first important planning step is deciding who should be involved. Getting the right teams together to talk at the beginning pays off throughout the deployment process. Be sure to include representation from these key stakeholders:

- IT, including network, security, and mobile device management specialists
- Your Tableau Online or Tableau Server administrator
- Your dashboard authors
- Business users who have specific mobile needs

In the team's kickoff meeting, try to answer questions like these to clarify your deployment strategy:

1. Who's the audience for mobile analytics, and what are their primary user scenarios?
2. Where will people be when they need data? In the field, a home office, or both?
3. How will users reach the Tableau Server if they aren't on the same network?
4. Will users need to access data offline, without connecting to the internet or your network?
5. Will people use company-provided devices, personal devices, or both?
6. What mobile OS's and device types (phone, tablet) do you need to support?
7. How confidential is the data?

Decide how to distribute the app

Organizations have various strategies for distributing mobile apps to their users. Many enterprises distribute apps via a Mobile Device Management (MDM) platform, because these provide precise control over how and to whom the app is deployed. In addition to controlling app delivery, [MDM platforms let you customize the Tableau sign-in experience](#), configure app policies, and provide additional security and governance controls. They can also make the sign in process easier (see Sign in Seamlessly, below). In this scenario, a user with a device enrolled in their organization's MDM platform would go to the internal app store provided by the MDM platform and download the app from that catalog. Here's an example of an AirWatch app catalog in a mobile browser:

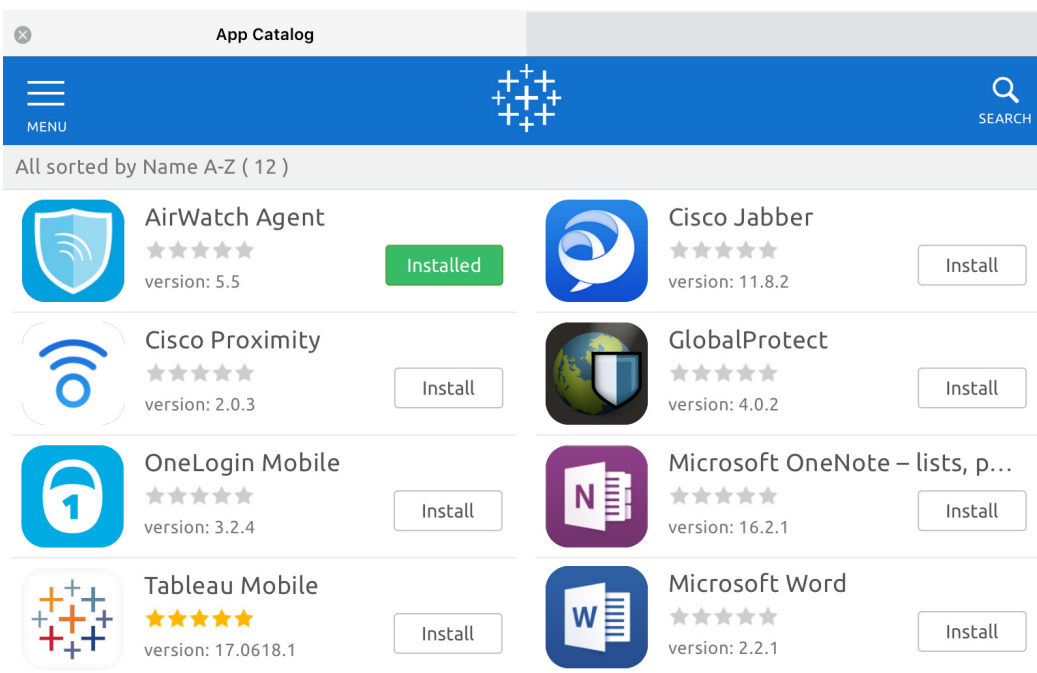


Tableau works well with Airwatch and MobileIron, and other MDM platforms that use the AppConfig framework. Tableau also works with other MDMs including Good Technology (Blackberry) and Citrix, although in that case access is via the MDM's secure browser if a containerization strategy is required. This means that certain functionality, like offline snapshots, is not available for customers using these MDM solutions.

For other organizations who haven't invested in MDM or who predominantly use SaaS applications like Salesforce, Workday, and Tableau Online, users can simply download the Tableau Mobile app from public app stores, including iTunes and Google Play, and then connect directly to the service.

Tableau supports both deployment methods. As part of your deployment discussions, ensure you understand the way your organization distributes apps to users and plan accordingly.

Secure data

Security is paramount in any mobile deployment. Mobile devices will be out-and-about in the wild. They will be used on different networks. They may even include users' personal devices if your organization supports a bring-your-own-device (BYOD) policy. It's critical that your data remain secure – both in transit and at-rest.

If you use Tableau Online, we securely connect to data for you so there's no additional effort on your part. Tableau Online by default leverages SSL communications and the Tableau Mobile app supports it “out-of-the box.” If you use Tableau Server, we highly recommend that you [configure the server to encrypt communications using SSL](#). This ensures that all traffic coming to and from your Server is encrypted and helps avoid potential man-in-the-middle attacks. For an overview of the process with links to additional resources, see [Secure communication between Tableau Mobile and Tableau Server](#).

In addition to securing the communication channel to the server, you must also determine how your Tableau Server will be reachable by a mobile device if the device isn't on the same network or the internet. There are two options to tunnel through your corporate firewall to reach the server: connect via a VPN, or use a reverse-proxy server. The choice of which option is best for your organization depends on many factors, such as whether you have an existing solution (VPN or proxy) that you can use, licensing costs, security considerations, and user experience. Ensure that the cross-team deployment group you assemble discusses this topic and understands your options.

The final piece of security involves data-at-rest, which Tableau takes care of for you. All information that gets persisted on a device, such as metadata about content, snapshot images, and access tokens, is securely stored using native OS encryption.

As a best practice, consider regularly confirming overall data security by having a third-party security specialist audit your organization. Tableau regularly does the same; this and other details of our holistic approach are outlined in the white paper, [Tableau & Mobile Security](#).

Sign-in seamlessly

Before users can get to their data, they have to sign in to the Tableau server. While this may sound mundane, ensuring that users have a secure, seamless experience is critical. If users struggle to sign in, they'll give up on mobile workflows, undermining your entire deployment effort.

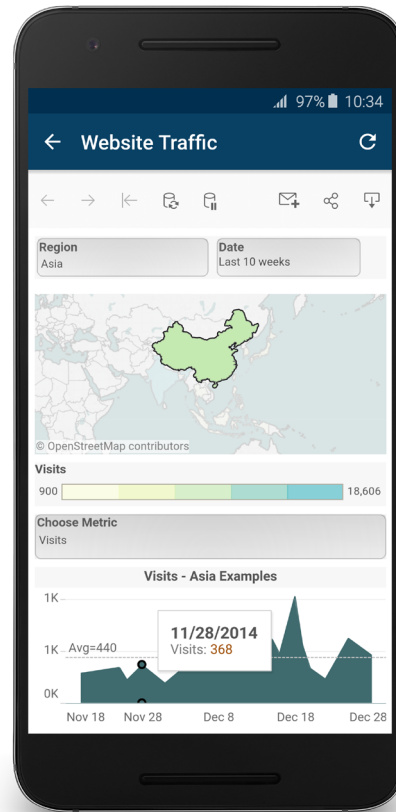
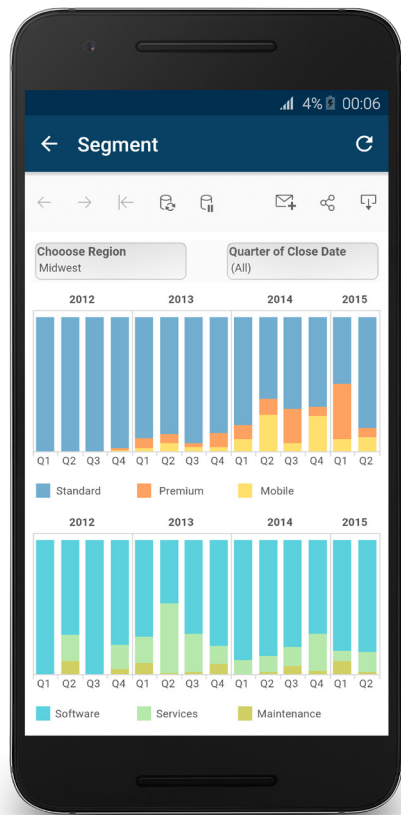
To streamline sign-in, we recommend using a single-sign on (SSO) technology like Active Directory, SAML, or Kerberos. SSO lets users use their existing set of corporate credentials rather than having to memorize something new.

In addition to SSO, we recommend leveraging additional capabilities provided by MDM platforms to improve the sign-in experience. With MDM, you can display a pre-set list of servers to connect to, and even automatically fill in their user ID. MDM can also push out policies and certificates, so that everything is pre-installed and configured ahead of time. For example, with Kerberos authentication, MDM can push certificates to devices so that authentication happens behind the scenes and users aren't even prompted for credentials. MDM can also automate tasks such as loading a VPN client in the background when needed, eliminating a bunch of initial steps for users so they can go to the app and directly connect to their data. Anything you can do to reduce friction in the sign-in experience will pay off in greatly increased mobile usage.

Design for mobile

To provide the best experience for mobile users, create Tableau content that works well on different form factors. A phone is a much different medium than a desktop computer. Not only is the screen size much smaller, but the way you interact with it (touch rather than keyboard and mouse) is different too. People typically use their phones on-the-go to do short quick tasks throughout the day, as opposed to the longer, more immersive tasks they'll complete on a desktop.

Because dashboards designed for large desktop monitors don't usually provide the best user experience on smaller mobile devices, Tableau lets you create [dashboard layouts for different device types](#) in a simple, drag-and-drop interface. When these are in place, Tableau automatically detects the user's device and serves up the best layout for it. If you have a lot of existing dashboards, leverage content analytics on the Tableau server to see which dashboards are used most and create mobile layouts for those first.



Different types of users typically need to access different Tableau content to do their jobs. For example, sales reps might have a set of dashboards they use every day while selling to customers, and your executive team might need quick access to a set of dashboards they use to stay on top of the business. We recommend that users mark content tailored to them as favorites in Tableau Online, Tableau Server, or the Tableau Mobile app itself. Tableau Mobile places a user's favorites front and center on the first screen of the app so they can quickly get to frequently used content. If you want to start users off with a specific set of favorites, you can use Tableau's [REST API](#) to create favorites for them automatically.

Optimize mobile performance

Dashboard performance is important in any setting but particularly crucial on mobile devices, which often have limited bandwidth and high user expectations. Mobile users are in a hurry and accustomed to quick response from their apps. When authoring workbooks, design with performance in mind to achieve the best user experience. [Our guidelines](#) cover everything from optimizing data structure to analyzing workbook response with performance recordings. To dive deeper, see our detailed whitepaper, [Designing Efficient Workbooks](#).

If you use Tableau Server, in addition to optimizing the performance of dashboards themselves, fine-tune the performance of the server delivering them. When you expand your mobile deployment, how many more users will be accessing the system? Is your server sized and configured to handle the workload? To monitor and tune server resources, see our [performance recommendations](#), which include links to third-party tools like [TabJolt](#) that let you test anticipated server loads for accurate capacity planning.

Configure offline access

As mobile users travel offsite, their internet connectivity can vary, so a seamless offline experience is a big benefit. For quick offline access on mobile devices, Tableau Mobile automatically caches high-resolution snapshot images of a user's favorite views. When users know they're about to go offline for a period of time, they can manually refresh snapshot images in the app. On iOS, snapshots are also regularly refreshed in the background.

Snapshots are beneficial even when users have connectivity because they provide at-a-glance access to the most important content. For example, users can pan and zoom snapshots to zero in on areas of interest and swipe between them as they're walking between meetings. When a user finds something of interest in a snapshot, they can tap it to go to the interactive view and answer additional questions with their data.

As an administrator, [you can disable cached snapshots for specific sites](#). But in most cases you'll find that the advantages of snapshots access outweigh any security concerns, as snapshots exclude the raw underlying data and are stored encrypted on the device.

Roll out and support your mobile deployment

Pilot your mobile rollout by testing it with a small group of users. After addressing any issues you uncover, extend the rollout to your entire organization, with accompanying step-by-step instructions that help users quickly set up their devices. An initial, in-person training session can dramatically speed up adoption, particularly if your organization uses unique deployment options.

You can also monitor the usage of mobile-optimized content with the [default traffic view for administrators](#). Or, if you use Tableau Server, consider creating custom admin views for mobile, drawing upon the rich database of user behavior stored in the [Tableau Server repository](#).

To continuously improve your organization's mobile experience, capture feedback from users while they're on the go. Successful approaches include a weekly “mobile office hours” meeting that anyone can dial into, and an email alias specific to mobile support that routes issues right to your group.

Enjoy the rewards of a mobile-ready organization

Successfully rolling out mobile requires some up-front planning, but when you're done your entire organization will not only be mobile-optimized, but also much more effective. Creating a seamless mobile experience lets people make critical, data-driven decisions wherever they are.