



SharePlus™
POWERED BY INFRAGISTICS

Administrator's Guide

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SharePlus™ 4.9 – Administrator’s Guide 3.1

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Introduction

Welcome to the SharePlus Administrator's Guide.

This guide's purpose is to assist you with every aspect of a SharePlus Enterprise solution, empowering you to do the planning, deployment, and complete administration of your solution. SharePlus has been crafted towards both small and large scale organizations, therefore, administrators need to comprehend the wide number of scenarios available that build upon all SharePlus functionality.

Audience

Despite the title, this documentation is not directed to administrators only, it is recommended for project managers, business analysts, developers, and also power users who want to understand more about SharePlus administration, design, and configuration.

Power users – Will learn more about planning SharePlus functionalities, configuration details, and also some advanced features like Search, Social Networking, and Offline Support.

Project managers – Will find key information from the Planning SharePlus chapter very useful when working with SharePlus projects.

Developers – Will have a detailed view of all SharePlus functionality, implementation architecture, configuration and deployment.

Business Analysts – As project managers, they will find the Planning SharePlus chapter very handy.

About SharePlus

SharePlus is a native mobile application that provides online and offline, read/write access to SharePoint content like libraries and lists. SharePlus Free and Subscription, available in the AppStore, are consumer-oriented applications that meet the needs and interests of individuals. SharePlus Enterprise, on the contrary, can be used as a base to build complex Business Enterprise Solutions that assemble aspects like connectivity, security, deployment, and configuration.

How to Use this Guide

This guide was formatted with the reader in mind, including not only illustrative images and diagrams but also elements like notes and links, in order to highlight/redirect to relevant information.

Note: Notes include information that needs to be highlighted, and sometimes tips for the reader.

About Tables	Details
Importance	Tables add value for the user by presenting complex data in a user-friendly and more readable format.



Gesture icons provide a close-to-reality representation for applications with touch-based UI.

What's in this Guide

SharePlus Administrator's Guide is divided into 6 different chapters:

Chapter 1 – Introducing SharePlus

This chapter introduces SharePlus and gives a general overview of the application functionality.

Chapter 2 – Planning SharePlus

This chapter help administrators understand the architecture of a SharePlus solution and plan the different aspects of it, including connectivity, security, user experience, configuration and deployment.

Chapter 3 – Configuration

The Configuration chapter gives detailed information about the configuration components available on SharePlus and how to adjust them to tailor the application's behavior.

Chapter 4 – Deployment

This chapter details the available methods used to distribute SharePlus Enterprise, including the Web, Ad-hoc, and MDM-based deployment. General information about the application re-signing process is also included in this chapter.

Chapter 5 – Advanced Configuration

The “Advanced Features” chapter covers advanced configuration aspects including UX Customization, Offline Support, and Support Enablement.

Chapter 6 – Advanced Features

This chapter covers advanced application features including ReportPlus Integration, Social Networking, Search capabilities, and MDM Integration.

Appendices

The appendices included in this final chapter provide further information about how to create your IG Account and request priority support. A complete reference to the Configuration File's contents is also included here.

Chapter 1

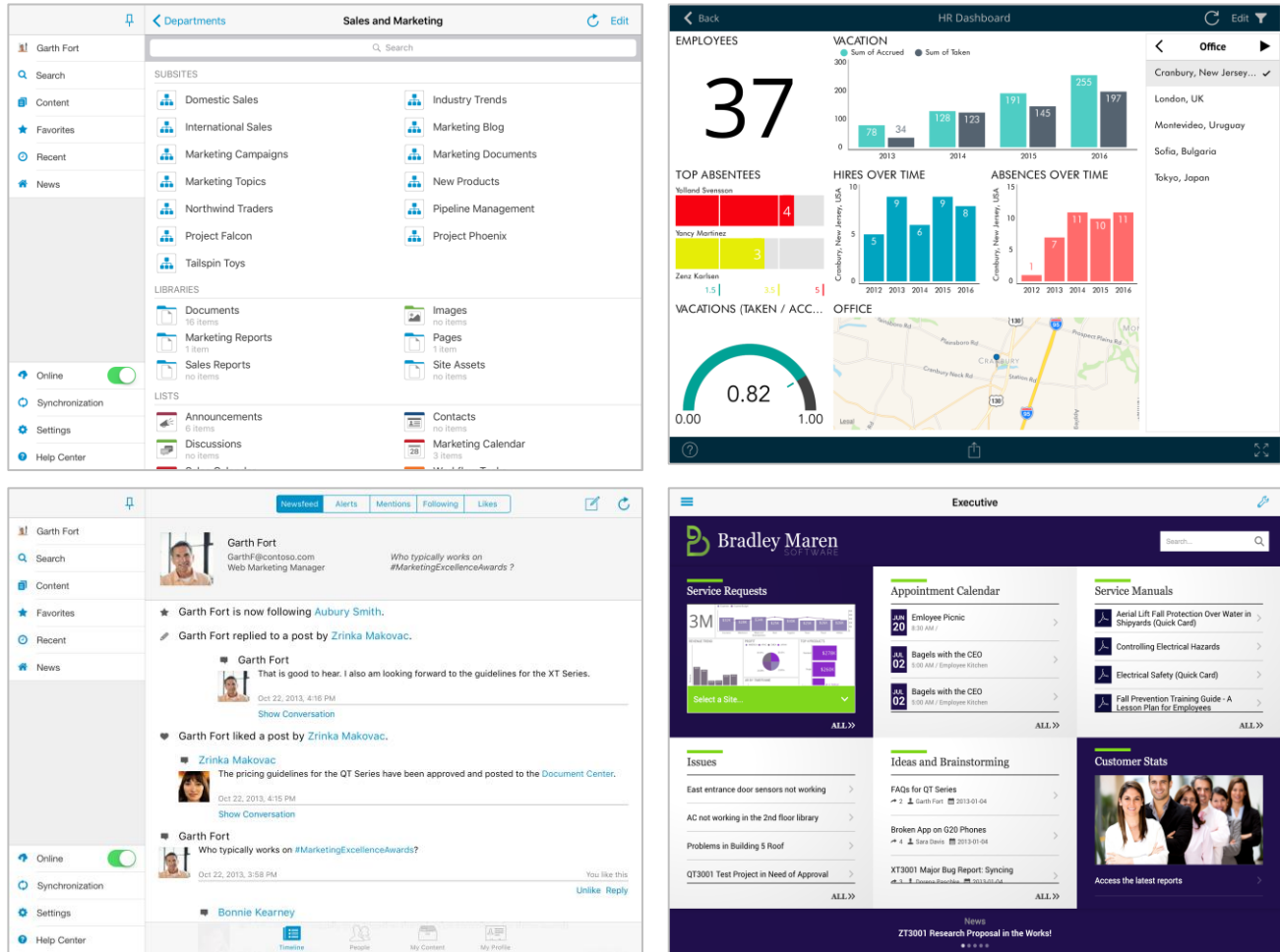
Introducing SharePlus

Section 1: Welcome to SharePlus

Section 2: Functional Overview

Welcome to SharePlus!

SharePlus is a native mobile application that empowers your team to run business processes, work on documents on-premises or in the cloud, and analyze data all in one place. SharePlus offline capabilities allows you to continue working with your SharePoint content even offline. Changes introduced while offline are synchronized automatically with the server when the devices goes back online.



Create amazing charts and pivot tables from SharePoint Lists and Excel spreadsheets, or find the experts on your network using People Search and discuss your insights by sharing the charts. Be in sync with your team with by sharing Calendars, Task Lists, Contacts, and Issues, Discussion Boards and Announcements and storing content in MySite/OneDrive for instant sharing.

SharePlus is available for iOS and Android platforms and is offered in three different license models:

- Free
- Subscription
- Enterprise

Note: This document refers to the SharePlus for iOS only. For other mobile platforms, please refer to the corresponding documentation.

Functional Overview iOS

Feature	FREE	SUBSCRIPTION	ENTERPRISE
Mobile Collaboration			
Browse SharePoint Content (online & offline)			
Navigate SharePoint sites, lists/libraries and its contents	Restricted	Yes	Yes
Embedded Document Previewer	Restricted	Yes	Yes
View in Web	Blocked	Yes	Yes
SharePoint List Views Support	Restricted	Yes	Yes
Nintex Integration	No	No	Yes
External Lists/Content Types Support	Restricted	Yes	Yes
Browse other content sources			
Box, Dropbox, Google Drive, Network Drives, OneDrive for Business	Restricted	Yes	Yes
Quick access to Content			
Sidebar with access to Content Hubs	Yes	Yes	Yes
Recent Content	Restricted	Yes	Yes
Favorites	Blocked	Yes	Yes
Recommended Content (SP 2013 only)	No	No	Yes
SharePlus Mobile Workspaces	No	No	Yes
Custom Site Homes	No	No	Yes
Edit Content			
Add list items and documents	Yes	Yes	Yes
Edit & delete list items and document properties	Restricted	Yes	Yes
File editing via native 3 rd party apps	Blocked	Yes	Yes
Office Web Apps	Blocked	Yes	Yes
Check In/Check Out and Approve/Reject Support	Restricted	Yes	Yes
"Save as Draft" (save to device) Support	Restricted	Yes	Yes
In-App PDF Annotation and PDF Forms (read only)	Blocked	Yes	Yes
SharePoint Document Versioning	Restricted	Yes	Yes
Rich Text Editor for Rich Text Fields	Restricted	Yes	Yes
Offline Synchronization with collision resolution	Blocked	Yes	Yes
InfoPath Forms	No	No	Yes
Collaborate			
Send files by Mail (attachment and URL)	Yes	Yes	Yes
Add User Profiles and Contact Items to device Contacts	No	No	Yes
Wi-Fi Sharing	Blocked	Yes	Yes
Analytics on the Go			
Visualize SharePoint Content			
Rich Visualizations (Grid, Calendar, Picture Thumbnails)	Restricted	Yes	Yes
Optimized PDF Navigator	Restricted	Yes	Yes
Search Hub			
Integration with SharePoint Server Search Engine	Restricted	Yes	Yes
Search for content in all connected portals and cloud providers	Restricted	Yes	Yes
Data Visualization			
Restricted	Yes	Yes	
Enterprise Ready			
Social Hub			
Newsfeeds (SP 2013) and change notifications (Alerts)	No	No	Yes
MySite/OneDrive Support	No	No	Yes
People navigation and search	No	No	Yes
Browse Colleagues (SP 2010), Followers and Followees (SP 2013)	No	No	Yes

Feature	FREE	SUBSCRIPTION	ENTERPRISE
Enterprise Ready			
Security			
Data-at-Rest Encryption	Yes	Yes	Yes
HTTPS and VPN Support	Yes	Yes	Yes
Authentication			
App Passcode Lock	Blocked	Yes	Yes
Touch ID	Blocked	Blocked	Yes
Native Support for Windows, Forms, Office 365, and Web Login	Yes	Yes	Yes
Integrated Client-Side Certificates	No	No	Yes
Custom Authentication methods	No	No	Yes
Advanced Security			
Editor Whitelisting	No	No	Yes
Passcode Fail handle (including Data Wipe)	No	No	Yes
Authentication Time-Bomb	No	No	Yes
Kiosk Mode	No	No	Yes
Deployment			
In-House Deployment (OTA w/Remote Update)	No	No	Yes
MDM Server Deployment	No	No	Yes
Advanced Configuration			
Centralized Configuration	No	No	Yes
Per-site Configuration (MobileNavigation)	No	No	Yes
In-App Support Tools (Feedback Email and Help URL)	No	No	Yes
Language Support			
English, Japanese, French, Spanish, Chinese, German, Russian, Italian, Portuguese	Yes	Yes	Yes
MDM Integration			
MobileIron Integration – AppTunnel & AppConnect (Deployment, Central Configuration and Policies, Per-app VPN)	No	No	Yes
Rebranding			
Corporate Branding	No	No	Yes
Custom Development			
HTML/JS SDK	No	No	Yes
Native custom development	No	No	Yes

Table Reference

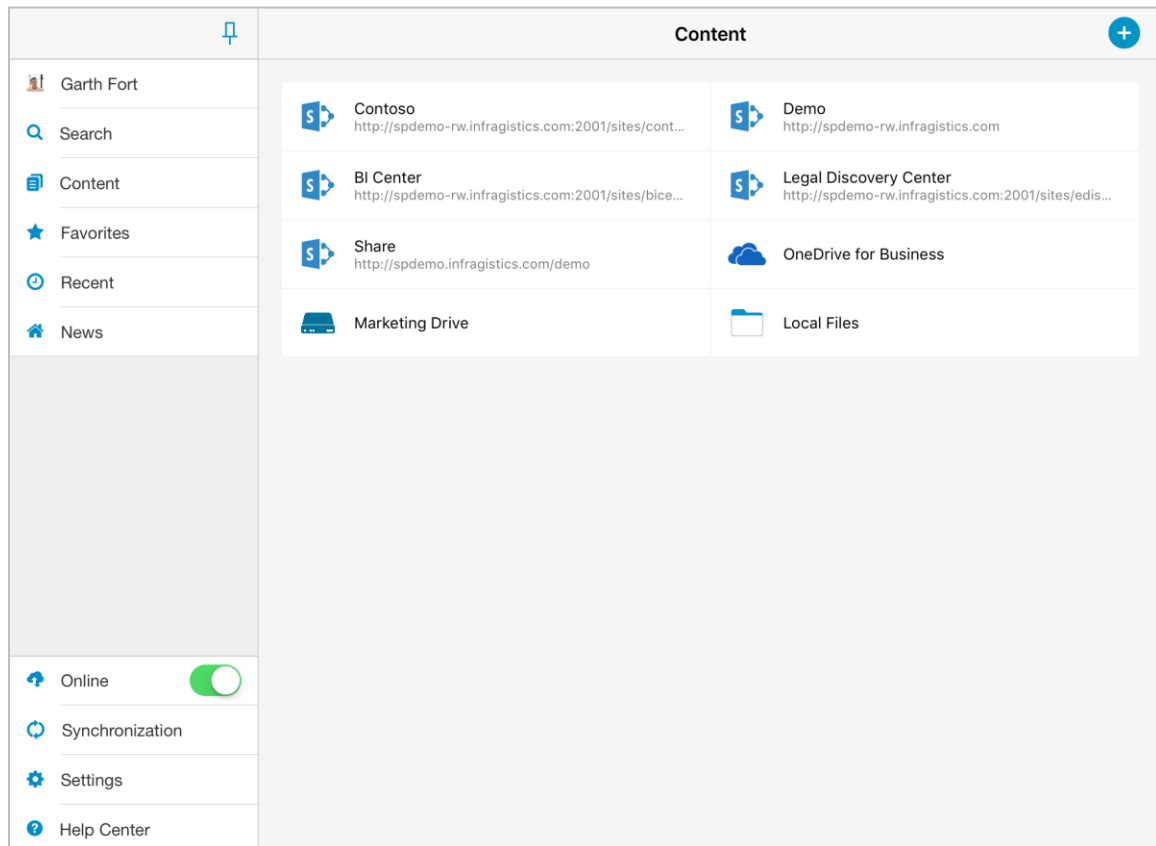
- **Yes** – Available
- **No** – Not available
- **Restricted** – Limited application behavior, e.g., only the first list items are shown.
- **Blocked** – Not available without Subscription or Enterprise.

Browse SharePoint Content

SharePlus provides an intuitive navigation of SharePoint content including sites, webs, lists, document libraries, documents and items.

Navigating Sites

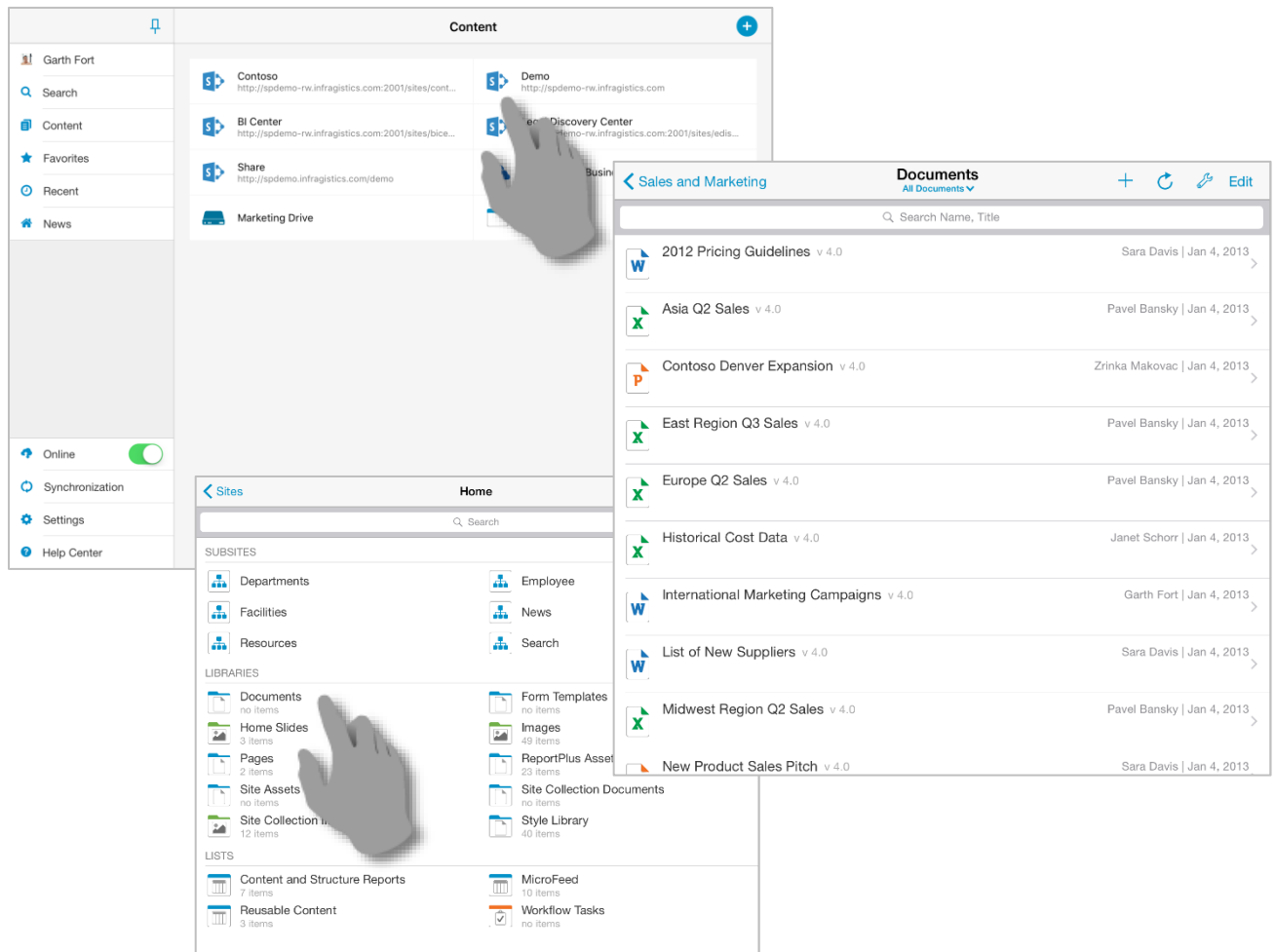
The Content Module gives you access to your SharePoint content as well as any documents in your network drives and cloud providers. Pre-configured **Portals** and **File Providers**, when available, are displayed. Any sites **recommended** for you or that you are **following** are displayed in the Favorites module.



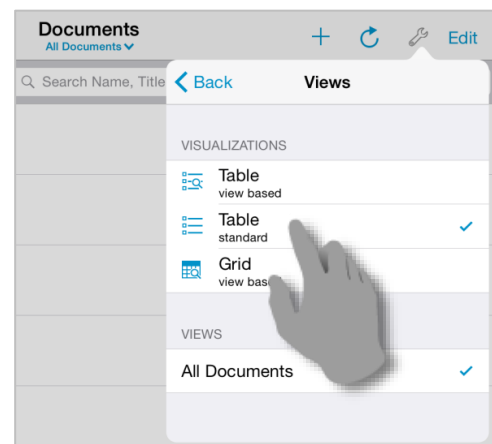
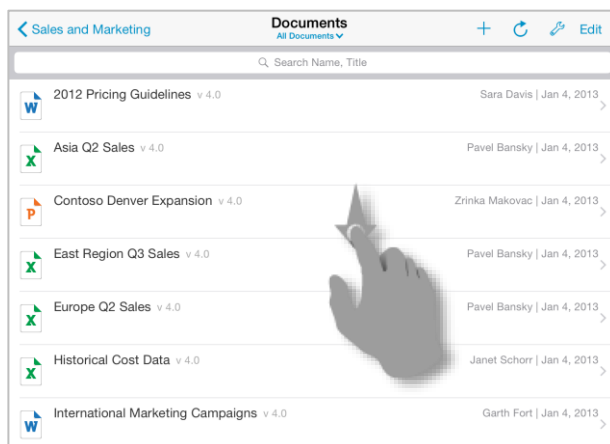
The Sites that you have tagged for quick access (Favorites) can also be accessed through the Favorites menu in the sidebar.

Navigating Lists and Libraries

Tapping on a Portal or site, you can browse its sub-sites, webs, libraries, and lists. The content, displayed on the right pane, depends on the user permissions on the SharePoint server.



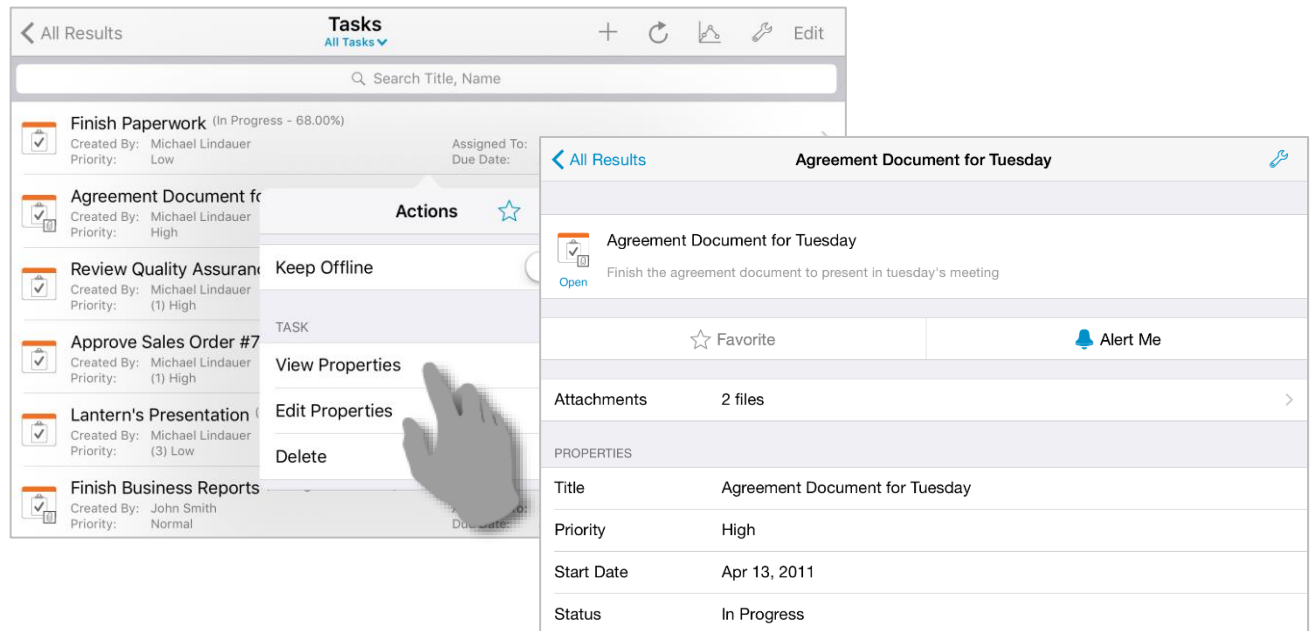
SharePoint items are displayed in a table, grid, or calendar view (according to the list type and settings). Items are paged to optimize network use and you can scroll up and down to look through the list.



Navigating Documents

SharePlus fully supports SharePoint [content types](#), including SharePoint default types and custom content types you may create.

The properties from an item can be opened and they will be displayed organized in columns. When the item is a document (or has one attached), tapping the item's icon will bring up a document preview (the most common slideshow, text, spreadsheet, PDF, and multimedia formats are supported).



If any specific file types are not supported by the SharePlus previewer, they can still be opened with any 3rd party apps that support it and use Open In.

Previewing Files

SharePlus uses the native iOS File previewer to display files within the app. All file formats that can be previewed on iOS Safari, or the iOS Mail Client, can be displayed in SharePlus.¹

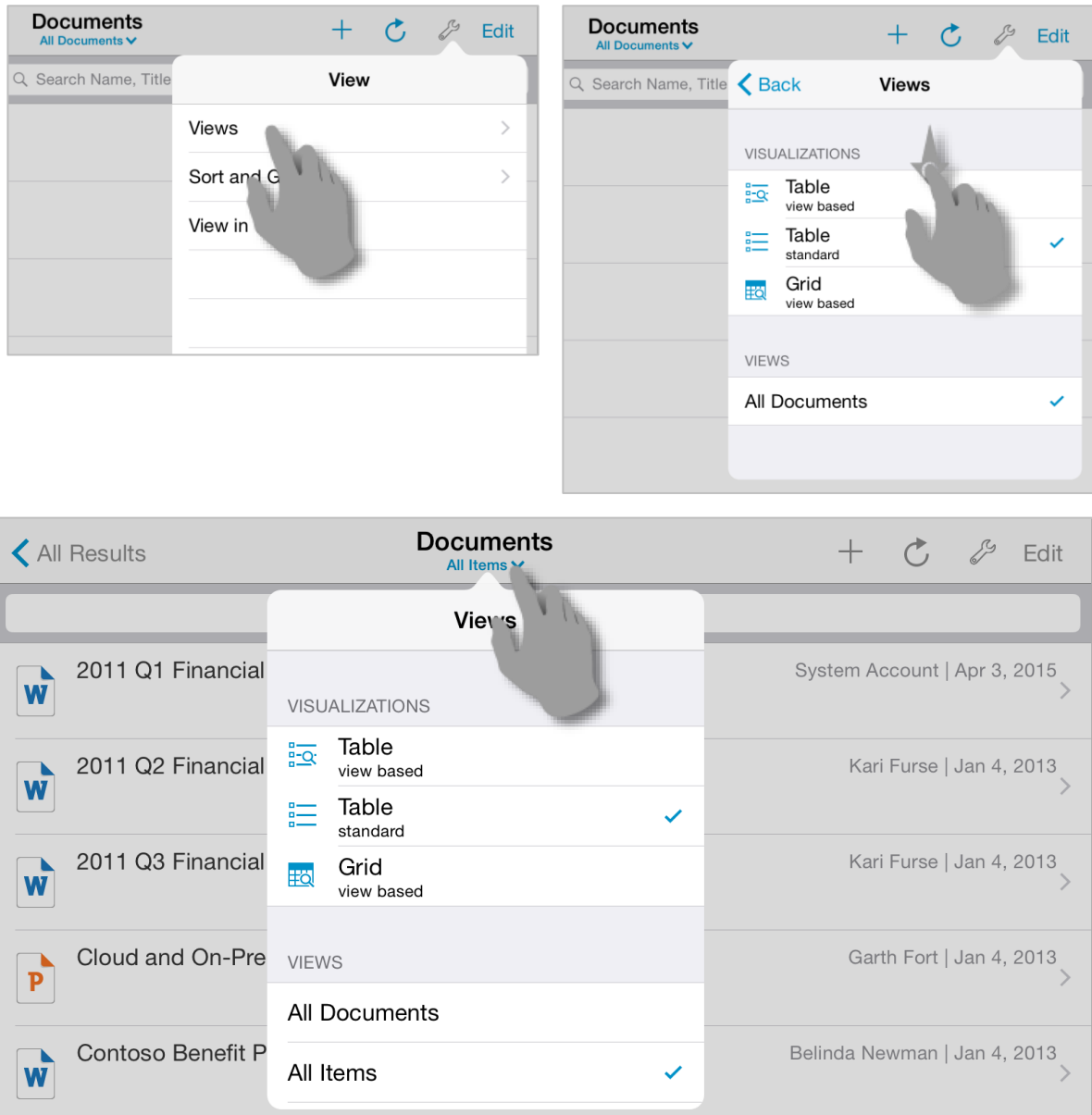
“View in Web”

Besides SharePlus' document previewer, the app includes a “view in web” feature that displays the resource as it would be shown in a web browser. This is especially useful to view a site or the home page of a sub-site, with its web parts, for example. Broadly speaking, any pure-web content will be better appreciated this way.

¹ Visio files not supported. PowerPoint slides might not be fully respected.

SharePoint List Views Support

List Views are pre-defined configurations created on the server to organize and filter the items of a list, depending on the needs of different SharePoint groups of users. You are allowed to change the list view by selecting among the *Views* you have access to.



Nintex Integration

With SharePlus' support for Nintex, you can view and complete your forms in SharePlus. In addition, any workflows associated with your SharePoint lists will be handled within the app.

The screenshot displays two overlapping Nintex forms within the SharePlus application interface. The background form is titled "Undergraduate Studies Admission Form" and features the Eastern State University logo. The foreground form is titled "Repair Order #" and features the Repair Squad logo. Both forms include a left-hand navigation menu with options: Garth Fort, Search, Content, Favorites, Recent, and News. The "Repair Order #" form contains the following fields: "Repair Order #" (text input), "Employee Name" (text input), "Date" (calendar and time picker), "Service ID" (text input), "Client Name" (text input), "Contact Phone" (text input), "Time Slot" (text input), and "Final Cost" (text input). The top of the foreground form shows the "Repair Squad" header with contact information: 1035 N. Washington Street, East Rutherford, NJ, 07073; Telephone: (201) 922-1121 or Fax: (201) 922-9999; email: info@repairsquad.com.

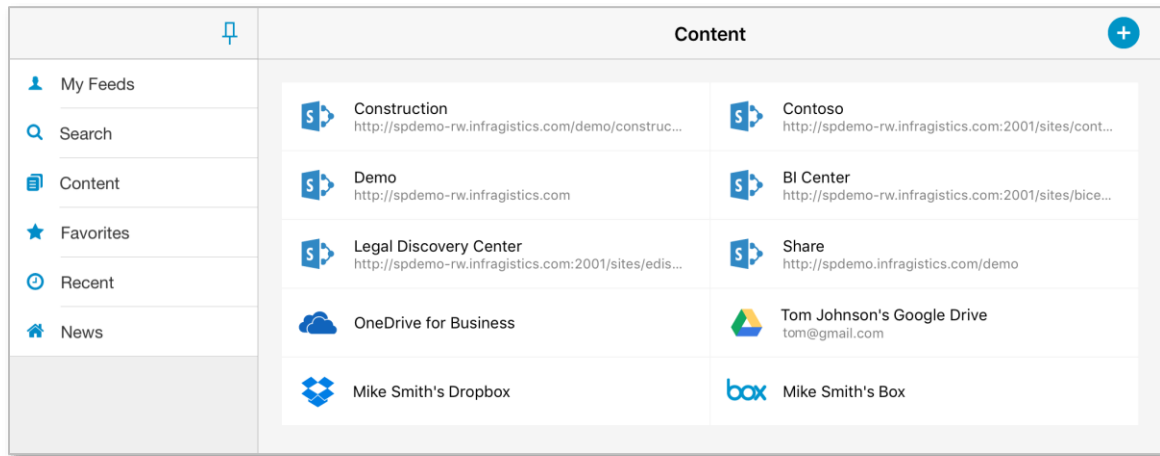
SharePlus integrates with Nintex in two different ways:

- Through the Nintex widget included in SharePlus Mobile Workspaces, which can interact with the Nintex Mobile application.
- With Nintex forms and tasks embedded inside SharePlus.

SharePlus supports both Nintex Forms and Workflows for Office365 and Nintex for SharePoint (On-Premise). For more information, navigate to the [Nintex Integration section](#).

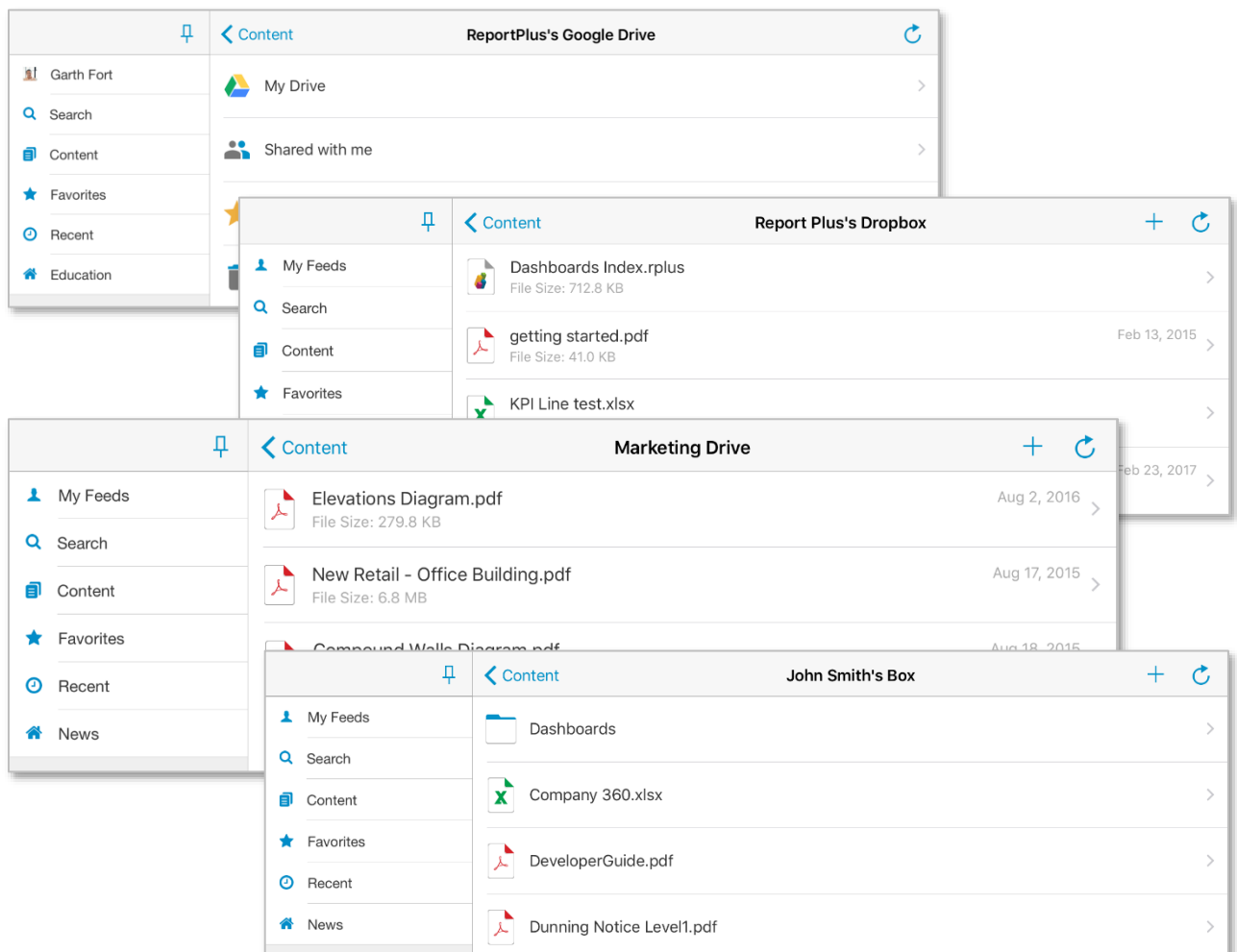
Browse other Content Sources and Cloud Providers

SharePlus gives you access to your content sources and the files contained in them. All content sources are displayed in an organized list view in the Content module.



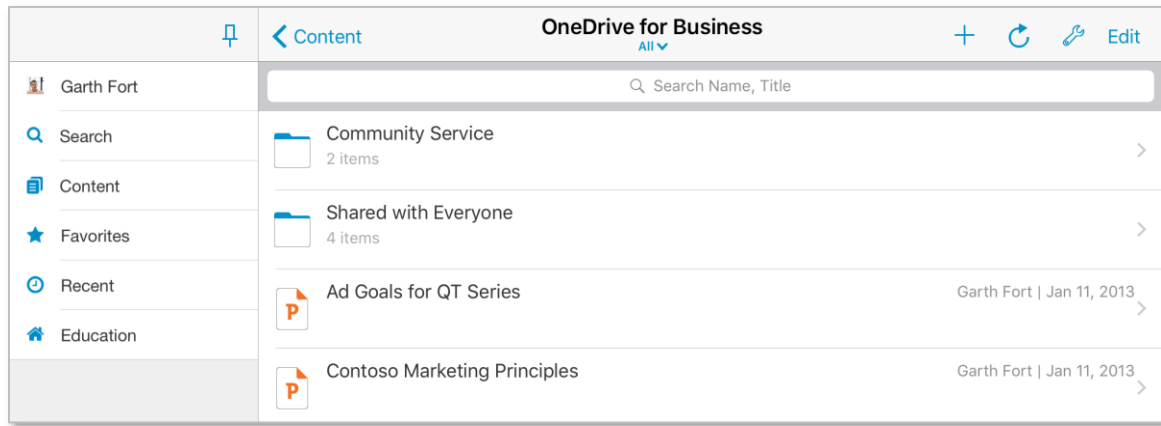
Box, Google Drive, Dropbox and Network Drives

Google Drive, Dropbox and Network Drives have the same available actions, although you will see that the display for Google Drive is different.



OneDrive for Business

This content source shares the same general behavior than SharePlus Portals. That means you are able to create documents and ReportPlus dashboards, add folders, change SharePoint list views and SharePlus visualizations, among other possibilities.

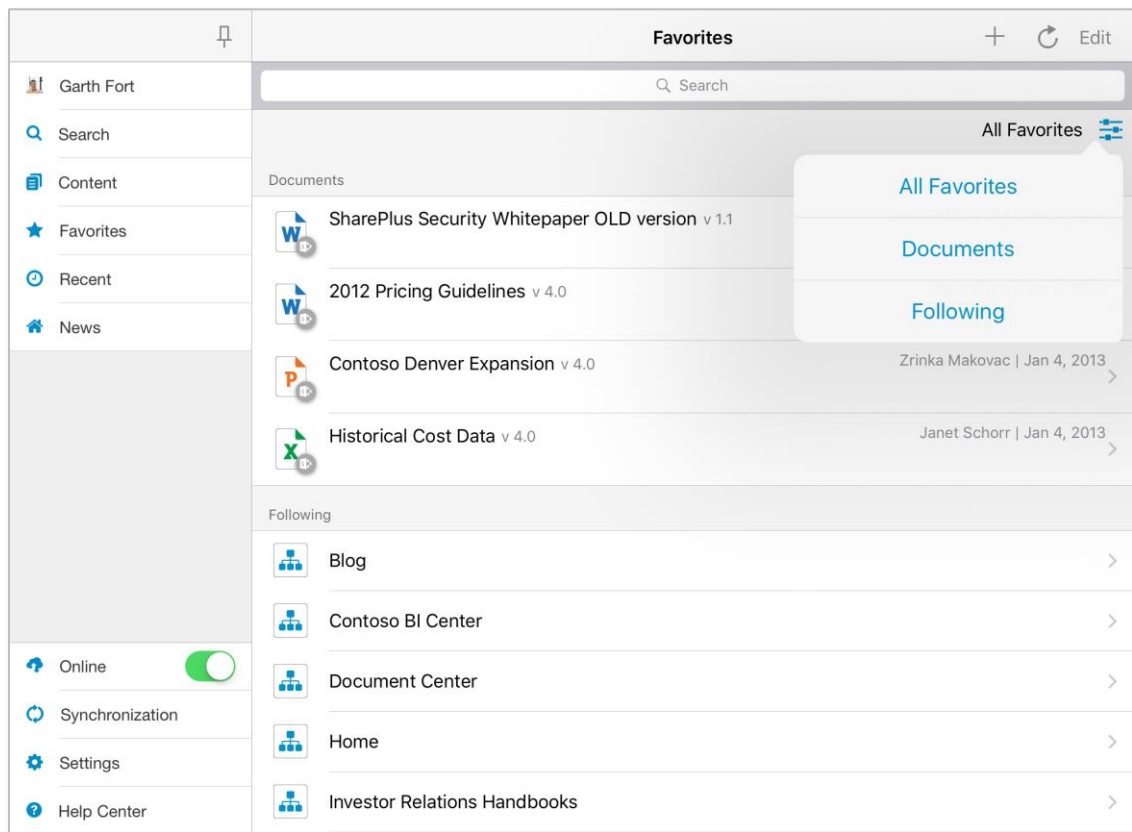


Quick Access to Content

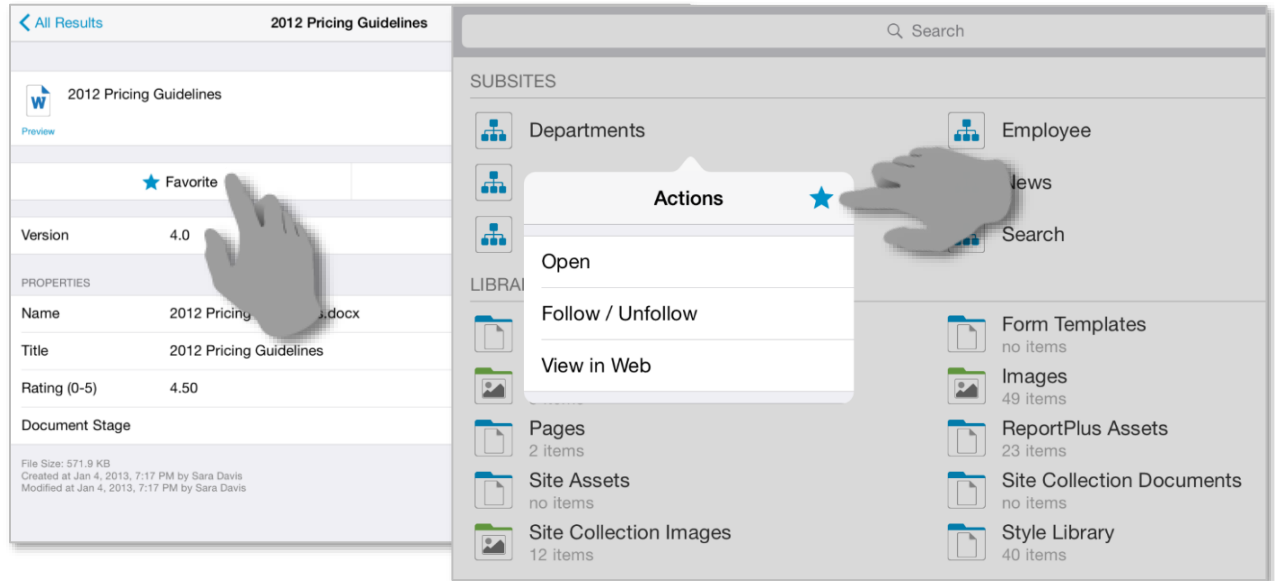
SharePlus helps you access your content with little effort, by showing recent content, allowing the creation of favorites, and including a SideBar menu with access to content hubs.

Favorites

SharePlus contains a “Favorites” Module that gives you quick access to all your favorite content displayed in an organized list view by category.

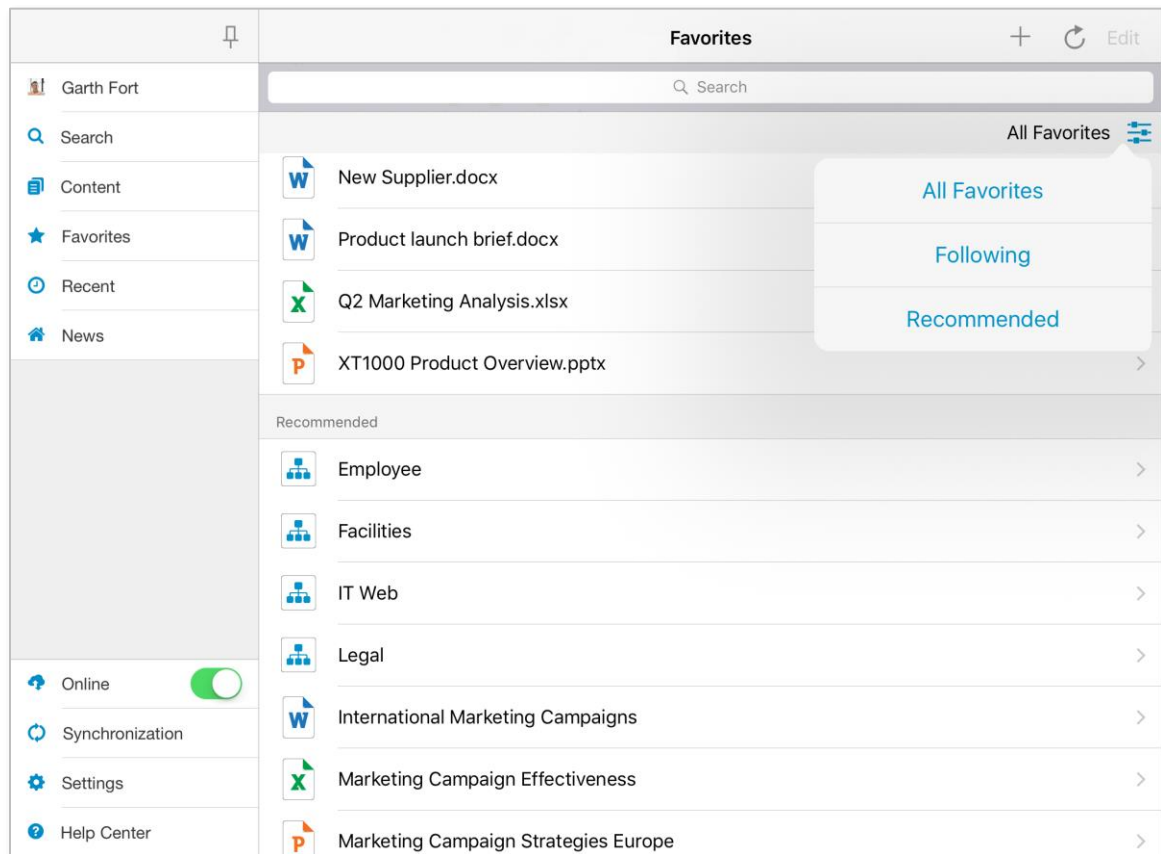


To mark an item as Favorite, just tap the “Star” icon on its properties.



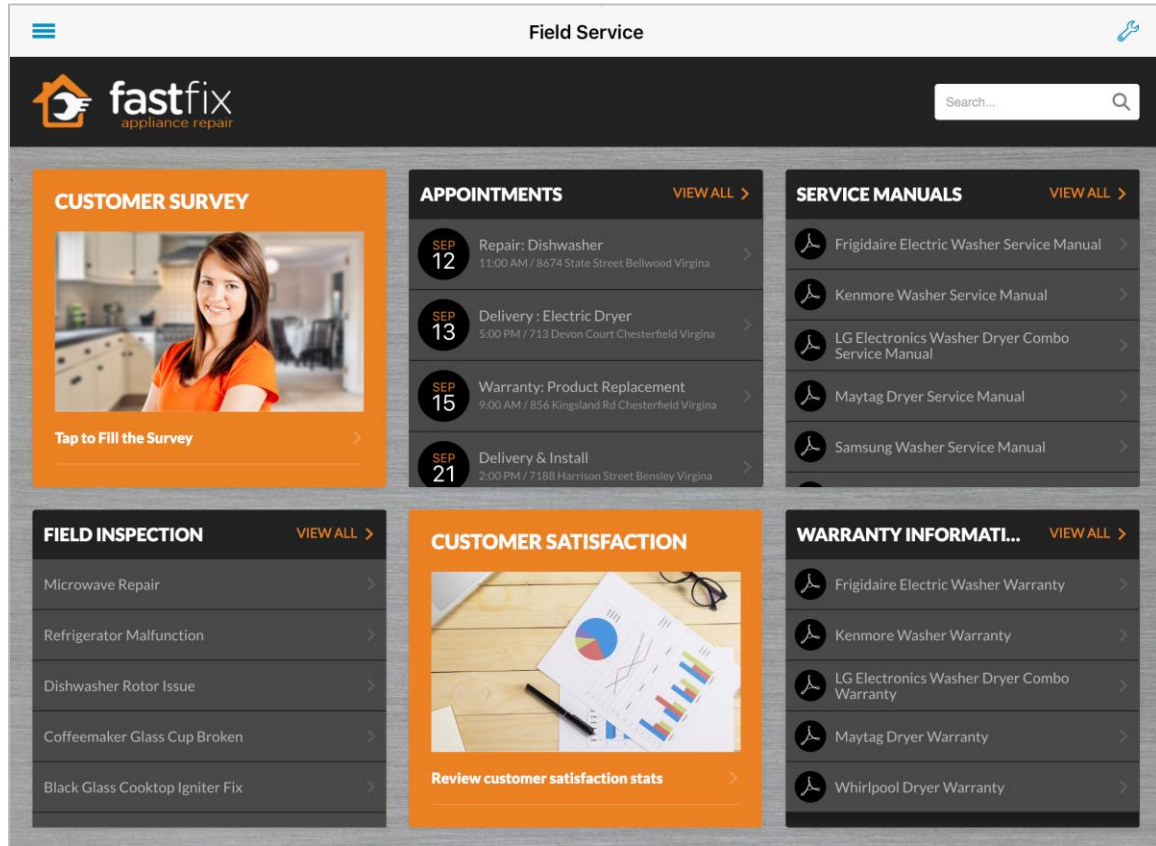
Recommended Content

When working with SharePlus Enterprise and SharePoint 2013 server you can get recommendations on sites and documents that may be relevant to you. Suggestions are included on the SharePlus list view under the *Recommended* section in the Favorites Module.



SharePlus Mobile Workspaces

By using web technologies like HTML, CSS and JavaScript, SharePlus can display rich mobile workspaces to enhance the user experience. In addition, high quality interactions can be achieved by using CSS and JavaScript frameworks like JQuery. Besides that, SharePlus provides a JavaScript API that gives access to SharePlus data, giving you the ability to present dynamic content from the server, even while offline.



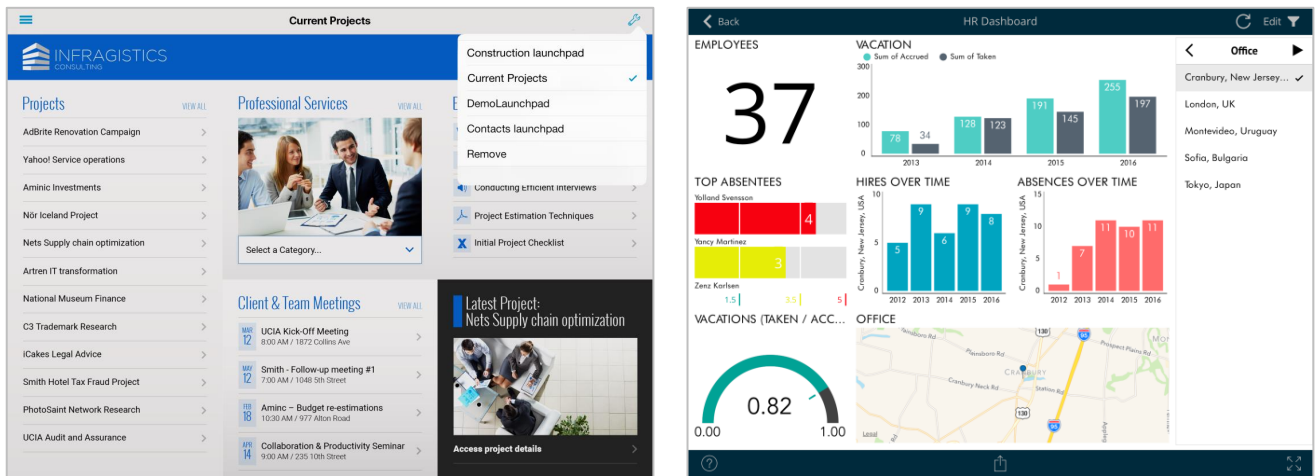
For further information about SharePlus Mobile Workspaces refer to [SharePlus Developer's Guide](#).

Custom Site Homes

Portals and sites can both display home content in SharePlus, presenting the user with a customized view for a given site. Site Homes can be pre-configured and shared across sites, displaying different content depending on the SharePoint site's context.

Every site in SharePlus has a Site Home by default, which can be changed manually (through the UI) or by configuration settings.

You can configure different types of content to be displayed as Site Home, i.e., SharePlus Mobile Workspaces, ReportPlus dashboards, and PDF files.



For further details about Site Homes configuration refer to [Home Customization](#)

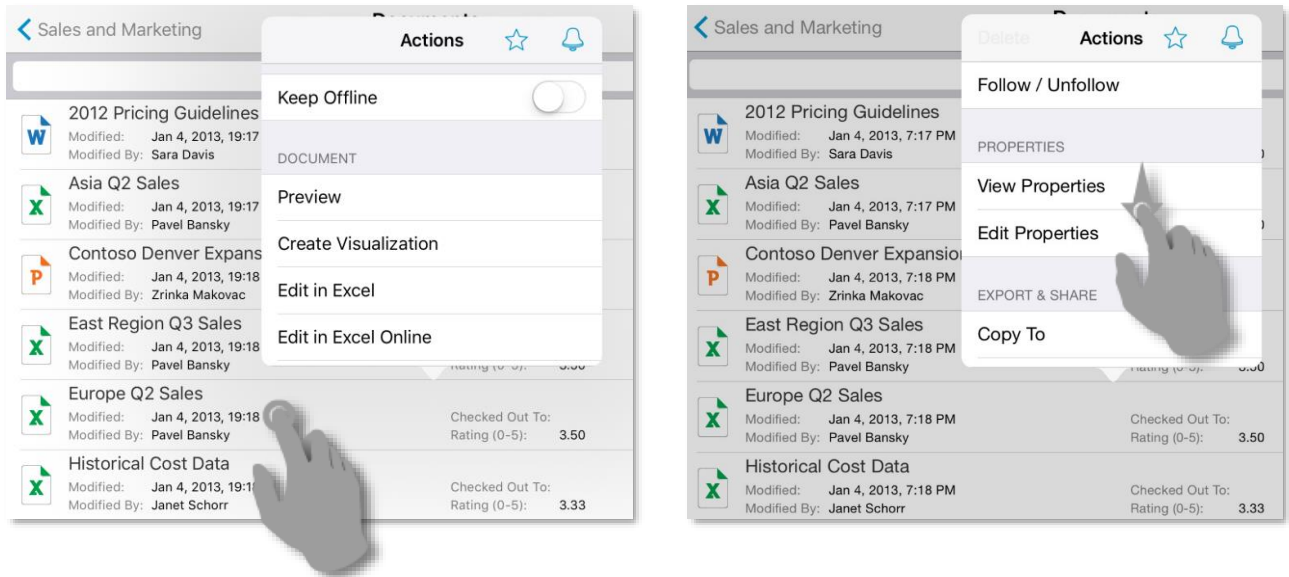
Edit Content

On top of reading SharePoint data, SharePlus allows users to:

- Add, edit & delete list items, documents and its properties, stored in lists, document libraries and attached to list items.
- Send/receive documents to 3rd party apps for editing. Those apps must support incoming and outgoing Open In.

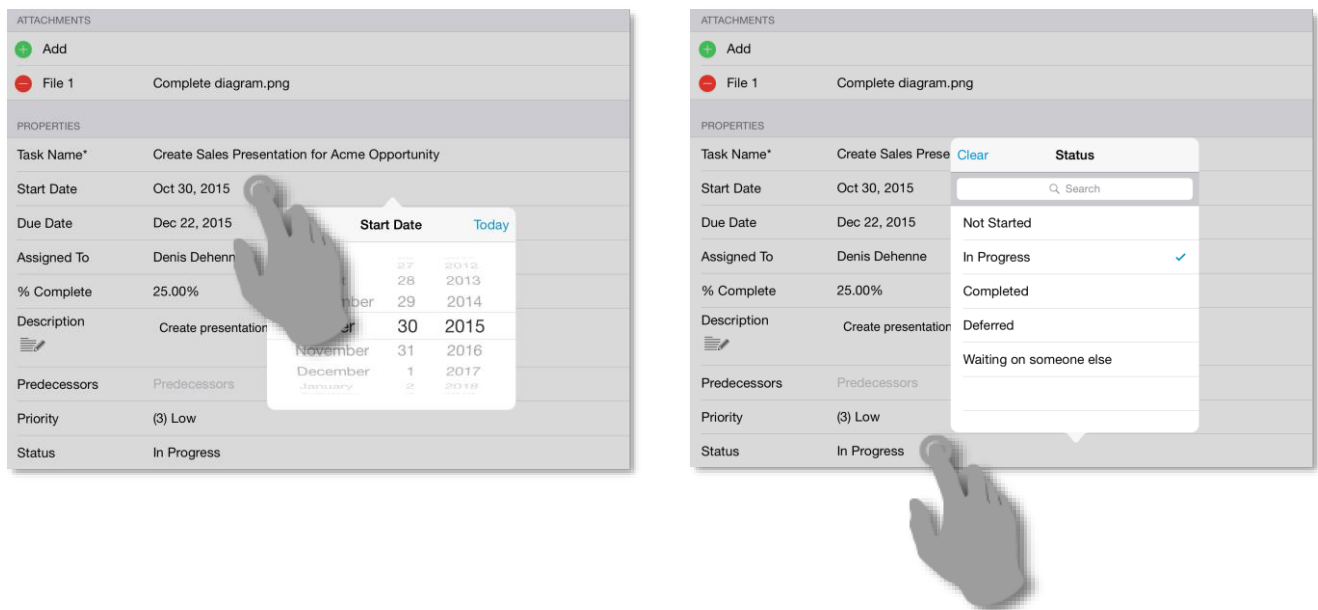
SharePlus centralizes all possible actions to be performed over any content, including sites, webs, lists, and items. Once the menu is displayed, scroll the list up and down to navigate through all the available actions for that type of content.

Perform a tap & hold to display the menu with all available actions.



Editing Items

SharePlus enables users to view and edit SharePoint List Items using native item forms.



Item forms are built dynamically, presenting both native and custom properties defined on the Item's content type or columns definition. All SharePoint property types are supported and rendered using the corresponding iOS visual control.

Editing Files

SharePlus relies on invoking 3rd party apps to edit documents. Any 3rd party app that supports incoming and outgoing Open In can be used.

When working with Office file formats, Microsoft Office for iPad is strongly recommended as you can save your work straight to the SharePoint server. Office for iPad will ask you for SharePoint credentials to access the document. Once you provide them the document is changed directly on the server and it will be automatically updated in SharePlus.

Check In/Check Out and Approve/Reject support

Check-In and Check-Out SharePoint actions are supported on SharePlus. The actions appear on the document actions menu when available to the current user. Approving and rejecting documents is only available on content-approval-enabled libraries for users with the “Approver” role on SharePoint.

“Save as Draft”

SharePlus features two save options: *Save* and *Save as Draft*. The *Save as Draft* option is useful when you want to work on a local copy without uploading changes to the SharePoint server.

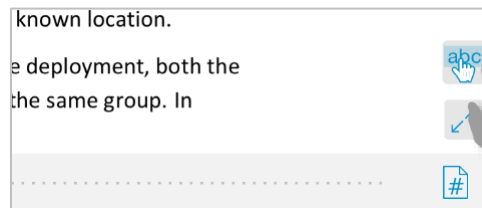
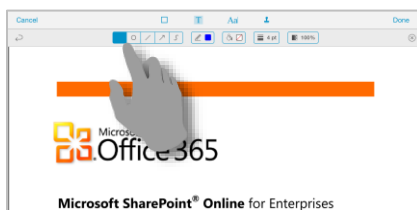
Save as Draft Save

In-App PDF Annotation and Form Filling

SharePlus provides a PDF annotation tool suite that lets the user annotate PDF documents and fill PDF forms without leaving the application. This maximizes productivity and keeps sensitive documents inside SharePlus.

The available tools are:

- Shapes: Square, circle, line, arrow and free drawing
- Markups: Highlighter, underline and strike. In addition, you can now highlight links.
- Text box and Sticky Notes
- Stamps

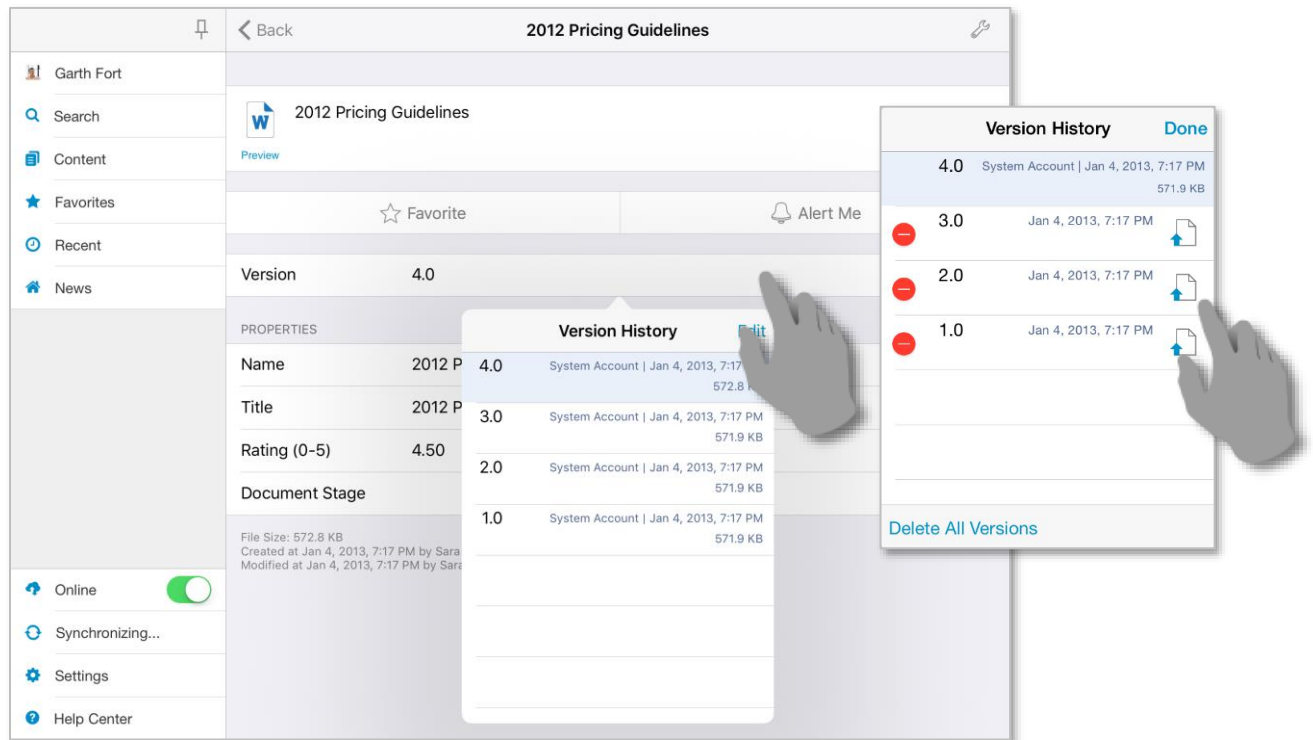


In addition, you can perform a search within a PDF file, browse the results by page and navigate to the page you want.



Document Versioning

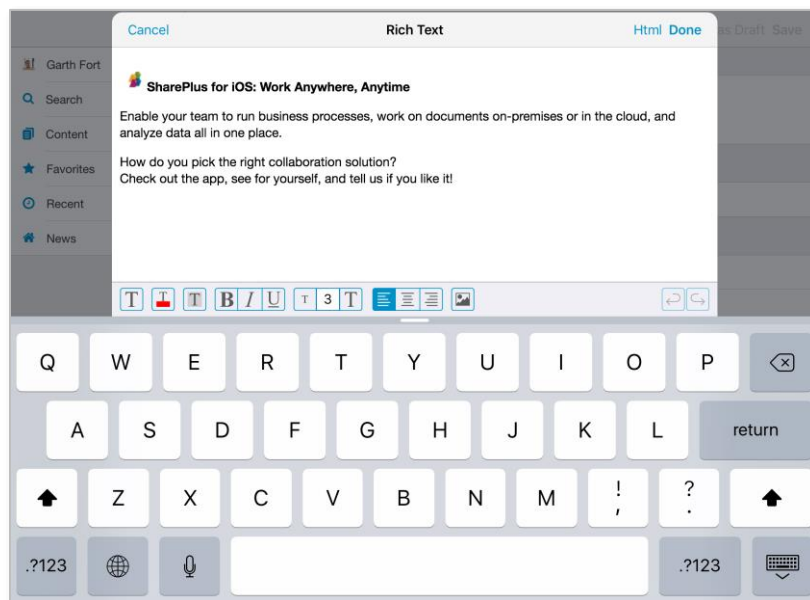
SharePlus supports SharePoint lists and document libraries with version control enabled. You can keep a history, track changes, and restore previous versions if needed.



Rich Text Editor

SharePlus features a fully capable Rich Text Editor which lets the user create rich content for Rich Text columns. The most common tools are available: font type face, font color, highlight color, bold, italic and underline, font size, paragraph alignment and insert picture. The editor also incorporates Undo and Redo support.

Besides being able to edit rich content, the user may also edit the HTML source of the content.

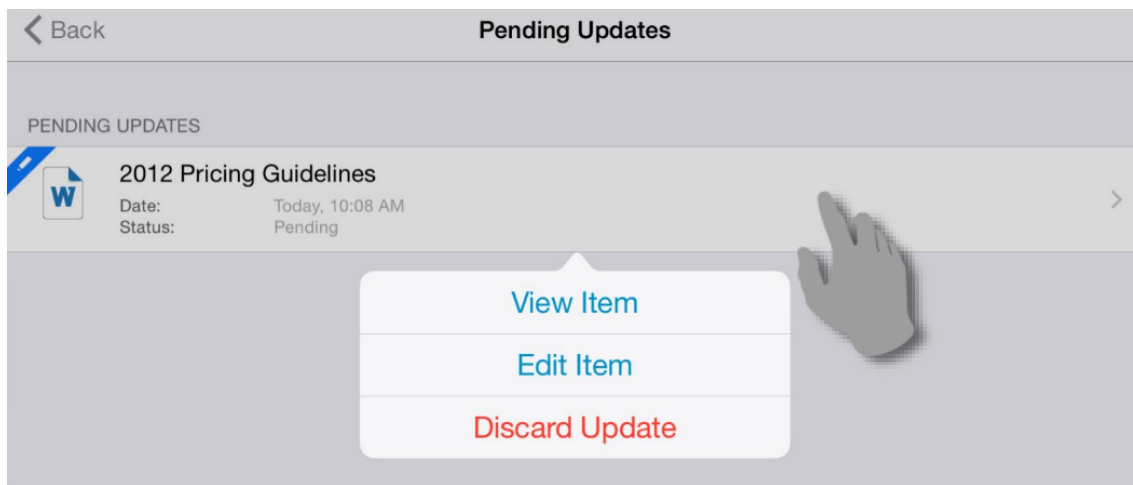
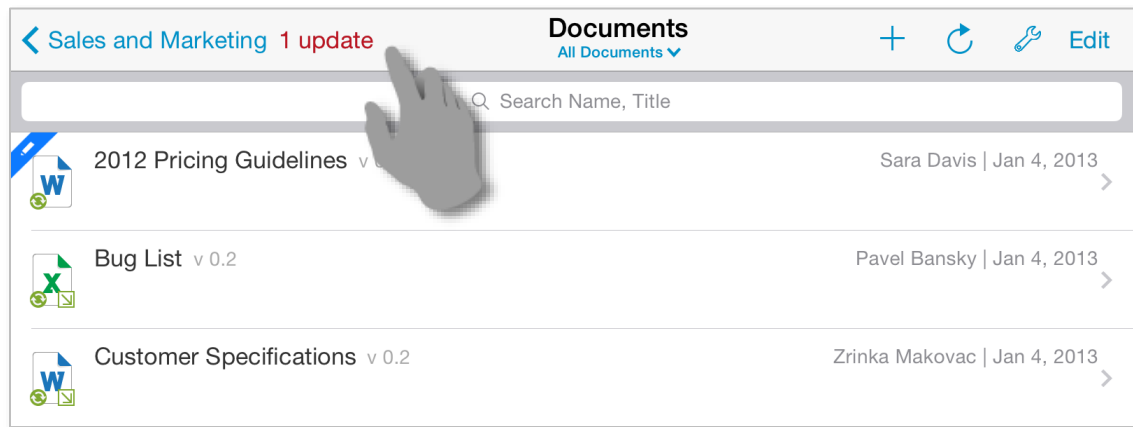


Managed Metadata Services

SharePlus also supports [Managed Metadata Fields](#). Native iOS controls are used for these field types as well. When editing a managed metadata field, SharePlus will present the user with a pop-up dialog with search capabilities, as well as adding new tags and multiple selection.

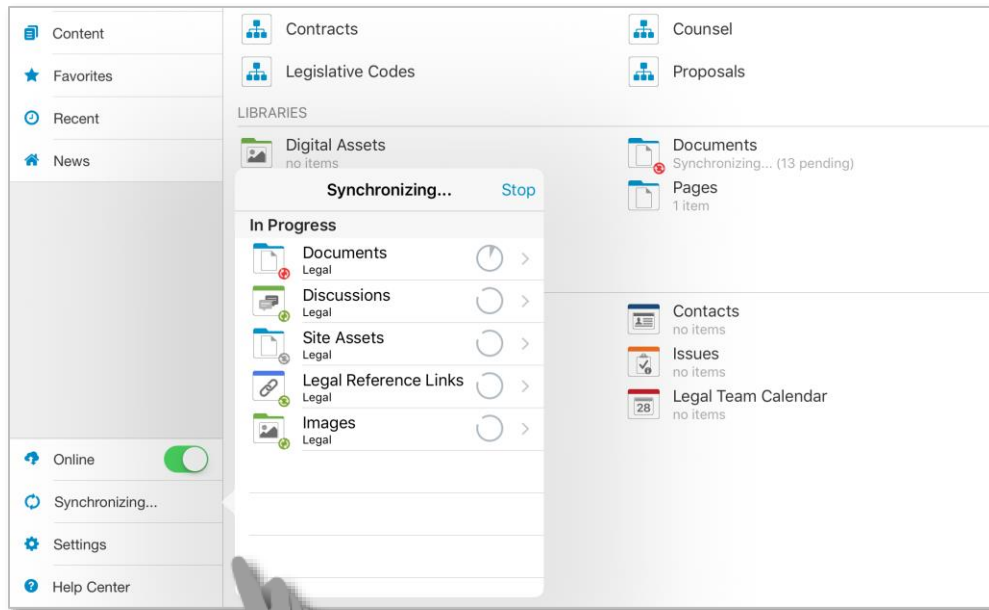
SharePoint Offline Synchronization with Conflict Resolution

Offline support is one of the most critical aspects of a mobile solution. SharePlus allows users to synchronize SharePoint content with the device, enabling offline reading and editing when not connected. Items can be added, edited and deleted while working offline. Changes are synchronized back with the server when the connection is restored.



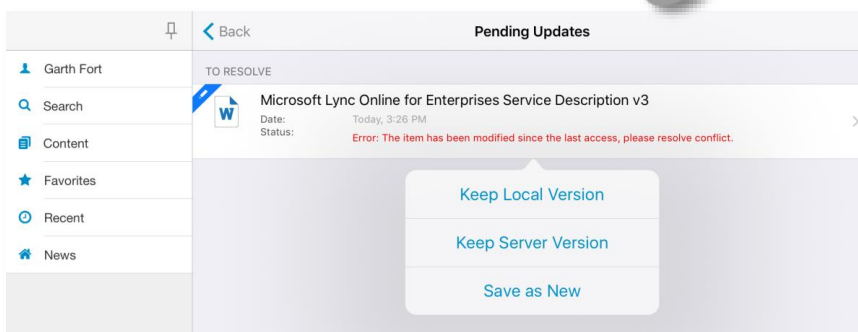
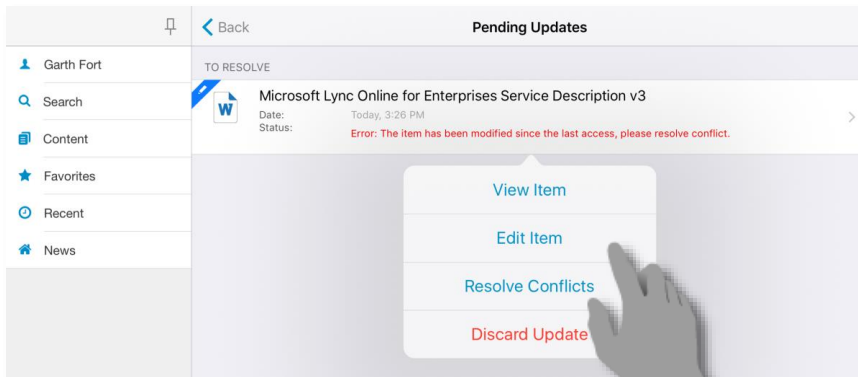
Synchronization Monitoring

The “Synchronization” SideBar component allows you to access and monitor information when synchronizing your data. All errors and recent activity is displayed on the popover, as shown in the image below.



Collision Resolution

When synchronizing changes back to the server you may encounter conflicts, for example, when two or more users edit an item at the same time. SharePlus resolution engine helps you decide how you want to proceed in those cases.



InfoPath Forms

SharePlus supports displaying InfoPath forms and also adding new forms based on templates. Viewing and adding new forms require SharePlus to be online. No offline support is provided for form libraries.

Your SharePoint server needs to have InfoPath Forms Services enabled and correctly configured for SharePlus to be able to render forms. For more information on how to configure it refer to the [Configure InfoPath Forms](#) TechNet article.

Collaborate

SharePlus enables users to be in sync with their teams by supporting all SharePoint native collaboration types, including Calendars, Task lists, Contact lists, Issue lists, Discussion Boards and Announcement lists.

Sending Files by Mail

SharePlus users can share documents by mail either attaching the file to the email or sharing the link to the document on SharePoint.

Email Format Support

MSG and EML file formats are fully supported in SharePlus. As long as the file is attached to an item or saved into a document library, SharePlus will be able to read the message along with its attachments.

Adding to device Contacts

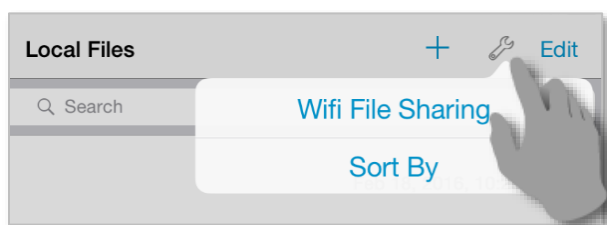
Any phone number, email, and SharePoint contact can be imported into the iOS contacts app from SharePlus with any SharePoint contact list.

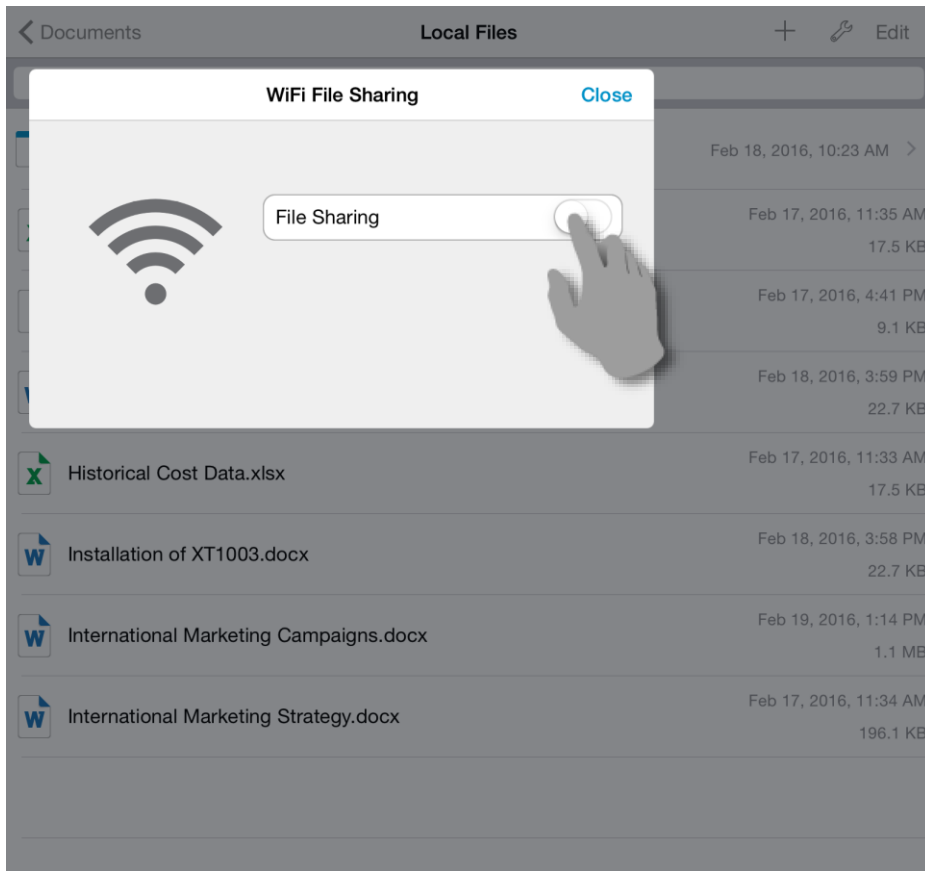
Local Files

The Content module includes the “Local Files” section, which gives you access to an isolated and secure storage on your device. This storage is not synchronized with the server and can be used to store personal files. From Local Files you are able to upload files to the SharePoint server or share them via the Wi-Fi network.

Wi-Fi Sharing

Share files from Local Files with others through the Wi-Fi network. It is as simple as connecting your device to the network and enabling File Sharing in SharePlus. Once the address is displayed on screen, input that address in a web browser connected to the same network.

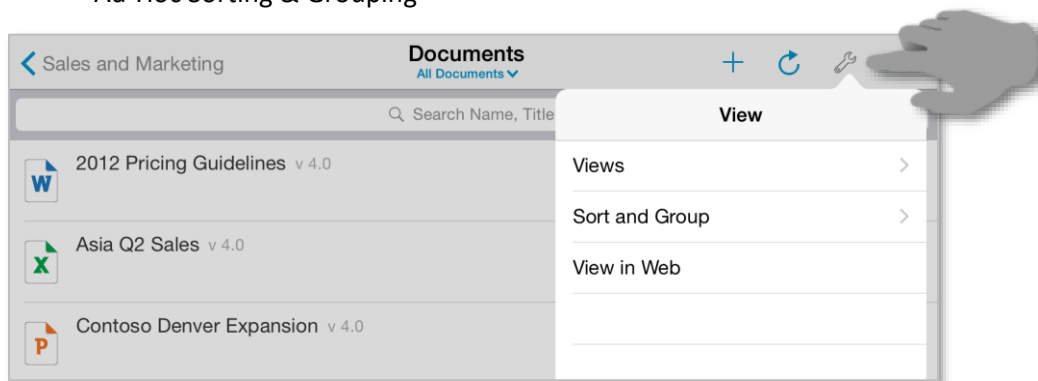




Visualize SharePoint Content

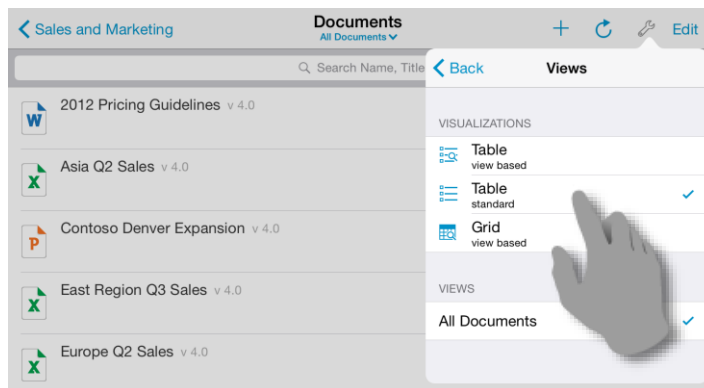
You can control every aspect on how SharePoint lists and document libraries are displayed by configuring the following settings:

- SharePlus Views
- SharePoint Views
- Ad-Hoc Sorting & Grouping



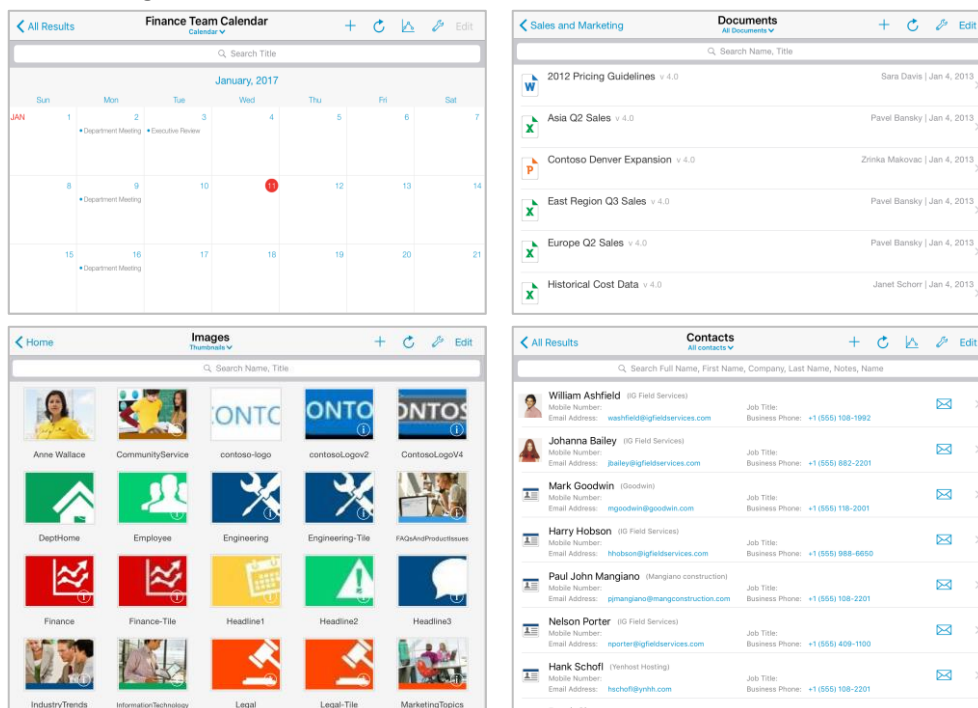
Rich Data Visualizations

The layout of Lists and Document Libraries can be adjusted using Visualizations, e.g. table, grid, calendar view. The default and available Visualizations depend on the list type and settings, e.g., the *Calendar compact* Visualization is only available for Calendar lists.



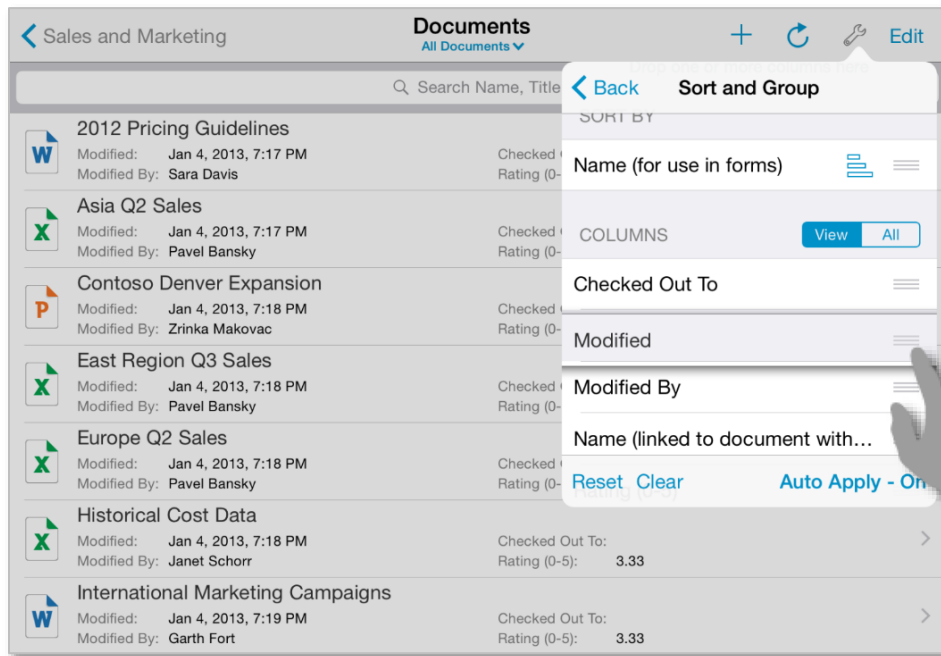
Available visualizations:

- **Table view based:** displays the items with their icon and basic information based on the list view, in a vertical list.
- **Table standard:** items are displayed showing only their title, in a vertical list.
- **Grid view:** displays the items in a spreadsheet fashion, one line per item and one column per metadata field.
- **Calendar view:** this is a calendar-specific view (only supported for calendar lists) which supports daily, weekly and monthly views.
- **Picture Board:** this is a picture-specific view (only supported for picture libraries and asset libraries) that displays picture thumbnails over a dark background to provide a better image visualization.



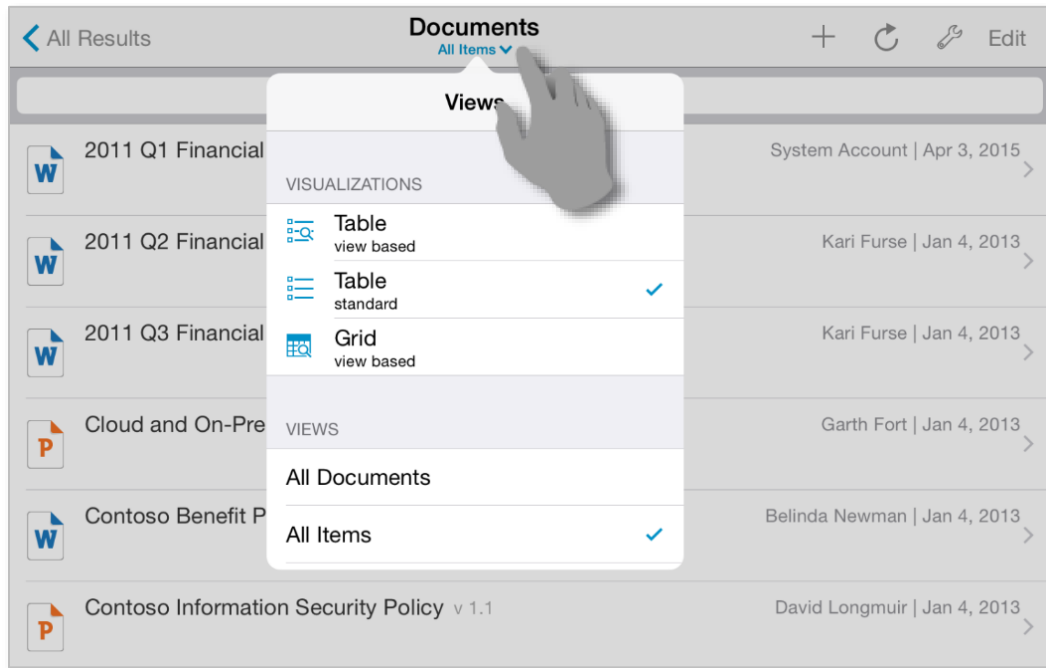
Ad-Hoc Sorting & Grouping

Once you enter the sort and group settings, you will find there are different buttons and actions available. You can specify group by criteria by dragging List columns to the **Group By** section or sort criteria by dragging columns to the **Sort By** section.



Quick Access

You can easily switch the SharePoint List Views and SharePlus Visualizations by tapping the view name to open the Views selector under the list/library name.

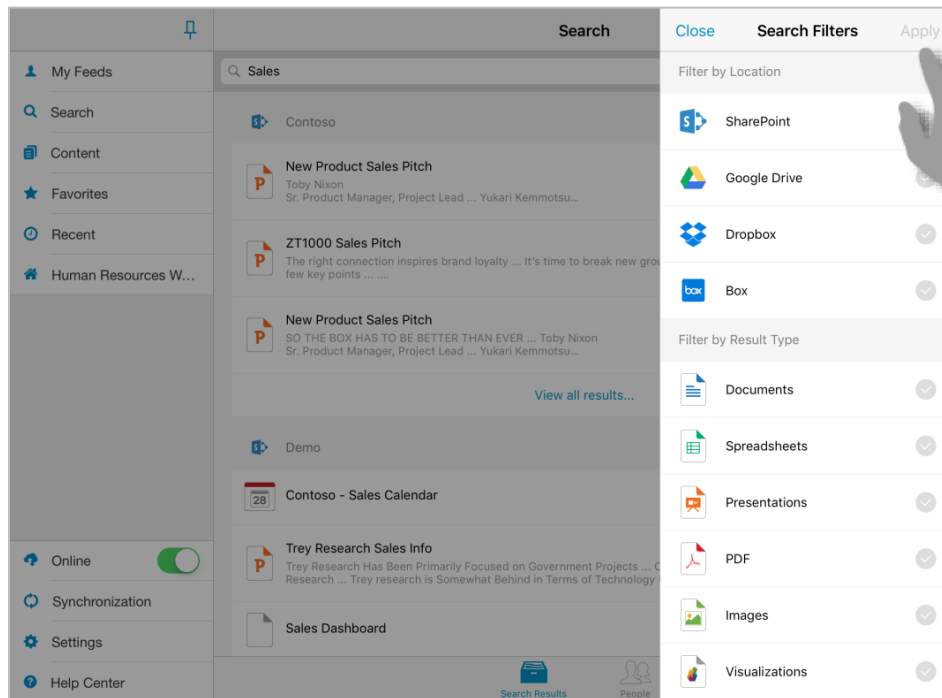


Search Hub

Search is today an integral part of any SharePoint-related solution, enabling easy access to larger and larger volumes of information.

SharePlus Enterprise Search

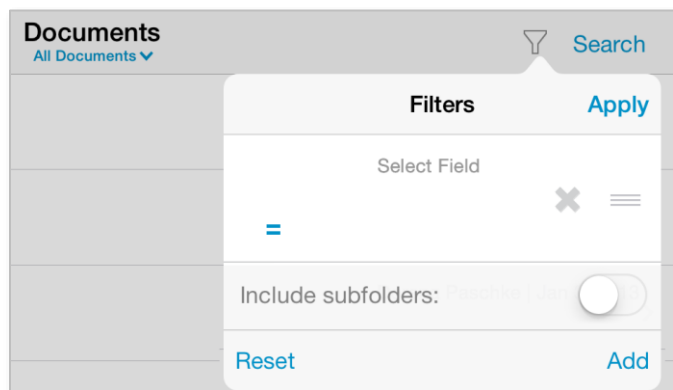
The Search module allows you to search SharePoint server and cloud providers content by keyword and retrieve results from all connected portals and cloud providers at the same time. Filters like location, modification date, result type, scope and author help you narrow the retrieved results which are displayed in an organized list view.



You can use the search filters, refining the search by **location**, **result type**, **modification date**, **author** and **scope**.

Filtering content inside lists and document libraries

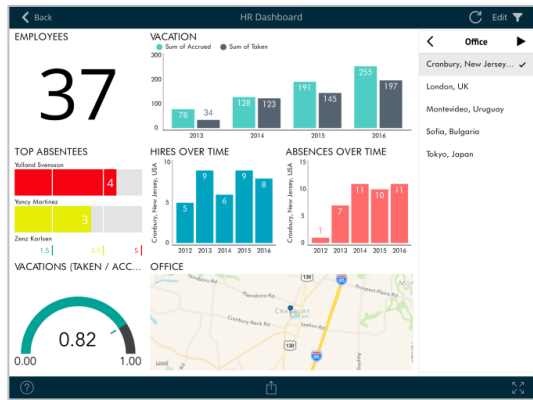
SharePlus provides both basic and advanced list filters, based on complex criteria and defined by the user, using the current list's available columns. Results will be displayed as items in the current list view and will be cleared once the search tool is dismissed.



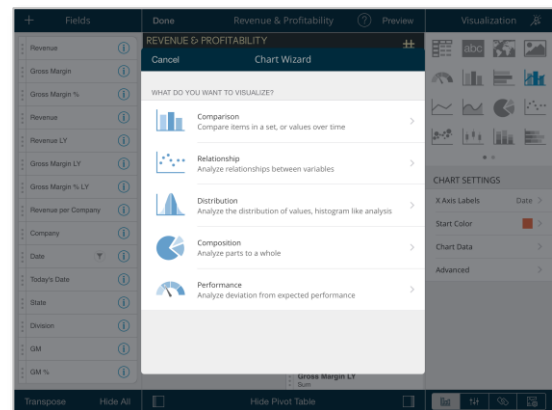
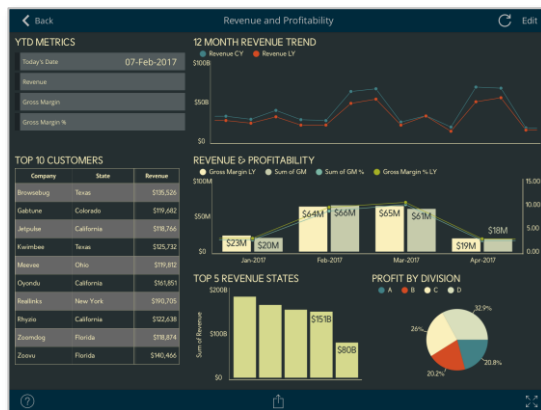
Data Visualization

Design and view dashboards with SharePoint Data

You can use data visualization to communicate insight by creating rich dashboards that consume SharePoint data.

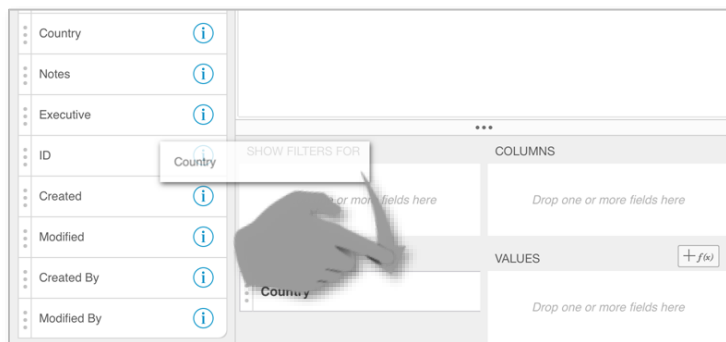


The Visualization options include grid, text, trend line, map, gauge, chart, and financial chart views.



Working with Pivot Tables

You can connect to data sources like lists and documents, including calendars, contacts, images, Excel files. SharePoint lists and Excel files can apply many different visualization options to their data. With SharePlus Bundle (ReportPlus and SharePlus Enterprise), you have access to more than 20 different data sources.



Pivot Tables are very powerful data summarization tools that help you analyze data. To create one is as simple as selecting your data and using the **Pivot Table Editor** to slice-and-dice data according to your needs.

You can summarize data, hide null values, add quick filters, and also customize the columns to be listed in your pivot table. For further details refer to the [Data Visualization](#)

Social Hub

Collaboration is encouraged through SharePlus new *Social* Module, providing a centralized and feature-rich User Experience (UX) for [SharePoint 2013 social features](#).

The *Social* Module lets you share your ideas, as well as discover and keep track of your colleagues and their work through their profiles, posts and updates in their Timelines. Your SharePoint personal storage (My Content) is also available in this module.

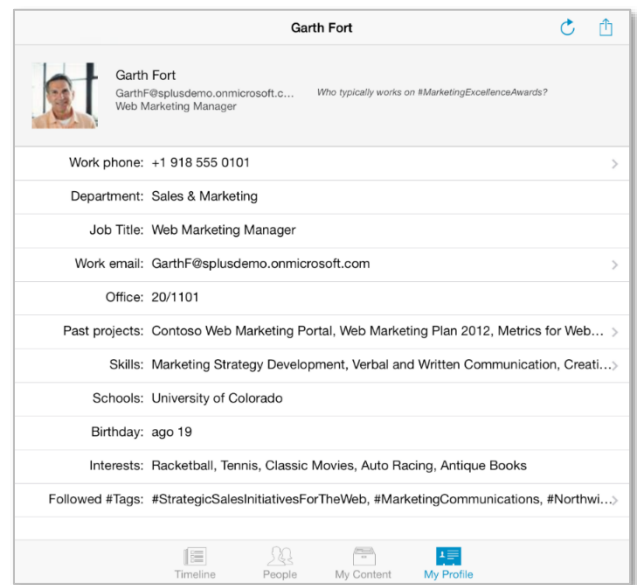
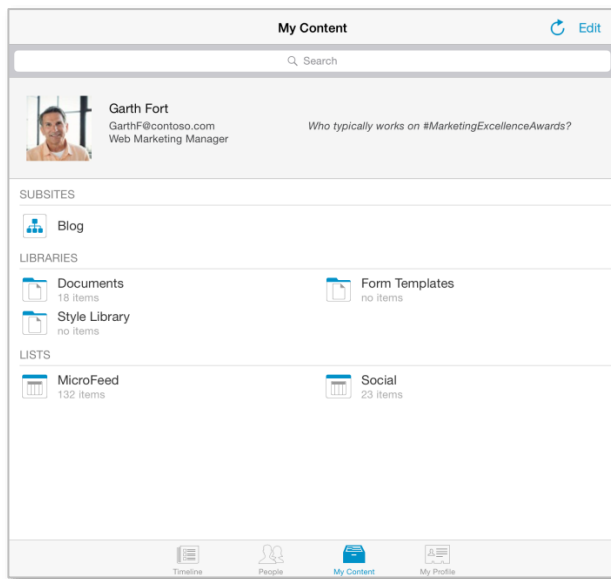
Timeline

The *Timeline* tab includes your newsfeed, the place where you can access all your public posts, conversations, and updates. In this section, you can gain quick access to all the posts in which you've been mentioned, the items you have "liked", and the posts of the people you follow.

The screenshot displays the SharePlus Social Hub interface. On the left is a navigation sidebar with links to 'Garth Fort', 'Search', 'Content', 'Favorites', 'Recent', 'News', 'Online' (with a toggle switch), 'Synchronization', 'Settings', and 'Help Center'. The main content area is titled 'Newsfeed' and shows a profile for Garth Fort (GarthF@contoso.com, Web Marketing Manager) with a bio: 'Who typically works on #MarketingExcellenceAwards?'. Below the profile, the timeline shows several updates: Garth Fort following Aubury Smith, Garth Fort replying to a post by Zrinka Makovac, Garth Fort's post about the XT Series guidelines (dated Oct 22, 2013, 4:16 PM), Garth Fort liking a post by Zrinka Makovac, Zrinka Makovac's post about pricing guidelines for the QT Series (dated Oct 22, 2013, 4:15 PM), and Garth Fort's post about the #MarketingExcellenceAwards (dated Oct 22, 2013, 3:58 PM). At the bottom, there are icons for 'Timeline', 'People', 'My Content', and 'My Profile'.

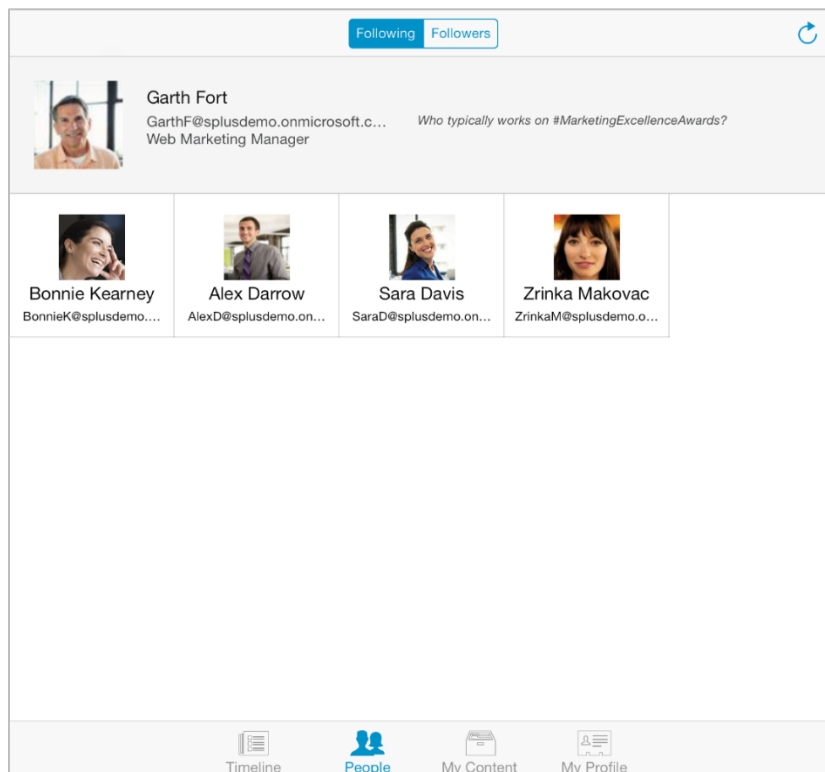
My content and profile

The *Social* Module gives you access to your personal SharePoint storage (My Content), including both your public and private document libraries. Also, you can visualize or edit your personal information shared on your corporate social network.



People

The *People* tab displays the list of people that you are following and the ones following you. In this section you are able to connect with people, access their content and activity feed and also start conversations with them.



Security

SharePlus provides secure access to SharePoint sites from mobile devices. To fortify data security, core security features have been built into the product at each layer.

The following is a list of security features that are included in SharePlus Enterprise for iOS devices:

- Storage Security (Data-at-Rest Security)
- Channel (Communication) Security
- Authentication
- Authorization
- Application-Level Security
- MDM Integration

Custom authentication methods can be implemented through the Objective-C SDK.

For further details on every feature, refer to the [Planning Security](#)

Deployment

SharePlus licensing models (Free, Subscription, and Enterprise) are distributed using different methods. You can download the Free/Subscription versions directly from Apple's App Store distribution platform. The Enterprise version can be distributed using the following methods:

- MDM Server Deployment
- Web Deployment using SharePoint
- Ad-Hoc (typically used for testing purposes)

For further details refer to the [Planning Deployment](#)

Advanced Configuration

SharePlus enables both end-users and IT Managers to adjust the application's behavior using two main configuration components:

- Central Application Configuration
- Per-site Configuration (also known as "Mobile Navigation")

Central Application Configuration

You can work with a Remote Configuration XML file published in a centralized location, on SharePoint or other server. The use of a remote configuration file, facilitates governance, allowing IT Managers to modify the default application settings on all devices centrally, without even having to push a new version of the product.

SharePlus also supports working with multiple remote configuration files, by using Dynamic Configuration or Library-Based Configuration methods.

For further details refer to [Local and Centralized Configuration](#)

SharePoint Per-site Configuration (MobileNavigation)

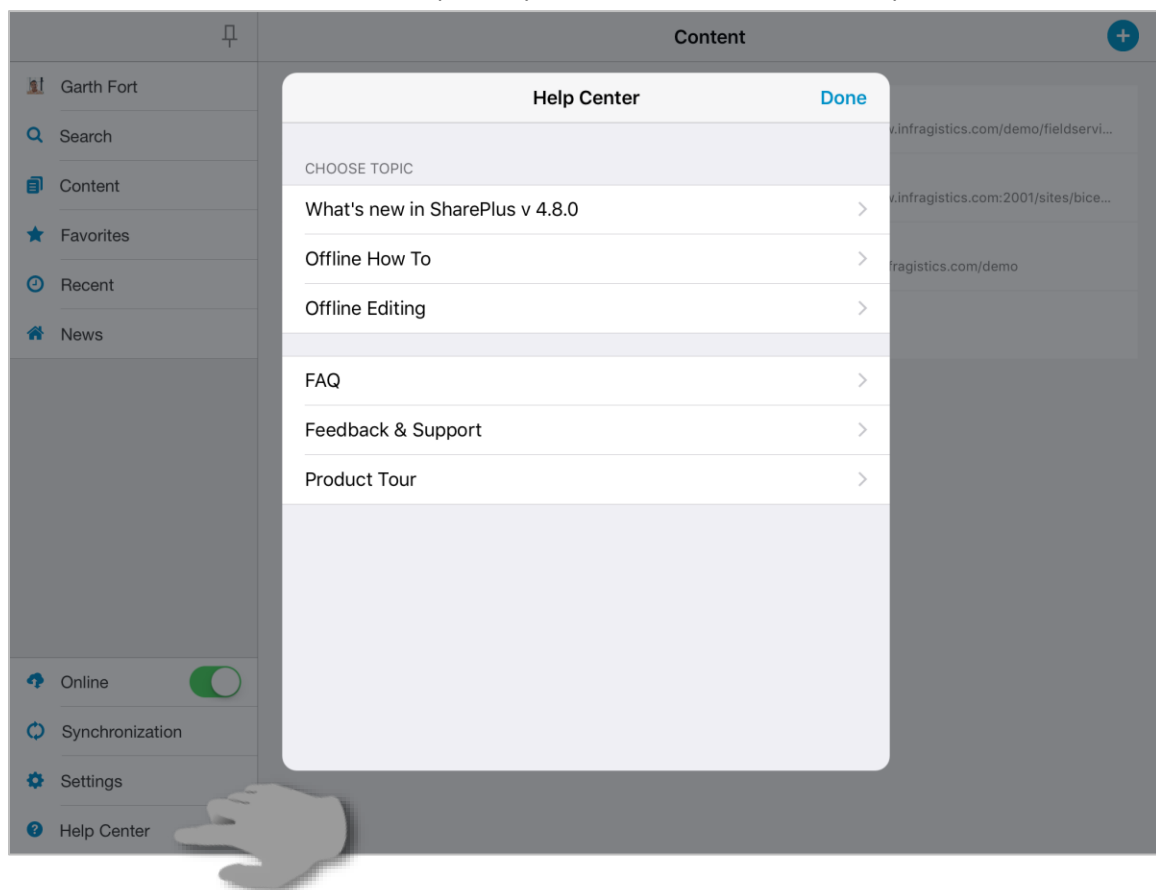
When browsing a site in SharePlus, all sites, lists, and libraries accessible to the user are displayed. SharePlus provides the **Site Configuration** method to manage the settings for sites and lists for each site independently. These settings include aspects like navigation, visualization, and offline behavior.

- **Navigation** is about the visibility and organization of sites and lists in the navigation bar.
- **Visualization** allows the configuration of the default SharePoint List View and SharePlus' native visualization for each list. You can also configure the site Home to personalize the site gateway.
- **Offline behavior** allows the configuration of default offline settings for a list.

For further details refer to [Site Configuration “a.k.a. MobileNavigation”](#)

In-App Support Tools (Feedback Email and Help URL)

SharePlus provides several in-app tools to facilitate access to support to the user. These different tools can be customized separately and are centralized in the Help Center.



For further details refer to [Support Enablement](#)

Language Support

SharePlus will apply language and regional settings configured on the device. The available languages are English, Spanish, Chinese (Traditional and Simplified), French, German, Japanese, Russian, Italian, and Dutch.

You can switch language or regional settings on the device and SharePlus will take settings into account. The localization to other languages can be custom implemented if needed.

MDM Integration

SharePlus integrates with many MDM solutions available in the market, including [MobileIron](#), [Citrix's XenMobile](#), and [Bitzer Mobile](#). The level of integration depends on the capabilities of each particular MDM solution. MDM servers and SharePlus can work in conjunction to cover Application Deployment, Authentication/Authorization, Data Leakage Policies and Data Protection.

MobileIron Integration

SharePlus integrates with [MobileIron's platform architecture](#), which is comprised of MobileIron Core, MobileIron Sentry, MobileIron Client, and end user products.

SharePlus leverages MobileIron SDK to improve the integration with the MDM, delivering a very good integration with the MobileIron platform. However, some particular capabilities may not be supported, e.g., AppConnect Data-at-rest encryption.

For detailed information refer to [MDM Integration](#)

Application Customization

SharePlus User Experience can be customized in several ways:

- Through application rebranding.
- Integrating web technologies (HTML, CSS, and JavaScript) into the native User Interface.
- With native custom development, implementing Objective-C code.

Corporate Branding

Enterprises often need a detailed control of the application's look-and-feel to meet corporate policies or match concrete solution needs. SharePlus look-and-feel can be customized during implementation, by the inclusion of customized assets.

For further details refer to [Application Rebranding](#)

SharePlus SDK

SharePlus can integrate modern standard client-side web technologies like HTML5 and jQuery, allowing the development of rich mobile workspaces that can offer a customized view of a given site (Site Homes) or display content for a SideBar module (Application Home). SharePlus Mobile Workspaces can communicate with the app using S+ links or through a JavaScript API.

For further information about SharePlus SDK refer to *SharePlus Developer's Guide*.

Native Custom Development

SharePlus can be further customized to adapt the product to specific business needs.

With the Objective-C SDK you can integrate custom components into SharePlus, like custom actions on items, authentication providers, custom startup steps, etc.

Additional modules included on the SideBar can display custom content. These modules allow a wide range of possibilities.

Chapter 2

Planning SharePlus

Section 1: Solution Architecture

Section 2: Planning User Experience

Section 3: Planning SharePlus Licensing

Section 4: Planning Configuration

Section 5: Planning Deployment

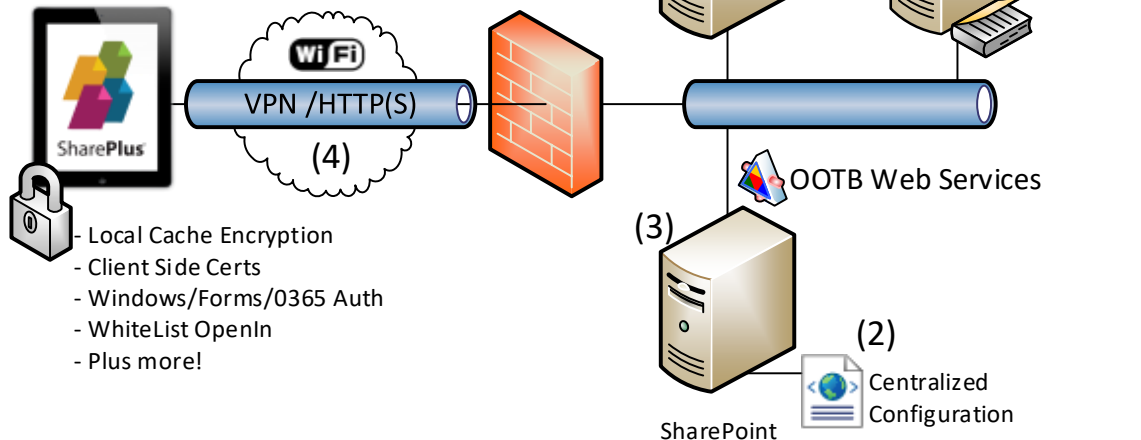
Section 6: Planning Connectivity

Section 7: Planning Security

Solution Architecture

SharePlus Architecture Overview

- 1) The Device connects to the MDM Server, enrolls and downloads SharePlus.
- 2) SharePlus loads and downloads the centralized configuration.
- 3) When the user navigates a site, the native SharePoint Web Services are invoked and the content is loaded.
- 4) Traffic can be tunneled via VPN and/or HTTP(S)
- 5) Authentication is relayed to AD, by the Reverse Proxy or by SharePoint itself.



SharePlus Client Application

SharePlus is a native iOS application. It manages a local database populated by a background Offline Synchronization process. Document editing is implemented invoking 3rd party editing tools via “Open In”.

Connectivity and Network Architectures

SharePlus connects to SharePoint through SharePoint’s out-of-the-box Web Services.

The network architecture needs to ensure connectivity by properly configuring:

- VPNs (or MDM-provided tunneling)
- Firewalls and Reverse Proxies
- SharePoint’s Alternate Access Mappings and IIS Hosts

You can test your network connectivity on SharePlus by trying the following:

- Open iOS Safari and browse the SharePoint site
- Download SharePlus Free

Security

SharePlus provides secure access to SharePoint sites by addressing aspects like:

- **Data Storage security** – iOS system architecture provides security features that are enabled by default.
- **Authentication** – The user authentication on a specific device can be achieved through the combination of several mechanisms like Passcode lock, Touch ID, and Office 365 on the cloud.
- **Authorization** – Access to SharePoint resources such as lists and documents is granted through the user's SharePoint credentials.
- **"Feature Trimming"** – Based on security rules, many restrictions over SharePlus functionality can be included.

MDM Servers

SharePlus can work in conjunction with an MDM Server to cover Application Deployment, Authentication/Authorization, Data Leakage Policies and Data Protection.

The level of support provided differs for each MDM vendor. For further details refer to the MDM Integration chapter.

Customization

SharePlus can be customized to adapt the product to specific business needs. The main mechanisms include:

- **Configuration:** By adjusting the app's configuration, you can tailor the application's existing functionality, for instance, pre-setting the list of sites, defining default visualizations and trimming unwanted features. You can also adjust branding.
- **"HTML" SDK:** With the HTML SDK, you can create rich custom visual experiences that leverage all the back-end SharePlus functionality and run even in offline mode.
- **Objective-C SDK:** With the Objective-C SDK you can integrate custom components into the app, like custom visual modules, authentication providers or custom startup steps.

System Requirements

When working with SharePlus, you need to meet the following requirements:

SharePoint Version	Mobile OS	iOS Devices
SharePoint 2007 or above, both on-premises and Office 365 (Cloud).	iOS 9 or above	iPhone 4S, iPad 2 nd generation, iPod touch 5 th generation or above.

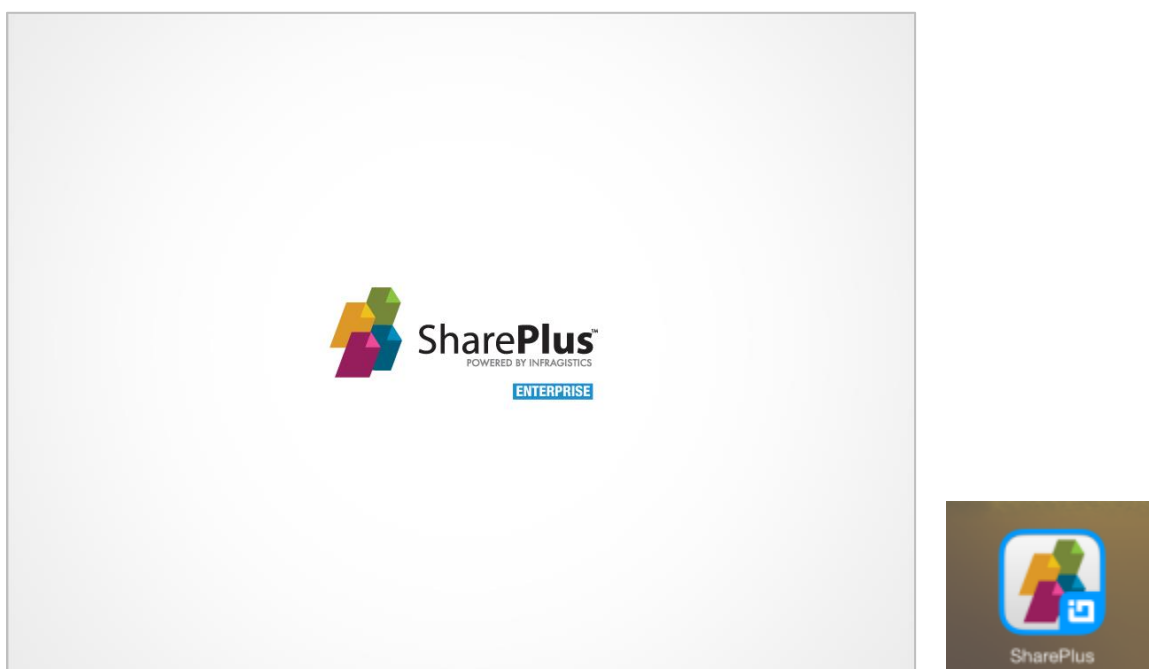
Planning User Experience

Enterprises often need a detailed control of the application's look-and-feel to meet corporate policies or match concrete solution needs. SharePlus look-and-feel can be customized by adjusting the configuration and graphic assets during implementation.

Application Rebranding

The following graphic elements can be customized to adjust the application's visual design:

- Icons
- Splash Screen
- Color Palette



To include customized assets, the existing standard components need to be replaced when creating SharePlus IPA to be deployed.

For detailed information refer to the [User Experience Customization](#) section.

Localization

SharePlus available languages are English, Spanish, Chinese (Traditional and Simplified), French, German, Japanese, Russian, Italian, and Dutch.

Localization to other languages can be custom implemented if required.

UI Customization

SharePlus User Interface can be customized to provide a more engaging, business-specific experience. You can customize the User Experience in the following aspects:

- The setup process
- The application's Start and Resume from background
- All the application's Visual Areas
 - **SideBar Area:** The starting point of the application, the first area presented to the user. This is the left pane in the default layout.
 - **Main Screen Area:** Area where the main content is displayed.
 - **Detail Area:** Area where contextual information is displayed.
 - **Auxiliary Area:** Area where temporary or "out of context" content is presented.
- The available Home scenarios
 - **SideBar custom modules:** When accessing the Application Home or other custom SideBar modules.
 - **Portal Home:** When navigating to a portal.
 - **Site Home:** When navigating to a site.

All these customizations can be implemented in several ways:

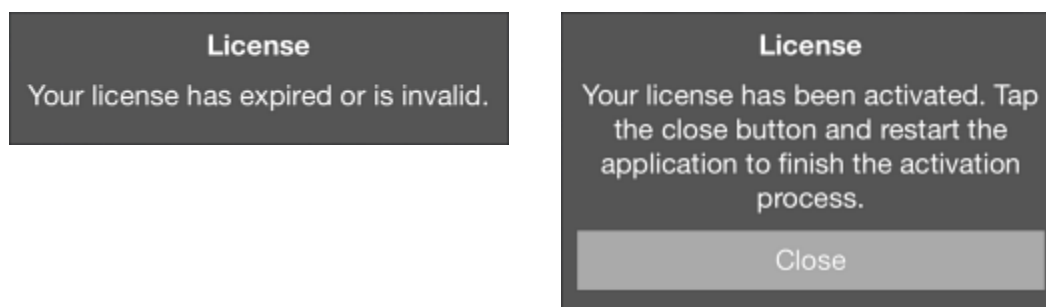
- Creating HTML-based components, using SharePlus Mobile Workspaces
- Creating rich components with charts and pivot tables, including ReportPlus dashboards
- Through custom Objective-C code

Planning SharePlus Licensing

Understanding SharePlus licensing

Every SharePlus application must have a license and every license file is created for a specific application's bundle identifier². SharePlus will not run in any device if the license file is missing or invalid. This means that even if the application bundle is modified and resigned in order to change a given configuration, the license specification cannot be modified.

The two license-related messages displayed by SharePlus application are:



Note: Unlike with devices, when running SharePlus in the iOS Simulator the license is not needed.

Asking for a License

License files are included in the application's ".IPA" file that is provided by Infragistics. The generation of new licenses or any modification over an existing one requires Infragistics assistance on the matter.

License Capabilities

SharePlus license has many possibilities and allows you to block/disallow a feature in SharePlus. This capability is conceptually different from the Configuration File settings, which are used to configure the application and its features. By configuration, you can adjust feature settings and even disable the feature if needed. However, if the license is not allowing a feature to be used it will never be available in SharePlus.

License Deployment

The license file must be included in the application's ".IPA" file provided by Infragistics. The application package may be modified and resigned to change specific configuration, however the license must remain untouched.

The application allows changing its license configuration dynamically by using the iOS Open In feature. In this case, the license file must be valid and provided by Infragistics.

² The Application's Bundle Identifier is the value that identifies your application within the device, e.g., *com.yourcompany.appname*.

Planning Configuration

Understanding SharePlus Configuration

SharePlus enables both end-users and IT Managers to adjust the application's behavior using two main configuration components: **Central Application Configuration** and **Site Configuration** (also known as "Mobile Navigation").

Central Application Configuration includes the following areas:

- **Sites and User Accounts:** Define the SharePoint Sites the user will connect to and the credentials and authentication methods to be used.
- **Features:** Turn application Features On/Off and adjust their parameters.
- **Look and Feel:** Adjust the color and behavior of specific UI components.
- **Advanced Security:** Set up advanced security policies.
- **Deployment Settings:** Define and configure how the application will be distributed to users.
- **Global Settings:** Tweak low-level parameters like connection time outs, synchronization idle time, and the use of application logs.

Site Configuration (a.k.a. "MobileNavigation") includes all the parameters specific to a particular site or list, including:

- **Offline Behavior:** Default Offline settings for each List within the site.
- **Navigation:** Visibility and organization of sites and lists in the navigation bar.
- **Visualization:** Default SharePoint View and native Visualization for each list. For the site and its sub-sites, you can configure the Site Home.

Central Application Configuration

SharePlus Application Configuration can be adjusted using the following mechanisms:

- **Manual Configuration:** Directly from the SharePlus' UI at run-time³
- **Local ("In-App") Configuration File:** Using a static XML Configuration File stored within the application.
- **Remote Configuration:** Using a Remote Configuration File stored on SharePoint or any web server.
- **Library-Based Configuration:** Access different configuration files stored in a SharePoint's document library, providing a selective configuration depending on the application scenario.
- **Dynamic Configuration:** Use web services or scripting language to generate Remote Configuration Files "on-the-fly".
- **Configuration "Injection":** Passing a new Configuration File to an already installed application by "injecting" the configuration via "Open In" protocol, invoking a custom URL or via an MDM policy/command.
- **MDM Administered Configuration:** SharePlus can work in conjunction with MDM servers, to set up Remote Configuration scenarios.

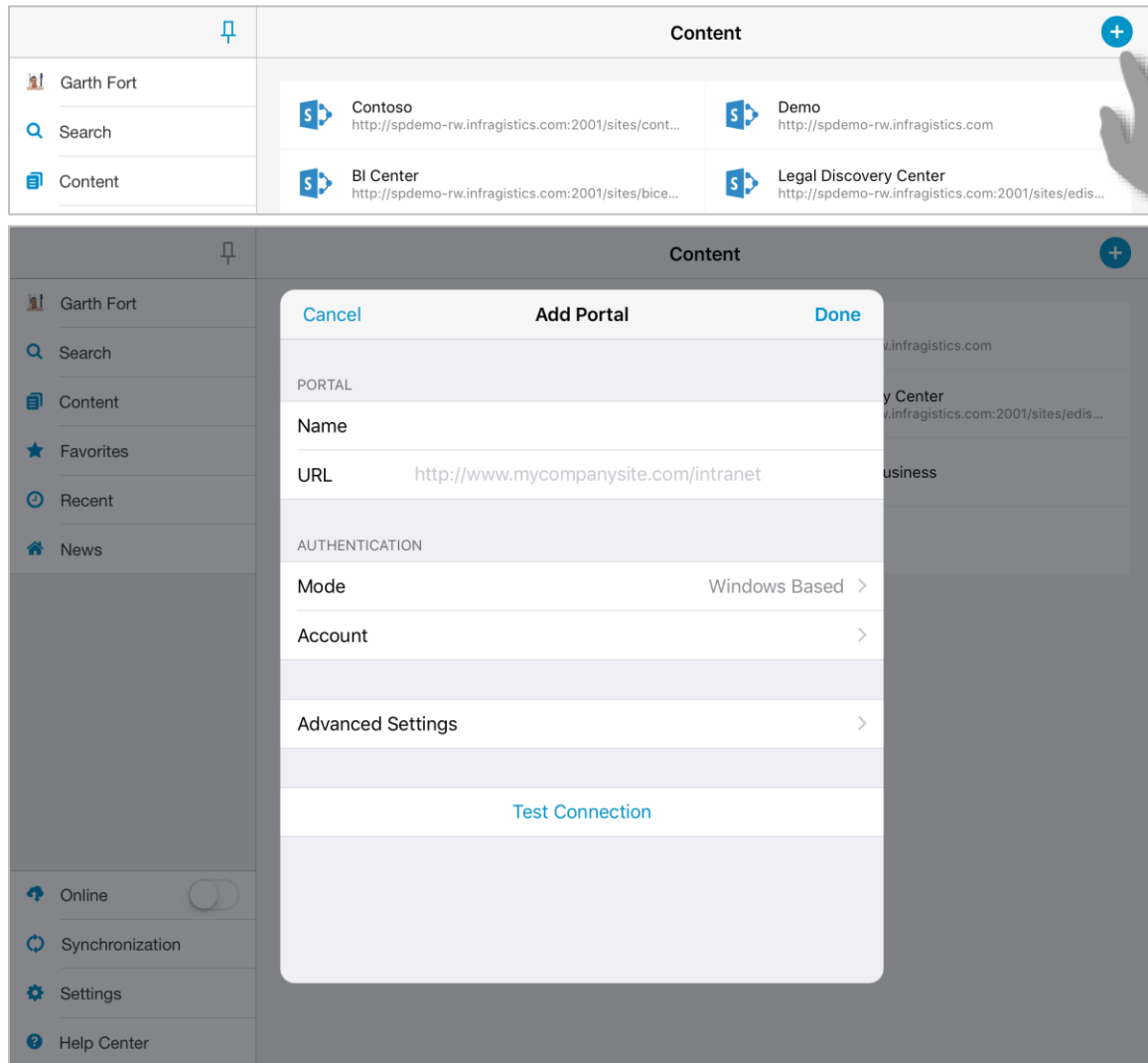
³ Only a subset of the Application's Configuration can be manually adjusted.

Manual Configuration

SharePlus can be deployed without any configuration, delegating the task of configuring the application to the end user. When first opening SharePlus, the sidebar is displayed in the left side of the application. Through the sidebar component the user can access the sites and file providers, accounts, and the global settings of the application.

Site Management

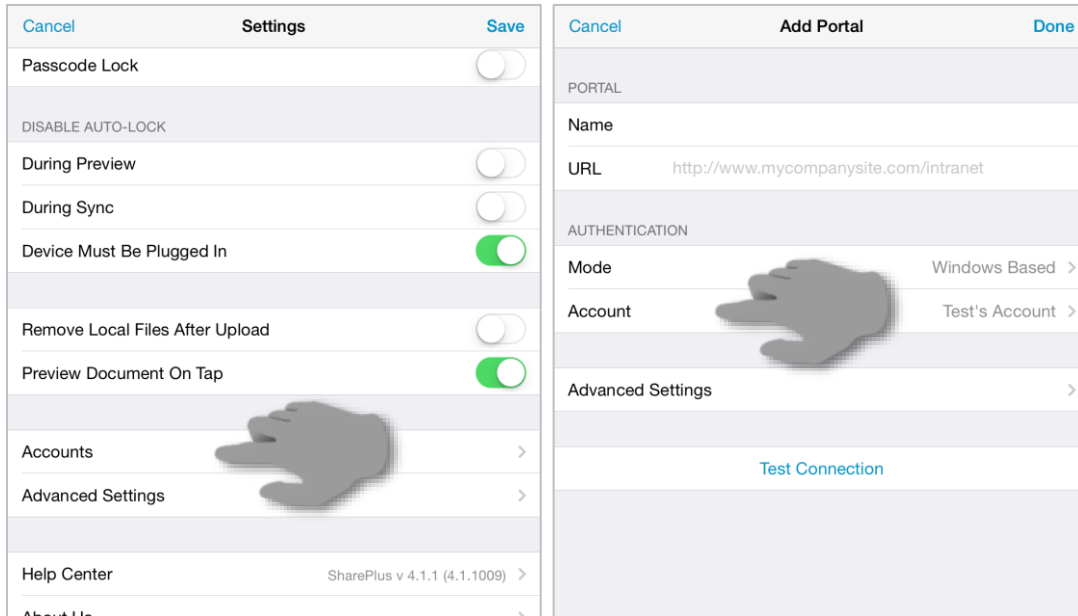
To access content from a SharePoint site within SharePlus you have to set up a new portal. Once your portal is configured, you will be able to browse its sub-sites, lists, and their content. Sites can be added, modified, and deleted from the UI.



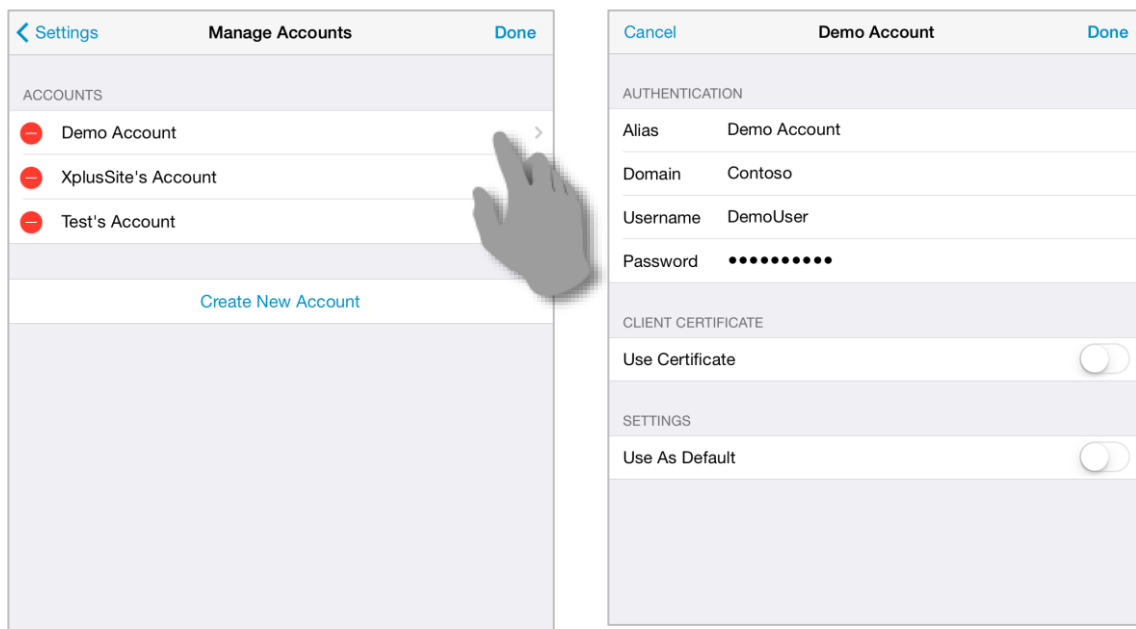
Account Management

Users can add, modify, or delete User Accounts independently from Sites, as all accounts are global to the application and can be shared between sites.

You can access Accounts from Settings or from your Portals.

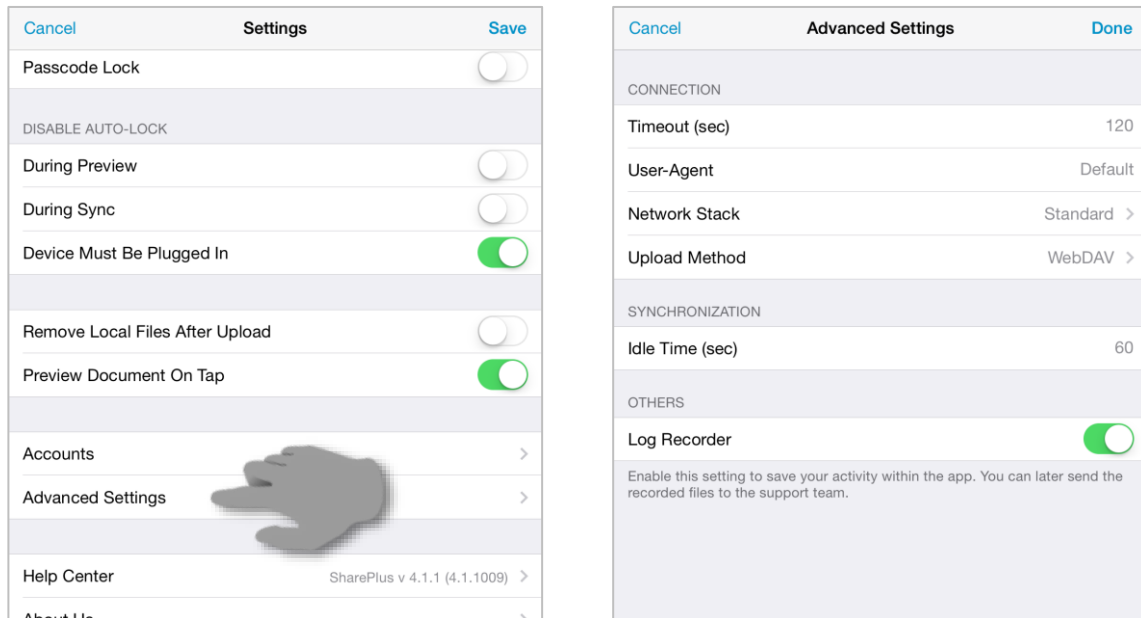


After tapping Accounts, all existing accounts are displayed.



Global Settings

Manual configuration settings include, among others, the auto-lock settings, connection timeouts, and synchronization idle time.



Local and Centralized Configuration

SharePlus Application Configuration can be adjusted in a local or remote file⁴, thus working with **Local Configuration** or **Remote Configuration** respectively.

Main advantages of Remote Configuration over Local Configuration:

- When configuration settings are adjusted in the remote file, the application does not need to be re-deployed after a configuration change.
- You are able to work with contextual information of the application, in order to provide a selective configuration depending on the application scenario. The app's contextual information include the OS version and Device ID among others.

In-App Configuration File (Local Configuration)

The Local configuration file is an iOS “Property List” XML file stored inside the application package. This file is fully configured before publishing the application, and packed inside the application’s “.IPA” file.

After editing the configuration file, the “.IPA” file has to be re-signed, to ensure that the IPA checksum will match its content. The application is later deployed and the Configuration File is stored locally in the device.

⁴ SharePlus Configuration File is an iOS “Property List” XML file used to store, organize and access SharePlus configuration data.

Centralized Configuration File (Remote Configuration)

The Remote configuration XML file is published in a centralized location, on SharePoint or other server. The use of a remote configuration file, facilitates governance, allowing IT Managers to modify the default settings of the device base centrally, without even having to push a new version of the product.

Remote Configuration Files are not pushed from the server by SharePlus, instead, they are retrieved from the server when requested ("pull" mode).

Note: In Remote Configuration scenarios it is recommended to work with a partial Configuration File, including only the items you want to change in the file. The application will later merge the data provided by the remote file with the local settings automatically.

In the case of using Dynamic Configuration, the remote configuration file is generated on-the-fly for every user, in that scenario, you work with multiple remote configuration files.

In the case of using Library-Based Configuration, you also work with multiple remote configuration files stored in a SharePoint's document library. It is a fixed number of configurations, though, as every document in that library represents a different configuration for the application.

For further information about Remote Configuration see [Central Application Configuration](#)

Library-Based Configuration

This configuration mechanism consists on accessing different configuration files stored in a SharePoint's document library. Every document in that library represents a different configuration for the application and must have the same structure as a standard Configuration File, which means that the file content needs to include configuration entries as any iOS "Property List" XML file.

To access the Remote Configuration Files stored in the SharePoint library you need to specify the URL to the library.

Dynamic Configuration

Instead of accessing a "static" file stored in a web server or SharePoint library, you can obtain a generated "dynamic" file. To generate this Remote Configuration Files "on-the-fly", certain contextual information needs to be processed to generate selective configuration settings. SharePlus application provides contextual information such as OS version, Device ID, or language among others.

Dynamic Configuration can be achieved using different methods, two common choices are:

- Using scripting language, obtaining a generated file from a database-driven web site.
- Using web services, retrieving selective configuration based on known context variables.

Configuration “Injection”

SharePlus configuration files can be manually loaded after the application has been deployed. The new (applied) configuration will merge with the Local Configuration and, as a result, a new SharePlus configuration will be set on the device.

Below there is a brief description of the two different methods that you can use to “inject” a new configuration to SharePlus.

Note: Both methods described next are disabled by default to enforce the application security. For further details refer to Configuration Injection, in the Security chapter.

SharePlus link (S+ link)

This SharePlus feature allows users to perform certain actions within SharePlus, invoking these actions from HTML content. S+ links are basically custom URLs that start with “splus://” or “spluss://” (for secure channels) and are followed by the resource’s URL without the http or https protocol. They can be used to modify the application’s configuration when building the URL with a set of required parameters.

Syntax needed to update the Remote Configuration URL in the Configuration File:

```
splus://?action=configurationURL&url=<URL to the new Configuration File>&useragent=<user agent>&timeout=<timeout in seconds>
```

Note: Sometimes you need to encode an entire URL or just some characters. For example, when sending a S+ link with a remote configuration by email, Outlook removes one “/” character from “http://” making the URL invalid.

Open In

This iOS protocol allows you to share files between applications on an iOS device. The Configuration File must be opened with SharePlus through *Open In* and the application will automatically merge the existing configuration with the new one. This capability is very helpful when working with Remote Configuration scenarios, allowing you, for example, to change the URL from where the remote Configuration File is retrieved.

The Configuration File must be identified as a SharePlus file, so the SharePlus application will be available among the *Open In* list of applications. To achieve this, the Configuration File extension needs to be “.spconfig”.

MDM Administered Configuration

SharePlus can work in conjunction with MDM servers, to set up Remote Configuration scenarios. MDM servers include a number of different policies/capabilities to be applied, a common policy is the one that enables the remote configuration capability.

Site Configuration “a.k.a. MobileNavigation”

When browsing a site in SharePlus, all the sub-sites (or webs), lists, and libraries accessible to the user are displayed. All this SharePoint content is filtered by the user’s permissions on the server, but this solution is not enough for many SharePoint solutions. SharePlus provides the **Site Configuration** method to manage the settings for sub-sites and lists for each site independently. These settings include aspects like navigation, visualization, and offline behavior.

- **Navigation** is about the visibility and organization of sites and lists in the navigation bar.
- **Visualization** allows the configuration of the default SharePoint List View and SharePlus’ native visualization for each list. You can also configure the Site Home to personalize the actual site and its sub-sites gateway.
- **Offline behavior** allows the configuration of default offline settings for a list in the site.

This method is configured using SharePoint Custom Lists created under each site, as it is a site-specific configuration method. The sub-site configuration list, normally referred as “MobileNavigation”, can be created by manually creating the list or using a list template.

Manually Creating the List

This method uses the SharePoint out-of-the-box template “Custom List”. It involves creating all the required columns to meet a pre-defined structure for the MobileNavigation list, following a small number of considerations.

Creating the List from a List Template

To follow this method, you need the latest Mobile Navigation list template which can be requested to Infragistics as explained in the Configuration Chapter. Once you have the template available in the list template gallery of your site, you can create the MobileNavigation list automatically. When working with SharePoint farms and using Site Templates, you can take advantage of this approach and automatically populate new sites with the Mobile Navigation list template.

Site Actions ▾ Browse **List Tools** Items List

Sandbox - SharePlus Demo ▸ MobileNavigation ▸ All Items ▾

Sandbox - SharePlus Demo	Business Development	Sales Weekly Meeting
Surveys		Title
Sales Process Survey	MobileNavigation	Is Web
	Site Pages	Hidden
Pictures	Site Assets	Default Mobile View
Asset Picture Library	Links	
Libraries	Shared Documents	
Site Pages		

MobileNavigation - Site Pages

View

Version History

Manage Permissions

Delete Item

Manage

Title	Site Pages
Is Web	No
Hidden	Yes
Default Mobile View	
Default Visualization	Table
Available Visualizations	Table
Swipe Documents	No
Offline Support	No
Offline	No
Offline Background	Yes
Offline View	
Offline Only Wifi	Yes
Offline Download Documents	Yes
Offline Max Document Size	
Query Page Size	

Once the list is located within the site, SharePlus will find the list, identify and read the structure and data to apply the specified settings.

Planning Deployment

Understanding SharePlus Deployment

SharePlus licensing models (Free, Subscription, and Enterprise) are distributed using different methods.

- **Free/Subscription versions.** Downloaded directly from Apple's App Store distribution platform.
- **Enterprise version.** Can be distributed using the following methods:
 - MDM Server Deployment
 - Web Deployment using SharePoint
 - Ad-Hoc (typically used for testing purposes)

MDM Server Deployment

When using an MDM Server, you need to upload the application package to the MDM Server following the instructions of the manufacturer. The application package (.IPA) is provided by Infragistics, then the whole deployment process is delegated entirely to the MDM.

For further details about MDM Servers refer to [MDM Integration](#) in Chapter 4: Deployment.

Web Deployment using SharePoint

This deployment method allows you to distribute the application without any collaboration of external services like MDM servers or the AppStore.

Working with Web deployment using SharePoint, the SharePlus application package is copied into a library located in SharePoint. When the web page is opened from a mobile device, a web page contained on the application package enables the automatic installation of SharePlus application.



Note: SharePlus deployment can be carried out with any web server, including SharePoint.

iOS does not provide any means to force the update of an application at the Operating System level. SharePlus Enterprise, however, provides this feature and can be configured to check for a new version every certain period of time, also suggesting the user to update the application. The application's upgrade can be postponed for a configurable period of time, after which the application will force the upgrade.

For further information refer to [Web Deployment using SharePoint](#) in Chapter 4: Deployment.

Ad-hoc deployment

This method allows distributing SharePlus application as a standard file and installing the app on devices using iTunes. The whole process consists of three steps:

- Locate the Unique iOS Device ID(s) (belonging to the device(s) to be used for testing).
- Build the application for that specific set of Device IDs.
- Install the application using iTunes or the iPhone Configuration Utility.

Application Resigning

To enable in-house deployment of SharePlus, the application needs to be signed with the client's Apple Enterprise Certificate. To obtain the Enterprise Certificate, the client must enroll in the [iOS Developer Enterprise Program](#).

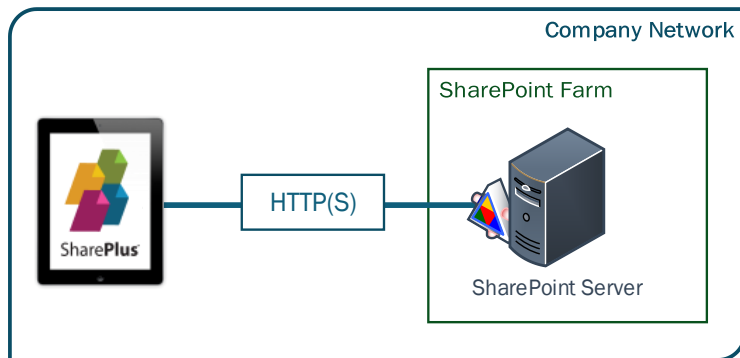
After obtaining the Enterprise Certificate, there are two alternatives to have a SharePlus build signed with the certificate:

- Send the certificate to Infragistics, so we can directly sign the build with your certificate.
- Re-sign yourself the build sent to you by Infragistics.

For further details about the process and all related concepts, refer to [Application Resigning](#) in Chapter 4: Deployment.

Planning Connectivity

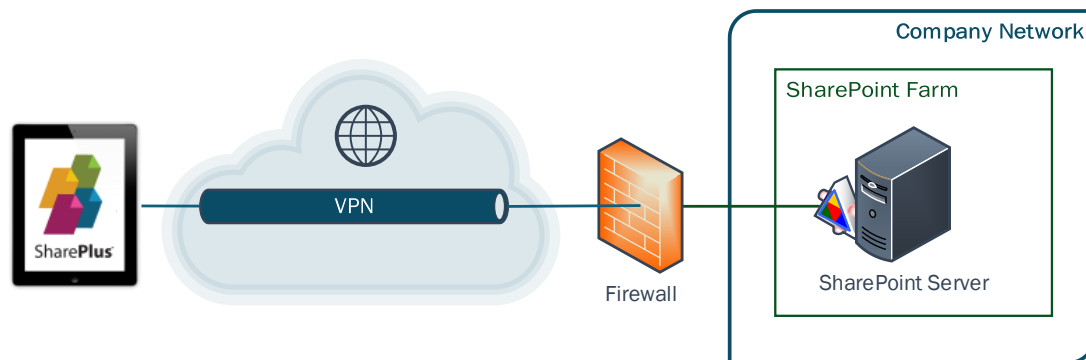
Typical Network Architectures



Basic/Standard information

- The user's device running SharePlus connects to SharePoint through the HTTP(S) protocol, within the Company Network environment.
- SharePlus connects to the SharePoint server or SharePoint farm through OOTB Web Services.

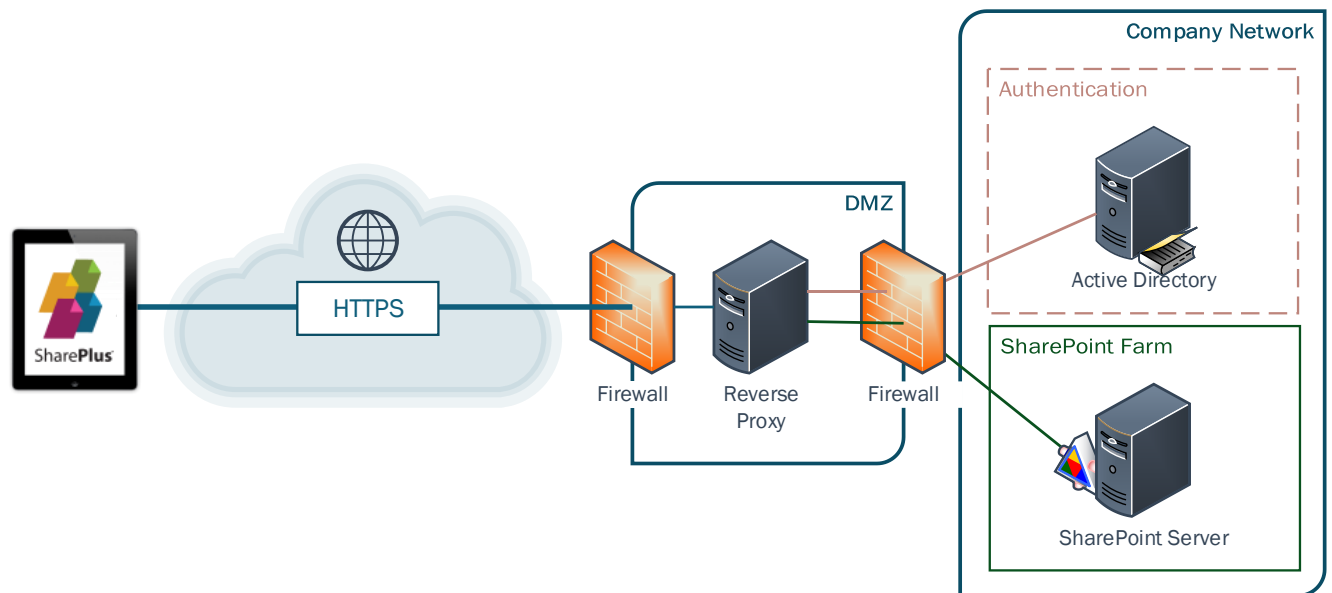
VPN



VPN-specific information

- SharePlus connects to SharePoint through a VPN (Virtual Private Network), extending the private and secure network across a public network (internet).
- Firewalls and VPNs are used in conjunction. As using a VPN is about ensuring security, Firewalls provide control over the network traffic.

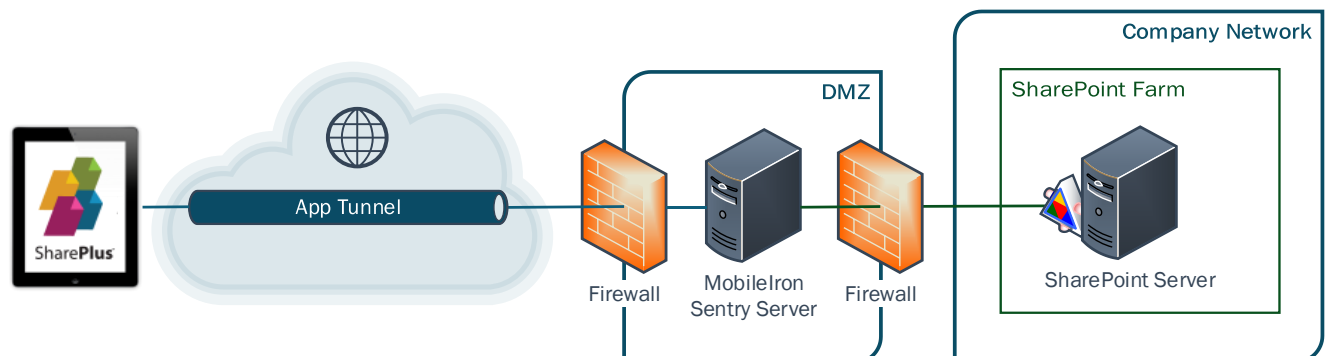
Reverse Proxy



Reverse Proxy-specific information

- SharePlus connects to SharePoint through a Reverse Proxy server deployed in a network DMZ, protecting internal servers from direct exposure to an untrusted network (internet).
- This architecture can be used to balance the load on a SharePoint server farm, increasing security by providing a single point of access to the internal network.
- Reverse Proxy security architectures may include domain authentication through Active Directory servers.

MobileIron with AppTunnel



MobileIron-specific information

- SharePlus connects to SharePoint through a secure dedicated connection, built upon MobileIron's Sentry technology.
- This solution's architecture brings many advantages regarding application's security, integration, and administration.

For further information refer to [MobileIron's product page](#).

Web Services Communication

SharePlus connects to the SharePoint server through SharePoint's Out of the Box Web Services. This access is optimized in SharePlus by design, in order to reduce the number of round trips between the application and the SharePoint server. For further details about SharePoint Foundation ASP.NET Web Services refer to the [Web Service Guidelines](#) MSDN topic.

HTTP methods

For SharePlus to function properly, the SharePoint server must allow access to **GET**, **POST**, and **PUT** HTTP methods. The following table list these three methods:

HTTP Method	Description
GET	Method needed to retrieve data, downloading documents and configuration files.
POST	Method used to invoke SOAP services. Can also be used to upload files, see File Upload Method below.
PUT	Method used by default to upload documents. POST can be used instead, see File Upload Method below.
HEAD	Method used to request resources information.

SharePlus verification to the server

An early validation is needed to confirm that the SharePoint service meets SharePlus needs. To achieve that, SharePlus often uses absolute URLs to the SharePoint Web service. These URLs include the path to the Web site that will be available and their syntax is similar to the following example:

```
http://<servername>/<site>/_vti_bin/Lists.asmx
```

File Upload Method

You can configure the method used to upload files by choosing between PUT or POST. SharePoint supports both methods, but unlike PUT, the POST method requires contiguous free space available in the server. Because of that, the POST method may have issues with files bigger in size. Also take into account that sometimes the PUT method is blocked by Firewalls. By default, SharePlus uses the PUT method.

Alternate Access Mappings

Alternate access mappings direct user requests to the appropriate URLs while interacting with SharePoint, enabling internal URLs to be mapped to public URLs. Internal URLs originate from Web requests and are received by the SharePoint Frontend Servers. Public URLs are the base address that servers return in response to the Web requests.

For SharePlus to work successfully, alternate access mappings must be correctly configured. This is particularly important when working with Reverse Proxy scenarios.

For further details refer to [Plan alternate access mappings](#) TechNet article.

Network Layer

SharePlus allow you to use different networking APIs, according to your needs.

Network stack	Description
Legacy (ASIHTTPRequest)	This method uses low-level networking APIs and is recommended for NTLM scenarios. Default method for the AppStore (Free and Subscription versions).
Standard (NSURLConnection)	This method uses high level networking APIs provided by Apple and may present issues with NTLM scenarios, e.g., timeout when uploading a file. This is the default method for Enterprise versions and MDM builds as it supports app tunneling.
Modern (NSURLSession)	This method was released after iOS 7 release and was created to replace NSURLConnection as the preferred method of networking.

Planning Security

Understanding SharePlus Enterprise Security

SharePlus Enterprise provides secure access to SharePoint sites from mobile devices. Keeping enterprise data secure is the highest priority of SharePlus. To fortify enterprise data security, core security features have been built into the product at each layer.

The following is a list of security features that are included in SharePlus Enterprise for iOS devices. These features will be described in detail in subsequent sections of this document.

In this Chapter:

- iOS Operating System Security
- Storage Security (Data-at-Rest Security)
- Channel (Communication) Security
- Authentication
- Authorization
- Application-Level Security
- MDM Integration

iOS Operating System Security

iOS system architecture comes with a layered approach to security which is enabled by default, for information regarding the subject refer to <http://www.apple.com/ipad/business/it-center/security.html>

Data-at-Rest Security

SharePlus offers two features to ensure that data is secure on a user's device:

- iOS Data Protection
- Secure Data Wipe

iOS Data Protection

SharePlus employs Apple's iOS Data Protection feature to keep application data secure. This native iOS feature enhances the built-in hardware AES 256-bit encryption by protecting the encryption keys with a user's passcode. This provides an additional layer of protection for application data such as cached documents and user configuration information.

The iOS Data Protection feature protects data-at-rest, and this includes locking or powering down the device.

Secure Data Wipe

A SharePlus administrator can configure a secure data wipe to activate upon failed passcode entry attempts or failed attempts to authenticate to the server. Also, SharePlus integration with MDM servers includes secure data wipe configuration.

iOS achieves data wipe by securely discarding the block storage encryption key from iOS Effaceable Storage, which renders all data unreadable.

Secure Data Wipe Triggered by Failed Passcode Entry

SharePlus may be configured centrally to securely wipe all application data upon reaching a configurable amount of failed passcode entry attempts. This feature may be enforced centrally by using the Remote Configuration feature provided by SharePlus.

Secure Data Wipe Triggered by “Authentication Time Bomb”

The Authentication Time Bomb feature allows administrators to set a limit on the number of days that a user can use the application without re-authenticating against the server. All SharePlus application data will be securely wiped from the device if a user reaches the configurable threshold for failed authentication attempts.

This feature is most relevant in SharePlus when the offline functionality is used. In the offline mode, it is possible to work with SharePoint data cached on the device after the user authenticates with the server. The Authentication Time Bomb allows an administrator to limit the number of days that the application may be used without re-authenticating to the server.

MDM-Based Data Wipe

An administrator can also initiate the secure data wipe on-demand by issuing a remote wipe command from a Mobile Device Management (MDM) server. MDM integration will be discussed in a subsequent section of this document.

Channel Security

SharePlus communicates with the SharePoint Server by accessing out-of-the-box SharePoint Web Services over the network. In addition to authentication and authorization requirements, SharePlus is also able to ensure secure communication through the use of **HTTPS (SSL)** and **VPN**.

Virtual Private Network (VPN)

SharePlus supports VPN connectivity either through the built-in iOS VPN support or through 3rd party VPN client applications. The native iOS VPN support is compatible with the following VPN Tunneling protocols:

- Layer 2 Tunneling Protocol (L2TP)
- Point-to-Point Tunneling Protocol (PPTP)
- Internet Protocol Security (IPsec)

Once the VPN iOS feature has been turned on and a connection is established, SharePlus will utilize the tunnel for server communication. Additionally, the VPN can be set to automatically establish a connection when a SharePlus user attempts to connect to the server. This eliminates the need for the end user to connect to the VPN prior to using the application.

For details about how to set up a VPN on your Apple device refer to: [iOS: Setting up VPN](#)

MDM Server VPN

SharePlus Enterprise versions can enhance their channel security through a dedicated connection provided by MDM (Mobile Device Management) solutions. A per-app VPN, securely and transparently routes all the SharePlus network traffic.

VPN On-Demand

When using certificate-based authentication, iOS provides “VPN-on-demand” which allows apps to transparently load a VPN when connection to the server is required.

For further information, refer to [iOS Security Overview](#) within Network Security

Secure Sockets Layer (SSL)

Secure Sockets Layer (SSL) is a cryptographic protocol used to facilitate secure communication over the Internet. SharePlus supports SSL, access to certificate enabled repositories, and Self-Signed Certificates.

To access a site using Secure Sockets, just use an “HTTPS” URL when configuring your site.

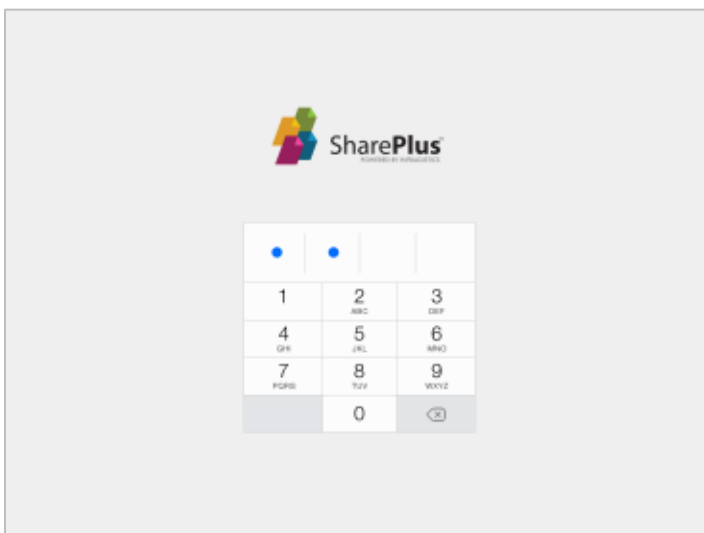
Authentication

SharePlus supports the following authentication mechanisms out-of-the-box:

- Passcode Lock (including Touch ID)
- Windows Integrated Authentication (Active Directory)
- SharePoint Form Based Authentication (FBA)
- Office 365
- Custom Web Login Forms

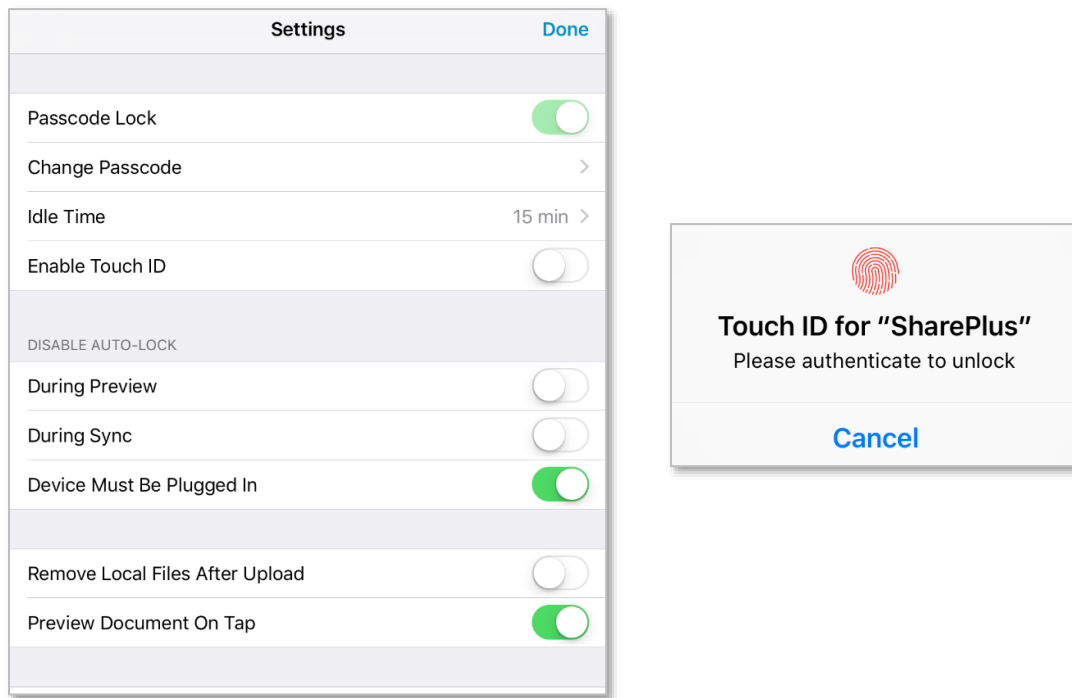
Application Level Passcode Lock

SharePlus provides an optional Passcode Lock. When opening the application with Passcode Lock enabled, you are prompted to enter a four digit code. The lock is automatically activated when the application goes to background or after a configurable amount of idle time. Settings can also be centrally enforced by an Administrator through the use of global configuration.



Touch ID

When configuring the Passcode Lock in SharePlus Enterprise, you can also enable the native iOS Touch ID as an additional security layer. You will need to [set up Touch ID on your device](#) first, where you can enroll up to five fingerprints.



Windows Integrated Authentication

When enabling Windows authentication, the security features of Windows clients and servers is used.

SharePoint Forms-Based Authentication

In this common authentication mechanism, the user is prompted to introduce his credentials.

Office 365 Authentication

This mechanism is used with SharePoint Servers hosted by Office 365 on the cloud.

Web Login Authentication

This mechanism has been implemented to support customized online authentication mechanisms such as Forefront UAG and ISA Server. This authentication method behaves like Office 365 authentication.

Web-based Auto Login

When using Web Login, users normally need to enter their credentials and submit the information. Through web-based auto login, users skip that part as the whole authentication process works as an integrated mechanism. They only need to select Web Login and associate an account, SharePlus then automatically populates the fields and submits the credentials information.

For the web-based auto login to work, SharePlus will search for the login name, password, and submit button within the page. The following fields are needed:

- input tag with name = “login” or class = “SPLoaderUserInput”
- input tag with name = “passwd” or class = “SPLoaderPasswordInput”
- button with class = “SPLoaderAutoSubmitElement”

Client Side Certificates

Client-side digital certificates can be used to request authenticated access in a SharePlus Enterprise application. You can deploy your client-side certificates by using two methods:

- **Manual configuration.** The certificate is saved to SharePlus “Local Files”, and then it is assigned to a user account.
- **Integrated.** SharePlus reads the certificate from a shared location on the keychain or the certificate is pushed to the app by an MDM.

Manual

This method is very straightforward, and, at a very high level, you just need to complete the following two steps:

1. Copy the client-side certificate to the device running SharePlus in order to make it accessible to the application (Local Files).
2. Associate the certificate to the user account that you want to use the authenticated access.

To achieve this two steps, you need to use the Wi-Fi sharing feature to send your certificate from your PC to SharePlus’ Local Files over the network. Also, you must edit the desired account to enable the use of certificates and later select the new certificate to be used. For a detailed procedure, refer to the [How to use Client-side Certificates](#) blog post.

Integrated

This method has two possible scenarios:

- Using a shared Keychain
- Pushing the certificate to the app

Using a shared Keychain

An MDM Server Agent (or “Helper App” – custom app used to deploy in the shared location) can be used to store certificates on a shared location on the keychain. The following three main steps are needed:

1. The MDM Server Agent and SharePlus must be re-signed so they can share keychain access.
2. Once deployed to the device, the MDM Server Agent obtains the certificate and stores it on the keychain on a known location.
3. SharePlus must be configured to read credentials from that known location.

As Enterprises are able to re-sign all their mobile applications before deployment, both the MDM Server Agent and SharePlus must be configured to belong to the same group. In consequence, both apps will share keychain access.

Pushing a certificate to the app

In this case, the MDM is configured to send the Client Certificate to the app. For further details regarding MobileIron see [Policies & Configs](#) in MobileIron Integration with SharePlus.

Other Authentication Methods

Besides existing out-of-the-box authentication methods, SharePlus Enterprise allows other possibilities to be taken into account, either using Web-based Authentication or by developing a custom Authentication Provider.

Custom Authentication Providers

SharePlus can be extended through the SharePlus SDK, which allows the implementation of custom authentication methods according to the Enterprise needs.

Multi-Factor Authentication methods

One-time password (OTP) methods, like RSA token, are supported using Web-based Authentication or through the implementation of custom Authentication Providers.

Authorization

User access to SharePoint resources such as lists and documents is granted in the SharePoint Server using permissions. Since SharePlus authenticates with SharePoint Server's web services using the end user's credentials, server-defined authorization rules apply. Therefore, the level of resource access (read/write, etc.) will mirror that which has been set up on the server.

For additional information regarding permissions in the SharePoint Server, please refer to the [User permissions and permission levels](#) TechNet article.

SharePlus User Accounts Management

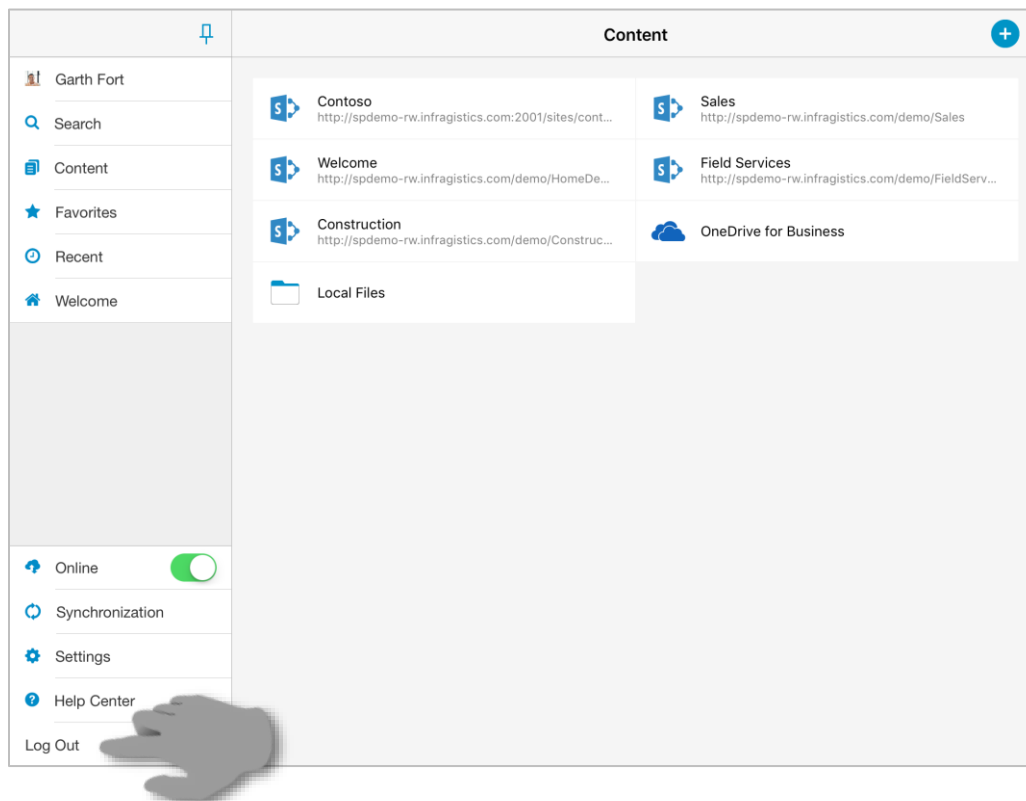
SharePlus allows you to work with as many user accounts as you need for your sites. SharePlus accounts are not restricted to a specific site, instead they are global to the application and can be shared between sites. When creating a new account, you need to select the set of credentials to be used to authenticate against the site's server. You can select one account to be the one used by default when creating a new site.

Kiosk Mode

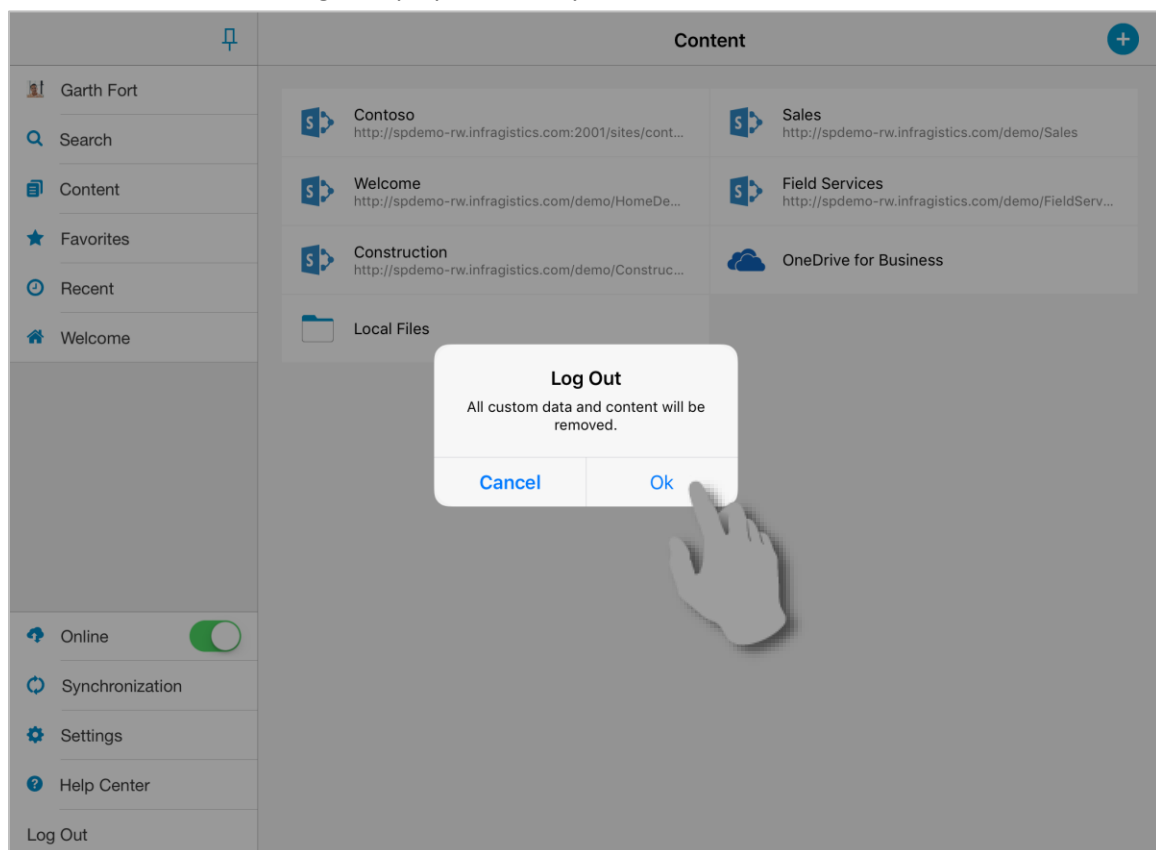
The "Kiosk mode" allows users to share a device without compromising security. In this mode SharePlus behaves as a session-based application, saving data of the current session while active and wiping all user data as soon as the session ends.

End of session

Sessions can end in two different ways, by specifying a session timeout (in minutes) or when the user manually logs out. The Kiosk mode can be configured to add a "Log Out" button to SharePlus UI (User Interface).



Depending on the session timeout setting, the user's session can expire after a certain period of time. An informative dialog is displayed to notify the user that the session is over.



For further details about the Kiosk mode configuration, refer to [“Kiosk” Mode Overview](#)

Application Level Security Policies

All Enterprises frequently need to adjust application functionality based on their security rules. These rules may include restrictions over application functionality such as saving a SharePoint document locally or sharing files via the Wi-Fi Share feature. SharePlus natively supports these administrative requirements through mechanisms that will be discussed in this section.

Feature Trimming

Feature trimming allows Enterprise administrators to disable and adjust SharePlus features on a global level. This may be necessary to comply with security policies or, in other cases, just to simplify the User Experience.

Features can be disabled by modifying SharePlus global remote configuration file. This Enterprise-owned and hosted file is used to set application configuration at a global level. When this file is modified and a feature is disabled, the change will take effect for all Enterprise SharePlus users. The following lists includes some of the functional aspects of the application that are often disabled via the Feature Trimming mechanism:

Site Administration

- Adding Sites
- Deleting Connections
- Updates to Connections
- Credential Storage
- Remembering Last User Name
- My Site Support
- My Profile support

Local Files

- Copy to Local Files
- File browser
- Emailing Documents
- Swiping Documents
- Tabbed Previewing of Documents

List Management

- Advanced Search
- Offline Mode

Favorites

- Displaying Items Count

Items Management

- Add
- Edit
- Delete
- CheckOut
- Approve/Reject
- Copy URL
- Email URL

Wi-Fi Sharing

- Allow WiFi Sharing
- Uploading Documents
- Downloading Documents

Open In Functionality

- Allow
- Restrict specific third-party application use

Printing

- Allow Printing

Enterprise Search Hub

- Enable the Search Hub
- Include Search Scopes
- Exclude Search Scopes

Global Settings

- Preview Documents On Tap
- Remove Local Files After Upload
- Help URL
- Enable Log Recorder
- Disable Auto Lock on Preview
- Disable Device's Auto Lock on Sync
- Connection Timeout
- Sync Idle Time
- User Agent

Location Services

- Enable Location Services
- Auto Start

Editor Whitelisting

Companies normally have a number of trusted (or preferred) apps suited for common tasks. They want to limit the sharing of information within a restricted number of applications. The Editor Whitelisting feature can be configured in SharePlus to filter which applications can receive files via the “Open In” protocol.

Trim Copy/Paste

SharePlus can be customized to restrict the copy and paste functionality prior to application deployment.

Block Screenshot Capture (iOS feature)

An administrator can modify the user profile settings within the device to disable the iOS screenshot feature.

Blank the App Screen before suspending

When an application is suspended, a screenshot is saved by iOS to quickly present the app in the last state when the app is resumed. This feature can be blocked in SharePlus, ensuring that the in-app information is never displayed without a user logged in.

MDM Servers

Mobile Device Management (MDM) software allows the secure management of mobile devices deployed across enterprises. As the “bring your own device” (BYOD) policy is spreading, security-related issues need to be addressed to avoid data breaches and other potential risks. MDM capabilities are frequently used by Enterprises and, because of that, SharePlus offers integration with some of the most commonly used MDMs, including MobileIron, Citrix’s XenMobile, and Bitzer Mobile.

Chapter 3

Configuration

Section 1: Central Application Configuration

Section 2: Site Configuration a.k.a. “MobileNavigation”

Section 3: Server Configuration

Central Application Configuration

The Configuration File Format

SharePlus configuration file is an iOS “Property List”⁵ XML file containing six main sections:

- **ConfigManager** – Attributes related to the remote configuration setup.
- **Features** – Attributes related to the application’s features.
- **Pages**: Attributes that define pages (and view containers) that can be used as home content for pre-defined portals or the Application Home module.
- **Accounts** – Attributes that define site’s accounts.
- **Sites** – Attributes that define portal configurations.
- **Variables** – Attributes for custom features. Empty by default.

```
<?xml version="1.0" encoding="UTF-8"?>
<plist version="1.0">
  <dict>
    <key>ConfigManager</key>
    <dict>...</dict>
    <key>Features</key>
    <dict>...</dict>
    <key>Pages</key>
    <dict>...</dict>
    <key>Accounts</key>
    <dict>...</dict>
    <key>Sites</key>
    <dict>...</dict>
    <key>Variables</key>
    <dict>...</dict>
  </dict>
</plist>
```

There are several options when choosing an XML editor. In case you don’t have a preferred one, good options are [Xcode](#) for Mac OS and [Notepad++](#) for Windows OS.

⁵ The Configuration File is a **property list**, a structured data representation used to store, organize and access data. Internally, it defines a dictionary (key-value pair) using XML syntax. This pre-defined structure is required by the application in order to correctly recognize and process the information. Property lists are used extensively by applications on OSX and iOS, for further details refer to [Introduction to Property Lists](#) in the Mac Developer Library.

Remote Configuration

The app configuration can be adjusted using a remote file published in a centralized location, on SharePoint or other web server. The *ConfigManager* section contains a dictionary used to configure the settings. It is not mandatory to provide information for all the keys every time. When specifying a URL and setting the *MustLoadRemoteConfig* to *<true/>*, the application will merge a remote Configuration File with the local settings automatically.

```
<key>ConfigManager</key>
<dict>
  <key>ConfigurationURL</key>
  <string>http://pathToRepository/SharePlus_Config_file.plist</string>
  <key>ConfigurationProviderID</key>
  <integer>0</integer>
  <key>ConfigurationVersion</key>
  <string>4.0</string>
  <key>MustLoadRemoteConfig</key>
  <false/>
  <key>ConfigurationAccountName</key>
  <string></string>
  <key>ConfigurationAuthProviderID</key>
  <integer>0</integer>
</dict>
```

- **ConfigurationURL** – Possible values include HTTP or HTTPS based URLs.
- **ConfigurationProviderID** – Indicates the ID of the configuration provider to be used. This value references the app.plist configuration providers section. Possible integer values are **0** (default) used for the Endpoint provider and **1** for Library-Based.
- **ConfigurationVersion** – Useful to keep track of the different versions of the Config File.
- **MustLoadRemoteConfig** – When set to true and the application cannot access the remote URL, the user won't be able to use the application.
- **ConfigurationAccountName** – The account to be used when retrieving a remote Configuration File. Should reference by name an account from the accounts section.
- **ConfigurationAuthProviderID (ConfigurationAuthenticationProviderID is also accepted)** – Indicates the authentication mode required by the server to retrieve the remote Configuration File. Possible values for this attribute:

Value	Authentication Mode
0	Windows Based
1	Form Based
2	Office 365
3	Web Login

For further details about Remote Configuration refer to [Working with Remote Configuration](#)

Configuring Sites and Accounts

The “Accounts” Section

The *Accounts* section of the Configuration File contains the SharePoint accounts that will be pre-loaded by SharePlus. The section is structured as an array with dictionaries, each dictionary representing an account. Pre-configured accounts must include the authentication information excluding passwords, which shouldn't be included for security reasons⁶.

All accounts are global to the SharePlus application and can be shared between SharePoint sites.

```
<key>Accounts</key>
<array>
  <dict>
    <key>Name</key>
    <string>Account's name</string>
    <key>AllowDelete</key>
    <true/>
    <key>IsDefault </key>
    <true/>
    <key>Domain</key>
    <string>Domain's name</string>
    <key>Username</key>
    <string>User's username</string>
    <key>UseCertificate</key>
    <true/>
    <key>CertificateName</key>
    <string/>
    <key>CertificatePassword</key>
    <string/>
  </dict>
</array>
```

- **AllowDelete** – Define whether the account can be modified/deleted by the user or not.
- **IsDefault** – Turn this account into the application's default account.
- **Domain, Username** – No password here. SharePlus will prompt the user to introduce credentials when needed.
- **Client-side certificates information** – Used to authenticate the client to the server, most of the times is not provided as it depends on the MDM configuration.

⁶ When a connection requires a password, the application will prompt the user to introduce his credentials on the first attempt to access the site.

The “Sites” Section

The *Sites* section of the Configuration File contains a collections of sites that will be pre-loaded by SharePlus application. The section is structured as an array with dictionaries, each dictionary representing a site. SharePlus sites or portals included here are the top-level connection to SharePoint content, and must specify an account and the authentication mode to be used.

```
<key>Sites</key>
<array>
  <dict>
    <key>Name</key>
    <string>Site's name</string>
    <key>URL</key>
    <string>http://mydomain.com/sites/theSite</string>
    <key>AuthMode</key>
    <integer>0</integer>
    <key>AccountName</key>
    <string>Account's name</string>
    <key>SupportMySite</key>
    <true/>
    <key>MySiteHost</key>
    <string/>
    <key>MySiteTitle</key>
    <string/>
    <key>SupportMyProfile</key>
    <true/>
    <key>ProfileHost</key>
    <string/>
    <key>ViewMode</key>
    <integer>0</integer>
  </dict>
</array>
```

- **URL** – String value with the portal's location.
- **AuthMode** – Authentication mode accepted by the server. Possible values for this attribute are:

Value	Authentication Mode
0	Windows Based
1	Form Based
2	Office 365
3	Web Login

- **Account Name** (Optional) – Must be an existent account (if empty the default account is used).
- **SupportMySite** – Enables the “MySite” feature.
- **MySiteHost** (Optional) – The URL where “MySite” pages are hosted.
- **MySiteTitle** (Optional) – The name of the “OneDrive for Business” drive in the Documents section of SharePlus.
- **SupportMyProfile** – Enables/Disables the “My Profile” feature.

- **ProfileHost** (Optional) – The URL where the person profile-related pages are hosted.
- **ViewMode** (Optional) – Allows you to pre-configure how a Site is viewed in SharePlus.

Possible values for this attribute are:

Value	Authentication Mode
0	View in SharePlus (Native)
1	View in Web
2	View in Safari
3	Ask User (Will always open a selection menu with options 0 to 2)

Note: The URL of a Portal cannot include the site's landing page ending (.../SitePages/Home.aspx) or other dynamic web page elements added to the URL. For example, use <http://mySharePoint.com/MySite> and not <https://mySharePoint.com/MySite/SitePages/Home.aspx>.

Configuring Features

SharePlus allows you to configure default behaviors and turn features on/off by using a centralized Configuration File with a specific structure. Having a centralized file, allows to set the application's configuration at a global level. When this configuration file is modified, the changes will affect all Enterprise SharePlus users. Features disabled or trimmed may respond to security policies or, sometimes, just to simplify the UX (User Experience).

Configuring a Feature

The Features section is related to the application's behavior and feature trimming. Every feature is represented by a dictionary structure and most of these entries display the following structure:

```
<key>FeatureName</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>...</dict>
</dict>
```

Each feature has the following common child nodes:

Node	Type	Description
Enabled	Boolean	Specifies whether the feature is enabled or not.
Settings	Dictionary (key-value pair)	Represents a dictionary of the needed parameters to configure the specified feature. Keys are always Strings and values for a specific key could be String, Integer, or Boolean.

List of Configurable Features

The following table lists some features that are commonly disabled or adjusted by Enterprise administrators.

Feature	Description
Alerts	Enable and configure alerts to be displayed in Timeline (Social Hub).
AppMeasurement	Adobe Analytics specific settings.
DocumentPrint	Allows the user to print documents using iOS native AirPrint service.
EmailClient	Configure settings for a 3rd party email client, which replaces iOS email client.
EmailDocument	Allows the user to send documents via e-mail.
EmailURL	Allows the user to send the URL of a document via e-mail.
Favorites	Enables the use and access to Favorites in SharePlus.
Feedback	Allows the user to send feedback from inside the application.
GlobalSearch	Refine the Enterprise Search settings by including/excluding scopes.
Help	Configure the in-app help by replacing or hiding it.
HomeManagement	Configure the Application Home page and the Default Site Home page.
ImageManagement	Enables the user to manage the images before being uploaded.
ItemsManagement	Enables the user to manage list settings via UI.
ListManagement	Enables the user to manage the list settings via UI (User Interface).
Local Files	Manage the Local Files section settings.
Location Services	Allows the user to automatically retrieve geo-location data.
OfficeWeb	Customize the URL used to view/edit office documents in Office Web Apps.
OpenIn	Share documents with other apps through Apple's Open In protocol.
Pages	Allows the definition of pages and view containers to be used as home content.
Pasteboard	Enable/Disable the copy & cut functionality from sensible places in the app.
PDFViewer	Manage the PDF Viewer settings.
ReportPlus	Enable/Disable ReportPlus dashboards.
SitesAdmin	Allows the user to manage sites within SharePlus.
URLSchemes	Enables the use of custom URL Schemes and configures their behavior.
VersionHandle	Configure the automatic updates settings
ViewInWeb	Users can view a web version of SharePoint content in a Safari-like window.
WebManagement	Reorder website links in the Navigation pane.
Wi-Fi Sharing	Share data from the Local Files section via Wi-Fi.

For further information regarding these features' configuration, see [Appendix 1: Configuration File Reference](#)

The “Global Settings” Section

This section includes the predefined configuration for a subset of SharePlus settings, the “global settings”. These are the application’s factory settings for all users and most of them can be manually adjusted through the UI, except by the *AutoHideNavigator* setting.

Below there is a list of these settings:

```
<key>GlobalSettings </key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>AutoHideNavigator</key>
    <true/>
    <key>ConnectionTimeout</key>
    <integer>50</integer>
    <key>DisableAutoLockOnPreview</key>
    <false/>
    <key>DisableAutoLockOnSync</key>
    <false/>
    <key>DisableAutoLockMustBePluggedIn</key>
    <false/>
    <key>PreviewDocumentsOnTap</key>
    <false/>
    <key>RemoveLocalFilesAfterUpload</key>
    <false/>
    <key>UserAgent</key>
    <string></string>
    <key>SyncIdleTime</key>
    <string>60</string>
    <key>EnableLog</key>
    <integer>0</integer>
    <key>StartupModule</key>
    <string></string>
    <key>ExternalBrowser</key>
    <string>chrome</string>
    <key>NetworkStack</key>
    <integer>0</integer>
    <key>UploadMethod</key>
    <integer>0</integer>
  </dict>
</dict>
```

Note: You can use remote configuration to change settings included in Global Settings and prevent users to make changes to them from the UI. To do this, you need to turn off the feature Global Settings by changing the **Enabled** key to *false*.

- **AutoHideNavigator** – Enable/Disable the Sidebar (left pane) auto hide behavior. If enabled, the Sidebar will be displayed only the first time the user runs the app. By default, this setting is disabled and the Sidebar is displayed.
- **DisableAutoLockOnPreview, DisableAutoLockOnSync** – Prevent the device from locking itself while previewing docs and/or during the sync process.
- **DisableAutoLockMustBePluggedIn** – Enables the other two auto-lock options when the device is plugged in.
- **PreviewDocumentsOnTap** – Enables document preview as the default action when tapping an item. Item details are still available on a different view.
- **UserAgent** – SharePlus' user agent. If empty, the standard agent is used.
- **SyncIdleTime** – Frequency in which the sync process is triggered, in seconds.
- **StartupModule** – Specifies the application module to be loaded by SharePlus when opening the application from scratch. Possible values include all Row Identifiers specified in the NavigatorTableDefinition.plist file. Possible OOTB values for the attribute are:

Attribute Value	Module
ContentHub	Content
Favorites	Favorites
Recent	Recents
Social	Social
Search	Search
Home	Application Home

- **ExternalBrowser** – Specifies the external browser that will be used. Possible values are *chrome* or *safari*, and Safari is used by default.
- **EnableLog** – Enable/Disable the Log Recorder to record your activity within the app, the app requests, and server responses. Logs will be generated in the Local Files under the “Logs” folder.

Possible values for the attribute are:

Integer Value	Description
0	False (Default)
1	True

- **NetworkStack** – Specifies the method used in the networking layer. Legacy is recommended for [NTLM](#) scenarios. Possible values for the attribute are:

Integer Value	Description
0	Legacy (ASIHTTPRequest). Default for AppStore versions (Free and Subs).
1	Standard (NSURLConnection). Default for Enterprise versions.
2	Modern (NSURLSession)

- **UploadMethod** – Specifies the method used to upload files, PUT or POST. SharePoint supports both methods, but unlike PUT, the POST method requires free space available in the server. Because of that, the POST method may have issues with files bigger in size. Also note that sometimes the PUT method is blocked by Firewalls.
Possible values for the attribute are:

Integer Value	Description
0	WebDav (PUT) (Default)
1	WebService (POST)

Configuring Security

SharePlus enforces security in many different levels, providing a series of built-in security features for iOS devices. The security features detailed below need to be configured in the Configuration File depending on your specific needs.

Passcode Lock and Touch ID

The Passcode Lock and the Touch ID features implicate a number of related configuration settings like forcing the user to have a passcode lock, configuring the Touch ID, or configuring the auto lock options. These configuration settings are included in the Configuration File under three different feature sections: Passcode, GlobalSettings and TouchID.

Passcode

Configuration Key	Description
EnablePasscode	Enable/disable passcode lock feature.
DefaultPasscode	Passcode lock code by default (4 digits Integer).
MustUsePasscode	Force the use of passcode lock feature (set up is on the first run).
PasscodeLockInactivityTime	Idle time before the application locks (in minutes).

GlobalSettings

Configuration Key	Description
DisableAutoLockOnPreview, DisableAutoLockOnSync	Prevent the device from locking itself while previewing docs and/or during the sync process.
DisableAutoLockMustBePluggedIn	Enables the other two auto-lock options when the device is plugged in.

TouchID

Configuration Key	Description
TouchID	Enable/disable the Touch ID feature.

Data Wipe

Data Storage Security includes secure Data Wipe, which can be activated upon failed passcode entry attempts or failed attempts to authenticate to the server.

Data Wipe Triggered by “Authentication Time Bomb”

A SharePlus administrator can configure a secure Data Wipe to be performed after a number of days in which a user didn’t re-authenticate against the server. This feature can be configured through the “Authentication Time Bomb” feature.

```
<key>AuthenticationTimeBomb </key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>AllowedTime</key>
    <integer>10</integer>
    <key>MaxAttempts</key>
    <integer>3</integer>
    <key>AttemptFailedMessage</key>
    <string>You have [AttemptsLeft] attempt(s) left </string>
    <key>LimitReachedMessage</key>
    <string></string>
  </dict>
</dict>
```

- **AllowedTime** – Maximum period in time (hours) that the user can work with the app without login in again.
- **MaxAttempts** – Maximum number of failed authentication attempts before all the site’s data is wiped.
- **AttemptFailedMessage** – If empty, no message will be displayed for failed attempts.
- **LimitReachedMessage** – Message displayed when there are no attempts left. If empty, a default message is shown to the user.

Data Wipe Triggered by Failed Passcode Entry

A secure Data Wipe can be activated upon failed passcode entry attempts. The PasscodeFailsHandle feature section also includes the maximum authentication attempts, and the message displayed to the user when there are no attempts left.

```
<key>PasscodeFailsHandle </key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>BlockApp</key>
    <false/>
    <key>MaxAttempts</key>
    <integer>3</integer>
    <key>Message</key>
    <string>You have no attempts left </string>
    <key>WipeData</key>
    <false/>
  </dict>
</dict>
```

- **BlockApp** – Enable the application to be blocked on authentication fails.
- **MaxAttempts** – Maximum authentication attempts.
- **Message** – Message to be shown when the user has no attempts left.
- **WipeData** – When true, clears internal app data when the user has no attempts left (Local Files, Offline cache, internal DB and other user data).

Editor Whitelisting

Companies normally have a number of trusted (or preferred) apps suited for common tasks. They want to limit the sharing of information within a restricted number of applications. The “Editor Whitelisting” feature is configured within the “OpenIn” feature under the “Filters” key.

```
<key>OpenIn</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>Annotation</key>
    <dict/>
    <key>Filters</key>
    <dict>
      <key>pdf</key>
      <string>customUTI, customExtension</string>
    </dict>
    <key>ShowButtonInViewer</key>
    <true/>
    <key>ShowButtonInViewer-iPad</key>
    <true/>
    <key>ShowButtonInViewer-iPhone</key>
    <true/>
    <key>AllowOtherExtensions</key>
    <true/>
    <key>AllowConfigurationUpdate</key>
    <true/>
  </dict>
</dict>
```

- **ShowButtonInViewer** – Shows/Hides the “Edit” button in the document preview top bar.
- **AllowOtherExtensions** – Allows to open documents with extensions not specified in the filters.
- **AllowConfigurationUpdate** – Enables/Disables the ability to update the app’s configuration using the Open In feature by sending a new Configuration File with *.spconfig* extension.
- **Filters** – Dictionary (key-value pairs) used to filter apps Open In feature based on file extension.
 - Key – contains the file extension, e.g., pdf.
 - Value – There are 3 different options available for this String field:

Option	Example
<editor's UTI>, <custom extension by the editor's vendor>	com.adobe.pdfreader, pdfex
<app_id_1> <app_id_2> ...	com.adobe.pdfreader com.corp.pdfapp
<officeWeb>, <action> ⁷	officeWeb, edit

Note: When no custom UTIs are available, the app can be configured to “close” the editor app if the editor selected by the user doesn’t match a specific APP id.

Copy & Paste Trimming

SharePlus can disable the copy & cut functionality from sensible places in the application. This feature is configured through the *Pasteboard* feature in the Configuration File.

```
<key>Pasteboard </key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict/>
</dict>
```

⁷ When specifying the use of Office Web App, actions available are: edit or view.

Configuration Injection

Configuration files can be manually loaded or “injected” to an already installed application via the “Open In” protocol. In addition, the Remote Configuration URL can be updated by invoking a custom URL Schema (S+ link) or through a JavaScript API method (*Configuration.setRemoteFileSource*). All three methods can be disabled to enforce the application security.

SharePlus links and JavaScript API

Both SharePlus URL Schemes and the *Configuration.setRemoteFileSource* JavaScript API method can be completely disabled through the URLSchemes feature in the Configuration File.

```
<key>URLSchemes</key>
<dict>
    <key>Enabled</key>
    <true/>
    <key>Settings</key>
    <dict>
        <key>AllowConfigurationUpdate</key>
        <false/>
    </dict>
</dict>
```

- **AllowConfigurationUpdate** – Enables/Disables the ability to update the Configuration URL by using any of the two following mechanisms:
 - URL Schemes
 - The *Configuration.setRemoteFileSource* JavaScript API method.

Open In

This iOS protocol that allows you to share files between other applications and SharePlus can be used to load a new SharePlus configuration. You can disable this method if needed.

```
<key>OpenIn</key>
<dict>
    <key>Enabled</key>
    <true/>
    <key>Settings</key>
    <dict>
        <key>AllowConfigurationUpdate</key>
        <true/>
    </dict>
</dict>
```

- **AllowConfigurationUpdate** – Enables/Disables the ability to update the app’s configuration using the Open In feature with a new Configuration File with *.spconfig* extension.

“Kiosk” Mode Overview

SharePlus can behave as a session-based application, in which each session works as a temporal interactive dialogue between SharePlus and the user. Once the session ends, all user data can be wiped and the app can be reset to its initial state. This specific behavior is sometimes known as “Kiosk Mode”. This feature is configured through the *SessionManagement* feature in the Configuration File.

```
<key>SessionManagement </key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>AllowLogOut</key>
    <true/>
    <key>ApplyFromBackground</key>
    <false/>
    <key>ApplyToBackground</key>
    <false/>
    <key>ApplyFromScratch</key>
    <false/>
    <key>ApplyFromTimer</key>
    <false/>
    <key>AllowFromInactivity</key>
    <false/>
    <key>InactivityExpirationTime</key>
    <integer>0</integer>
    <key>ResetPasswords</key>
    <false/>
    <key>WipeData</key>
    <false/>
    <key>WipeLocalFiles</key>
    <false/>
    <key>WipeSitesCache</key>
    <false/>
    <key>WipeAccounts</key>
    <false/>
    <key>WipeAlerts</key>
    <false/>
    <key>WipeFavorites</key>
    <false/>
    <key>Timeout</key>
    <integer>10</integer>
  </dict>
</dict>
```

The *SessionManagement* configuration settings always apply all the enabled actions.

- **AllowLogOut** – Enables the log out button in the interface to manually end the session.
- **ApplyFromBackground** – Applies all actions when returning from an inactive scenario.
- **ApplytoBackground** – Applies all actions when the app is entering a background state.
- **ApplyFromScratch** – Applies all actions when the app starts.
- **ApplyFromTimer** – Applies all actions after a session timeout.
- **AllowFromInactivity** – Specifies whether the session will be handled by the *InactivityExpirationTime* or not.
- **InactivityExpirationTime** – Amount of hours the application will keep a session alive without being active.
- **ResetPasswords** – Action to reset the passwords of all the existing accounts.
- **WipeData** – Action to reset all the existing content in the device. Pre-defined sites in the Configuration file are automatically reloaded in the interface.
- **WipeSitesCache** – Action to delete all cached data for all existing sites (documents, images, thumbnails).
- **WipeAccounts** – This action deletes all existing accounts, leaving the existing portals with no account associated.
- **WipeAlerts** – This action deletes all created alerts and their definitions in the app.
- **WipeFavorites** – This action deletes all Favorites in the app.
- **WipeLocalFiles** – Action to delete all local files available in the Local Files section.
- **Timeout** – Session duration expressed in minutes, i.e., session timeout.

Working with Remote Configuration

Remote Configuration scenarios are very powerful and include many possibilities. It is important to fully understand all aspects of this SharePlus configuration capability. This section will help you:

- Achieve a general understanding of the scenario.
- Work with contextual information, such as Device ID, to provide personalized configurations.
- Learn how to configure a Library-based configuration
- Learn how to work with Dynamic Configuration

Understanding Remote Configuration

SharePlus application configuration can be adjusted by merging a remote Configuration File with a local file in the device. When working with Remote Configuration, two Configuration Files are always used, one internal to the device and another one stored in a centralized remote location. Note that Remote Configuration Files are not pushed from the server by SharePlus, instead, they are retrieved from the server when requested (“pull” mode).

Remote Configuration scenarios include many possibilities that include:

- Using one common file for all company devices or multiple personalized configuration files.
- Accessing static pre-defined files or dynamically generated configuration files.

In the case of working with **Dynamic Configuration**, the remote configuration file is generated on-the-fly for every user, in that scenario, you work with multiple remote configuration files.

In the case of working with **Library-Based Configuration**, you also work with multiple remote configuration files stored in a SharePoint's document library. It is a fixed number of configurations, though, as every document in that library represents a different configuration for the application.

Advantages of Remote Configuration

There are two main advantages derived from working with Remote Configuration scenarios:

- When configuration settings are adjusted in the remote file, the application does not need to be re-deployed after a configuration change.
- You can use contextual information of the application, e.g., OS version or device ID, in order to provide a selective configuration depending on the application scenario.

Providing contextual information for selective configurations

Understanding the Application Context Information

SharePlus application's context can be used to provide a selective configuration depending on the application scenario. You can add contextual information by replacing arbitrary tokens in the specified URL or even modifying the outgoing request.

Custom information to the application context can be added by implementing custom code for your SharePlus application. That can be achieved through the SharePlus Bridge when using SharePlus Mobile Workspaces or working with Objective-C and SharePlus SDK.

Examples using existing keys

The following are examples of URL structures that can be specified as Remote Configuration URLs. Both examples describe a selective configuration based on known identifiers used in a custom implementation.

```
http://myDomain.com/Configuration_Api/GetConfigurationForInfo?osversion=[osversion]&osname=[osname]&oslanguage=[oslanguage]
```

```
http://mydomain.com/Configuration_Api/GetConfigurationByLocationIdentifier?locationidentifier=[locationidentifier]
```

Note: These examples use keys that already exist in the application context. When using your own keys, make sure there is a value in the context to replace a given token.

List of Application Context Key-Values

The available and ready-to-use application context information is listed below:

- **OSVersion** – The OS running version, e.g., *6.1.3*.
- **OSName** – The OS name, e.g., *iPhone OS*.
- **OSLanguage** – The OS language preference (IETF language tag), e.g., *en*.
- **DeviceVendorIdentifier**: Identifier that iOS creates based on the device identifier and the bundle identifier of the application. Available from iOS 6 and later.
- **DeviceName**: Name of the device provided by the user, e.g., *John's iPad*.
- **DeviceUA**: The user-agent for the device, e.g., *Mozilla/5.0 (iPhone; CPU iPhone OS 9_3 like Mac OS X) AppleWebKit/601.1.46 (KHTML, like Gecko) Mobile/13E230*.
- **DeviceModel**: The device model, e.g., *iPhone*
- **AppName**: The name of the application that appears in the springboard of the device, e.g., *SharePlus*.
- **AppMajorVersion**: First component of the version number, e.g., *3*.
- **AppShortVersion**: Short version of the version number, e.g., *3.8*.
- **AppVersion**: Current application's full version number, e.g., *3.8.2*.
- **AppType**: Type of application, provided by the application's app delegate, e.g., *Demo*.
- **AppBundleIdentifier**: The bundle identifier of the application defined by the profile used to sign the application, e.g., *com.infragistics.SharePlus*.

Working with Library-Based Configuration

SharePlus allows you distribute different configuration files stored in a SharePoint's document library, where every document in the library represents a different configuration for the application.

The application's contextual information can be used here to assign permissions, deciding which configuration applies for a given scenario by matching different list's columns with context information.

Building the URL to the library

You need to specify the URL to a SharePoint library in order to get the configuration elements.

This value can be included in the Configuration File in two different ways:

- Using the absolute URL to the configuration library in a SharePoint installation.
E.g., *http://mySharepoint.com/ConfigurationSite/Remote Configuration/Forms/AllItems.aspx*
- Using the URL to the Sub-site where the configuration library was created along with the library title as it appears in SharePoint, both separated by a comma: *[site/subsite URL],[list name]*.

You can also use the list's GUID instead of the list name. E.g.:

- *http://mySharepoint.com/ConfigurationSite,Remote Configuration*
- *http://mySharepoint.com/ConfigurationSite,{26534EF9-AB3A-46E0-AE56-EFF168BE562F}*

Note: If the library was renamed after being created (the display name changed), you must use the display name or list GUID in order to reference the list correctly.

The image on the right shows an example of how the library settings should look like after being created for configuration purposes in SharePoint

To take into account:

- When creating the library, specify only the columns you need.
- SharePlus expects the list to be a document library.
- The content of every document must be compatible with the Configuration File's Property List structure, containing a subset or all configuration entries.

Columns	
A column stores information about each document in	
Column (click to edit)	Type
Title	Single line of text
OSVersion	Single line of text
OSName	Single line of text
OSLanguage	Single line of text
DeviceUniqueIdentifier	Single line of text
DeviceVendorIdentifier	Single line of text
DeviceName	Single line of text
DeviceModel	Single line of text
AppName	Single line of text
AppMajorVersion	Single line of text
AppShortVersion	Single line of text
AppVersion	Single line of text
AppType	Single line of text
AppBundleIdentifier	Single line of text
Order	Number
With Space	Single line of text
Created By	Person or Group
Modified By	Person or Group
Checked Out To	Person or Group

Specify the provider in the Application Configuration Settings

In the *ConfigManager* section, you need to specify the URL and the provider to be used (List-Based).

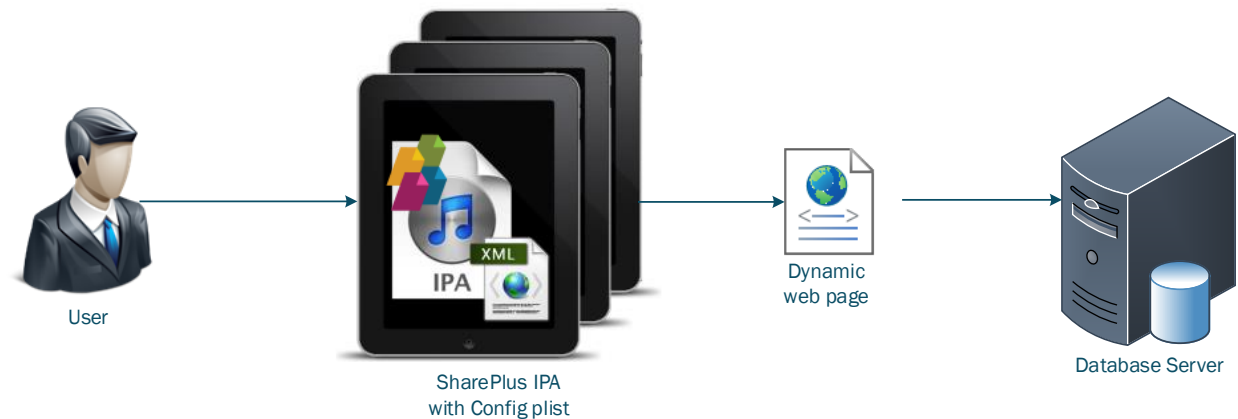
```
<key>ConfigManager</key>
<dict>
  <key>ConfigurationURL</key>
  <string>http://mySharePoint.com/ConfigurationSite,RemoteConfiguration</string>
  <key>ConfigurationProviderID</key>
  <integer>1</integer>
</dict>
```

Working with Dynamic Configuration

Instead of accessing a “static” file stored in a web server or SharePoint library, you can obtain a generated “dynamic” file. To generate Remote Configuration Files “on-the-fly”, specific contextual information needs to be processed to generate selective configuration settings. SharePlus application provides contextual information such as OS version, Device ID, or language among others.

Dynamic Configuration can be achieved using different methods, two common choices are:

- Using a scripting language, obtaining a generated file from a database-driven web site.
- Using web services, retrieving selective configuration based on known context variables.



Using a Scripting Language

You can generate a personalized Remote Configuration File “on-the-fly” for every user’s device that requests configuration. This powerful configuration scenario can be used for companies that require selective configuration depending on arbitrary variables, avoiding fixed configuration scenarios.

For example, an International Sales Company may want to provide their salesmen with personalized SharePlus configurations depending on their sales territory, sales team colleagues, position within the organization, etc.

Example with a CRM system in a web server

When generating the remote Configuration Files, specific queries to the site’s database can determine the configuration settings retrieved in the remote file. For example, a web server with a CRM system that generates dynamic content can be used in conjunction with Remote Configuration. In this scenario, all users’ devices have SharePlus configured to use a Dynamic URL to get the remote file from the server and load the configuration settings. The remote file is generated “on-the-fly”, depending on each specific user configuration defined in the CRM system.

Below you can find an illustrative pseudocode for this example's Dynamic Configuration File:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN"
"http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">

<dict>
<!--Static Config Ends Here -->
    <key>Sites</key>
    <% Obtain user from HTTP context %>
    <% Query LOB system and obtain list of sites for user%>
    <Array>
    <% For each site on list %>
        <dict>
            <key>Name</key><string><%%Value%></string>
            <key>URL</key><string><%%Value%></string>
        </dict>
    <% end for %>
    </Array>
</dict>
</plist>
```

Using a Web Service

By implementing a Web Service⁸, you can retrieve a selective configuration for your application. This scenario is very useful when there is a fixed number of different application configurations. Below you can find a Web Service example built using .NET C#. The technology used to build the web services may vary, what really matters here is how the configuration is retrieved from the service.

Example with a location identifier

The URL specified in the Configuration File must be:

```
http://mydomain.com/Configuration_Api/GetConfigurationByLocationIdentifier?
locationidentifier=[locationidentifier]
```

The Service implementation will return a personalized Configuration File depending on the device's location, and a default file when the location is not in the list of known locations.

⁸ Web Services or Application Services share business logic, data and processes across networks, allowing different sources to communicate with each other through the service implementation.

```

namespace EndpointSamples.Controllers
{
    public class EndpointController : ApiController
    {
        public HttpResponseMessage GetConfigurationByLocationIdentifier(string locationIdentifier = "")
        {
            string directoryPath = System.Web.HttpContext.Current.Server.MapPath(@"~\Resources");
            DirectoryInfo resourcesDirectoryInfo = new DirectoryInfo(directoryPath);
            string configFileName = locationIdentifier + ".plist";

            FileInfo configInfo = resourcesDirectoryInfo.GetFiles().ToList().Where(f =>
f.Name.Equals(configFileName)).FirstOrDefault();
            if (configInfo == null)
                configInfo = resourcesDirectoryInfo.GetFiles().ToList().Where(f =>
f.Name.Equals("defaultConfig.plist")).FirstOrDefault();

            return this.ReturnTextXml(configInfo);
        }

        private HttpResponseMessage ReturnTextXml(FileInfo fileInfo) {
            return new HttpResponseMessage()
            {
                Content = new StringContent(File.ReadAllText(fileInfo.FullName),
                    Encoding.UTF8,
                    "text/xml");
            }
        }
    }
}

```

An *HttpResponseMessage* object is returned by the service. This object represents the content of the Configuration File as a text-based file with UTF-8 encoding. SharePlus application must be able to map this response into an XML file with a structure similar to Property List. As a recommendation, avoid using JSON and escaped responses.

SharePoint Site Configuration a.k.a “MobileNavigation”

SharePlus provides this configuration method to customize SharePlus application’s behavior for each site independently. Site Configuration includes settings to customize the sub-sites and lists belonging to the site, and also the Site Home (customized view of the site).

These settings manage aspects like navigation, visualization, offline behavior.

- **Navigation** is about the visibility and organization of sites and lists in the navigation bar.
- **Visualization** allows the configuration of the default SharePoint List View and SharePlus’ native visualization for each list. For the site and its sub-sites, you can configure the Site Home.
- **Offline behavior** allows the configuration of the default offline settings for a list within the site.

Creating the Site Configuration List(s)

Site Configuration is implemented using a SharePoint custom list with a pre-defined structure. A custom list must be created on every site of the solution, as this is a site-specific configuration method. SharePlus will find the list within the site, will identify and read the pre-defined structure and later apply the specified settings.

Every item added to this configuration list will includes settings to configure a sub-site or a list belonging to the site. In addition, you can add one item to configure the Site Home for the site itself.

Manually Creating the List

First you need to create the SharePoint custom list, then you will adjust navigation, visualization, and/or offline behavior as desired. When creating the list, there are a three important details to take into account:

- The list must be created based on the out-of-the-box template “Custom List”.
- The list must be named “MobileNavigation” exactly when first created, later it can be renamed as desired. The following URL structure is required so SharePlus can locate the list:

```
http://myDomain.com/MySite/Lists/MobileNavigation/AllItems.aspx
```

- The list must keep the “Title” column provided by the custom list template, that being said, this is the only column name that can be changed if desired. Others column names described below are case sensitive.

Creating the List from a List Template

First you must upload the Mobile Navigation list template to the list template gallery in your site. Then you can create the Site Configuration List based on the new list template. Finally, adjust navigation, visualization, and/or offline behavior as desired.

When creating the list through this process, take the following details into account:

- You need administrator permissions on the site to upload a new list template.
- You need to locate the site's list template gallery. The following URL is an example of the List Template Gallery location:

```
http://myDomain.com/_catalogs/lt/Forms/AllItems.aspx
```

When working with SharePoint farms and using Site Templates, you can take advantage of this approach and automatically populate new sites with the Mobile Navigation list template.

Get the latest Mobile Navigation list template [here](#).

The List Structure

There are a number of required columns for the list, other columns might be added in order to add value for administrators or contributors. These “extra” columns will not affect SharePlus application behavior. The required columns' names are case sensitive and must be the same as specified in the table.

The following table shows the whole structure of columns required for the list, including details about the expected information on each column:

Column	Type	Expected information
Title	Single line of text	The title of the list or site to be configured. Use the “ThisWeb” value to configure the site itself.
List URL Name	Single line of text	The name of the library/list in the SharePoint URL.
Is Web	Yes/No	Yes to configure a site and No for a list.
Hidden	Yes/No	Yes when the site or list should not be visible.
Default Mobile View	Single line of text.	Specifies the default SharePoint list view. Must match a list view, e.g., “All Documents”.
Default Visualization	Single line of text.	Must match a SharePlus list visualization, e.g., “Table”, “TableViewBased”, “Grid”, etc.
Available Visualizations	Choice (Checkboxes)	Must be a multiple selection choice and values are the same as Default Visualization above.
Layout Mode	Choice (Drop-down menu)	Must be a choice between two values: “Normal” and “Extended”.
Sort And Group	Single line of text.	Names of the fields available in the <i>Sort and Group</i> functionality, separated by commas.
Offline Support	Yes/No	Yes to allow the user to modify the offline settings for the list.
Offline	Yes/No	Yes to enable the offline settings for the list.

Offline Background	Yes/No	Yes to set the sync mode to “Background” and No for “Per Item”.
Offline View	Single line of text	Must match a default SharePoint list view, e.g., “All Documents”.
Offline Only Wifi	Yes/No	Yes to synchronize over Wi-Fi networks only, excluding 3G
Offline Download Documents	Yes/No	Yes to download attached documents and not only the item’s properties.
Offline Max Document Size	Number	Maximum size (MB) allowed for the documents to be downloaded.
Query Page Size	Number	Number of items per block that are requested from the server when synchronizing data.
Swipe Documents	Yes/No	Yes to enable swipe through documents from a document library.
Preview On Tap	Yes/No	Yes to enable document preview on tap.
Tabs	Yes/No	Yes to enable the opening of documents in different tabs.
Order	Number	The position in the sequence of webs or lists displayed in the site view.
ManualOrderSupport	Yes/No	No to disable the manual reordering of webs and lists in the site view.
Home	Single line of text	URL to any content that can be set as Site Home for a site, e.g., PDF file or an HTML page.
HomeTitle	Single line of text	A title to be displayed for the Site Home.
Search Fields	Single line of text	Names of the fields to be used in the search, separated by commas.
ShowInSaveToOtherLocation	Yes/No	Allow/Block the inclusion of the list as a possible destination when using the Copy to/Move to functionality.
Picture Library	Single line of text	Specify the default picture library used to store images when working with Rich text fields.

To **configure a site**, you need:

- **Only five fields:** Title, Is Web, Hidden, Home, and HomeTitle.
- The “Is Web” field should be set to *Yes*.

To **configure the current site itself**, you need:

- **Only five fields:** Title, Is Web, Hidden, Home, and HomeTitle.
- The “Is Web” field should be set to *Yes*.
- The Title field should be set to “ThisWeb” or “ThisSite”.

Adjusting Common/Basic List Properties

The first three fields are used for both sites and lists. The following table shows the three columns and a brief description of the purpose of each column:

Column	Type	Description
Title	Single line of text	Should specify the title of the list or site to be configured. When configuring the site itself should be set to “ThisWeb” or “ThisSite”.
List URL Name	Single line of text	Identifies a document library or list. This value refers to the name of the library/list in the SharePoint URL, which remains unchanged when renaming a library/list.
Is Web	Yes/No	Indicates whether the group of settings to be configured apply for a site (web) or a list.
Hidden	Yes/No	Specifies visibility, whether the site or list will be hidden or not when browsing the parent site.

Note: If the Title of the list or site was changed, you must specify the new title.

Adjusting Site Home

The Home property allows you to specify home content for a portal or one of its sites. In addition, you are able to configure one or more contents for the same site.

Your Site Home can contain a SharePlus Mobile Workspaces, a PDF document, a ReportPlus dashboard or any content that can be rendered in a web browser.

Column	Type	Description
Home	Single line of text	A list of values separated by comma. Possible values are: <ul style="list-style-type: none">• An URL - to reference a resource to be loaded.• A page name - referencing a <i>PageName</i> key value defined in the <i>Pages</i> section of the Configuration File.• “default” - to reference the default SharePlus site view, which is the native view that displays sub-sites, libraries, and lists.
HomeTitle	Single line of text	A list of titles separated by comma, for each of the Home values specified in the <i>Home</i> field respectively.

Note: The “default” value in the Home column will reference the DefaultSitePageName key value if this value was manually changed in the Configuration File.

Adjusting Navigation

Sometimes you need another layer of content filtering that is independent from the user's server privileges. For those scenarios, SharePlus provides a customizable hierarchical navigation model, which must be customized for every site.

Column	Type	Description
Hidden	Yes/No	Specifies visibility, whether the site or list will be hidden or not when browsing the site.
Swipe Documents	Yes/No	Enable/disable the ability to swipe through documents from a document library.
Preview On Tap	Yes/No	Enables/Disables the document preview as the default action when tapping a document. Shows its properties instead.
Tabs	Yes/No	Enables/Disables the tabbed previewing of docs. When opening a single document, all docs from a list are opened in different tabs.
Order	Number	Specifies the position in the ordered sequence of webs or lists displayed in the site view.
ManualOrderSupport	Yes/No	Enables/Disables the possibility to manually reorder the webs and lists in the site view.

Adjusting Visualizations

By configuring SharePlus Visualizations, you can control how list data is presented to the user by default and which visualizations are available through the UI. Also, the layout mode can be configured for the item's details. Two layout modes are available, "Normal" and "Extended". The "Normal" layout shows labels and values on the same line. The "Extended" layout includes labels on the first line and values on the second line, below.

SharePoint List Views are different from SharePlus Visualizations, but both are used to organize, filter, and display the items of a list. List Views are configured in SharePoint, e.g., "All Documents" and are supported by SharePlus, while Visualizations only apply within SharePlus, e.g., Table, Grid, Picture.

Column	Type	Description
Default Mobile View	Single line of text	Specifies the default SharePoint list view. Must match a list view, e.g., "All Documents".
Default Visualization	Single line of text	Specifies the default SharePlus visualization for the list, i.e., "Table", "TableBased", "Grid", "Calendar", and "Picture".
Available Visualizations	Choice	Visualizations shown in the list. Must be a multiple selection choice (using checkboxes). Values are the same as Default Visualization.
Layout Mode	Choice (Drop-down menu)	Indicates whether to use "Normal" or "Extended" layout when opening an item's details (or item's metadata) in SharePlus.
Sort And Group	Single line of text.	List of the field names to be displayed in the <i>Sort and Group</i> functionality, separated by commas.

Note: Through the Configuration List you can select a default SharePoint List View, other views will be displayed though.

“Normal” and “Extended” layout:

Back	View Response #2	
View Response #2		
Favorite	Alert Me	
PROPERTIES		
Do you know there i... Yes		
Have you read the... Big gg		
How much did you... 666%		
How often should t... Annually		

Back	View Response #3	
View Response #3		
Favorite	Alert Me	
PROPERTIES		
Do you know there is a Sales Process Manual?		
Yes		
Have you read the Sales Process Manual?		
No.		
Do you refer to it when you have a question?		
No, I don't.		
Should we improve a specfic chapter? Which one?		
No		

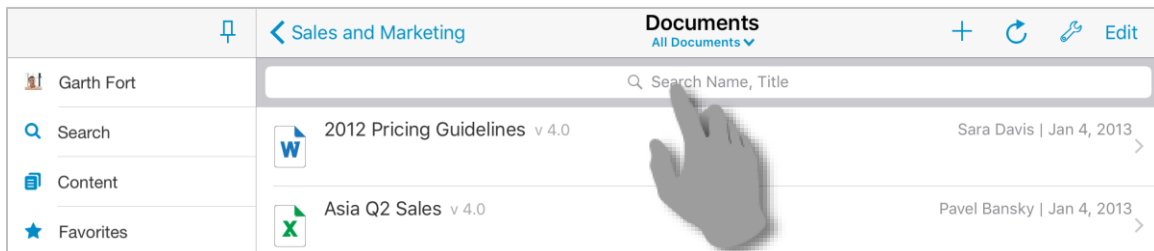
Adjusting Offline Behavior

The Offline Support capability is enabled at the List level and each list is configured separately. A number of offline settings are available for every list, including whether the offline settings are enabled or not. When offline behavior is disabled, all other settings are ignored.

Column	Type	Description
Offline Support	Yes/No	Specifies whether the user can modify the offline settings for the list or not.
Offline	Yes/No	Enables/disables the configuration of offline settings for the list.
Offline Background	Yes/No	When enabled, sets the synchronization mode to “Background”. Otherwise is set to “Per Item”.
Offline View	Single line of text	Specifies the SharePoint list view used for synchronization. When no value is specified, the list’s default view is used.
Offline Only Wifi	Yes/No	Specifies whether the synchronization process will be done over Wi-Fi networks, and not 3G.
Offline Download Documents	Yes/No	Indicates whether attached documents will be downloaded during the sync process or only metadata (item’s properties).
Offline Max Document Size	Number	Specifies the maximum size of documents (in MB) to be downloaded during the sync process. For example, when this value is 10, only docs smaller than 10MB will be downloaded.
Query Page Size	Number	Number of items per block that are requested from the server when synchronizing data.

Adjusting List Search

The keyword “standard” list search allows the user to perform a default search based on the name or title of the document. This search can be configured to search by other fields, like “% Complete” for example.



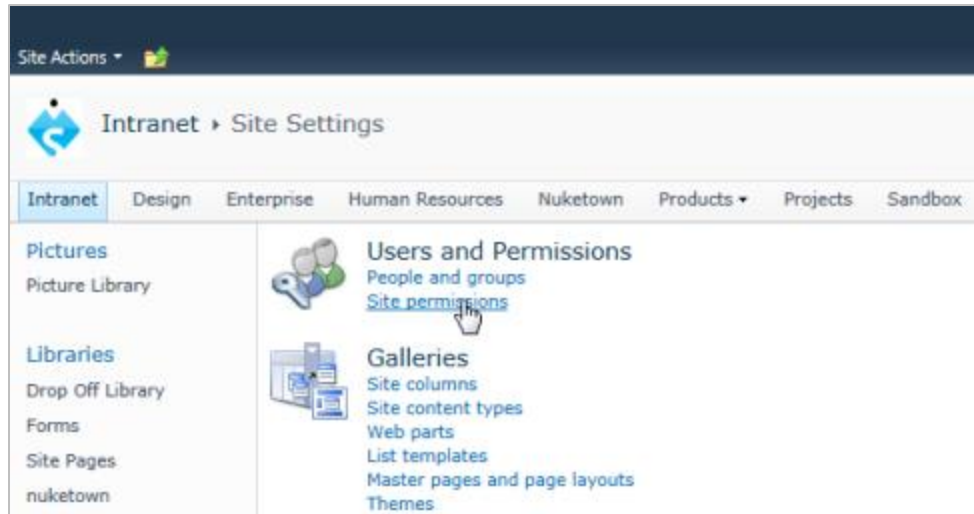
Column	Type	Description
Search Fields	Single line of text	Specifies the names of the fields to be used in the search separated by commas. E.g., “Title, % Complete, Assigned To”.

Server Configuration

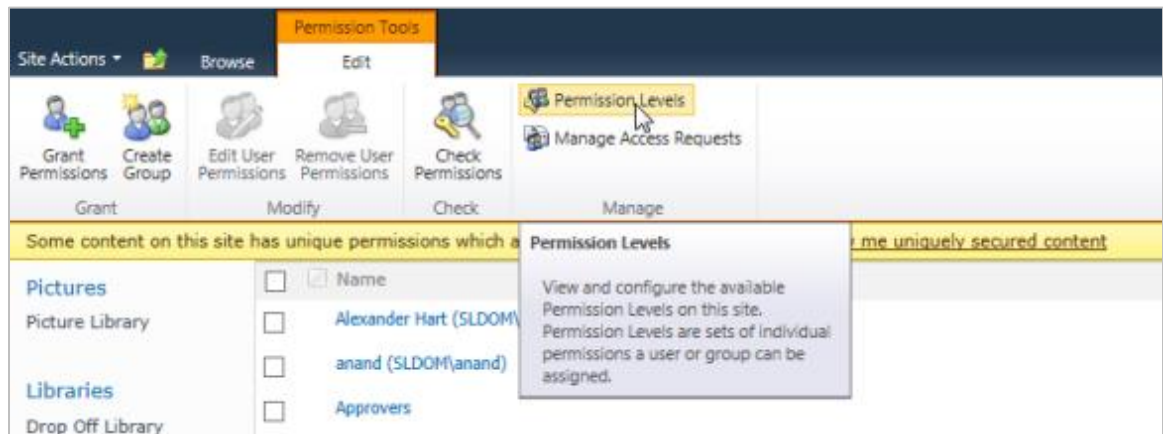
Adjusting SharePoint “Read” permission level

You must grant “Browse Directories” permissions to accounts with read-only privileges. This can be achieved with one simple modification on the Read permission level, on the SharePoint server site.

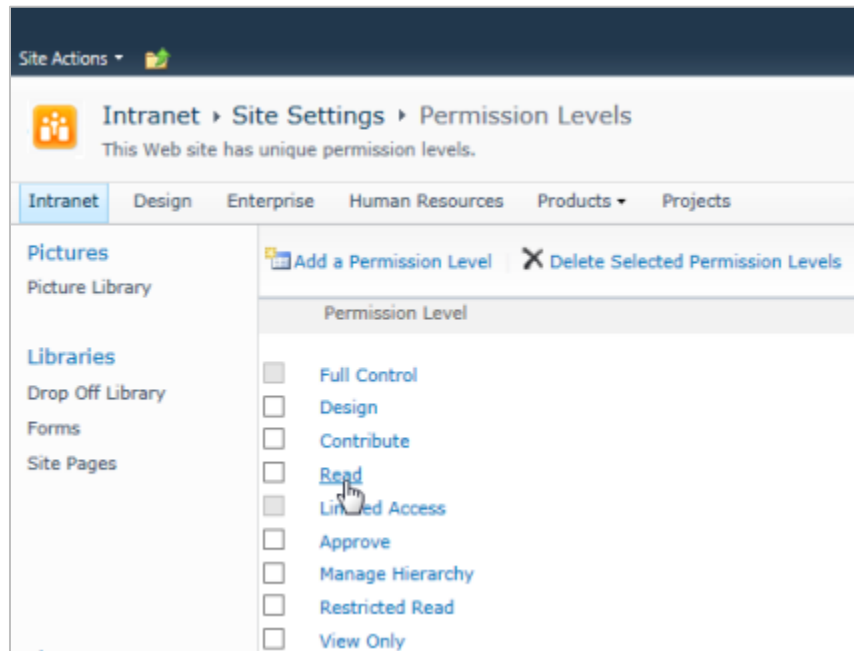
1. Go to *Site settings*, and click on *Site permissions*.



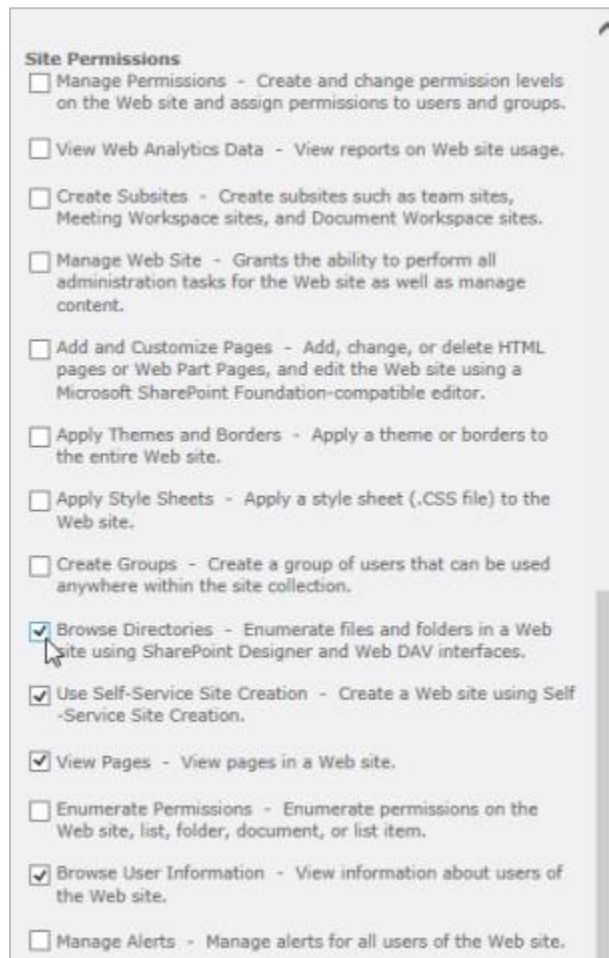
2. Select *Permission levels*.



3. Click on the *Read* Permission levels link.



4. Select the *Browse Directories* option, and save.



Adding Pictures to Contact Lists

When working with Contact Lists, you need to properly configure the picture fields in the list to make them available in SharePlus. This is a very straightforward task, just include any of the field names that SharePlus will look for in the list definition, which are:

- Picture
- Photo
- Foto

Chapter 4

Deployment

Section 1: Enterprise Deployment

Section 2: Application Re-signing

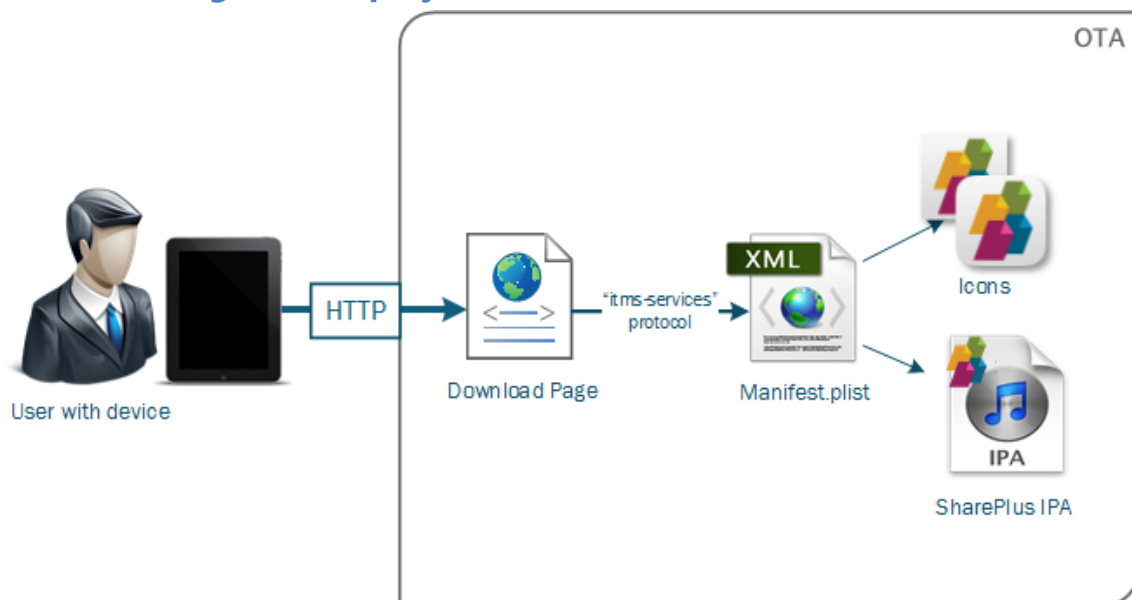
Enterprise Deployment

Web Deployment using SharePoint

SharePlus Web deployment allows the distribution of the application without any collaboration of external services like MDM servers or the AppStore. The application's IPA is copied to a SharePoint library to make it available and later SharePlus can be installed by opening a web page from any device. It is a very straightforward method, you just need to copy the required information to the server and it will be working. In addition to this, the folder holding the content is completely static and will always comply with security restrictions from the server.

Note: SharePlus deployment can be carried out with any web server, including SharePoint.

Understanding Web Deployment



Web Deployment lifecycle

SharePlus deployment package is distributed to the user within the context of the over-the-air (OTA)⁹ mechanism. The process illustrated with the diagram is further explained below:

1. In the device and through the wireless network, the User opens a web browser with the Download Page.
2. The Download Page contains a download link URL that includes a prefix with the "itms-services" protocol and the XML manifest file location.
3. Once the User follows the download link, iOS Launchpad proceeds to read the information on the Manifest.plist file and the required resources (application IPA and icons) are retrieved from their respective network locations.
4. The user receives a confirmation request to install the application and SharePlus is installed on the User's device.

⁹ This mechanism consists on using the wireless network to transfer the new application to a device, and it can be configured in any operating system (e.g.: Mac OS X, Windows, Linux).

Preparing the deployment package

There are several requirements that need to be ready to follow this deployment method. Most of these components need configuration (XML manifest, download page, SharePlus IPA). The application icons are, however, simple resources to be included.

- SharePlus IPA file
- Application icons
- XML manifest file
- Download page
- iOS 9 *untrusted sources* verification

SharePlus IPA file

SharePlus in-house iOS application that will be provided by Infragistics in .ipa file format.

Application icons

Two icons are needed for your application, a small icon and a large one. The icons used here should be the ones used for application rebranding which, normally, are provided by a Visual Designer.

PNG Icon	Size	Description
Small	57 x 57 px	Image displayed during download and installation.
Large	512 x 512 px	Image displayed in iTunes.

Fully qualified URLs must be specified for the images.

XML manifest file

The manifest file is an XML plist¹⁰ format file. It is used by iOS devices to find, download, and install applications from your web server. It contains a set of attributes required by the device to correctly install the application.

Assets (app package and images) and metadata (bundle identifier and title) must be correctly configured using any XML editor. The application's bundle identifier value must be included in the XML manifest to identify SharePlus application in the device.

Getting the Application's Bundle Identifier

This value identifies your application within the device, e.g., com.yourcompany.appname. The application's bundle identifier to be used must match the value set on your Provisioning Profile. You can get the application's bundle identifier from three different places:

- iOS Provisioning Portal
- Provisioning Profile file
- IPA file

¹⁰ Property list files are used to store, organize and access data. Internally this files define dictionaries (key-value pair) using XML syntax. Property lists are used extensively by applications on OSX and iOS.

Below there is a quick guide on how to get the bundle identifier through any of these methods.

From iOS Provisioning Portal

1. Login to the [iOS Provisioning Portal](#).
2. Go to *App IDs* on the left pane.
3. Look for the *application's ID* and click *configure*.
4. The ID will be presented on a frame like the following:



From Provisioning Profile file

1. Open the Distribution Provisioning Profile (.mobileprovision) used to sign the build in any text editor (e.g., TextEdit).
2. Search for the *Entitlements* key.
3. Search for the *application-identifier* key within the *Entitlements* key.
4. Copy the value within this key without the first part, e.g.: com.yourcompany.appname.

Code included in the XML manifest file should be similar to the one below:

```
<dict>
  <key>items</key>
  <array>
    <dict>
      <key>assets</key>
      <array>
        <dict>
          <key>kind</key>
          <string>software-package</string>
          <key>URL</key>
          <string>http://<portal>/yourfolder/app.ipa</string>
        </dict>
        <dict>
          <key>kind</key>
          <string>full-size-image</string>
          <key>needs-shine</key>
          <true/>
          <key>url</key>
          <string>http://<portal>/largeImage.png</string>
        </dict>
        <dict>
          <key>kind</key>
          <string>display-image</string>
          <key>needs-shine</key>
          <true/>
          <key>url</key>
          <string>http://<portal>/smallImage.png</string>
        </dict>
      </array>
      <key>metadata</key>
      <dict>
        <key>bundle-identifier</key>
        <string>com.yourcompany.appname</string>
        <key>kind</key>
        <string>software</string>
        <key>title</key>
        <string>appname</string>
      </dict>
    </dict>
  </dict>
</dict>
```

- **url (software-package)** – URL to SharePlus IPA file.
- **url (full-size-image, display-image)** – URL to image resources (large and small application icons).
- **bundle-identifier** – Application's Bundle Identifier, the value that identifies your application within the device.
- **title** – The application's name, the last part of the bundle identifier.

Download page

To distribute SharePlus application, a simple web page with a download button must be created. This download page will be opened from a user's device to install the application. The download button must include a link URL with a specific prefix and the location of the manifest.plist file.

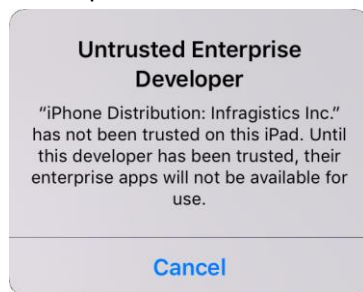
Distribution link

To install the application, OTA deployment uses URL schemas¹¹. In this case, you need the following prefix: "itms-services://?action=download-manifest&url=". The URL to the manifest.plist is also needed at the end of the distribution link, as shown in the example below:

```
itms-services://?action=download-manifest&url=https://<portal>/manifest.plist
```

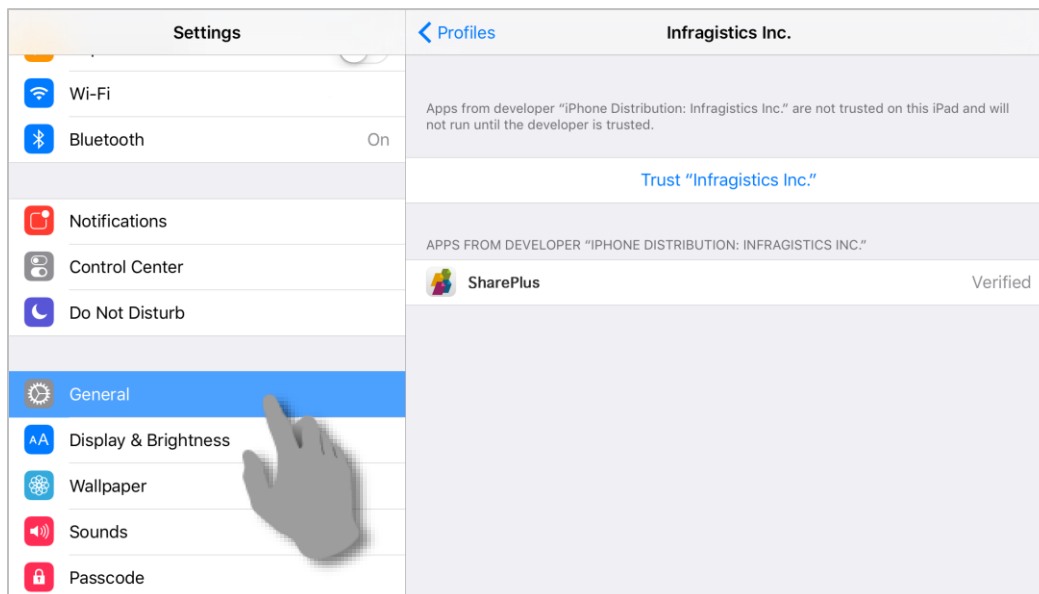
iOS 9 untrusted sources verification

Starting in iOS 9, Apple introduced a new feature to help protect users from installing in-house apps from untrusted sources. Only in-house apps installed using an MDM solution are explicitly trusted and will no longer prompt the user to trust the developer that signed and provisioned them. All applications installed for the first time without an MDM will be prompted to trust the developer.



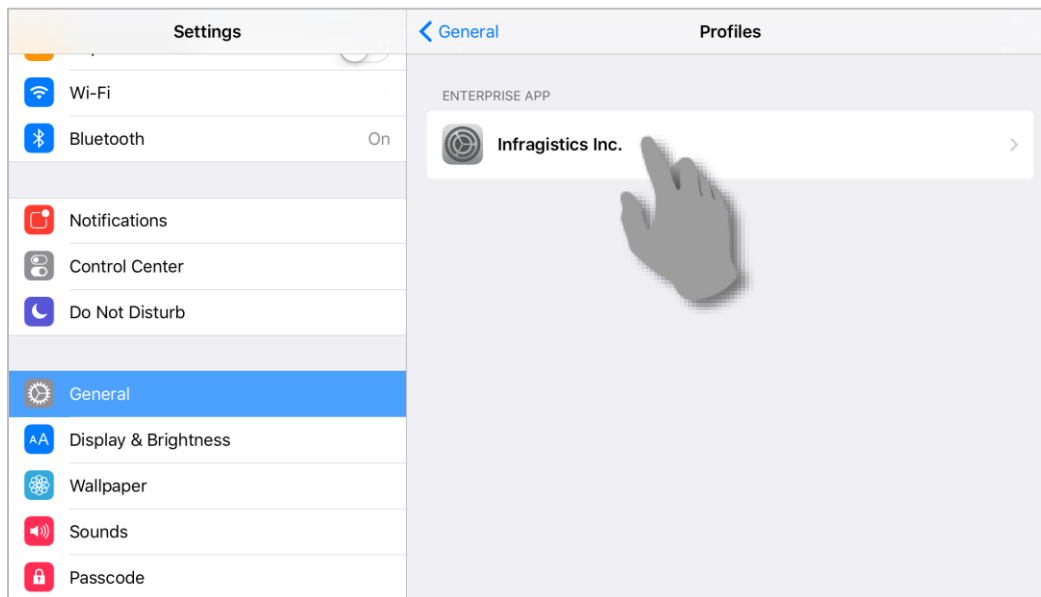
To install SharePlus, you will need to:

1. Go to the iPad Settings, then tap "General" and "Profiles".

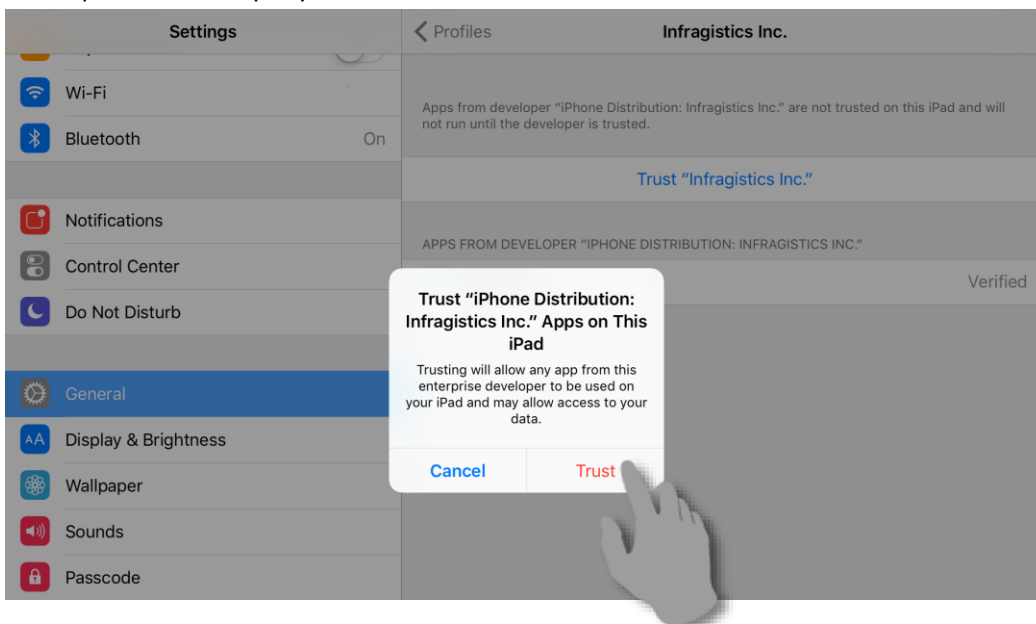


¹¹ These URL types have their own format and are frequently used to initiate specific requests. For further information, refer to [Apple URL Scheme Reference](#) in the iOS Developer Library.

2. Under “Enterprise App”, tap the name of the profile that matches your app.



3. Tap ‘Trust’ “Company name”



Once the users tap “Trust”, the app can be opened and used; this should be a one-time process. Once your provisioning profile is trusted in that device, all subsequent installations or updates of apps signed with the same profile should go through without issues.

Publishing the Deployment Package

The installation assets must be accessible from the device, but can be spread across the network in many places. A centralized location to hold all the site’s assets is, however, recommended. In addition, that location must be accessible using HTTP or HTTPS without any type of authentication.

Note: Since iOS 7.1 the URL to the manifest.plist must use the HTTPS protocol.

The download page can be customized according to your needs. For example, you could request for credentials when accessing the page, restricting the users allowed to download the application.

Promoting SharePlus installation

Once you have the distribution link set up, you can make the deployment package available in many ways like sending the link by SMS or email, using banners, through JavaScript pop-ups, or by embedding the link in another enterprise applications created by you.

The key element here is to develop traffic towards the distribution link location, to promote SharePlus installation.

Setting server MIME types

Sometimes you need to configure your server so that the manifest file and application IPA file are transmitted correctly.

MAC OS X Server

Using Server administrator credentials, add the following MIME types to the MIME types settings:

```
Application/octet-stream ipa
text/xml plist
```

(Internet Information Server) IIS

Use the IIS Manager to add the MIME types in the Properties page of the server:

```
.ipa application/octet-stream
.plist text/xml
```

For more information on the entire process refer to [Distributing Enterprise Apps for iOS Devices](#).

Configuring Automatic Updates

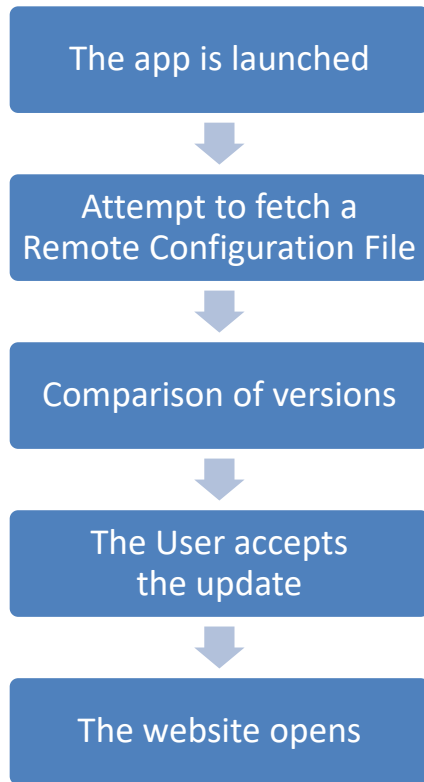
SharePlus allows your company to set up automatic updates. OTA (Over-the-air) mechanism is normally used to distribute updates to all the devices that connect to your application. The *VersionHandle* feature allows you to configure automatic updates settings in the Configuration File.

```
<key>VersionHandle</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>DeferBlockToTimeSpan</key>
    <string>10/19/2013</string>
    <key>ImmediateBlock</key>
    <false/>
    <key>LastVersion</key>
    <string>3.9.8</string>
    <key>URL</key>
    <string>http://<companysite>/download.html</string>
  </dict>
</dict>
```

- **DeferBlockToTimeSpan** – Limit date for users to update the app before it becomes blocked. Date format expected is mm/dd/yyyy, e.g., 10/19/2017.
- **ImmediateBlock** – When a new version of the app becomes available, the application is blocked until updated.
- **LastVersion** – Last version number of the app.
- **URL** – The URL where the updated app version is hosted for downloading; download.html file that was previously set up in the Over-the-air configuration process.

Note: The DeferBlockToTimeSpan and ImmediateBlock settings are optional and mutually exclusive.

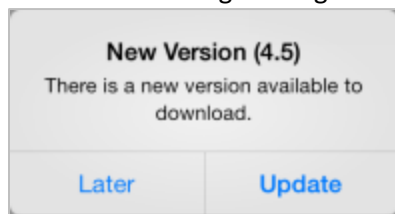
Automatic Update Process



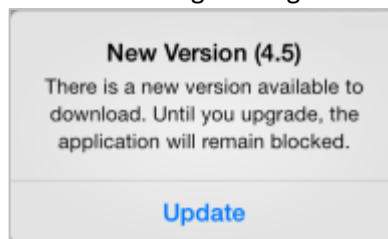
- The *ConfigurationURL* specified in the app's local Configuration File is used.
- If the *LastVersion* number on both Configuration Files (Remote and local) is different, the user is prompted to update the application.
- If the user accepts, the app is sent to background and Safari opens the website previously configured with OTA configuration
- The website that was previously configured through OTA configuration opens. The user must tap the *install/download* button and confirm the update.

Automatic Update Messages

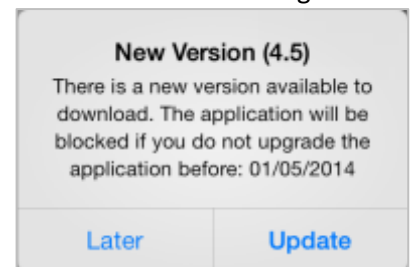
Non-Blocking message:



Blocking message:



Deferred message:



MDM Integration

Mobile Device Management solutions (MDM) allow Enterprises to secure, monitor, and manage mobile devices. For additional information regarding Mobile Device Management, please refer to the following article: <http://www.apple.com/ipad/business/it/management.html>

Introduction

SharePlus can integrate with many 3rd party MDM solutions available in the market, including [MobileIron](#), [Citrix](#), and [Bitzer Mobile](#). The level of integration depends on the capabilities of each particular MDM solution.

MDM solutions include many possibilities when it comes to the integration with SharePlus.

When working in conjunction with MDM solutions, the following capabilities can be achieved:

- Deployment
- Per-app VPN
- Authorization
- Data containerization
- Secure data wipe
- Enforce security policies

Deployment

MDM Servers handle application deployment by themselves. The SharePlus application package (.IPA) to be uploaded to the MDM Server will be provided by Infragistics.

Per-app VPN

The channel security can be enhanced by a MDM by providing a dedicated connection. Securely and transparently routing all the SharePlus network traffic.

Authorization

Only the applications authorized by the MDM can run on the device.

Secure Data Wipe

To enforce security, MDM Servers can include Data Wipe policies. Important data can be irreversibly erased through a secure procedure.

Data Containerization

Through the use of container passcodes, MDMs can add an extra layer of security on top of SharePlus.

Enforce Security Policies

A set of rules defined in the MDM server can be used to regulate the behavior of mobile applications. Features can be trimmed or partially restricted to enforce security.

Note: MDM vendors provide a different range of possible policies. Some particular policies may not be supported, like MDM-integrated data-at-rest encryption or specific security policies depending on the specific MDM provider.

MobileIron is one of the leading vendors of Mobile Device Management (MDM) and Enterprise Mobility Management (EMM) solutions. The MobileIron Platform combines traditional MDM capabilities with comprehensive security and mobile application management (MAM) capabilities.

Introduction to MobileIron

MobileIron's offering includes different EMM solutions built upon [MobileIron's platform architecture](#), which is comprised of MobileIron Core, MobileIron Sentry, MobileIron Client, and end user products. EMMs provide a complete solution for enterprise mobile apps, securing both the app data on the device through [AppConnect](#) functionality, and data in motion, by leveraging AppTunnel.



EMM solutions can include:

- **MobileIron Core, MobileIron Sentry, and Apps@Work** – Core modules that allow the apps distribution and management, all transparently supported by SharePlus.
- **AppConnect** – Protects data-at-rest through data encryption (not supported by SharePlus) and provides an SDK for securing and managing apps (SharePlus integration is detailed later).
- **AppTunnel** – Dedicated tunneling and access control module, build upon the MobileIron Sentry technology and also transparently supported by SharePlus.

MobileIron is available as both an on-premises system and a cloud service through the MobileIron Connected Cloud.

MobileIron Integration with SharePlus

SharePlus leverages MobileIron SDK to improve the integration with the MDM, delivering many capabilities. When working in conjunction with a MobileIron solution, the following capabilities can be achieved:

- Deployment
- Remote Configuration
- Per-app VPN
- Authorization
- Authentication through client-side certificates
- Data containerization
- Secure data wipe
- Enforce Data Loss prevention policies

Note: Take into account that Deployment, Per-app VPN, Authorization, Data Containerization and Data Wipe capabilities described next are handled entirely by MobileIron. To see SharePlus security features refer to Planning Security in Chapter 2.

Deployment

MobileIron can distribute a SharePlus application package (.IPA) provided by Infragistics.

Remote Configuration

MobileIron can broadcast and replicate a SharePlus Remote Configuration to all devices with SharePlus installed. MobileIron manages the remote URL, and sends it to SharePlus to load a Remote Configuration File.

Per-app VPN

MobileIron AppTunnel enhances the channel security by providing a dedicated connection. The connection is secure and transparent and routes all SharePlus' network traffic.

Authorization

Only the applications authorized by the MDM can run on the device.

Authentication through client-side certificates

MobileIron MDM Server can deploy client-side certificates to SharePlus, in order to use them to request authenticated access.

Data Containerization

In addition to SharePlus security passcode, MobileIron can add an extra layer of security using a container passcode. Successfully protecting SharePlus against unauthorized access and distribution.

Secure Data Wipe

MobileIron, as many MDMs, can enforce security including Data Wipe policies.

Enforce Data Loss Prevention Policies

A set of rules defined in MobileIron can be used to regulate the behavior of mobile applications. Features like Copy/Paste, Print, or Open In can be managed in conjunction with SharePlus to enforce security.

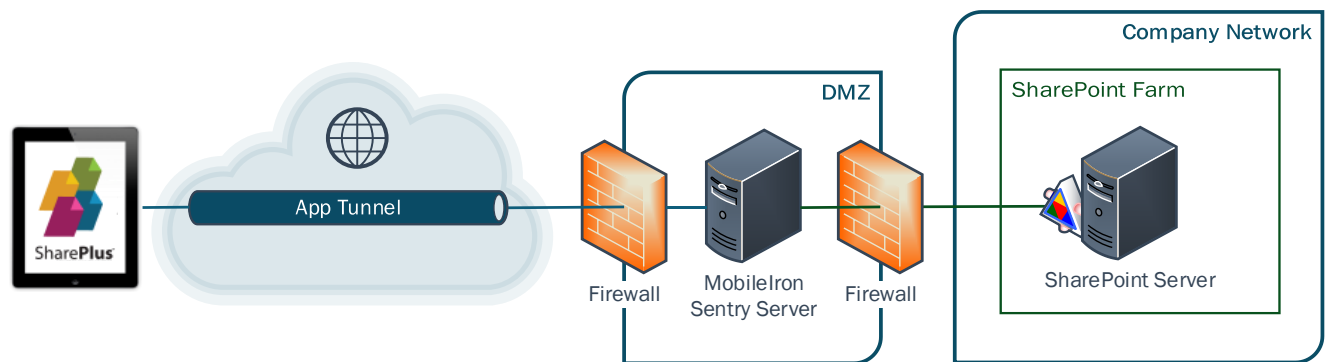
Note: Some particular policies may not be supported, like AppConnect Data-at-rest encryption.

SharePlus provides a very good integration with the MobileIron platform. However, some particular capabilities may not be supported, e.g., AppConnect Data-at-rest encryption.

Below you can find detailed information about how to work with MobileIron in conjunction with SharePlus.

AppTunnel Integration

AppTunnel can be used to securely route all SharePlus' network traffic. AppTunnel capabilities are transparently applied at the application level by AppConnect's configuration.



Authorization

When working in conjunction with MobileIron, SharePlus will check with the MDM for execution permissions. On the server, execution can be granted both by application and by user. iOS jailbreak detection is also provided to keep your data secure, protecting contacts and corporate data. MobileIron can be configured to block compromised devices from accessing corporate resources.

Deployment

MobileIron AppStorefront can be used to distribute SharePlus by using the following steps:

1. Obtain the application file (.IPA) from Infragistics Services.
2. Configure the info.plist file by updating the following keys:
 - I. **CFBundleName**, e.g., shareplus.
 - II. **CFBundleIdentifier**, e.g., com.contoso.shareplus.
 - III. The second instance of **CFBundleURLName**, e.g., com.contoso.shareplus.
 - IV. The second instance of **CFBundleURLSchemes**, e.g., accom.contoso.shareplus
3. Configure the App identifier in AppConnect.plist.
Update the App identifier key value with the company's bundle ID, e.g., com.contoso.shareplus.

4. Configure and Re-sign the .IPA file following the guidelines described on the “Deployment” chapter.
5. Upload the .IPA file to MobileIron’s App Distribution Library as an “In-house app”

Add App Wizard

Step 2 of 5: Basic App Info

Distribution Type: ☒ In-house App ☐ Recommended App

App Upload: **Browse...**

iPad Only: ☐ Yes ☒ No

iOS 5 or later only - Managed App Settings

Prevent backup of the app data ☒ Yes ☐ No

Remove app when MDM profile is removed ☒ Yes ☐ No

Remove app when device is quarantined or signed out ☒ Yes ☐ No

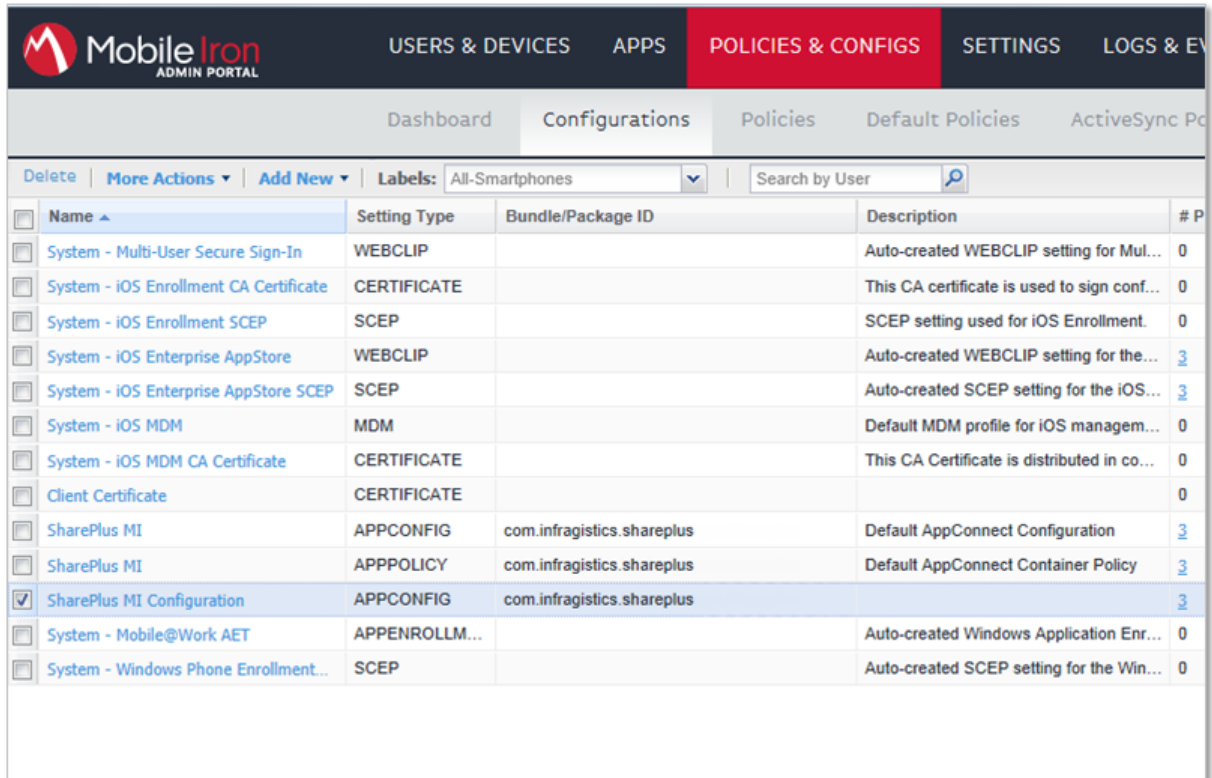
Send installation request on device registration or sign-in ☐ Yes ☒ No

Next > **Cancel**

Policies & Configs

MobileIron's "Policies & Configs" are a set of rules included in the Admin Portal, used to secure, manage, and regulate the behavior of mobile applications. By using Policies and Configurations, MobileIron can regulate the following SharePlus behaviors:

- **Policies**
 - **Copy/Paste** – Disables the *Copy* feature.
 - **Print** – Disables the *Print* feature.
 - **Open In** – Allows the configuration of this feature. See below for further details.
- **Configurations**
 - **Assign a Remote Configuration File**
 - **Distribute Client-side Certificates**



Name	Setting Type	Bundle/Package ID	Description	# P
System - Multi-User Secure Sign-In	WEBCLIP		Auto-created WEBCLIP setting for Mul...	0
System - iOS Enrollment CA Certificate	CERTIFICATE		This CA certificate is used to sign conf...	0
System - iOS Enrollment SCEP	SCEP		SCEP setting used for iOS Enrollment.	0
System - iOS Enterprise AppStore	WEBCLIP		Auto-created WEBCLIP setting for the...	3
System - iOS Enterprise AppStore SCEP	SCEP		Auto-created SCEP setting for the iOS...	3
System - iOS MDM	MDM		Default MDM profile for iOS managem...	0
System - iOS MDM CA Certificate	CERTIFICATE		This CA Certificate is distributed in co...	0
Client Certificate	CERTIFICATE			0
SharePlus MI	APPCONFIG	com.infragistics.shareplus	Default AppConnect Configuration	3
SharePlus MI	APPPOLICY	com.infragistics.shareplus	Default AppConnect Container Policy	3
SharePlus MI Configuration	APPCONFIG	com.infragistics.shareplus		3
System - Mobile@Work AET	APPENROLLM...		Auto-created Windows Application Enr...	0
System - Windows Phone Enrollment...	SCEP		Auto-created SCEP setting for the Win...	0

Copy/Paste

SharePlus blocks the "Copy" command on key locations, preventing the user to take sensible information out from the application using the clipboard¹².

Key locations are:

- Document and Content viewers
- Item's metadata details (view/add/edit element properties)

Even though the feature is called Copy/Paste, the user is able to paste content from outside to the application in the specified locations.

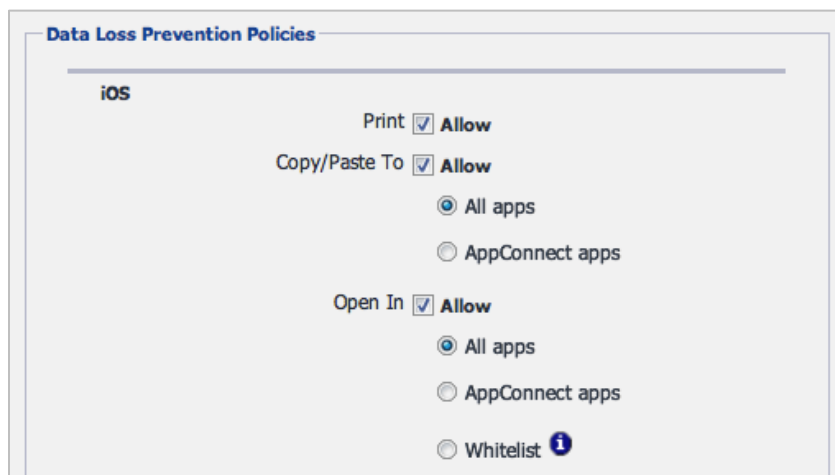
¹² The Copy/Paste policy applies only to components managed by SharePlus. For external modules, like Mail and Address Book, it is not possible to apply this configuration. Instead, you should evaluate each scenario and disable this feature using the configuration file.

Open In

As mentioned above, this policy allows you to **enable/disable** the Open In feature, which is the common protocol to communicate between different apps.

Mobile Iron's available options for this policy are:

- **Allow** – Notify the application if the feature is enabled/disabled.
- When enabled, you can choose between the following options:
 - **All apps** – Allows the Open In feature for all applications installed in the device.
 - **AppConnect apps** – Allows the Open In feature only for those applications that integrate AppConnect. SharePlus is one of those applications.
 - **Whitelist** – When this option is selected, you must specify the bundle identifier of those applications you allow SharePlus to communicate with.



Assign a Remote Configuration File

To push a configuration to SharePlus, administrators need to add the following configuration keys in MobileIron:

- **"ConfigurationURL"** (String) – Specifies the Configuration File's location used when working with Remote Configuration. List-based Configuration is supported, allowing you to provide selective configuration depending on the application scenario.
- **"ConfigurationAuthProviderID/ ConfigurationAuthenticationProviderID"** (Numeric) – Specifies the authentication provider to be used by the configuration module. This scenario applies when the remote configuration file's location requires authentication. Possible values for this attribute:

Value	Authentication Mode
0	Windows Based
1	Form Based
2	Office 365
3	Web Login

- **"ConfigurationProviderID"** (Numeric) – Specifies the configuration provider to be used to retrieve the application's configuration from the remote location. Possible integer values are **0** (default) used for the Endpoint provider and **1** for Library-Based.
- **"UserAgent"** (String) – Specifies the user agent to be used by the application.

	Value i	
ConfigurationURL	http://10.15.0.20/Sandbox/spconfigu...	-
UserAgent	Shareplus	-
ConfigurationAuthenticationProviderID	0	-
ConfigurationProviderID	1	-
ClientCertificate	Certificate	-

+

Save | Cancel

This feature is optional and you can use none, some, or all of the specified keys depending on your needs. MobileIron's settings in SharePlus have precedence over all configuration settings, including remote configuration and manually "injected" configurations (Open In, URL Schemas).

Note on Authentication Providers: SharePlus Authentication Providers resolve any authentication that is required in SharePlus. Standard providers are Windows-Based, Office 365, Web Login, etc. SharePlus SDK allows you to include new authentication methods.

Note on Configuration Providers: SharePlus Configuration Providers provide extensibility over the remote configuration feature, allowing you to extend existing providers and also to create new ones. Configuration Providers can use contextual information of the application (such as OS version and language between others) in order to provide a selective configuration depending on the app scenario.

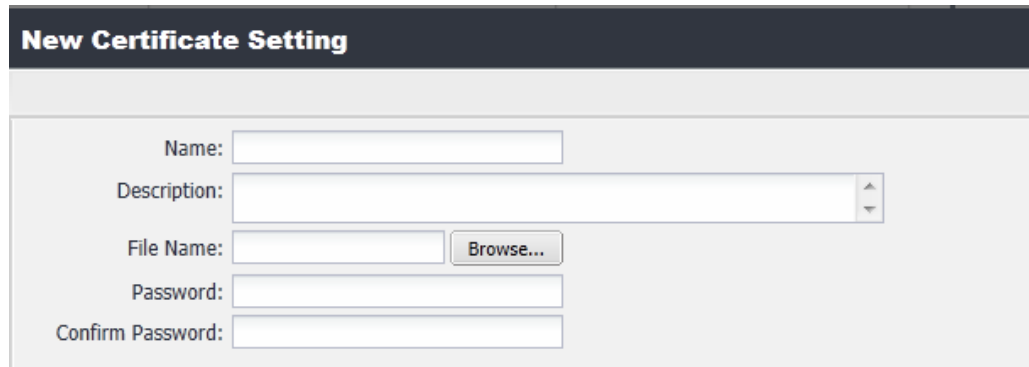
Distribute Certificates

There are two possible scenarios:

- MobileIron stores the certificate in a shared Keychain and SharePlus reads it from there.
- MobileIron pushes the certificate to SharePlus.

Pushing the certificate to SharePlus, can be achieved with a few steps:

1. Create a new configuration with “Certificates” type.



The screenshot shows a web form titled "New Certificate Setting". It contains the following fields and controls:

- Name:** A text input field.
- Description:** A text input field with a vertical scrollbar on the right.
- File Name:** A text input field followed by a "Browse..." button.
- Password:** A text input field.
- Confirm Password:** A text input field.

2. Add the following key to the “App-specific Configurations” section on the SharePlus Configuration policy.
 - **“ClientCertificate”** (digital document) – This key has a Mobile Iron’s client certificate reference as value.
3. In SharePlus, once the certificate is imported to the device it becomes available in the keychain and must be manually associated to an account.

Ad-Hoc Deployment

To avoid the need of complex deployment systems to install the application, the Ad-hoc distribution method is used during the stabilization phase. The method allows distributing the application as a standard file and installing it on a set of devices using iTunes or the iPhone Configuration Utility. The process consists of three steps:

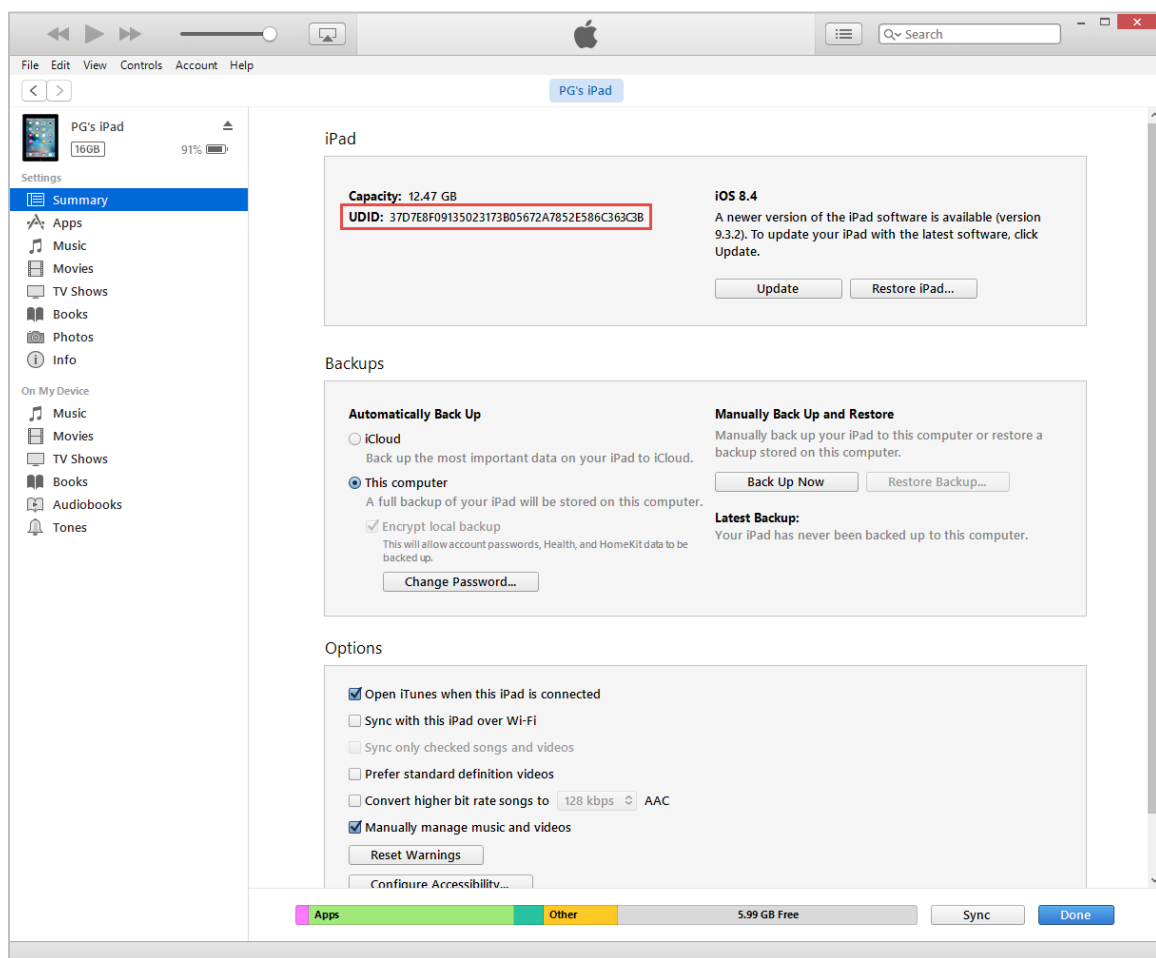
1. Locating the Unique Device ID for every device that will be used for testing.
2. Building the application for those Device IDs.
3. Installing the application.

Locating a Unique Device ID with an App

1. Download the app "UDID Pro" from the [App Store](#).
2. Install the app.
3. Follow the instructions to send the UDID by mail.

Locating a Unique Device ID with iTunes 7.7 or later

1. Connect your device to your Mac or PC and launch iTunes.
2. In iTunes, select your device in the 'Devices' section and navigate to the Summary tab.
3. Click on the Serial Number label to reveal the Identifier field and the 40 character UDID.
4. Copy the UDID identifier to your clipboard.



Installing SharePlus using iTunes

After providing the UDID, Infragistics will prepare a SharePlus build specifically targeted to your device and send you the application file (.ipa). In order to successfully create the build, Infragistics Engineers need your Distribution Certificate.

See the following instructions to install the application:

1. If you have a previous SharePlus version installed:
 - Remove the old app from the device
 - Remove the old app from iTunes App Catalog
2. Install the beta build:
 - Drag the .ipa file to iTunes.
 - Select the new app in the Apps Section from the device
 - Apply changes to synchronize the app to the device

Application Re-signing

In order to deploy a SharePlus IPA file, it has to be re-signed using your company's Enterprise Distribution Certificate. In the following chapters you will review how to re-sign your application along with how to get the required resources for the process.

To successfully re-sign a SharePlus application you need the following resources:

- Apple's Enterprise Distribution Certificate
- Distribution Provisioning Profile
- App IPA file: This should be the application to be re-signed

The first two resource files are owned by companies enrolled in Apple's Enterprise Program and can be retrieved from apple's portal.



Understanding iOS App Re-signing Concepts

The Enterprise Distribution Certificate

The distribution certificate is a private certificate that is provided by Apple. Certificates are created to help Apple identify your company and, once retrieved, a certificate must be installed to be used in the application signing process.

The Distribution Provisioning Profile

The provisioning profile is targeted to one or more apps and can be retrieved from Apple's portal. Profiles are created to authorize specific apps to run in iOS devices. A specific app can be uniquely identified by its bundle ID.

There are two types of provisioning profiles:

- *Ad-Hoc* - It is commonly used for internal testing and is restricted to specific devices.
- *In-House* - It depends only on the App ID and is not limited by device IDs.

About the App ID and Bundle ID

App IDs are used by Apple to identify applications. An App ID is a string composed with two parts, a Team ID prefix and a bundle ID search string.

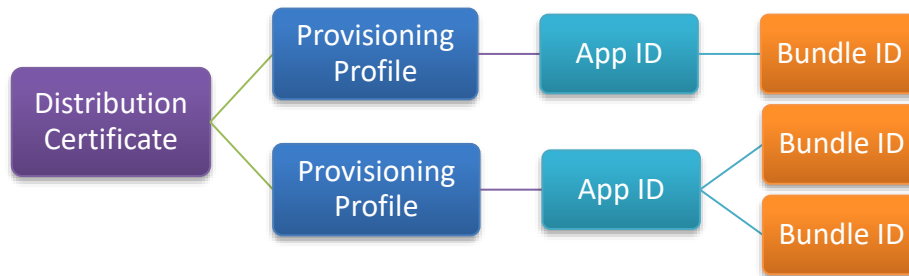
The *Bundle Identifier* (bundle ID) is a unique string used to identify a specific application's bundle. The application bundle contains the executable code and all resources required to run the application. The *Team ID prefix* is automatically provided by Apple's portal and identifies a development team.

The Certificate-Profile Relation

Provisioning Profiles are closely related to the Distribution Certificate. Because of that, if the certificate expires the distributed application will no longer run.

A Distribution Certificate can have more than one Provisioning Profile associated and a Provisioning Profile can target more than one bundle ID. Profiles are created for a specific App ID, but you can include a wildcard (.) in the App ID specification.

For example, by entering `A1B2C3D4E5.com.infragistics.*` as the App ID, the same Provisioning Profile can be used for `com.infragistics.shareplus` and `com.infragistics.reportplus` bundle IDs.



Certificate-Profile expiration

Both Distribution Certificates and Provisioning Profiles must be renewed periodically.

- Distribution Certificate – valid for 3 years
- Provisioning Profile – valid for 1 year

SharePlus License

SharePlus app must have a license associated for each application's bundle identifier (Bundle ID). SharePlus will not run in a device if the license file (license.splic) is missing or invalid.

The Contoso Company example

Contoso company wants to distribute SharePlus Enterprise app internally.

To enable app distribution to iOS devices, Apple requires Contoso to be a part of the iOS Developer Enterprise Program. A **Distribution Certificate** (`ContosoCertificate.p12`) is needed to legally register an app under Contoso's name.

Next, Contoso must define a **bundle ID** (`com.contoso.shareplus`) in order to identify SharePlus Contoso application. To register the bundle ID, Contoso needs to create a new **App ID** (`A1B2C3D4E5.com.contoso.shareplus`) in Apple's Provisioning portal. The **Team ID prefix** (`A1B2C3D4E5`) included in the App ID is provided by Apple.

After that, a **Provisioning Profile** ([SharePlusContoso.mobileprovision](#)) can be created and downloaded from Apple's portal to use the previously defined **bundle ID** ([com.contoso.shareplus](#)).

Finally, a **SharePlus license** ([license.splic](#)) provided by Infragistics must be included in the IPA to be signed. Note that a SharePlus application will not run without a license file.

After gathering all the required resources, the SharePlus Contoso IPA can be signed and distributed by Contoso company.

For further details about the whole process refer to the *Start-up Package document* and Application Re-Signing Process section in the *SharePlus Administrator Guide*.

The iOS Developer Enterprise Program

This document assumes that your company is already enrolled in the iOS Developer Enterprise Program. For information about the program, visit [Apple's Enterprise Developer Home](#).

Note: This process usually takes, at least, two weeks. So, if you are not part of this program already, is important that you start this process as soon as possible

D-U-N-S Numbers

Apple requires a D-U-N-S number for organizations and can't be bypassed. The Apple Support Center has a [D-U-N-S Numbers](#) page with additional information about their importance and how to get one.

The support page also mentions that while getting a D&B number is free, you can expedite its creation (5 days) for an additional fee.

<https://www.dandb.com/establish-business-credit/>

Preparing the Certificate and Profile

Once you enroll your company in the Apple's Enterprise Program, you need to get a couple of files from the apple's portal to sign the application for enterprise distribution.

These files are:

- Distribution Certificate
- Distribution Provisioning Profile

Getting the Distribution Certificate

To get the distribution certificate from the portal, first you need to create a client request, which will be uploaded to the portal in order to generate the certificate. The following are the complete steps in order to get the Certificate correctly:

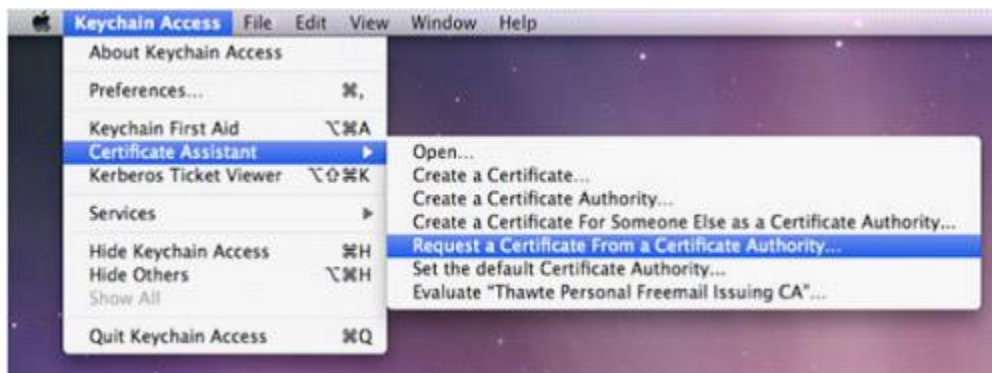
1. Launch the Keychain Access app.

2. In the Preferences menu, set Online Certificate Status Protocol (OCSP) and Certificate Revocation List (CRL) to *Off*.



3. Choose Keychain Access -> Certificate Assistant -> Request a Certificate from a Certificate Authority.

Note: If you have a non-compliant private key highlighted in the Keychain during this process, the resulting Certificate Request will not be accepted by the Provisioning Portal. Please confirm that you are selecting *“Request a Certificate From a Certificate Authority...”* and not selecting *“Request a Certificate From a Certificate Authority with <Private Key>...”*



4. Complete the Certificate Information in the Assistant.
 - a. In the User Email Address field, enter your email address. The email address entered must match the same information submitted when you registered as an iOS Developer.
 - b. In the Common Name field enter your name. The name entered must match the information that was submitted when you registered as an iOS Developer.
 - c. No CA (Certificate Authority) Email Address is required. The “Required” message will be removed after completing the following step.
 - d. Select the “Saved to Disk” radio button and, if prompted, select “Let me specify key pair information” and click “Continue”.



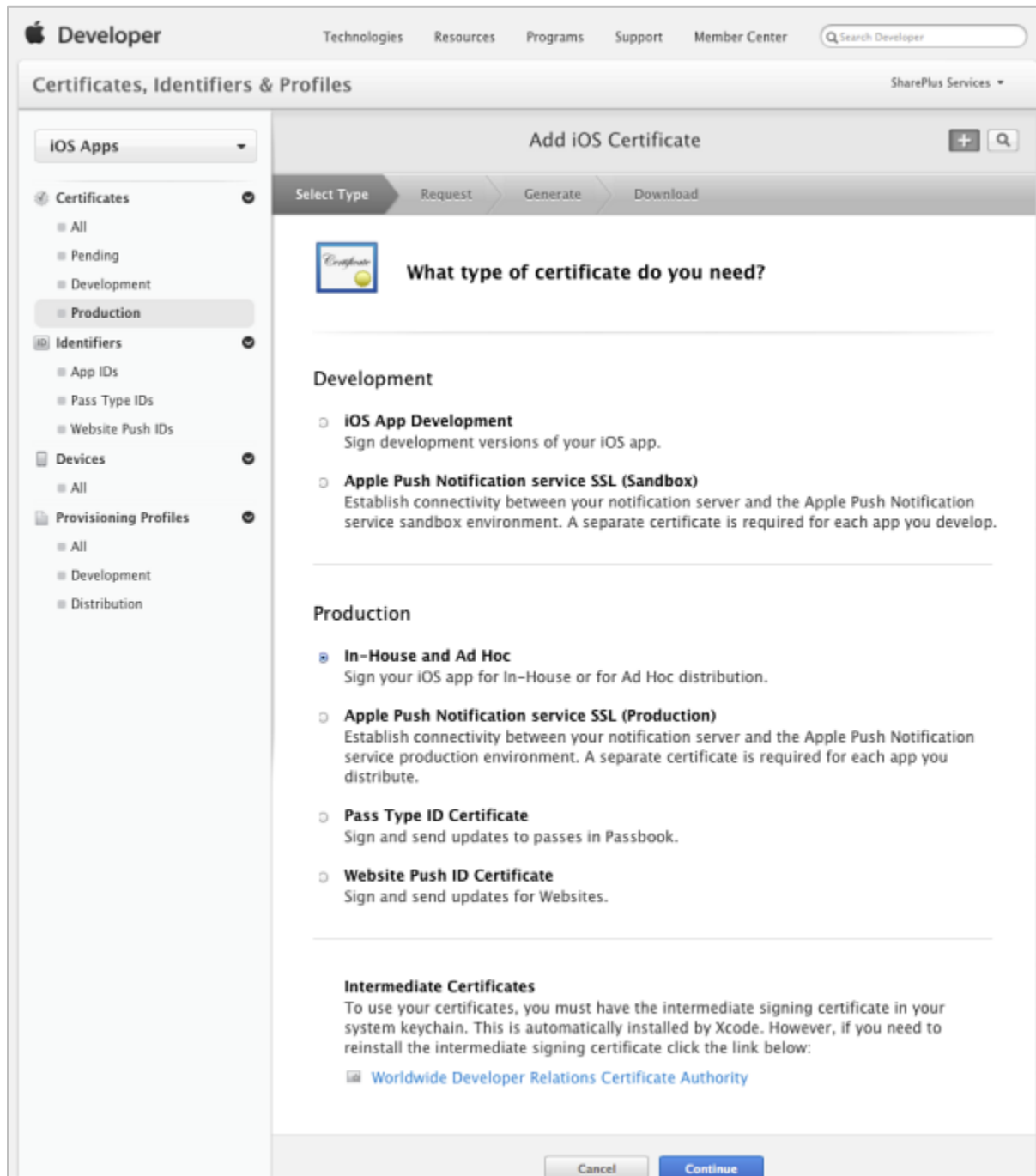
- e. If “Let me specify key pair” option was selected, specify a file name and click “Save”. In the following screen, select “2048 bits” for the Key Size and “RSA” for the Algorithm.



- f. Click “Continue”.

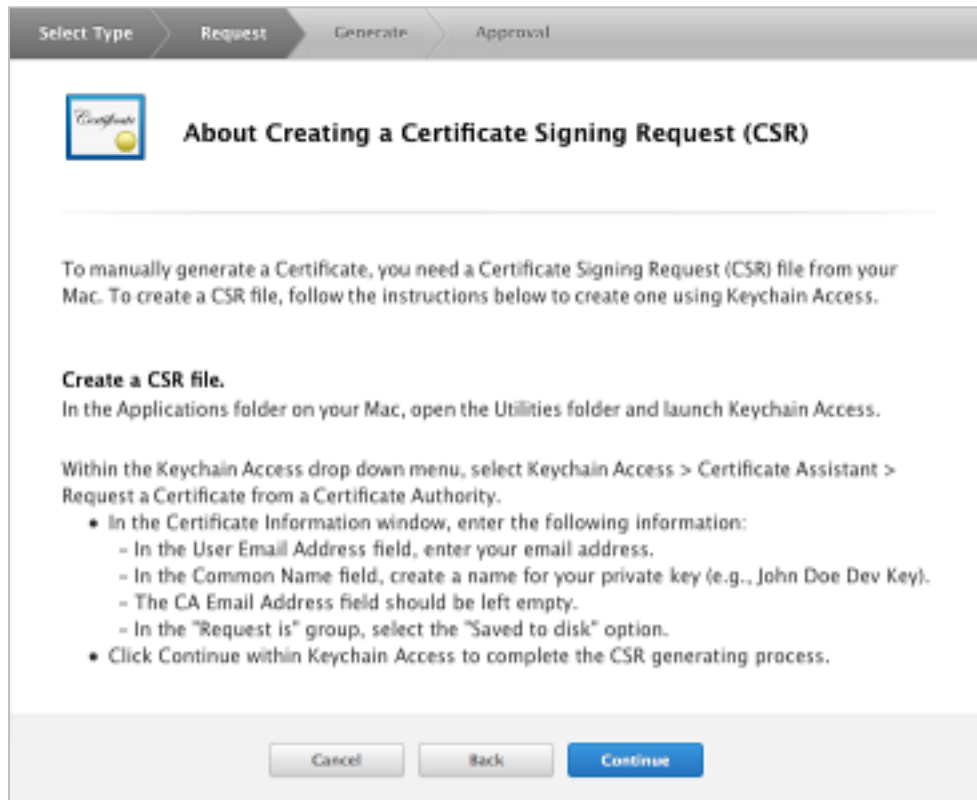
The Certificate Assistant will create a CSR (Certificate Signing Request) file on your desktop.

5. After creating a CSR file, log in to the iOS Provisioning Portal and navigate to Certificates > Production and click “Add Certificate”.



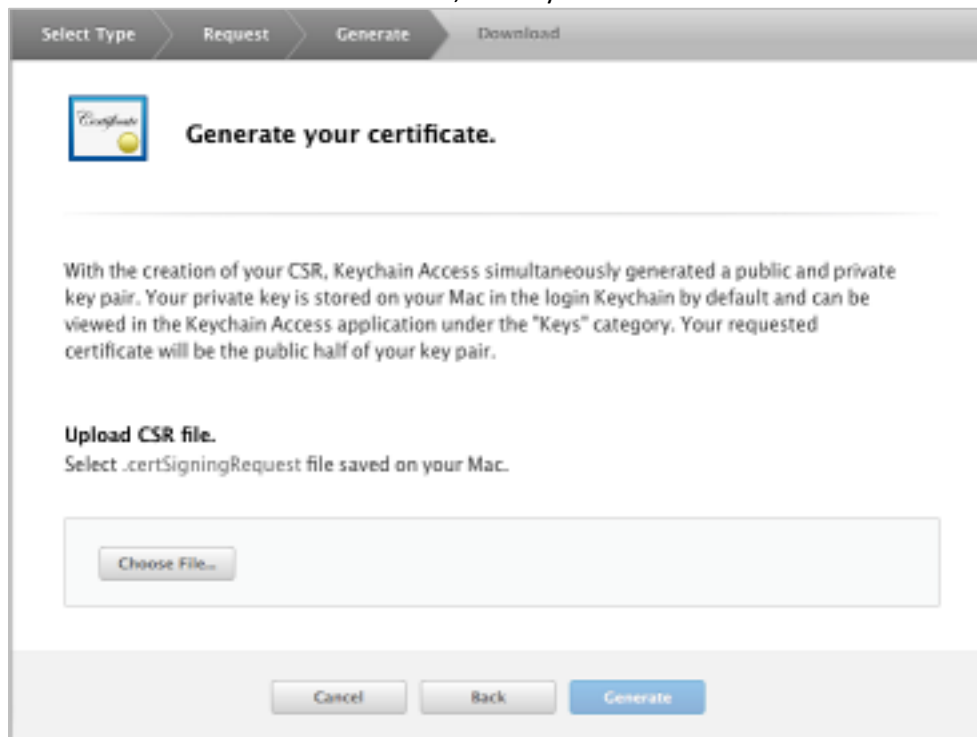
6. Select “In-House and Ad-Hoc” option under “Production” and then click “Continue”.

As shown below, an informative screen about how to create a CSR file is displayed.



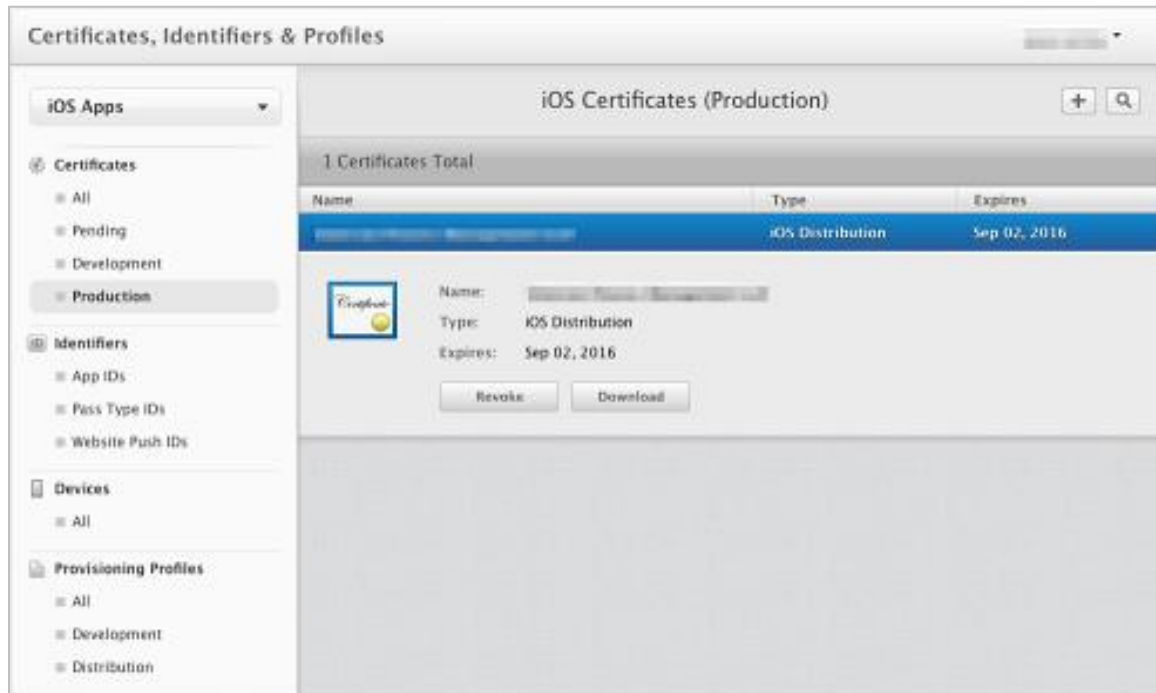
7. Click "Continue".

8. Click the "Choose file" button, select your CSR and click "Generate".



Note that if the Key Size was not set to *2048 bits* during the CSR creation process, the Portal will reject the CSR.

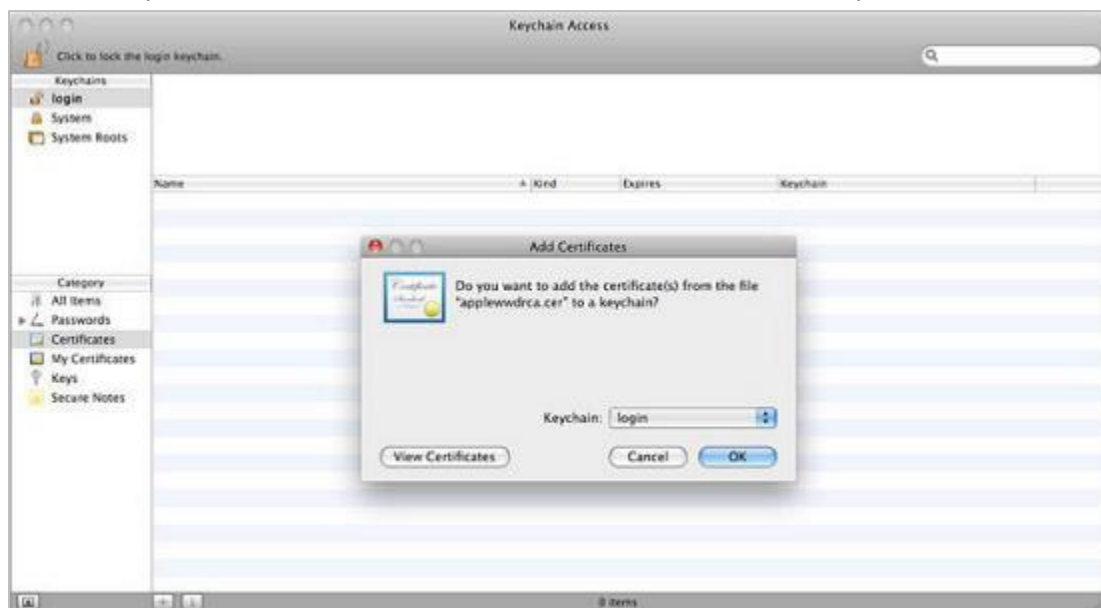
Once generated, you should be able to locate the certificate in “iOS Certificates Production”.



Installing the Certificate

After downloading it, you have to install the certificate locally:

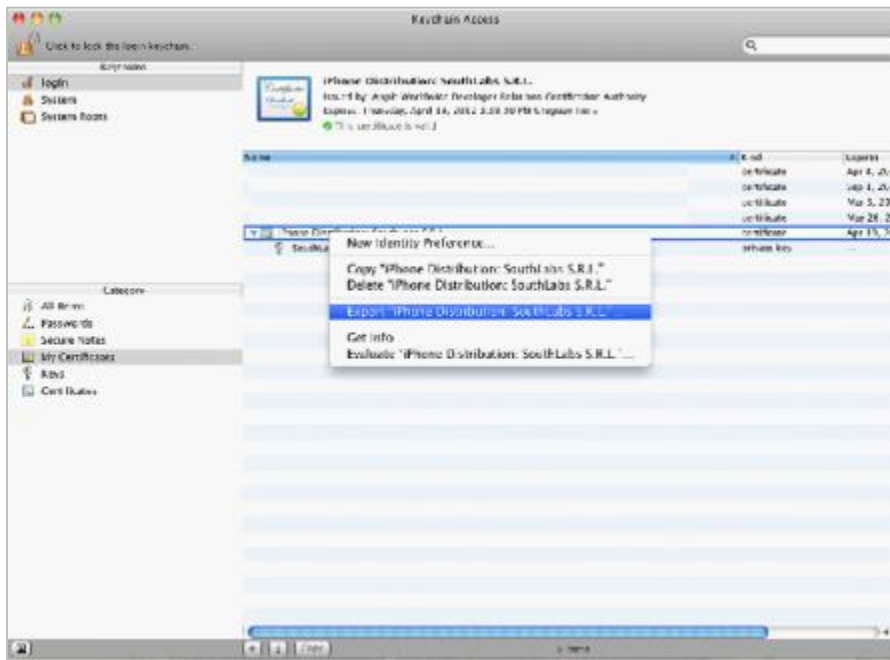
1. In the *Certificates > Production* section of the Portal, click “Download”.
The iOS Development Certificate is downloaded as a .cer file.
2. On your local machine, double-click the certificate to launch Keychain Access and install.



Exporting the Certificate

Once you have the distribution/development certificate, you can export it from your computer and save it as backup or use it with another computer. Steps to export the certificate from your computer are:

1. Open the keychain access application.
2. Locate the certificate under *login keychain* for *My Certificates* category, and check that it has an **identity key** associated.



After that, you need to send the exported p12 file (Personal Information Exchange) to Infragistics engineers, this file should have embedded the identity key along with the certificate.

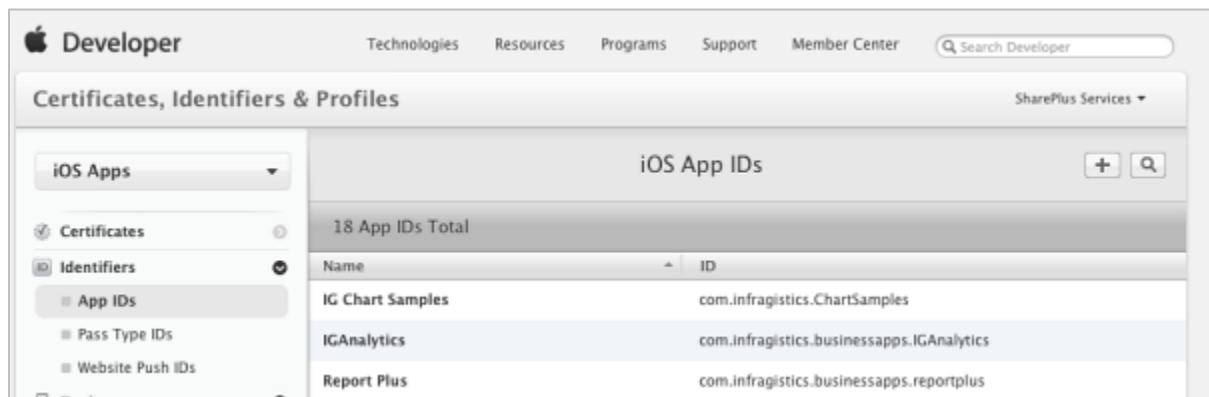
3. **Ctrl-click** over the certificate and then select "Export certificate".

Note: The certificate must have an identity key associated, otherwise the certificate won't be able to sign the application.

Getting the Distribution Provisioning Profile

To get the distribution profile, you need to have the Application ID first. If you already have an Application ID for the application you will distribute, skip the procedure below and go to the Creating your Provisioning Profile section.

1. Go to the [Developer Center Home](#).
2. Login to the Developer Center and enter the **iOS Provisioning Portal**.
3. Navigate to the **iOS App IDs** section.



- Click the plus (+) button to register an App ID. A form is displayed:

Registering an App ID

The App ID string contains two parts separated by a period (.)—an App ID Prefix that is defined as your Team ID by default and an App ID Suffix that is defined as a Bundle ID search string. Each part of an App ID has different and important uses for your app. [Learn More](#)

App ID Description

Name:

You cannot use special characters such as @, &, *, ' , *

App ID Prefix

Value: WXF269YW84 (Team ID)

App ID Suffix

☒ **Explicit App ID**

If you plan to incorporate app services such as Game Center, In-App Purchase, Data Protection, and iCloud, or want a provisioning profile unique to a single app, you must register an explicit App ID for your app.

To create an explicit App ID, enter a unique string in the Bundle ID field. This string should match the Bundle ID of your app.

Bundle ID:

We recommend using a reverse-domain name style string (i.e., com.domainname.appname). It cannot contain an asterisk (*).

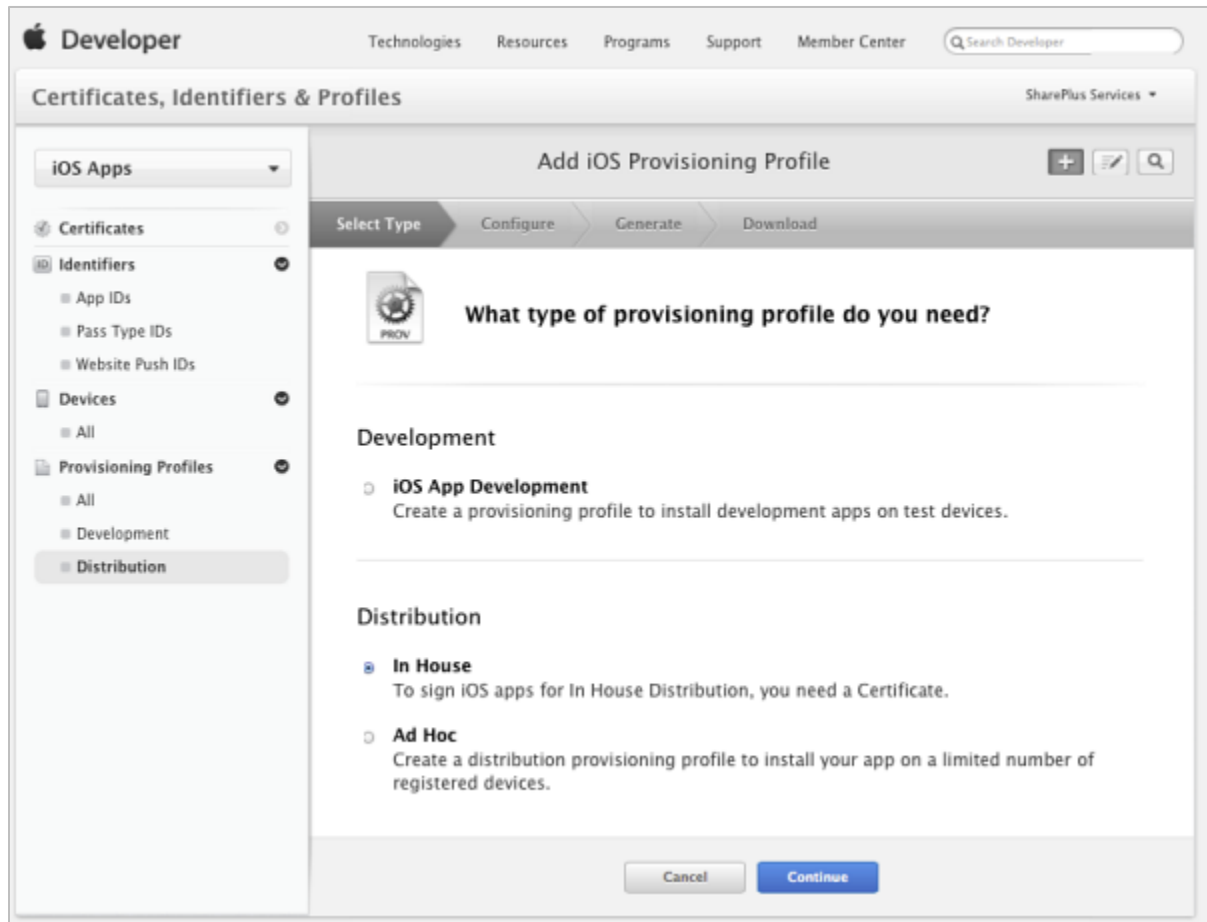
- Fill the blanks with the corresponding data.
Using an explicit App ID is recommended, since it will allow you to uniquely identify the app.

If possible, use the standard notation based on a reverse-domain name style string, i.e., *com.domainname.appName*. It cannot contain special characters like “*”.

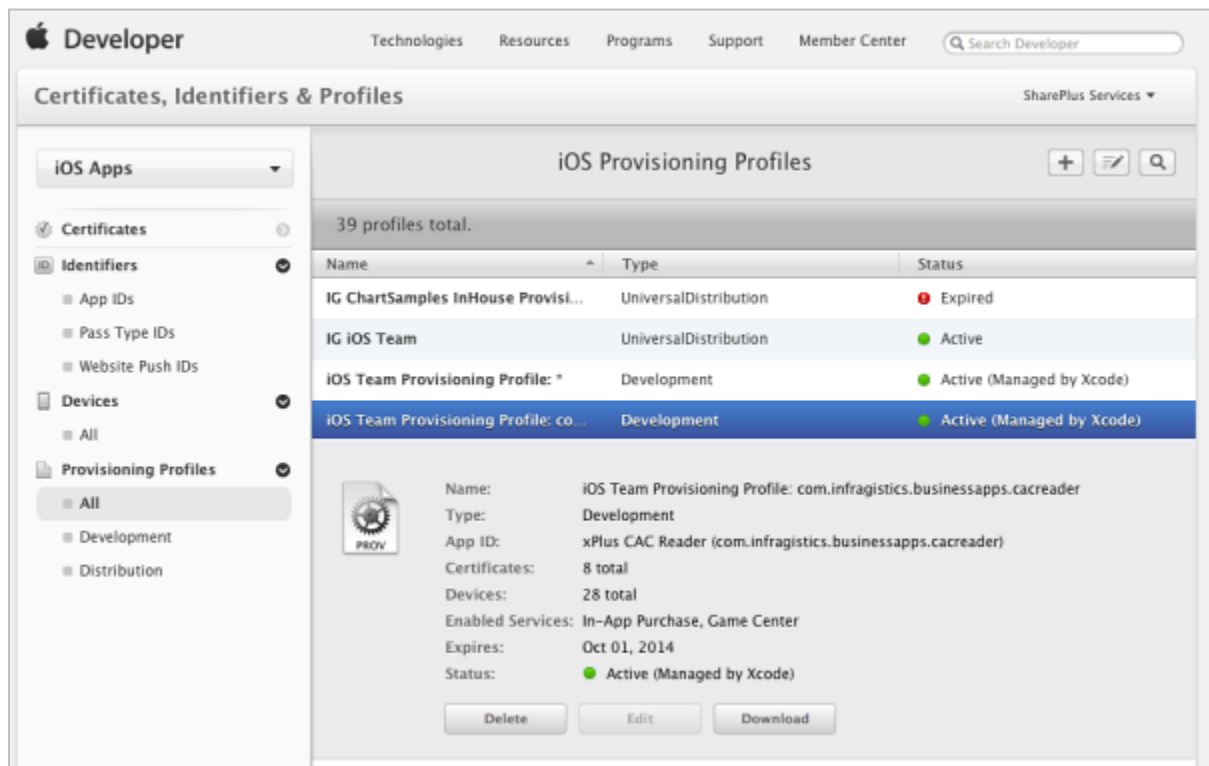
6. Finally, click the submit button.

Creating your Profile

1. Under *Provisioning Profiles*, go to the *Distribution* section to add a new Profile.



2. Select the profile type.
Available Distribution options are:
 - **Ad Hoc** - For internal distribution and testing purposes. Specific device IDs are needed.
 - **In House** - Lets you create a profile that helps you distribute the release build of the application internally and no device IDs are needed.
3. Click Continue.
4. Once you have created the profile, select *All* under *Provisioning Profiles*. There you will find a list of your profiles.



5. Locate the profile you just created and download it.

Note: Sometimes the profile takes just a minute to be available for download. In case you are not able to download the profile, just refresh the page after a few seconds and the download button should appear next to the profile name.

Chapter 5

Advanced Configuration

Section 1: User Experience Customization

Section 2: Offline Support

Section 3: Support Enablement

User Experience Customization

The User Experience can be customized in several ways, through application re-branding, configuring the behavior of the user interface, configuring different Home content, changing the application launch module, or even including further customization by using SharePlus SDK or Native custom Development.

For further information about SharePlus SDK refer to SharePlus Developer's Guide.

Application Re-Branding

Re-branding can be achieved through the inclusion of customized assets , image resources that must be included on the application package to be distributed.

1. **Download** sample graphic assets from [here](#).
The sample graphic package includes the required images to be customized, also detailed in the *List of Re-Branding PNG Images* section below. Optional images are not included in the download.
2. **Create** the customized images.
The images used for application rebranding are normally provided by a Visual Designer.
3. **Replace** the images in the application package to be distributed.
In the file system folder where the application package is located, replace sample images with rebranded images.
4. **Re-sign** the application.

Adding Re-Branding Assets

The Branding folder in your file system must contain all re-branding resources. You need to store the customized images in the folder before SharePlus build is created, so that they will be included in the application package to be distributed.

List of Re-Branding PNG Images

Re-branding images include:

- **Application Icons**, used in the Springboard, iTunes Artwork, device settings, Spotlight.
- **Splash screens**, images displayed when first launching the app while the interface loads.
- **Passcode Lock headers**, you can optionally change the Passcode Lock header.

App Icons

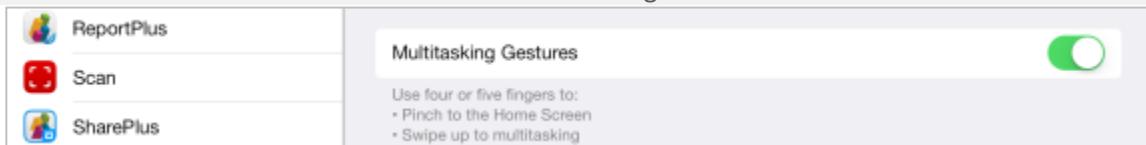
Springboard / iOS home screen



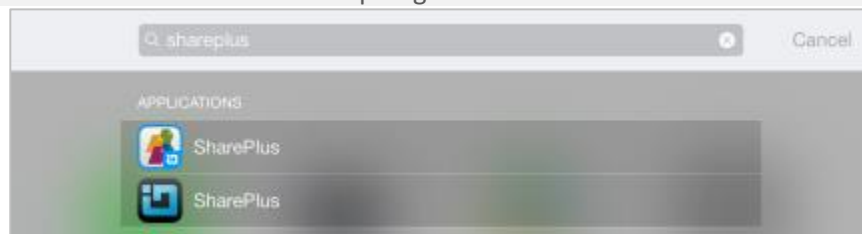
iTunes Artwork



Device settings



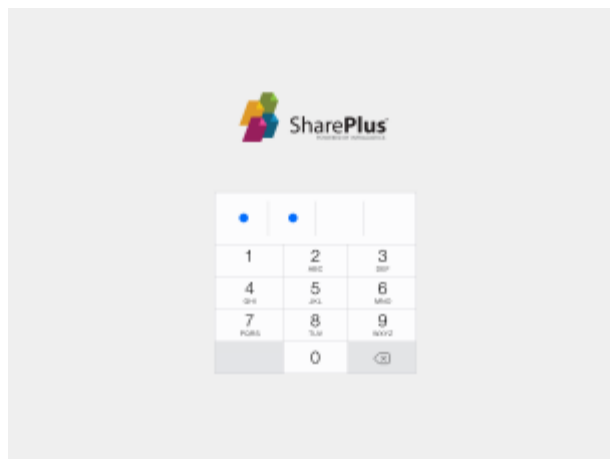
Spotlight search



Splash screens



Passcode Lock headers



When adding re-branding assets, some application icons are required and others are optional.

Required – Not including all the required app icons will result in a blank/black space within the app, affecting the application's user experience.

Optional – These app icons may not be included, in which case the closest icons in size will be used instead. Note that these icons will be automatically stretched to match the required size.

In the tables below you will find the application icons, splash screens, and passcode lock images.

Required Images

iOS VERSION	IMAGE LOCATION	DEVICE	SIZE (px)	TENTATIVE NAME
iTunes	iTunes Artwork	-	512 x 512	iTunesArtwork
			1024 x 1024	iTunesArtwork@2x
iOS 9, 10	Springboard / iOS Home Screen	iPad	76 x 76	applcon-76x76-ipad
			152 x 152	applcon-76x76@2x-ipad
		iPhone	120 x 120	applcon-60x60@2x-iphone
			180 x 180	applcon-180x180@3x-iphone
	Launch / Splash Screen	iPad	768 x 1024	default-700-Portrait-ipad
			1536 x 2048	default-700-Portrait@2x-ipad
			1024 x 768	default-700-Landscape-ipad
			2048 x 1536	default-700-Landscape@2x-ipad
		iPhone	640 x 960	default-700@2x-iphone
			640 x 1136	default-700-568h@2x-iphone
			750 x 1334	default-800-667h@2x-iphone
			1242 x 2208	default-800-Portrait@3x-iphone
			2208 x 1242	default-800-Landscape@3x-iphone

Passcode Images (Recommended)

iOS VERSION	IMAGE LOCATION	DEVICE	SIZE (px)	TENTATIVE NAME
iOS 9, 10	Passcode lock header	iPad	474 x 146	header-ipad
			948 x 292	header@2x-ipad
		iPhone	292 x 77	header-iphone
			584 x 154	header@2x-iphone

Optional Images				
iOS VERSION	IMAGE LOCATION	DEVICE	SIZE (px)	TENTATIVE NAME
iOS 9, 10	Device Settings	iPad & iPhone	29 x 29	applcon-29x29
			58 x 58	applcon-29x29@2x
	Spotlight Search	iPad	40 x 40	applcon-40x40-ipad
		iPad & iPhone	80 x 80	applcon-40x40@2x

Important considerations on graphic assets:

- All images must follow these **general requirements**:
 - No transparency, except the Passcode Lock header
 - 72 dpi
 - PNG format
- **iTunes Artwork** images must be named without the .png extension.
- **Required images** are mandatory.

User Interface Behavior

In SharePlus you can configure the UI (User Interface) to better suit your needs. The whole configurations set is grouped into 6 different areas which are included under several features in the Configuration File.

- Swipe through documents
- Disable Auto-Lock
- Tabbed preview of documents
- Office documents preview
- Picture Board
- Document Preview on Tap

Swipe Through Documents

```
<key>DocumentViewer</key>
<array>
  <dict>
    <key>SwipeDocumentsEnable</key>
    <true/>
    <key>SwipeListTemplates</key>
    <string>109, 851</string>
  </dict>
</array>
```

- **SwipeDocumentsEnable** – Enable/Disable swipe through list documents when opening a single document from a library or list.
- **SwipeListTemplates** – Specify the list templates that will have the Swipe Documents feature enabled or disabled. Those SharePoint list templates are represented by numbers, e.g., 109 is a Picture Library and 851 is an Assets Library. Default values are: 109, 851.

Navigation Pane/Sidebar

```
<key>GlobalSettings</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>AutoHideNavigator</key>
    <true/>
  </dict>
</dict>
```

- **AutoHideNavigator** – Enable/Disable the Sidebar (left pane) auto hide behavior. If enabled, the Sidebar will be displayed only the first time the user runs the app. By default, this setting is disabled and the Sidebar is displayed.

Disable Auto-Lock

```
<key>GlobalSettings</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>DisableAutoLockOnPreview</key>
    <false/>
    <key>DisableAutoLockOnSync</key>
    <false/>
    <key>DisableAutoLockMustBePluggedIn</key>
    <true/>
  </dict>
</dict>
```

- **DisableAutoLockOnPreview** – Prevents the device from locking itself while previewing documents.
- **DisableAutoLockOnSync** – Prevents the device from locking itself during the synchronization process.
- **DisableAutoLockMustBePluggedIn** – Enables the *DisableAutoLockOnSync* and *DisableAutoLockOnPreview* options only when the device is plugged in.

Tabbed preview of documents

```
<key>DocumentViewer</key>
  <key>Settings</key>
  <dict>
    <key>TabsEnable</key>
    <false/>
    <key>TabsListTemplates</key>
    <string></string>
  </dict>
```

- **TabsEnable** – Enables/Disables the tabbed previewing for documents – Have all documents from a list opened in different tabs when opening a single document.
- **TabsListTemplates** – Enables/Disables the tabbed previewing feature only for the specified list templates. SharePoint list templates are represented by numbers, e.g., 109 is a Picture Library and 851 is an Assets Library. Default values: BLANK.

Office documents preview

```
<key>DocumentViewer</key>
  <key>Settings</key>
  <dict>
    <key>ForceWebViewForOffice</key>
    <false/>
  </dict>
```

- **ForceWebViewForOffice** – When true, disables the use of *quick look*, a native view that can display any type of document but does not support swipe between documents (useful when opening several documents at the same time). The alternative, *web view*, can't display Office Macros but it does support swipe. This setting is false by default.

Picture Board

This feature changes the Picture Board visualization settings, and is only available for Picture and Assets libraries.

```
<key>PictureBoard</key>
<dict>
  <key>Settings</key>
  <dict>
    <key>HideInfoButton</key>
    <true/>
  </dict>
</dict>
```

- **HideInfoButton** – When enabled, hides the button on the bottom right corner of the pictures.

Document preview on Tap

```
<key>GlobalSettings </key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>PreviewDocumentsOnTap</key>
    <false/>
  </dict>
</dict>
```

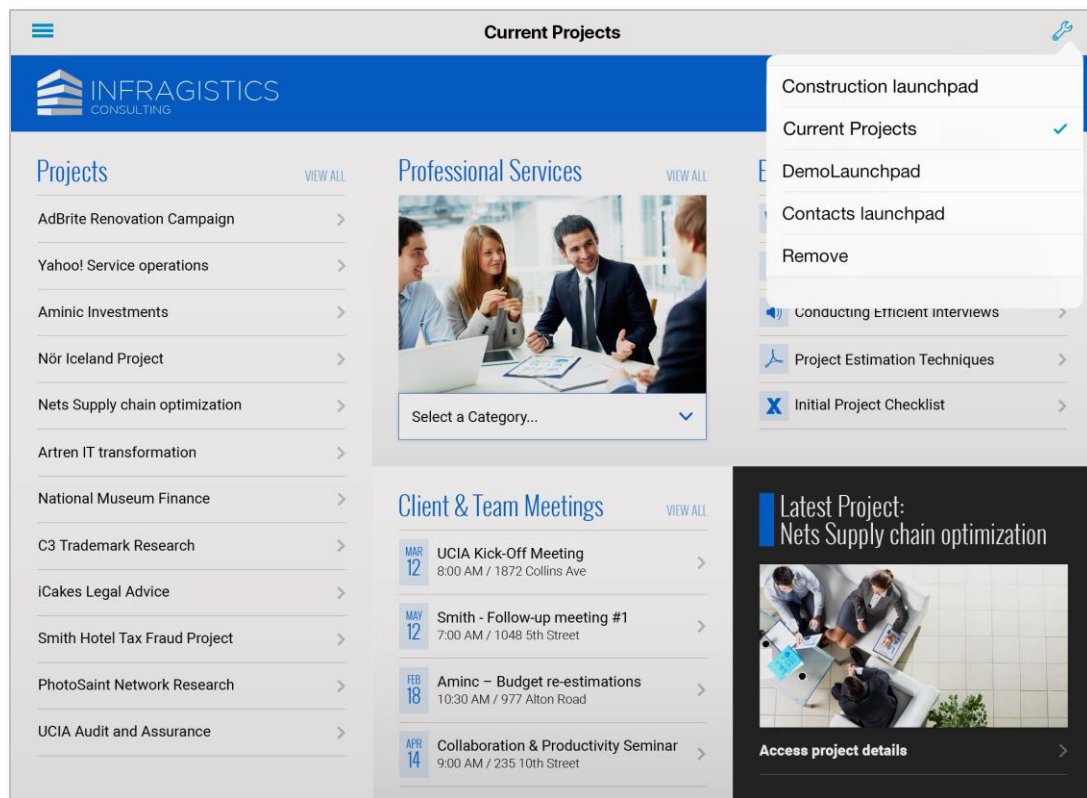
- **PreviewDocumentsOnTap** – Enables document preview as the default action when tapping an item. Item details are still available on a different view.

Home Customization

“Home” refers to the content displayed when accessing a Site Home or the Application Home within SharePlus application. You can configure different types of content to be displayed as Home, i.e., SharePlus Mobile Workspaces, ReportPlus dashboards, and PDF files.

For further information about SharePlus Mobile Workspaces refer to *SharePlus Developer's Guide*, for information about ReportPlus dashboards refer to [Data Visualization](#)

In addition, a Home can have more than one content assigned, in those cases you are able to switch between the different content by using a selector.



Home content

You can customize Site Homes or the Application Home to displayed customized content in SharePlus.

Application Home

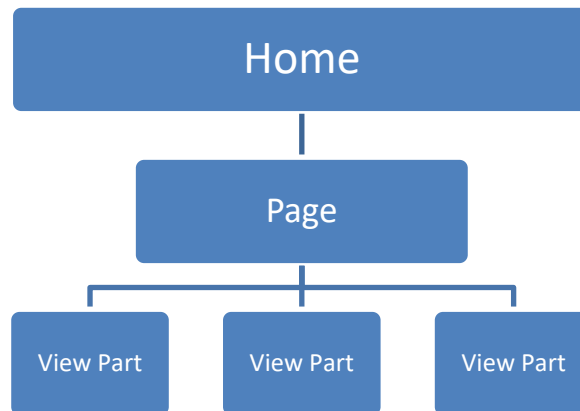
Home content can be displayed in SharePlus when accessing the Application Home module in the SideBar. This module can be loaded by default when opening the application from scratch.

Site Homes

Portals and sites can both display home content in SharePlus, presenting the user with a customized view for a given site. Site Homes can be pre-configured and shared across sites, displaying different content depending on the SharePoint site's context. Every site in SharePlus has a Site Home by default, which can be changed by configuration.

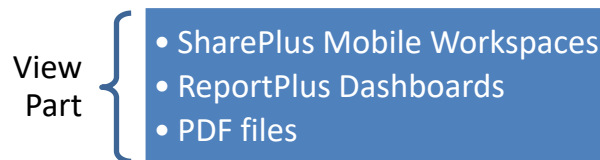
Understanding Homes, Pages, and View Parts

Home content can be specified manually (through the UI) or in the Configuration File by creating and configuring Pages, which include one or more elements called View Parts. View Parts are in charge of showing content on the screen when the Home is loaded.



Pages

In SharePlus, pages are not HTML web pages from a web site. A SharePlus Page is a different matter, it has a name for identification and it is used as a container of elements (View Parts). Pages are created in the Configuration File and they display Home content by including one or more View Parts. Each View Part can display a SharePlus Mobile Workspace, ReportPlus Dashboard, or a PDF file. When having more than one View Part, the user can swap between them through the User Interface.



View Parts

They are in charge of displaying content inside a Page, which is displayed on screen when a Home is loaded. There are two types of View Parts OOTB, SharePlus Mobile Workspaces and ReportPlus Dashboards. New View Part controllers can be added and configured for a custom application using the SharePlus Native SDK.

Pages and their View Parts are configured in the Configuration File (config.plist) at the same level as Sites, Accounts, and Features. Pages can also be pre-loaded by the application.

Home Configuration

The following table lists the available scenarios when configuring Homes.

Scenario	Details	Configuration Method
Application Home (In-App)	Configure a Site Home or Application Home through the UI.	Actions menu – Add as Home
Application Home	Create a Page holding home content and reference the PageName in the HomeManagement feature.	Configuration File – Pages, HomeManagement
Site Home	Add an entry to the MobileNavigation list and include the URL to the home content.	Site Configuration a.k.a. “MobileNavigation”
Default Home - Portal and sites	Configure the default page settings to be used across all sites of a portal.	Configuration File – Pages, Sites, HomeManagement

Application Home (In-app)

You are able to manually configure home content for a Site Home or the Application Home module through the User Interface.

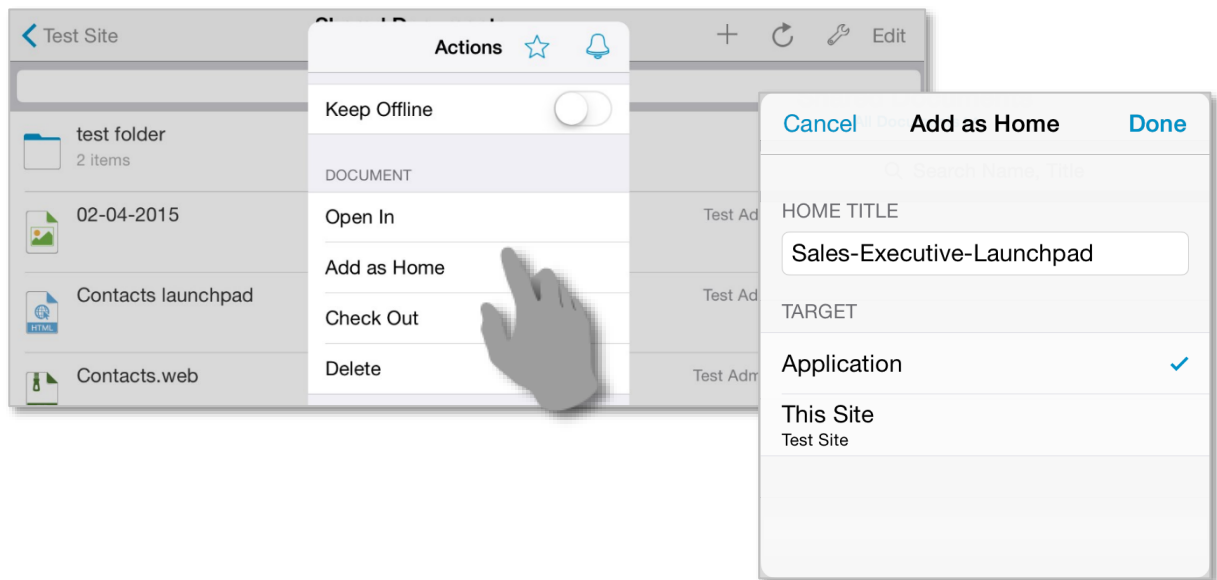
STEPS

1. Access the Actions menu

Tap & hold over the item/content to open the *Actions* menu and select the *Add as Home* action.

2. Then choose where to display your dashboard

You can choose between two targets, Application (Application Home module) or This Site (the site where the item is located).



Application Home

The Application Home will be displayed when tapping the module in the SideBar. You can pre-configure this Home in the Configuration File using an already created Page.

STEPS OVERVIEW

1. Creating a Page that includes one or more View Parts
2. Configuring your Page as the Application Home module

STEPS

1. Create a Page that includes one or more View Parts

You need to define a new page in the Configuration File or use an already existing one.

- a. Open the Configuration File.
Navigate to the Pages section to create a new Page.
- b. Define a Page.

```
<key>Pages</key>
<array>
  <dict>
    <key>PageName</key>
    <string>customPageName</string>
    <key>ShowSelector</key>
    <false/>
    <key>ViewParts</key>
    <array>
      ...
    </array>
  </dict>
</array>
```

The three elements are:

- **PageName** – The name used to reference the page when configuring a Home.
- **ShowSelector** – Enables/Disables the possibility to select between the different View Parts from a page/view container. Does nothing when there is only one View Part specified.
- **ViewParts** – Array of the View Part elements defined for the page.

- c. Specify a View Part containing home content.

Each page has an array of view Part elements that you must specify:

```
...
<key>ViewParts</key>
<array>
  <dict>
    <key>ViewControllerID</key>
    <integer>0</integer>
    <key>Title</key>
    <string>customMobileWorkspace</string>
    <key>Settings</key>
    <dict>
      <key>Source</key>
      <string>http://pathToServer/folder/Demo.web.zip</string>
      <key>SourceType</key>
      <integer>0</integer>
    </dict>
  </dict>
</array>
...
```

The elements are:

- **ViewControllerID** – Specifies the View Controller to be used (ID defined in the app.plist). Possible OOTB values are:
 - **0** – to reference SharePlus Mobile Workspaces or PDF files
 - **1** – to reference ReportPlus Dashboards
 - **2** – to reference SPWebAndListViewPartViewController
- **Title** – Specifies the title to be displayed on the top toolbar for this View Part.
- **Source** – Specifies the source location of the home content. The source can be an URL or a local path inside the application.
- **SourceType** – Sets the source type of the home content. Possible values are:
 - **0** – to reference an URL to download the file
 - **1** – to reference a path inside the application, in the application's resource bundle or Local Files if the path starts with "Documents/".

Note on Sources:

- When loading home content from local files, the path must start with "Documents/". This is a useful approach for debugging and testing new home content.
- When downloading the content from a static URL, the URL location must be public or otherwise located under the same Domain than the Configuration File to share its credentials.

2. Configure your Page for the Application Home

- a. Open the Configuration File.
Navigate to the *HomeManagement* feature in the Features section.
- b. Reference the Page
You need to reference the Page you created by name (*AppPageName* key value).

The Configuration File should be similar to:

```
<key>HomeManagement</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    ...
    <key>AppPageName</key>
    <string>customPageName </string>
    <key>ShowMainAreaButton</key>
    <false/>
    <key>ShowNavigatorButton</key>
    <true/>
    ...
  </dict>
</dict>
```

The relevant elements are:

- **AppPageName** – Defines the page name to be used as Application Home. The page name must match the name of an existing page in the Pages section.
- **ShowMainAreaButton** – When true, shows the Application Home button permanently at the top of the Main Screen or “Working Surface”.
- **ShowNavigatorButton** – When false, hides the Application Home button in the SideBar.

Site Home

When working with Site Configuration (a.k.a. “MobileNavigation”), the *Home* property allows you to set home content for a portal or one of its sites. In addition, you are able to configure one or more contents at the same time.

Your Site Home can contain a SharePlus Mobile Workspace, a PDF document, a ReportPlus dashboard or any content that can be rendered in a web browser.

Column	Type	Description
Home	Single line of text	A list of values separated by comma. Possible values are: <ul style="list-style-type: none">• An URL - to reference a resource to be loaded.• A page name - referencing a <i>PageName</i> key value defined in the <i>Pages</i> section of the Configuration File.• “default” - to reference the default SharePlus site view, which is the native view that displays sub-sites, libraries, and lists.
HomeTitle	Single line of text	A list of titles separated by comma, for each of the Home values specified in the <i>Home</i> field respectively.

Note: The “default” value in the Home column will reference the *DefaultSitePageName* key value if this value was manually changed in the Configuration File.

For further details about the MobileNavigation list refer to [SharePoint Site Configuration a.k.a “MobileNavigation”](#)

Default Home – Portal and sites

In SharePlus, Portals and sites can present a pre-configured customized view that can be shared with other sites. In this scenario, different content is displayed depending on the site’s context. You can configure a Site Home to be used by default for a portal and all its sites. To achieve this, Portals’ Site Homes need to be pre-configured using Pages and Sites in the Configuration File instead of using the MobileNavigation list.

STEPS OVERVIEW

1. Creating a Page that includes one or more View Parts
2. (Optional) Enabling the default list view for the Portal
3. Configuring your Page for the Portal’s Home
4. Defining the Site Home by default (DefaultSitePageName)
5. Adjusting inheritance settings (InheritParentPage)

STEPS

1. Create a Page that includes one or more View Parts

You need to define a new page in the Configuration File or use an already existing one. For details on how to specify a Page and a View Part including home content, see the previous scenario

Application Home

2. (Optional) Enable the default list view for the Portal

When pre-configuring custom home content as Portal Home, the default content is replaced.

A View Part with SharePlus default list view needs to be added, so you can switch between content (default list view and the new home content) by using the selector.

Note: SharePlus default list view shows all the sub-sites, libraries, and lists for portals or sites. The bottom bar also includes the site's Favorites.

In the Configuration File, the Page should include the following View Part:

```
<key>ViewParts</key>
<array>
  <dict>
    ...
    <key>Settings</key>
    <dict/>
    <key>ViewControllerID</key>
    <integer>2</integer>
    <key>Title</key>
    <string> </string>
    ...
  </dict>
</array>
```

The elements are:

- **ViewControllerID** – Specifies the ID defined in the app.plist for the View Controller to be used. For the default list view, the value specified must be 2.
- **Title** – Specifies the title to be displayed on the top toolbar for this View Part.

3. Configure your Page for the Portal's Home

- a. Open the Configuration File.
Navigate to your Portal configuration in the Sites section.
- b. Reference the Page in the pre-configured Portal
You need to reference the page you created by name (PageName key value).

The Configuration File should be similar to:

```
<key>Sites</key>
<array>
  <dict>
    ...
    <key>PageName</key>
    <string>yourCustomPage</string>
    ...
  </dict>
</array>
```

4. Define the Site Home by default (DefaultSitePageName)

- a. Navigate to the HomeManagement feature in the Features.
- b. Reference an existing page by name (PageName key value).

5. Adjust inheritance settings (InheritParentPage).

Go to *HomeManagement* to enable inheritance between the parent site and its sites.

The *HomeManagement* feature in the Configuration File should be similar to:

```
<key>HomeManagement</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    ...
    <key>DefaultSitePageName</key>
    <string>yourCustomPage</string>
    <key>InheritParentPage</key>
    <false/>
    ...
  </dict>
</dict>
```

The existing elements are:

- **DefaultSitePageName** – References the page to be used as Site Home by default. The page name must match the name of a page in the Pages section.
- **InheritParentPage** – When true, sub-sites inherit pre-configured pages from their parent site.

Startup Module Customization

In SharePlus you can change the module to be displayed when the application starts. The possible module choices are the Application Home, the Sites Hub, or any other module specified by configuration.

Starting with a pre-configured module

The module to be displayed when the application starts can be pre-configured in the Configuration File. To specify this module, you need to configure the *StartupModule* setting from Global Settings feature.

```
<key>GlobalSettings </key>
<dict>
    <key>Enabled</key>
    <true/>
    <key>Settings</key>
    <dict>
        ...
        <key>StartupModule </key>
        <string>FavoritesRow</string>
        ...
    </dict>
</dict>
```

This setting can be empty and the possible values are the Row Identifiers specified in the *NavigatorTableDefinition.plist* file.

Current OOTB values are:

- **ContentHub** – to reference the Content Module.
- **Favorites** – to reference the Favorites Module.
- **Recent** – to reference the Recents Module.
- **Social** – to reference the Social Module.
- **Search** – to reference the Search Module
- **Home** – to reference the default Application Home Module.

Starting with the Application Home

When no module was specified by configuration and the Application Home module is assigned, SharePlus will display this module when opening the app from scratch. The module can be pre-configured in the Configuration File or manually assigned through the UI.

Starting with the Sites Hub

SharePlus will display the Sites Hub when the application starts only when:

- No module was specified by configuration
- The Application Home module was not assigned.

SharePoint Offline Support

Understanding Offline Support

SharePlus provides the ability to **cache SharePoint content locally** in the device, allowing you to access information even when **not connected**. This means that you could, for example, open and edit a document stored in SharePoint when out visiting a client, regardless of the client's location or his network connectivity.

The Offline Support capability is enabled **at the List level**, and each list or document library is configured separately. Changes made offline are synchronized back to the server. Items with conflicts that need to be resolved will be displayed as Pending Updates for the list.

Configuring Offline

To optimize both performance and disk storage capacity, your content is not available by default while offline. In order to navigate your information while disconnected, you must turn on the Offline Support capability for the content you want.

Choose between two different sync modes: *Per Item* and *View Based*.

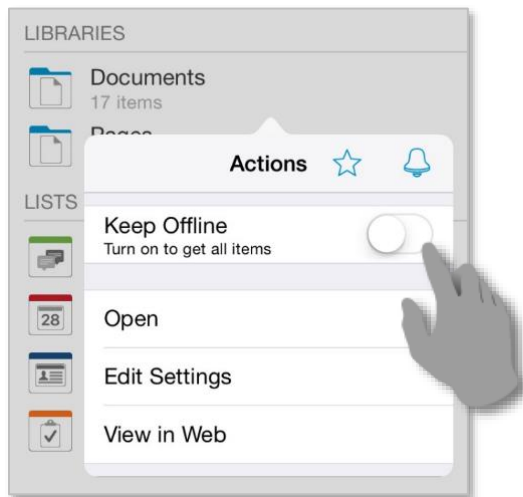
Per Item Mode (default)

Using this mode SharePlus synchronizes **only the content marked to be synchronized**.

You can activate it **per item, per folder, or choosing the entire list** as well.

How to Enable/Disable

1. **Tap & hold** over an item, a folder, or the whole list to access their *Actions*.
2. Then, just **turn on/off** the *Keep Offline* switch.



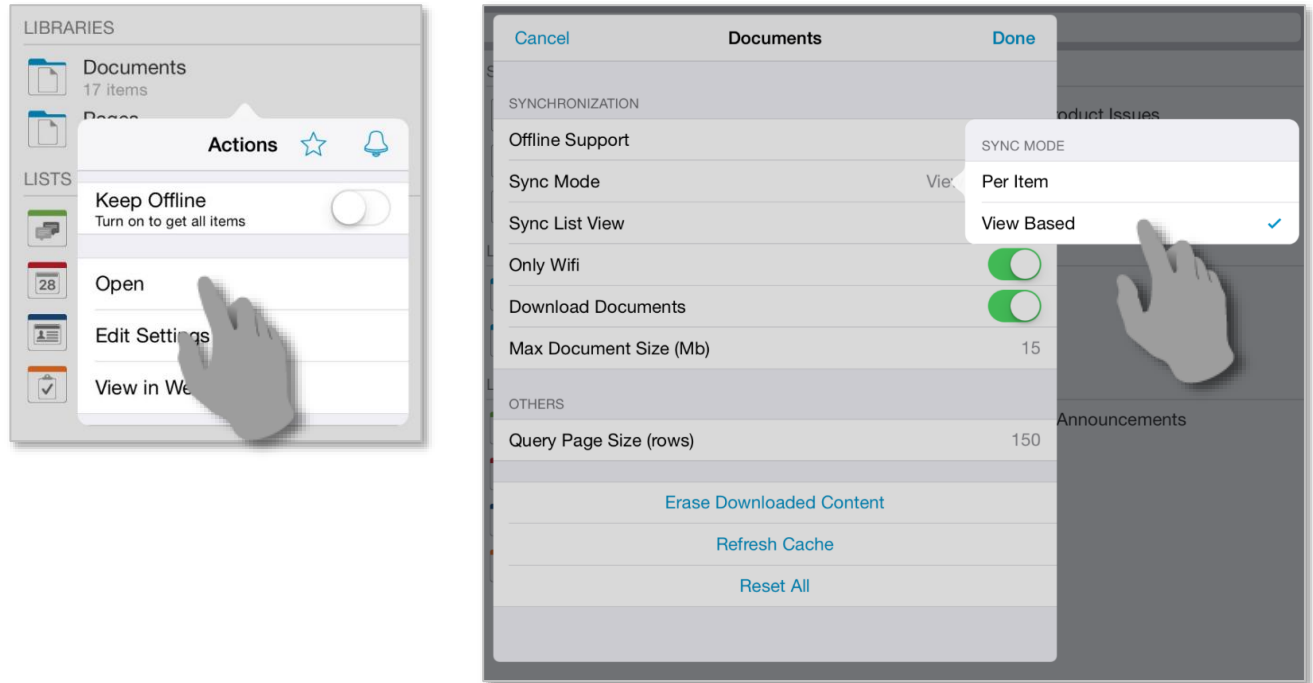
Note: Turning on/off the Keep Offline switch for a list or folder, you get to configure the offline behavior of all their items. This means that items or sub folders inside lose all their previous offline settings if any.

View Based Mode

This mode synchronizes **all the list items based on a SharePoint List View** like *All Documents*, *All Items*, or *By Author*. For example, you could synchronize your list based on a view showing items modified on the last seven days. Only those items will be cached in SharePlus, not the entire list.

How to Enable/Disable

1. **Tap & hold** over a list to access its *Actions*.
2. Then, choose *Edit Settings* to open the List Settings.
3. **Turn on/off** the *Offline Support* switch & **change** the default Sync Mode to *View Based*.
4. Finally, **select** the SharePoint List View to be used.



Complete list of Offline Settings

Besides the Sync Mode, there are several settings available to configure the offline behavior:

Setting	Description
Offline Support	Enable/disable offline browsing for a list.
Sync Mode	Choose between <i>Per Item</i> and <i>View Based</i> sync modes.
Sync List View (only View Based)	Choose a SharePoint List View definition to drive the View Based synchronization
Only Wifi	Configure the synchronization to run only when a wireless network connection is available.
Download Documents	Disable to synchronize only the item properties (metadata), not the actual document files.
Max Document size	Filter the downloaded documents by size, synchronizing only documents with less size than the specified value.
Query Page Size	Specify the number of items per page that are requested from the server.

Understanding Synchronization

The Synchronization process is activated when there are lists with offline support enabled and the device is idle for a fixed number of seconds. The frequency in which the process is triggered can be modified through an advanced configuration setting (*SyncIdleTime*). Alternatively, you can trigger the process yourself using the *Sync Now* feature.

The Synchronization Process

This process runs in the background while SharePlus is active and the device is online. SharePlus requests a block of list items to the SharePoint server to store them locally. After storing the block of items, if SharePlus remains idle the process continues to synchronize the rest of the list items. The frequency in which the synchronization process is triggered can be specified in the Configuration File (*SyncIdleTime* setting), or directly in the device through the UI (*Idle time*).

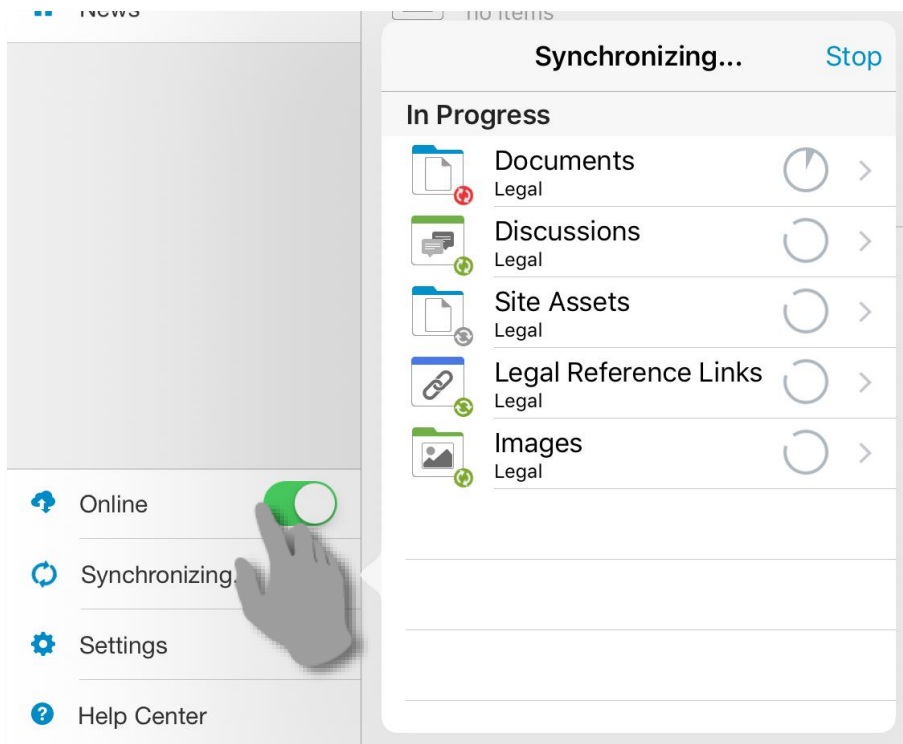
When SharePlus is moved to the background (the app state changes and is no longer active), the synchronization process is triggered. The process runs for about 7 minutes and then stops due to platform limitations.

Note: The **sync process** is suspended when:

- The user interacts with the device, to free bandwidth for navigation.
- SharePlus is sent to the background.
- The device is suspended.

Automatic Sync

Open *Synchronization* from the SideBar to start and also monitor the synchronization process.

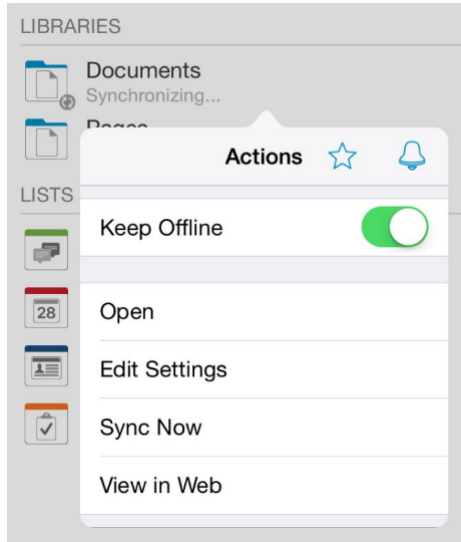


Once the process is finished, all the list contents will be cached locally.

Sync Now

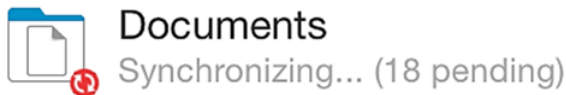
You can trigger the synchronization for a list for both sync modes, *Per Item* or *View Based*.

1. **Tap & hold** over a list to access its *Actions*.
2. Then, choose *Sync Now* to start the sync process.

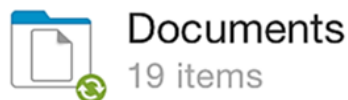


Synchronization status icons

Once the process is triggered, the list will go through the synchronization process.

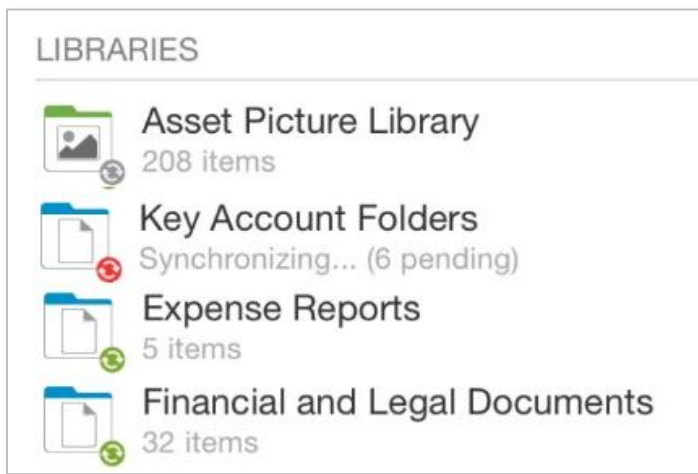


Once the process is successfully completed, the list is synchronized and the sync status icon turns green.



The sync status icons are used to illustrate different states when having Offline Support enabled.

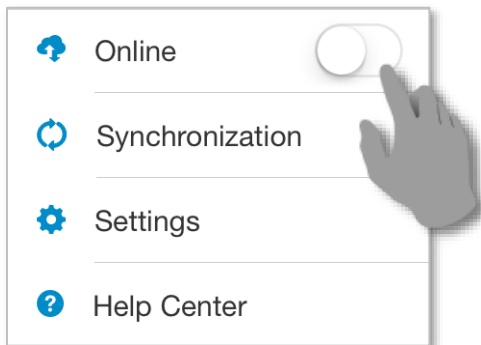
- **Grey icon** - A list or item is not yet synchronized.
- **Red icon** - A list is being synchronized or has pending changes.
- **Green icon** - A list or item is fully synchronized with the SharePoint server.



Note: A document bigger in size than the Max Document Size setting (15 Mb by default) won't be synchronized. As a consequence, the sync status icon will remain in color red to notify the document's status.

Going Offline/Offline

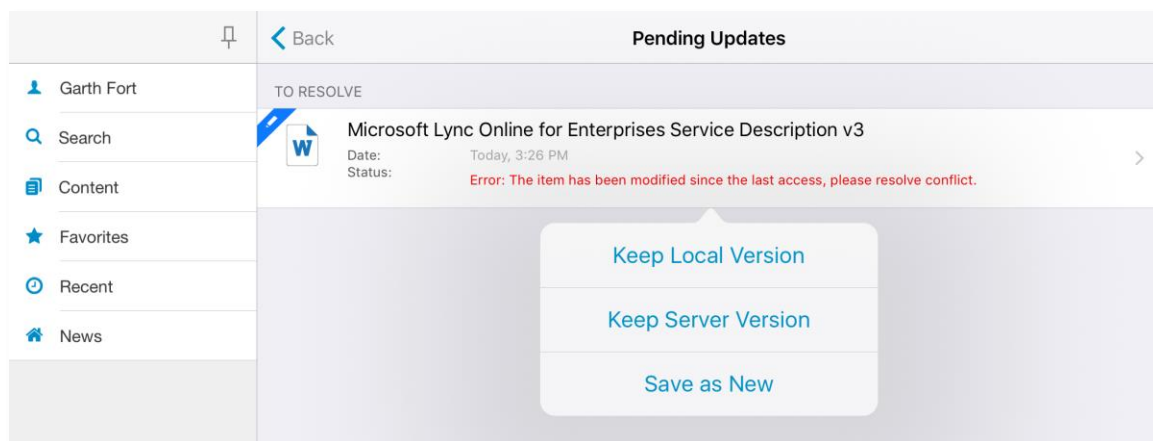
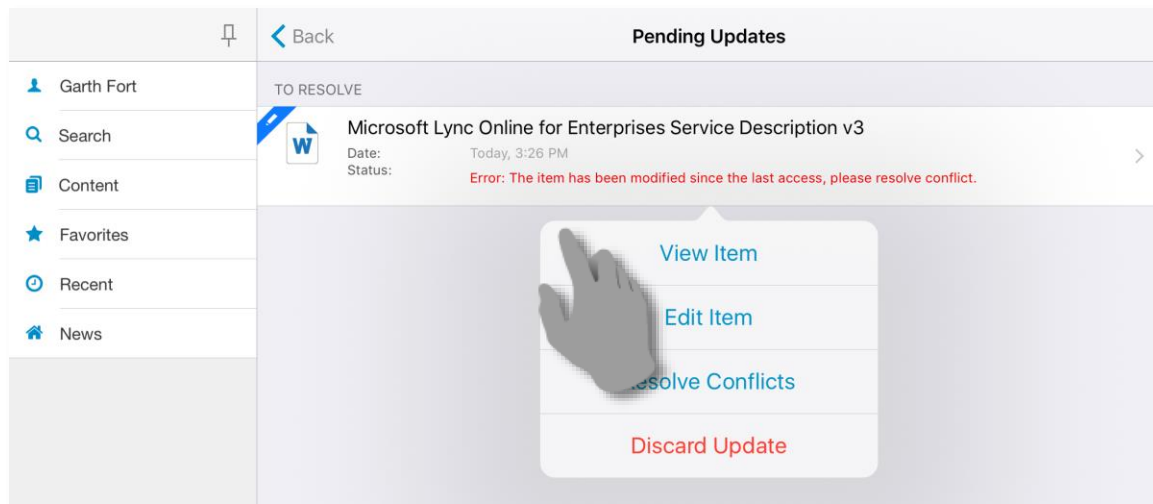
When switching the application to the Offline mode, you can only access the content that is already synchronized.



Note: When the Online switch is turned on (Online mode), SharePlus automatically switches between the Online and Offline modes depending on the network connectivity.

Conflict Resolution

When synchronizing changes back to the server you may encounter conflicts, for example, when two or more users edit an item at the same time. SharePlus resolution engine helps you decide how you want to proceed in those cases.



Permission Changes on the server while Offline

While working Offline, **permission changes** in SharePoint **can't be replicated** to SharePlus at that time. However, you will get those changes later when going Online again and content is synchronized. Synchronizing your work can lead to several **conflicts** which need to be addressed, like having SharePoint permissions changed for a site, a list or even a specific document.

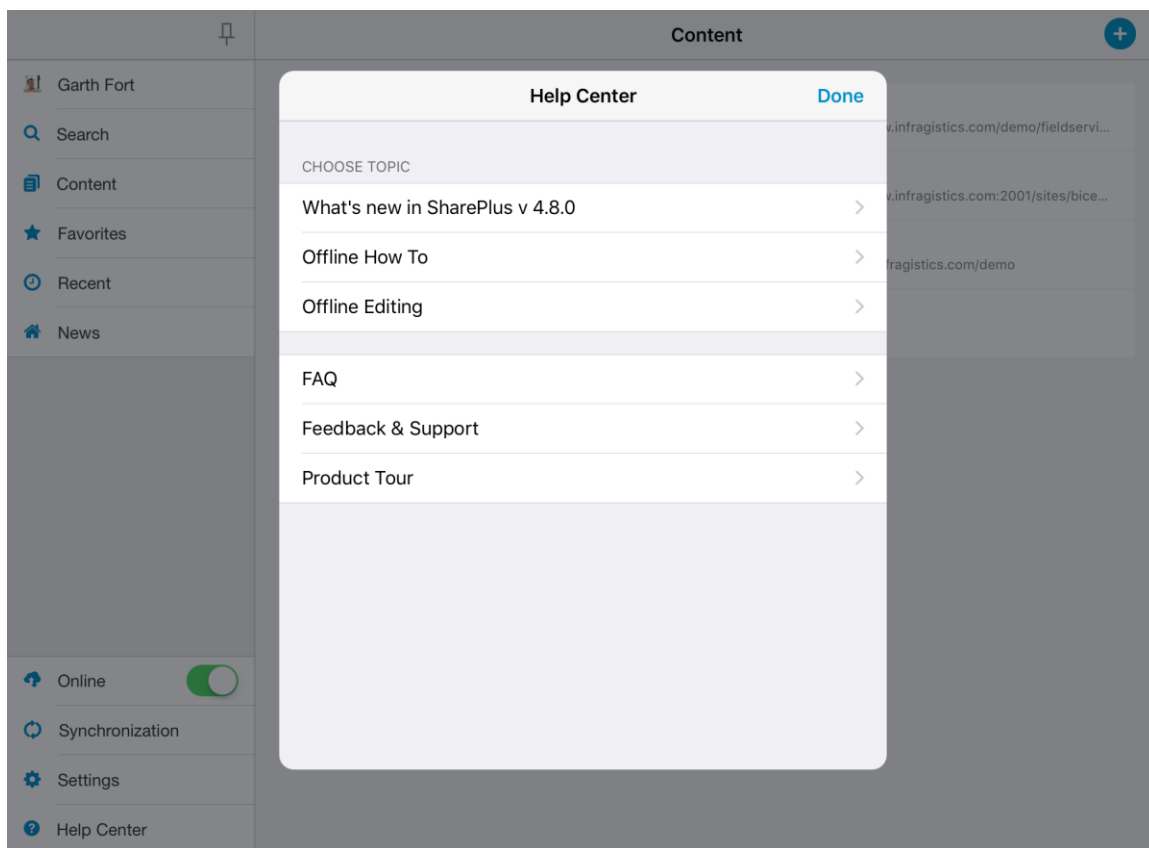
Structural changes on the server

The synchronization process updates all content changes from the SharePoint server. Changes in the structure, however, are not automatically updated. This is true for either online or offline scenarios. Structural changes in the SharePoint server include, for example, changing the default list View or adding/deleting a column from a list.

To **retrieve structural changes** for a list just use the *Refresh* button.

Support Enablement

SharePlus provides several in-app tools to facilitate access to support to the user. These different tools can be customized separately and are centralized in the Help Center.



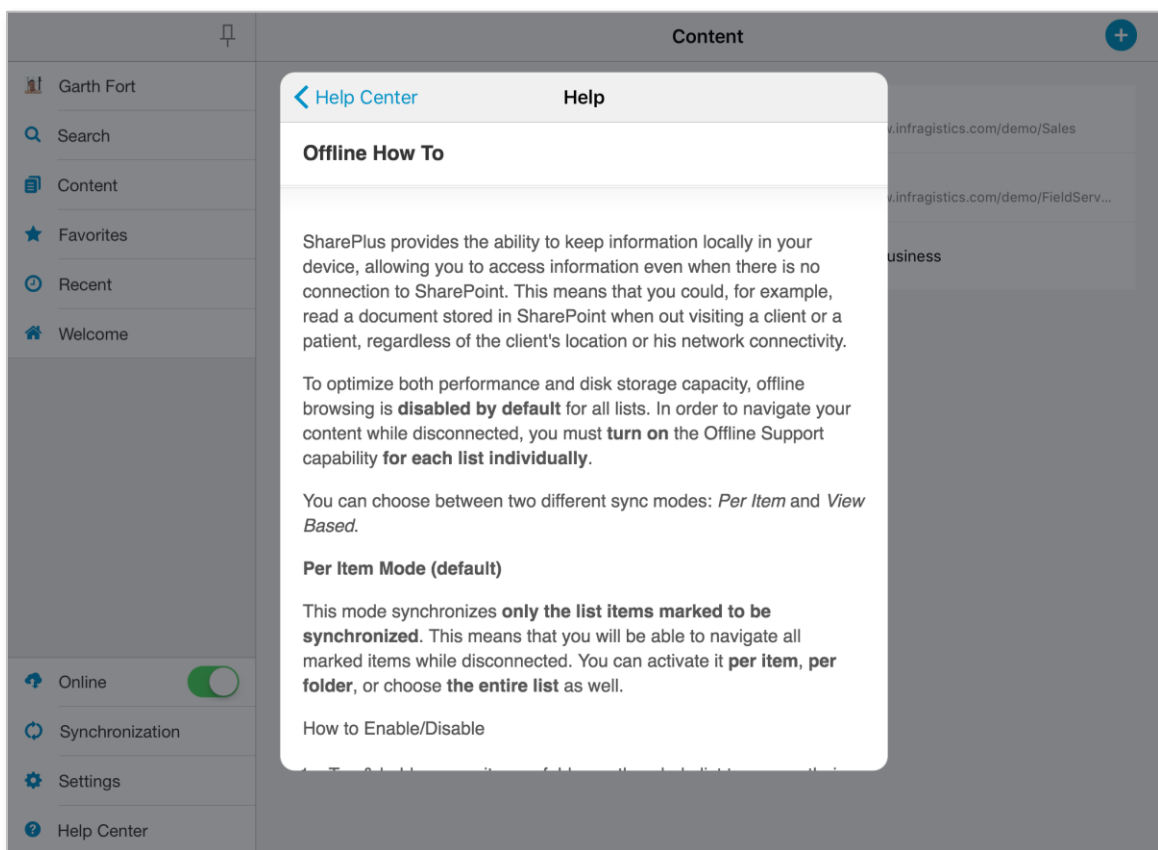
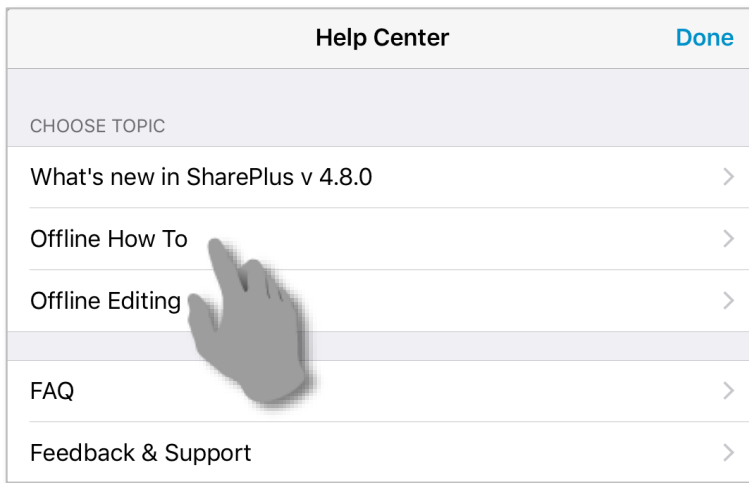
These tools are:

- In-App Help Documentation
- Mail Feedback Tools

In-App Help Documentation

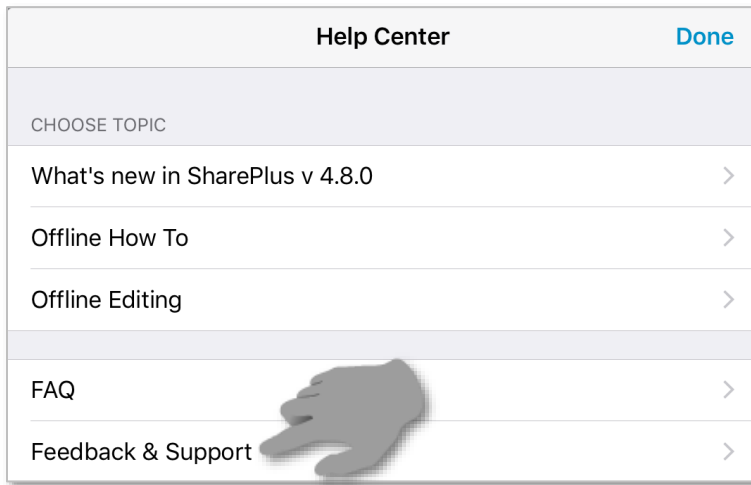
SharePlus displays a help documentation to the user within the application.

This help documentation consists of a few relevant topics which can be embedded on the application or accessed through external links.



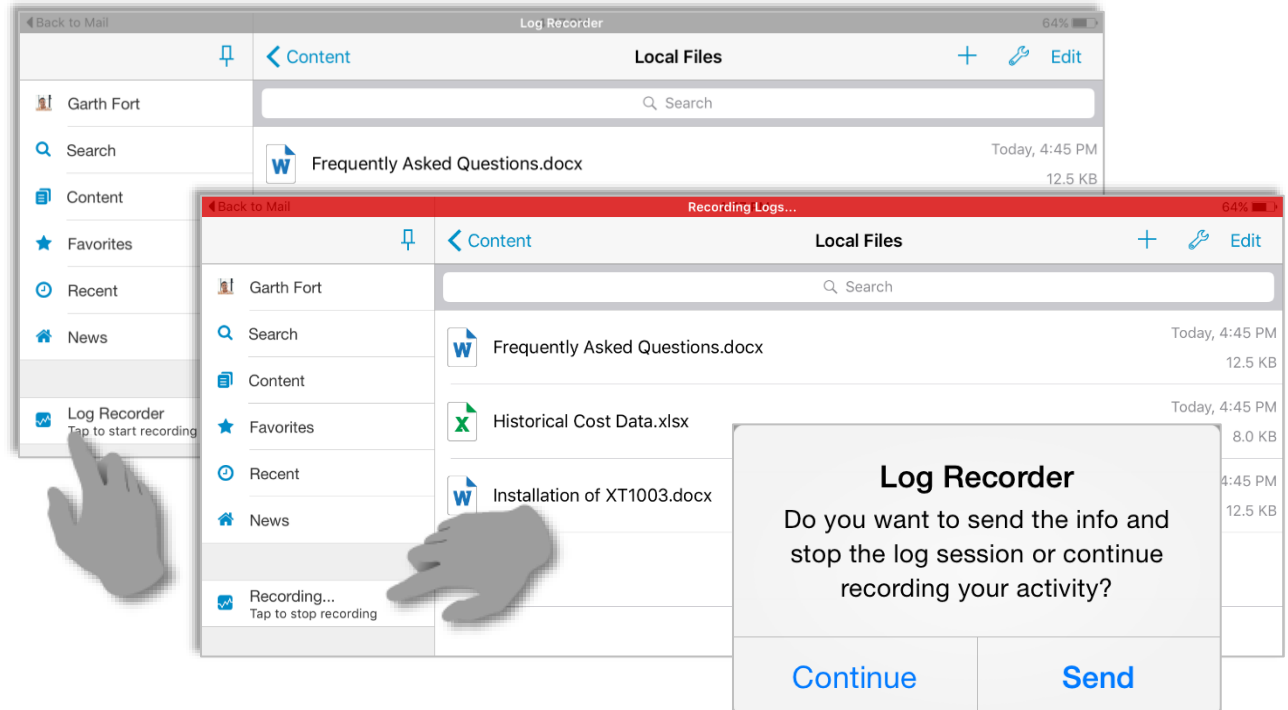
Mail Feedback Tools

SharePlus Enterprise allows the redirection of user inquiries to an internal help desk, customizing the Email Subject and recipient.



Troubleshooting errors with SharePlus

When you need to troubleshoot a SharePlus issue, the Support Team needs technical information in order to help you. SharePlus Log Recorder can be used to record all your activity within the app. Then, that information can be used to find a solution to the app issues.



Enabling the Log Recorder

While enabled, the Log Recorder will be shown in SharePlus and you can use it to record your activity within the app. To **enable** this feature, **go to** *Settings > Advanced Settings* and **turn ON Log Recorder**.

You can choose between **two different approaches** to generate and send app Logs:

1. Generate app logs only and manually send those logs.
2. Generate video and app logs and automatically send everything.

Below you can find details about the second method, which allows you to send all your activity within the app (logs and video) automatically.

Generating app Logs and video for the Support Team

Once the Log Recorder is enabled, you just need to:

1. **Start** the Log Recorder.
2. **Reproduce** the issue you want to troubleshoot.
3. **Stop** the Log Recorder and choose **Send**.

You can easily start or stop the Log Recorder by tapping the new section displayed on the SideBar as shown in the images above.

Sending the app Logs to the Support Team

Once you reproduced your issue within SharePlus and generated app Logs, you need to send them to the Support Team. How to send the app Logs depends on the license model:

Enterprise (email)

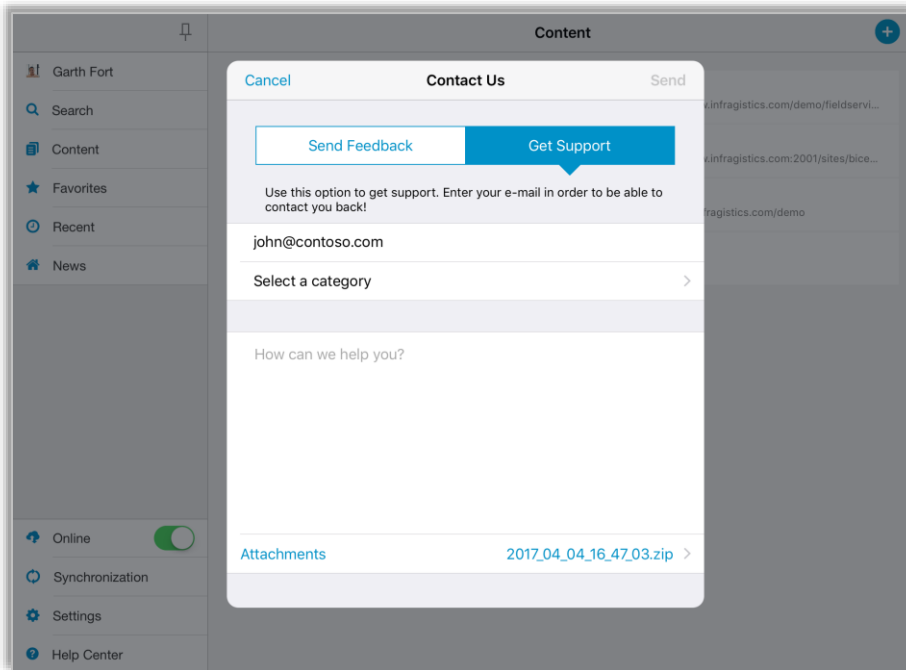
Enterprise users are prompted to **send an email** with the app Logs attached to either the IT Helpdesk or Managers. With this information, they can contact the Infragistics Support Team. SharePlus Enterprise has priority support for the reported issues.

Free and Subscription (in-app)

Once you choose Send, a **form within SharePlus** is displayed with the app Logs already attached.

You just need to:

1. Select the *category*
2. Tap *Send* to create the new ticket.



Configuring Support Tools

SharePlus Enterprise allows you to redirect user inquiries by customizing the feedback email and the help's URL.

In-App Help with External URLs

SharePlus' help is configured through the Help feature in the Configuration File.

HTTP or HTTPS based URLs are accepted in all cases.

```
<key>Help </key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>HelpURL</key>
    <string></string>
    <key>HelpURL-iPad</key>
    <string></string>
    <key>HelpURL-iPhone</key>
    <string></string>
    <key>ShowAboutUs</key>
    <true/>
    <key>ShowFAQ</key>
    <true/>
    <key>ShowHelp</key>
    <true/>
  </dict>
</dict>
```

- **HelpURL** - URL to an online help page that replaces the app's help (only if no per-device URLs are defined).
- **HelpURL-iPad/HelpURL-iPhone** - Replaces the app's help when SharePlus is running in an iPad/iPhone.
- **ShowAboutUs/ShowFAQ/ShowHelp** – Shows/Hides the help/FAQ/About US on the app's global settings.

Mail Feedback Support

The Feedback feature is used to customize feedback emails. The accepted format for this feature is to specify addresses separated by commas, e.g., [example1@domain.com](#), [example2@domain.com](#).

```
<key>Feedback </key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>BCC</key>
    <string></string>
    <key>Body</key>
    <string></string>
    <key>CC</key>
    <string>Sent via [ProductSignature] </string>
    <key>Subject</key>
    <string>[DocumentName] - [FeedbackType]</string>
    <key>To</key>
    <string>contact@mycompany.com</string>
  </dict>
</dict>
```

- **To** - Default email addresses to be included in the TO field when composing a new message. This setting must contain at least one valid email address, as it is used to report errors.
- **CC/BCC** – Default email addresses to be included in the CC/BCC field.
- **Subject** – Default Subject when composing a new message.
Available Tokens are: [DocumentName] and [FeedbackType].
- **Body** – Text to be used as the default Body in the message.
Available Tokens are: [DocumentName], [DocumentURL], [ProductSignature], [NewLine], and [FeedbackType].

Chapter 6

Advanced Features

Section 1: Social Networking

Section 2: Data Visualization

Section 3: Network Drives

Section 4: Other Cloud Providers

Section 5: Search

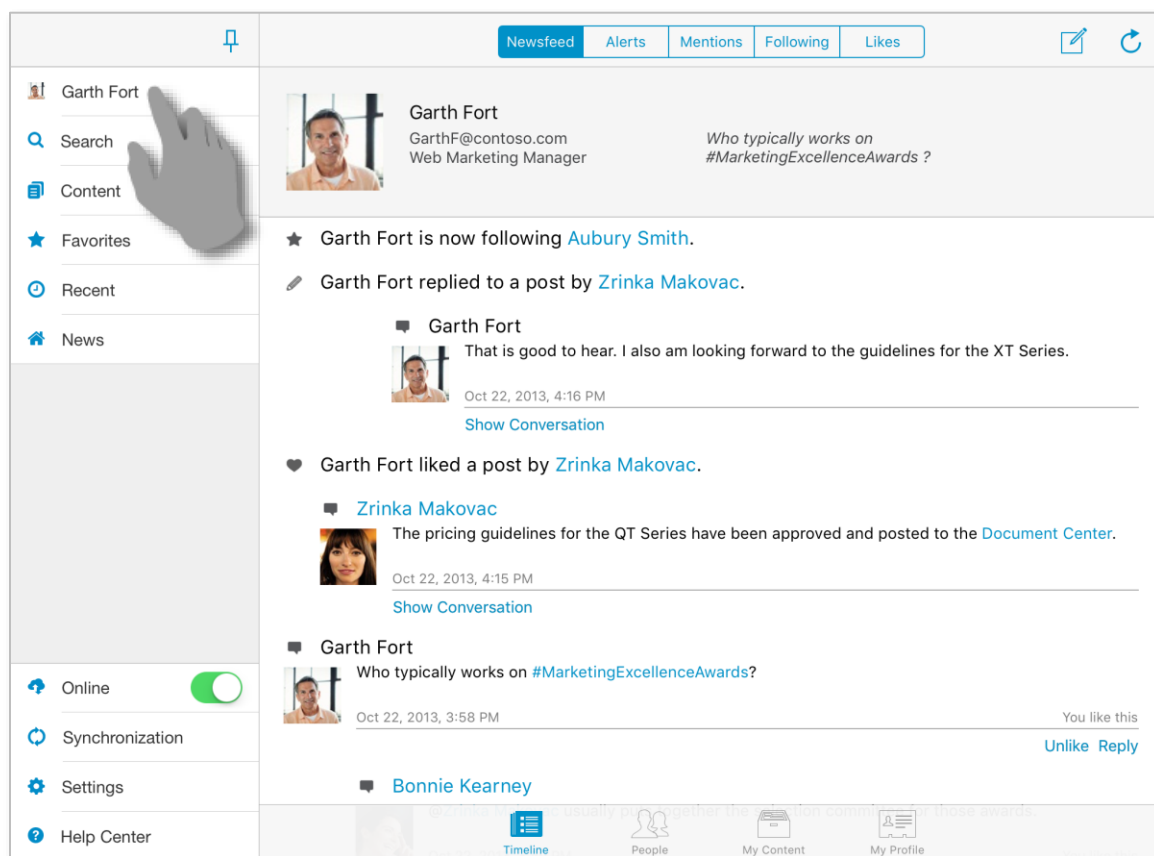
Section 6: Application Integration

Section 7: Nintex Integration

Social Networking

Understanding Social Networking

Social collaboration has been reorganized and greatly enhanced through SharePlus new *Social* Module, providing a centralized and feature-rich User Experience (UX) for [SharePoint 2013 social features](#). The Social Module is available for SharePlus Enterprise versions.



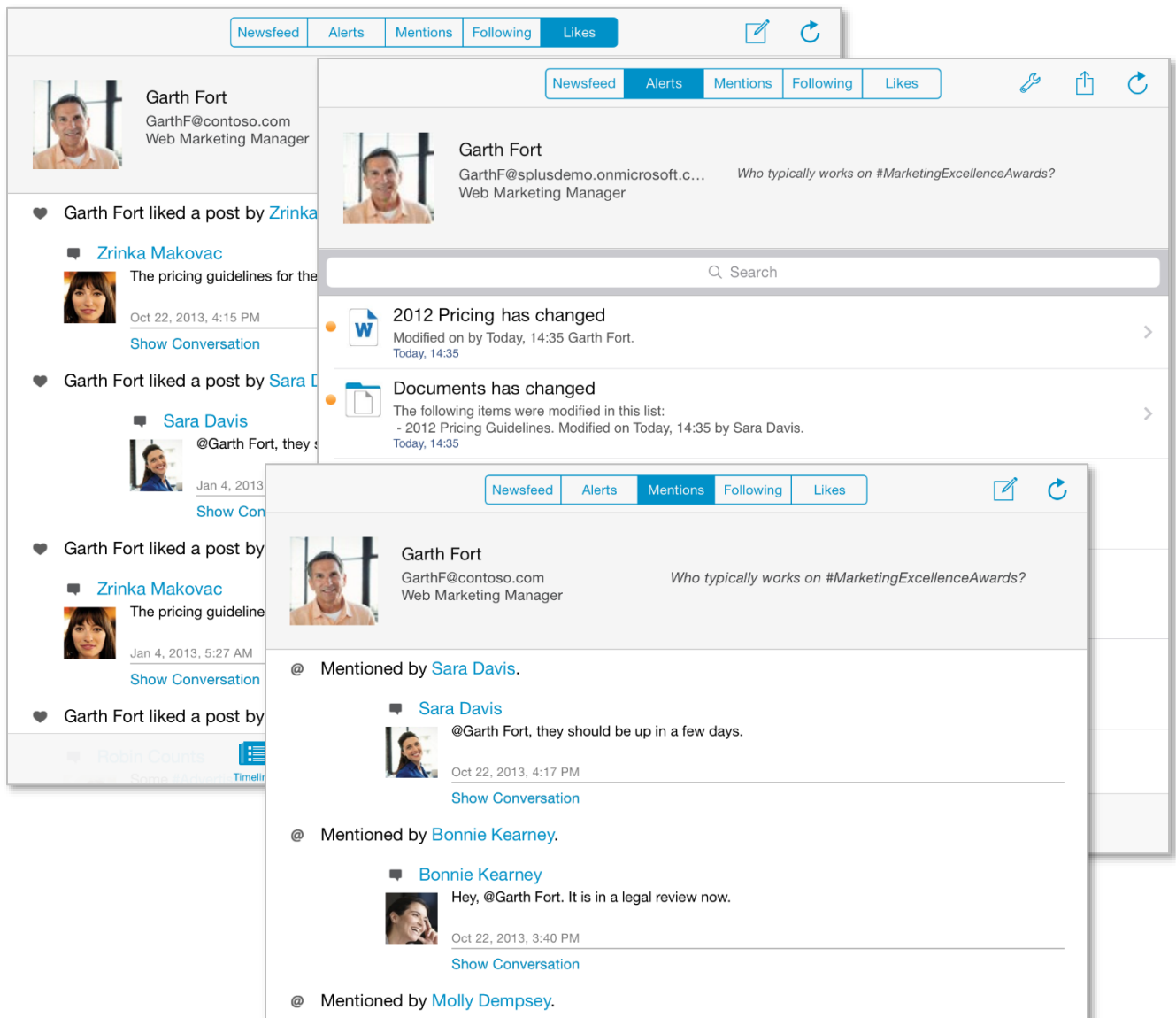
With SharePlus Enterprise, the *Social* Module lets you share your ideas, as well as discover and keep track of your colleagues and their work through their profiles, posts, and updates in the Timeline. You can connect with people, start conversations, and also access their content and activity feed. Your SharePoint personal storage (My Content) is available in this module, including both your public and private document libraries.

The Module is divided in four sections: *Timeline*, *People*, *My Content* and *My Profile*.

Timeline

The Timeline tab provides you access to the following sections:

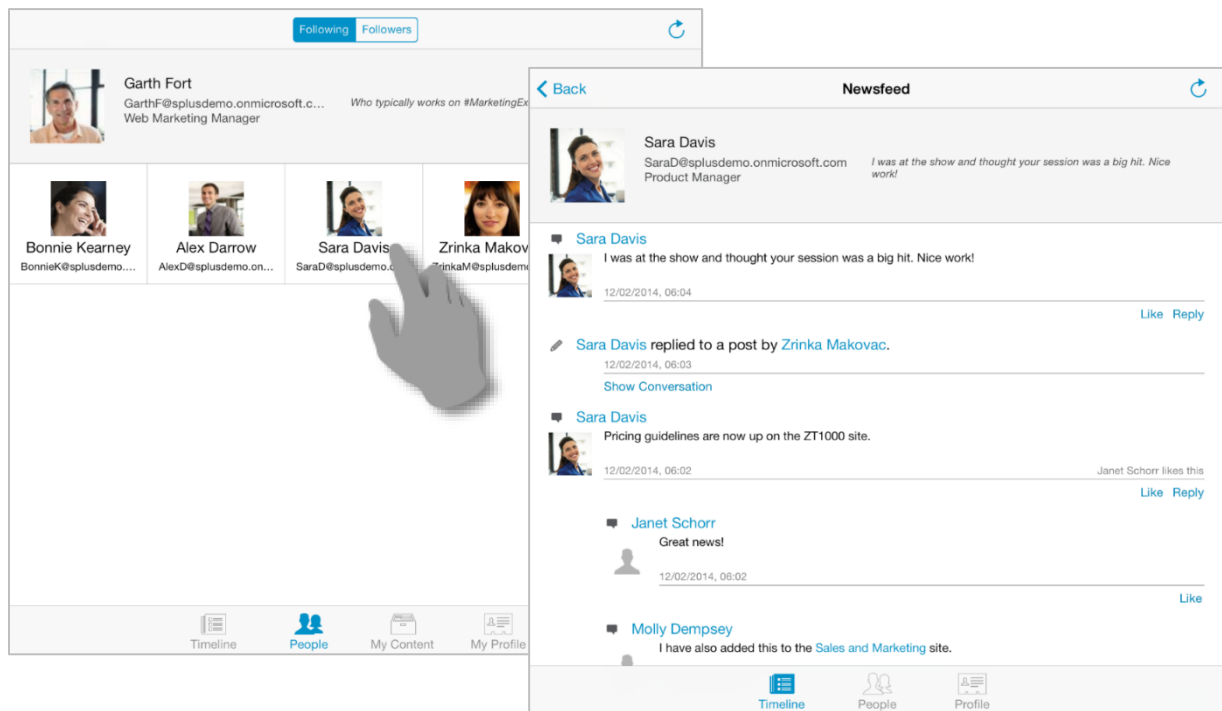
- **Newsfeed** – Includes public posts and other people’s activities. Besides creating new posts, or mark items you *like*, you can also start conversations with colleagues here.
- **Alerts** – Displays all the recent notifications on resources that were modified. SharePlus allows you to keep close track of important resources by marking them with the *Alert Me* option.
- **Mentions** – Gives quick access to all the posts in which you’ve been mentioned.
- **Following** – Displays posts from the people and content you are following.
- **Likes** – The Likes tab includes all the posts you have “liked”.



Note: Timeline sections require SharePoint 2013 to be displayed in SharePlus. Alerts is the only exception and is always available in the Timeline.

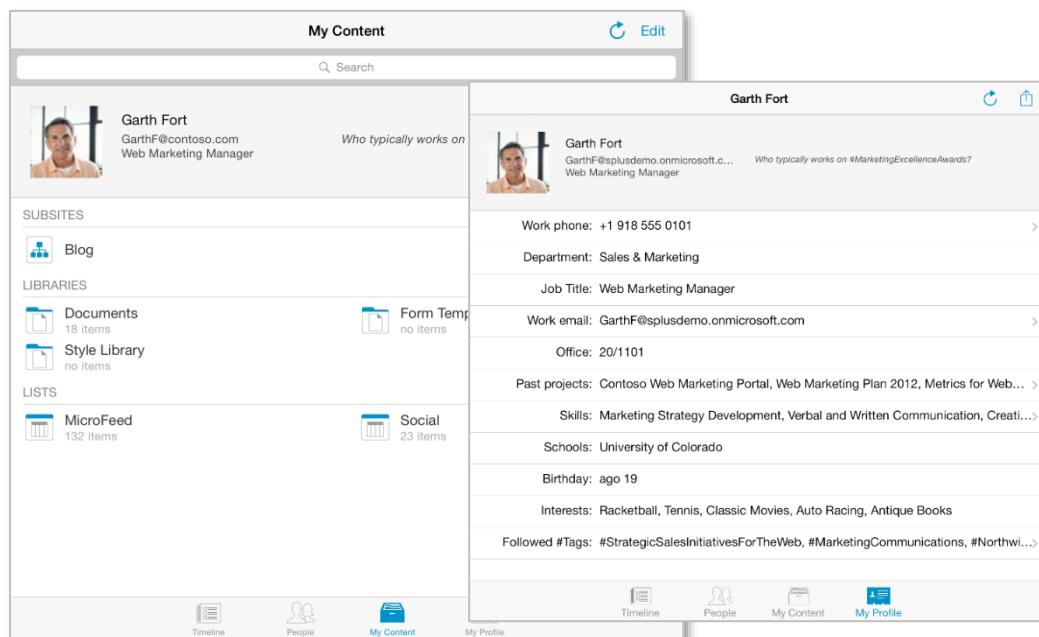
People

The People tab displays the list of people that you are following and the ones following you. In this section you are able to connect with people, access their content and activity feed and also start conversations with them.



My Content and Profile

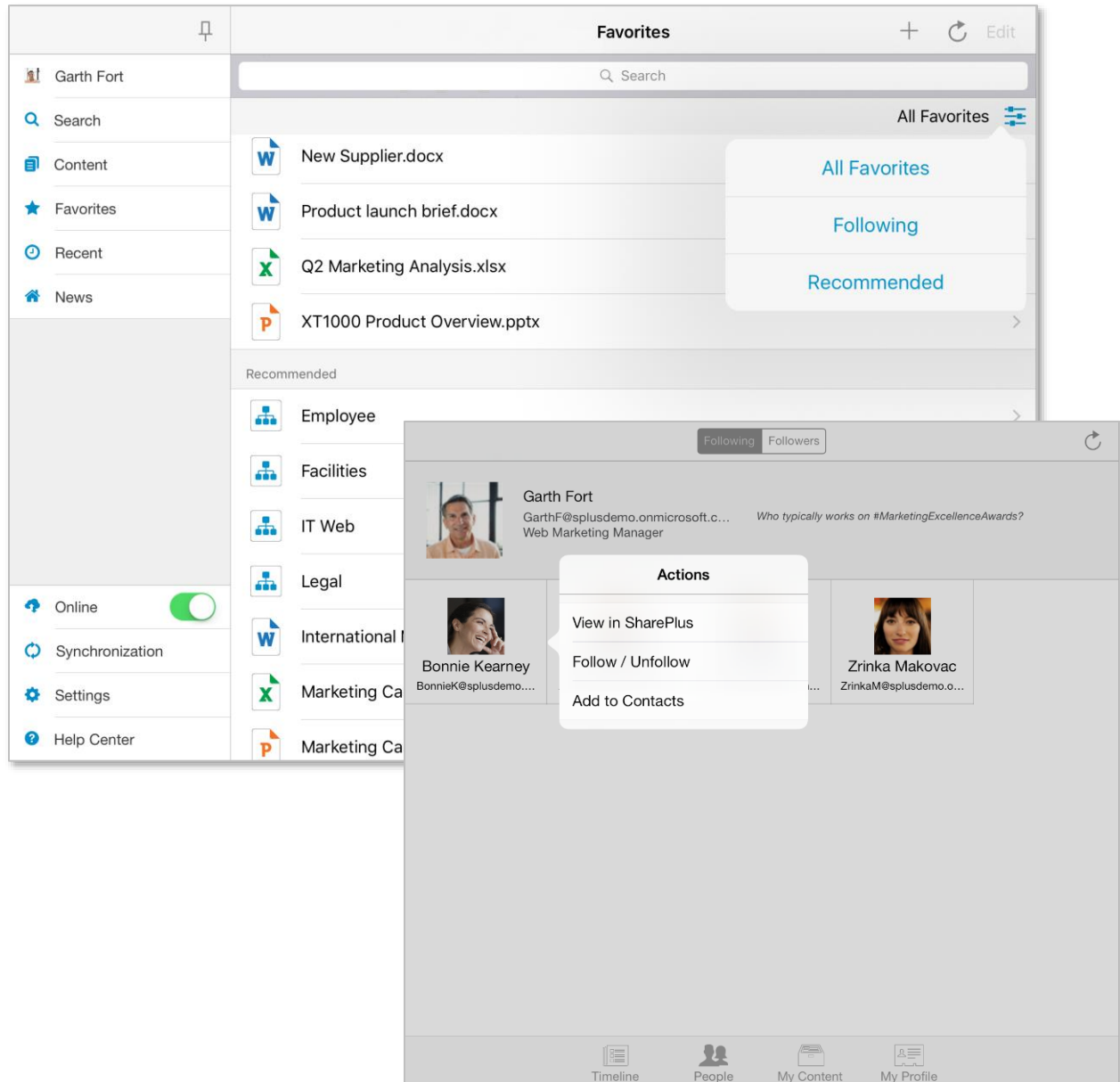
The Social Module gives you access to the content of your SharePoint's personal site, including both your public and private document libraries. Also, you can visualize or edit your personal information shared on your corporate social network.



Recommended and Followed content

When working with **SharePlus Enterprise** and **SharePoint 2013** server you can get recommendations on sites and documents that may be relevant to you. The portal suggestions are included on the SharePlus list view under the *Recommended* section of the Favorites Module. The sites, documents, and people that you follow is also listed in the Content and Social Modules respectively.

Through the SharePlus User Interface you can choose to *Follow/Unfollow* content from a SharePoint 2013 server.



Configuring Social Networking

Configuring your Personal SharePoint site

The integration with My Site (SharePoint 2007, 2010) or OneDrive (SharePoint 2013) provides users with a personal site, a central location to manage and store documents, content, links, and contacts.

To configure the feature's integration with SharePlus, you need to configure attributes from an existing site in the Configuration File.

MySite feature Overview

```
<key>Sites</key>
<array>
  <dict>
    <key>SupportMySite</key>
    <true/>
    <key>MySiteHost</key>
    <string>https://rootUrl/personal/[accountName]</string>
  </dict>
</array>
```

- **SupportMySite** – This setting can be enabled for only one site at a time.
- **MySiteHost** – Specify the URL where the personal site's root is hosted. You can use the *[accountName]* token and it will be replaced with the user's account name.

Note: When configuring the My Site feature for SharePoint 2007/2010, you don't need to specify the URL. My Site is automatically configured once the user enters the site. For this to work, MySite feature must be enabled and the current user needs to have My Site associated with his credentials

Configuring My Profile

The integration with My Profile (SharePoint 2007, 2010, 2013) is closely-related to My Site and, basically, it consists on a public profile page located in SharePoint.

To configure the feature's integration with SharePlus, you need to configure attributes from an existing site/connection in the Configuration File.

MyProfile feature Overview

```
<key>Sites</key>
<array>
  <dict>
    <key>SupportMyProfile</key>
    <true/>
    <key>ProfileHost</key>
    <string/>
  </dict>
</array>
```

- **SupportMyProfile** – This setting can be enabled for only one site at a time.
- **ProfileHost** – The URL where the person's profile pages are hosted. When empty, the root URL will be concatenated with "/my".

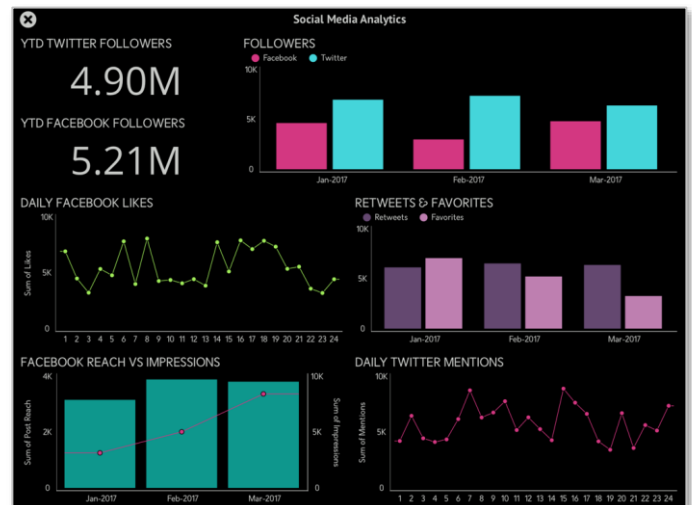
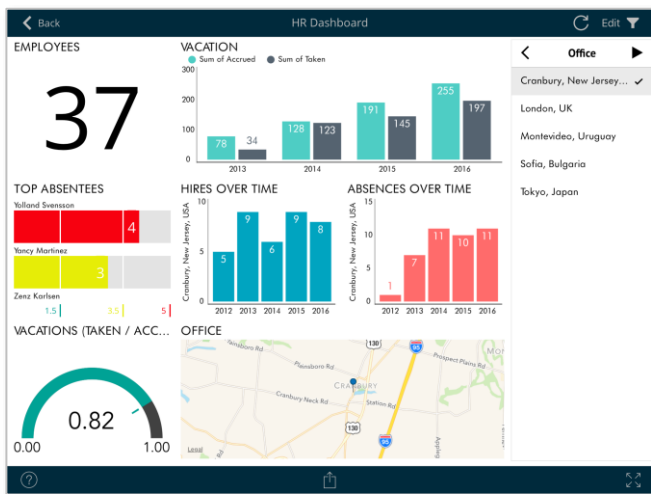
Data Visualization

Data visualization can be used to communicate insights, but sometimes it can be difficult to achieve results which are both useful and compelling. User experience (UX) is crucial, which is why SharePlus invested on capitalizing the [ReportPlus](#) interactive, easy-to-use and fast data visualization experience.

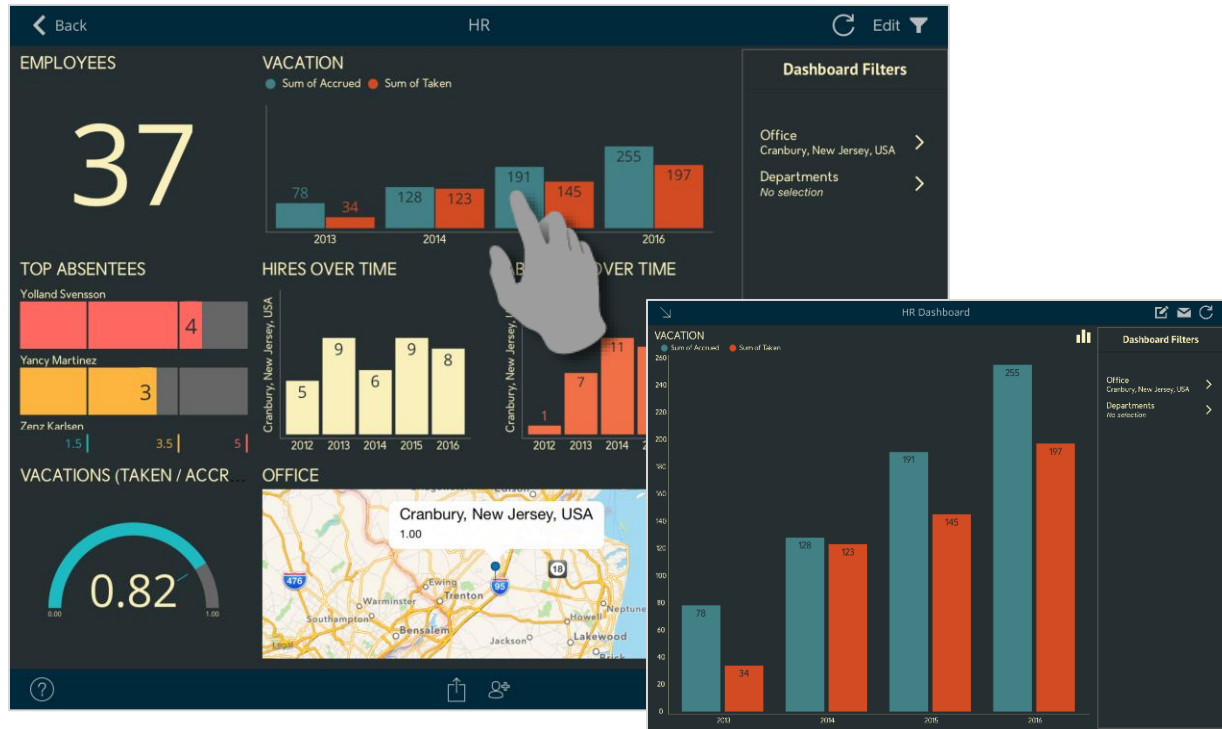
As a result from the integration with ReportPlus, SharePlus introduces the possibility to design and create data visualizations from data stored in SharePoint.

Introduction to Data Visualization

You can design, create, or modify ReportPlus dashboards and achieve different data visualizations. The large number of visualization options, grid, text, trend line, map, gauge, chart, and financial chart views, help you maximize business insights.



Dashboards are highly interactive; you can navigate to any of the composing widgets as shown below.

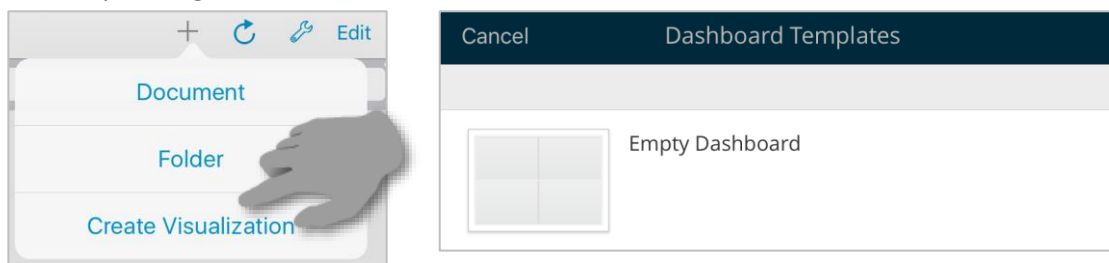


Creating Dashboards

Creating new dashboards is as simple as adding a new dashboard, selecting your data, and customizing the visualization. That being said, let's dig a little deeper and create a dashboard from scratch:

1. Add a new ReportPlus Dashboard

As other documents, you can add dashboards and share them with other users by uploading them to the SharePoint server.

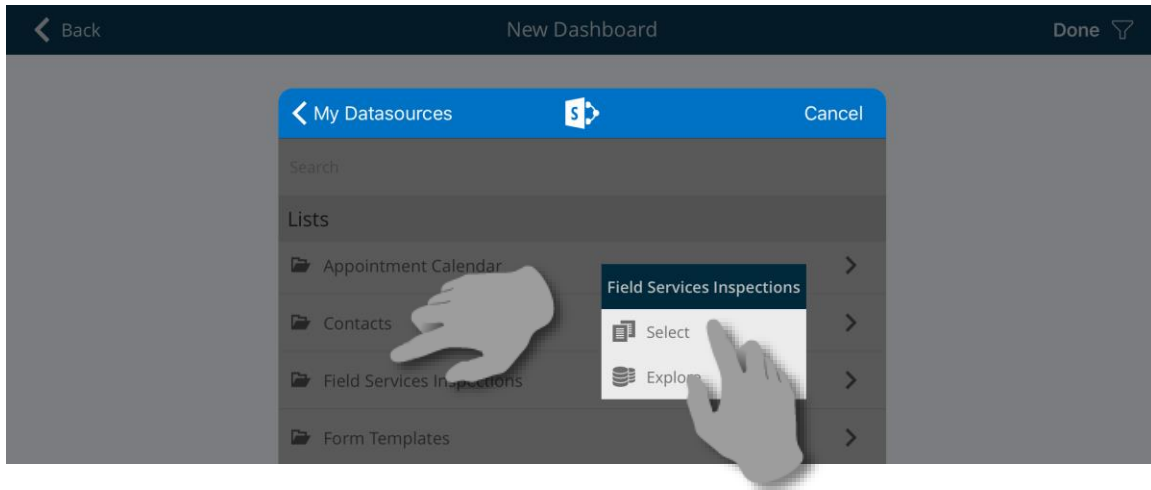


Note: While dashboards cannot be created from files in the Local or Network Drives, they can be saved there.

2. Select your data

You can connect to data sources like lists and documents, including calendars, contacts, images, Excel files. SharePoint lists and Excel files are particularly interesting, as you can apply many different visualization options to their data.

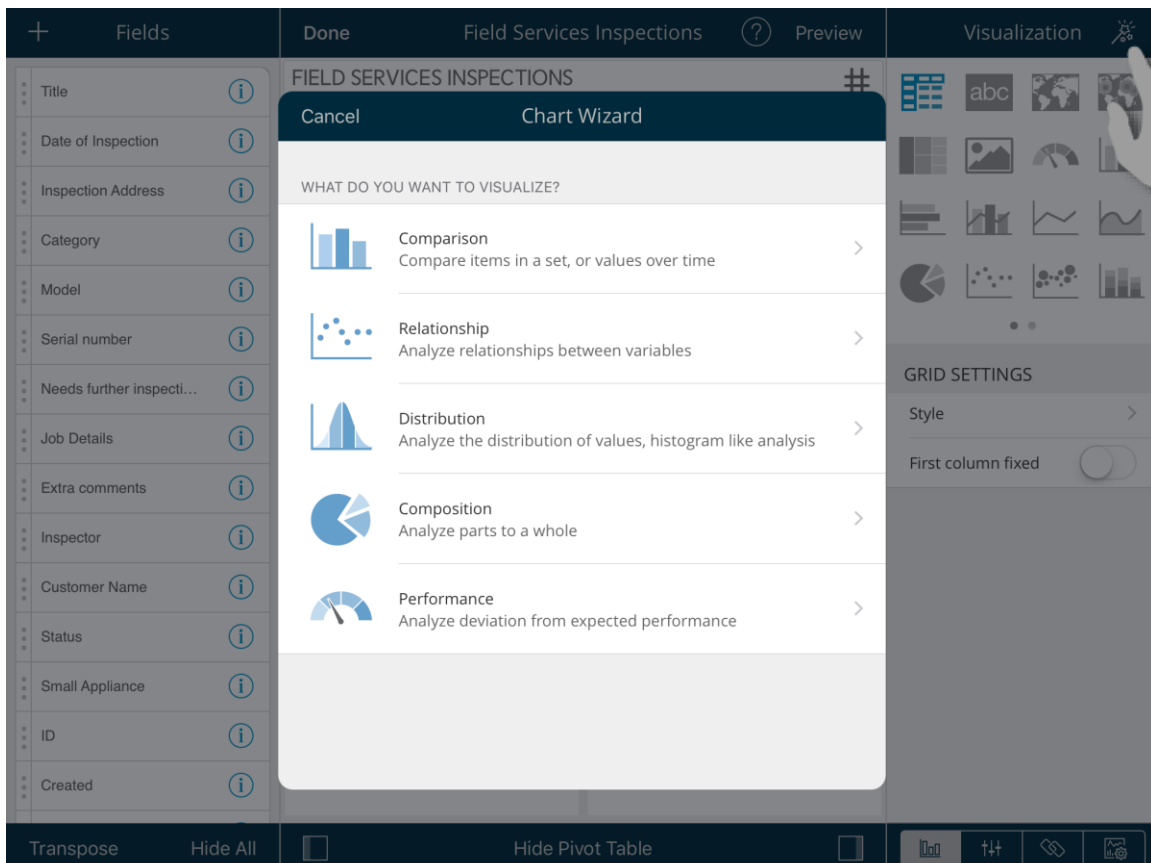
Once you select a data source, you can easily add a new data set to the dashboard by tapping the item and choosing *Select*.



Dashboards connect to SharePoint data using the current user's credentials.

3. Customize the visualization

The Chart Wizard can be displayed inside the widget editor by tapping on the wand icon in the top right corner.



The Wizard helps you create a chart visualization, making it easy for you to configure any chart available. Alternatively, you can dig deeper and apply filters or conditional formatting to further tweak the information displayed.

The screenshot shows the SharePlus 4.9 interface. On the left is a 'Fields' pane with a list of fields: Inspection Address, Category, Model, Serial number, Needs further inspect..., Job Details, Extra comments, Inspector, Customer Name, Status, Small Appliance, ID, Created, Modified, and Created By. The main area displays a pivot table titled 'FIELD SERVICES INSPECTIONS'. The table has columns for Inspector, Completed, In Progress, On Hold, and Small Appliance Total. The rows list inspectors: Ashfield, Bailey, Porter, Sloan, and a Grand Total. A 'SHOW FILTERS FOR' pane is open, showing filters for Category and Status. A 'GRID SETTINGS' pane is also open, showing options for Alignment, Text, Date, Numeric, Font, and Size. The bottom of the interface has buttons for 'Transpose', 'Hide All', and 'Hide Pivot Table'.

Inspector	Completed	In Progress	On Hold	Small Appliance Total
Ashfield	2.00	1.00		3.00
Bailey		1.00		1.00
Porter	1.00			1.00
Sloan	1.00		1.00	2.00
Grand Total	4.00	2.00	1.00	7.00

Working with Pivot Tables

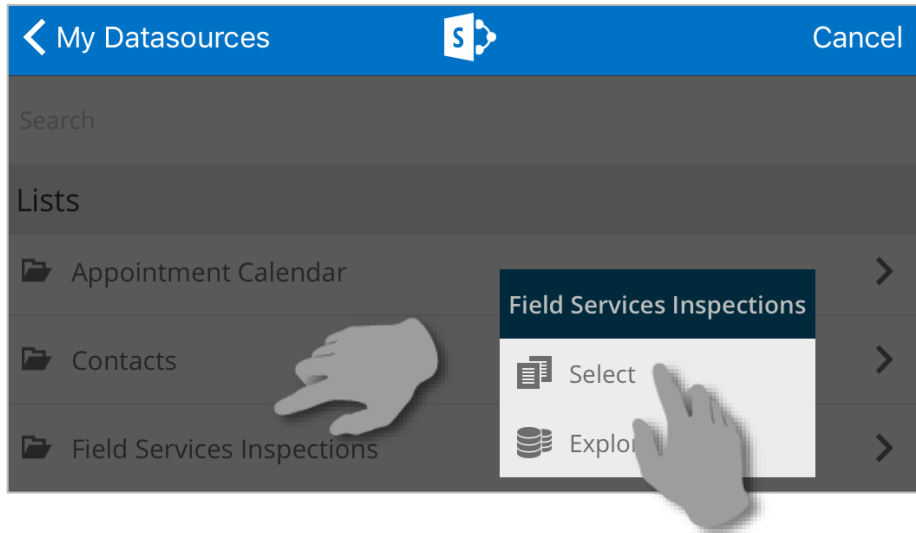
Pivot Tables are very powerful data summarization tools that help you analyze data.

Let's create one using a custom SharePoint list as an example. The custom list (Field Services Inspections from SharePlus Demo site) contains information about inspections and their results:

Title	Category	Inspector	Status	Job Details	Inspection Address	Date of Inspection
Microwave Repair	Service on-site	Ashfield	Completed	Microwave had the Inverter Turbo Defrost pad broken. Opened and fixed it.	15 Civic Center Lane, East Brunswick, New Jersey	22-Sep-2016
Refrigerator Malfunction	Warranty	Porter	Completed	French door was loose but was easy to fix.	2 Taylor Avenue, East Brunswick, New Jersey	27-Sep-2016
Dishwasher Rotor Issue	Service on-site	Sloan	Completed	Replaced a rotor and fixed a blockage.	110 Leonardine Avenue, South River, New Jersey	24-Sep-2016
Coffeemaker Glass Cup Broken	Service on-site	Bailey	In Progress	Coffeemaker glass cup is broken and needs to be replaced.	2880 Birchwood Court, North Brunswick, New Jersey	23-Sep-2016
Black Glass Cooktop Igniter Fix	Repairs needed	Ashfield	In Progress	Extracted and re-assembled the burners. Cleaned the igniters with rubbing alcohol. Still, two burners are dead. Need to take in for	285 George Street, New Brunswick, New Jersey	28-Sep-2016

1. Select your data

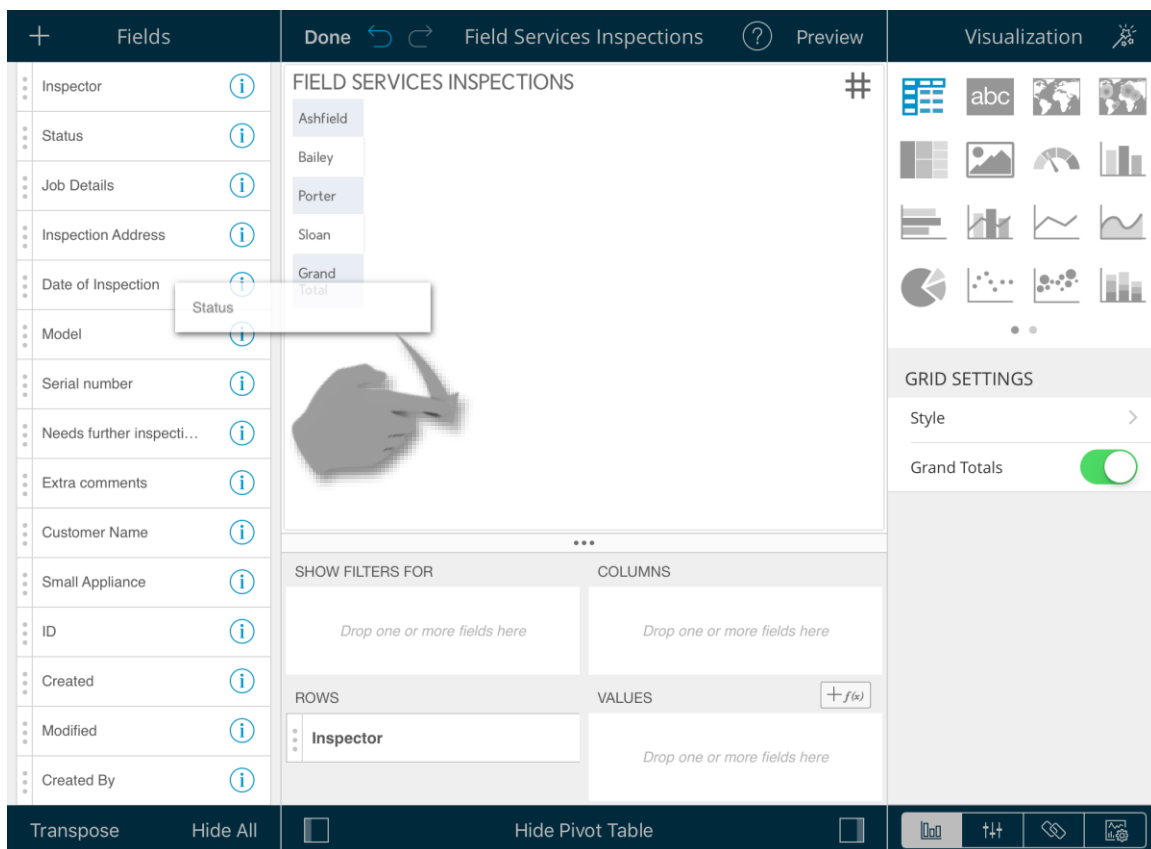
Select a data source by tapping the item and choosing Select.



2. Start using the Pivot Table Editor

List countries as rows using the Pivot Table Editor located at the bottom of the Widget Editor. The Pivot Table editor gives you the ability to slice-and-dice data according to your needs.

Just **drag & drop** fields in the corresponding placeholders like shown with Country below:



To hide <null> values, tap over the Country field and enable *Filter Empty Values*.

The screenshot shows the 'Fields' panel on the left with a list of fields including Title, Date of Inspection, Inspection Address, Category, Model, Serial number, Needs further inspection, Job Details, and Extra comments. The 'Serial number' field is highlighted. On the right, the configuration for the 'Serial number' field is shown, including 'Is Visible' (checked), 'Label' (Serial number), 'Grid Column style', 'Sorting' (Off, Asc, Desc), 'Filter by Rule' (unchecked), 'Filter Empty Values' (checked), and 'Select Values' (All). A hand icon points to the 'Filter Empty Values' toggle.

3. Summarize data

Drag the Estimated Worth field to the Values placeholder, the Sum aggregation function is selected by default for numeric fields.

The screenshot shows the 'Field Services Inspections' pivot table. The 'Inspector' field is in the Rows placeholder, and the 'Small Appliance Count' field is in the Values placeholder. A hand icon points to the 'Small Appliance Count' field. The pivot table displays the following data:

Inspector	Small Appliance Count
Ashfield	3.00
Bailey	1.00
Porter	1.00
Sloan	2.00
Grand Total	7.00

4. List the columns

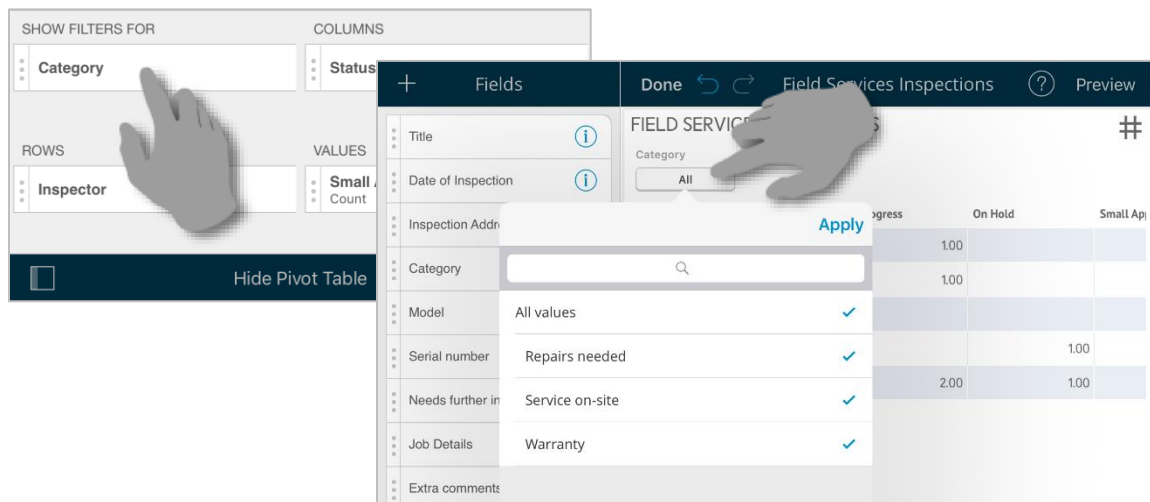
Now add the Category field to the Columns placeholder, in order to dynamically create a column for every existing category.

The screenshot shows the 'Field Services Inspections' pivot table with the 'Status' field added to the Columns placeholder. A hand icon points to the 'Status' field. The pivot table displays the following data:

Inspector	Completed	In Progress	On Hold	Small Appliance Total
Ashfield	2.00	1.00		3.00
Bailey		1.00		1.00
Porter	1.00			1.00
Sloan	1.00		1.00	2.00
Grand Total	4.00	2.00	1.00	7.00

5. Add a quick filter

Define a quick filter to dynamically change the dashboard information at run-time. This means that you can later open the dashboard and filter the information by the *Executive* field values without editing the dashboard.



The Pivot table is ready, you are now able to quickly summarize and analyze your data.

FIELD SERVICES INSPECTIONS					#
Category					
All					
Inspector	Completed	In Progress	On Hold	Small Appliance Total	
Ashfield	2.00	1.00		3.00	
Bailey		1.00		1.00	
Porter	1.00			1.00	
Sloan	1.00		1.00	2.00	
Grand Total	4.00	2.00	1.00	7.00	

Still, dashboards can be customized in many different ways, including the Visualization type. The **grid view** used on this example is the visualization type selected by default, but you can choose between several visualization types.

Customizing the Visualization

When customizing your dashboard, you can choose between more than 20 different pre-defined themes. In addition, the visualization type (e.g., grid, gauge) can also be styled depending on the visualization type.

Following the same example (Pivot Table based on a custom SharePoint list), let's start by changing the visualization type from the default Grid to a Linear Gauge View. Linear Gauges are particularly useful to compare values of different rows side by side.

During the process, let's review the existing settings for the Grid view, some of the different visualizations available, and finally the dashboard customization settings.

1. Customize the Grid view

Before switching to the Gauge view, let's take a look to the previous Pivot Table and how it can be customized.

The screenshot shows the 'Field Services Inspections' dashboard in Grid view. The main table displays inspection data categorized by Inspector. A 'GRID SETTINGS' overlay is visible, showing options for alignment and font size.

Inspector	Completed	In Progress	On Hold	Small Appliance Total
Ashfield	2.00	1.00		3.00
Bailey		1.00		1.00
Porter	1.00			1.00
Sloan	1.00		1.00	2.00
Grand Total	4.00	2.00	1.00	7.00

GRID SETTINGS

Style >

ALIGNMENT

Text: [Left] [Center] [Right]

Date: [Left] [Center] [Right]

Numeric: [Left] [Center] [Right]

FONT

Size: [Small] [Medium] [Large]

Through the Grid Settings you can both configure the text's alignment and add a *Grand Totals* field by toggling the "Grand Totals" option on/off.

2. Switch to the Gauge view

The screenshot shows the 'Field Services Inspections' dashboard in Gauge view. The visualization area displays a gauge chart. The Pivot Table Editor is visible, showing the 'Small Appliance' aggregated function.

Visualization

123

SHOW FILTERS FOR

Drop one or more fields here

COLUMNS

Drop one or more fields here

ROWS

Drop one or more fields here

VALUES

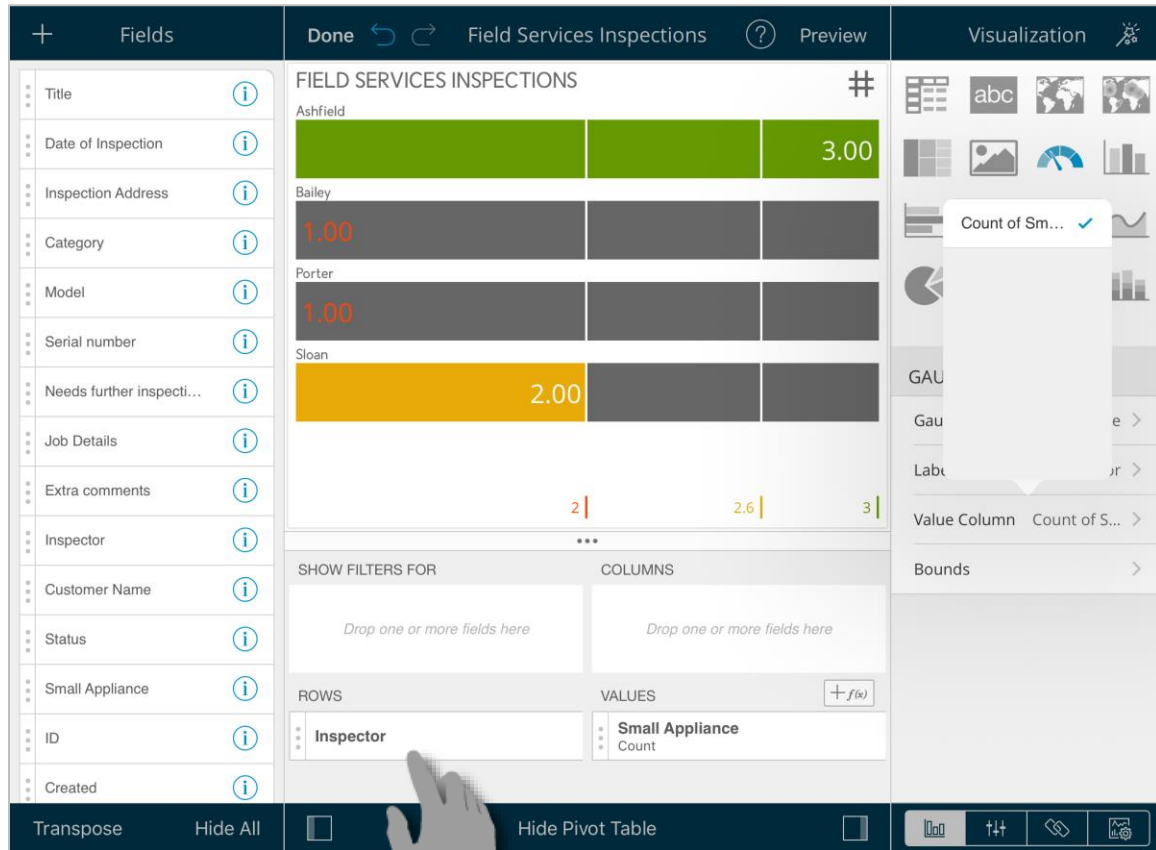
+ f(x)

Small Appliance
Count

After making the switch, clear the Pivot Table Editor except by the Small Appliance aggregated function. To clear a field just drag it outside the editor.

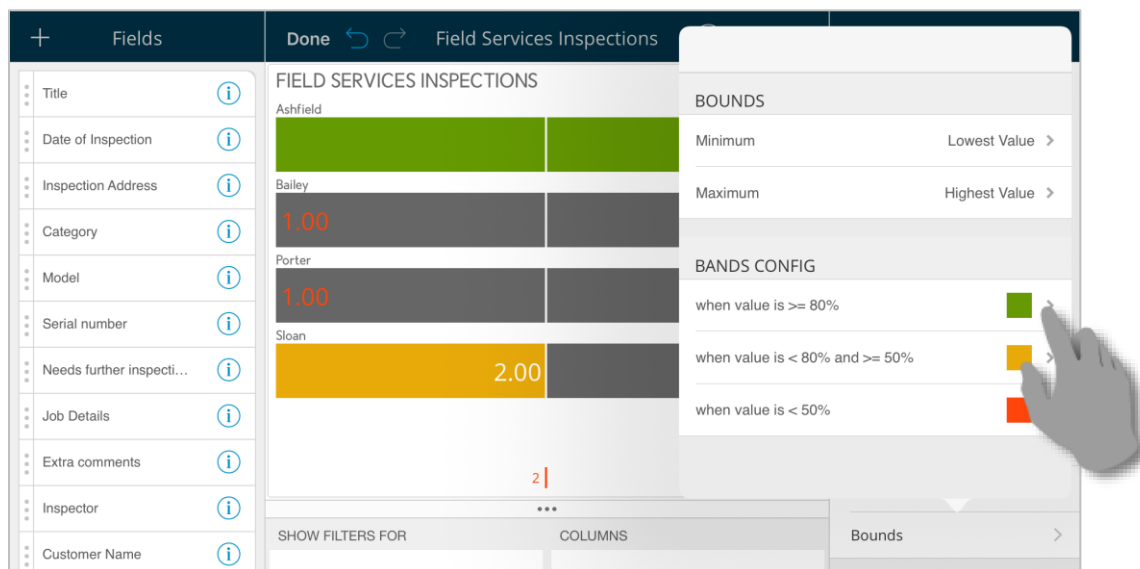
3. Adjust/Tweak the Gauge view

The Linear Gauge can be used to display the Small Appliance totals for each Inspector. Add the *Inspector* field to *Rows*, so that the inspectors assigned are listed as rows.



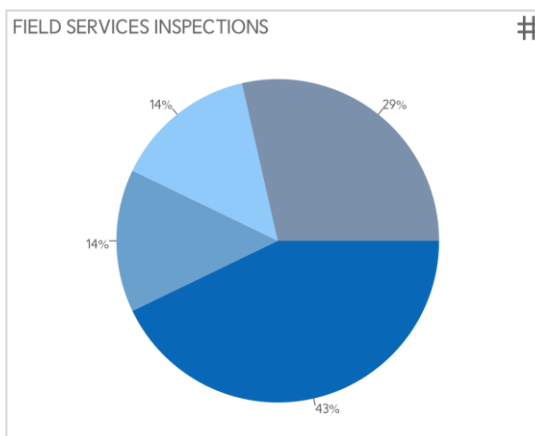
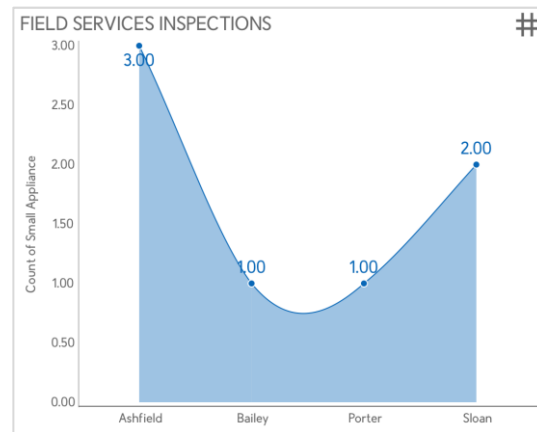
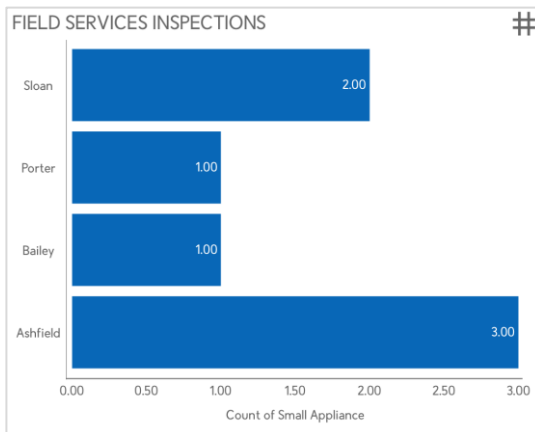
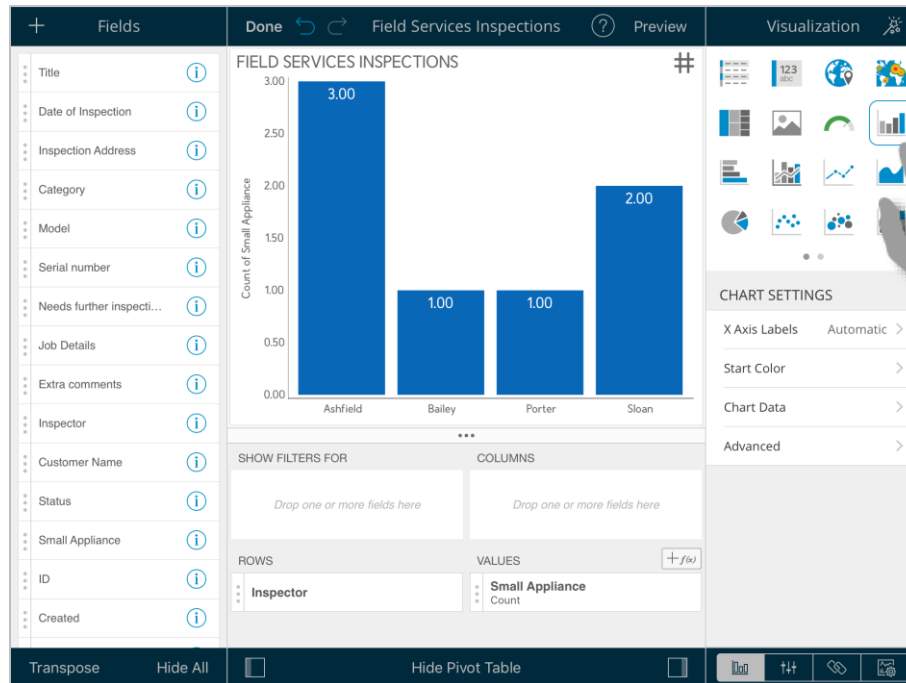
4. Customize the Gauge view

Through *Bounds* in the Gauge Settings you can configure the minimum and maximum values, and the bands range or color among other settings.



5. Switch to other views

Change how your data is presented by switching between the different data visualizations.

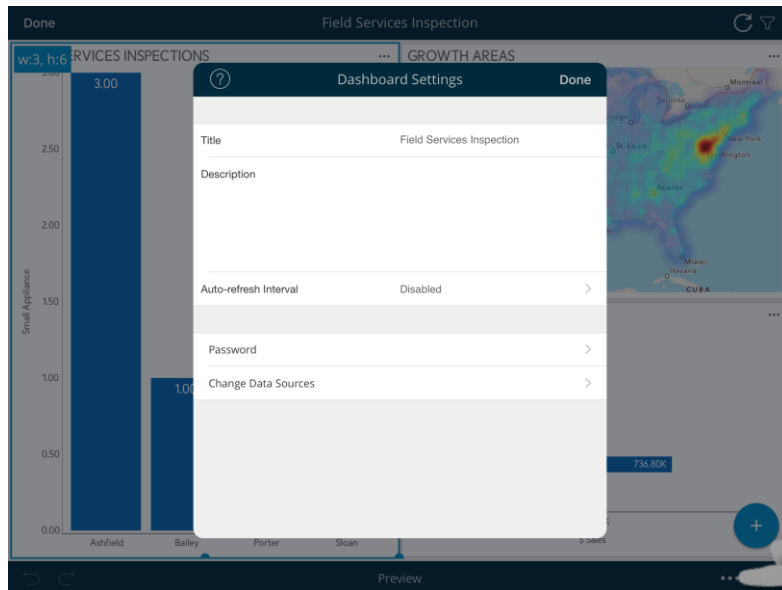


6. Customize the dashboard

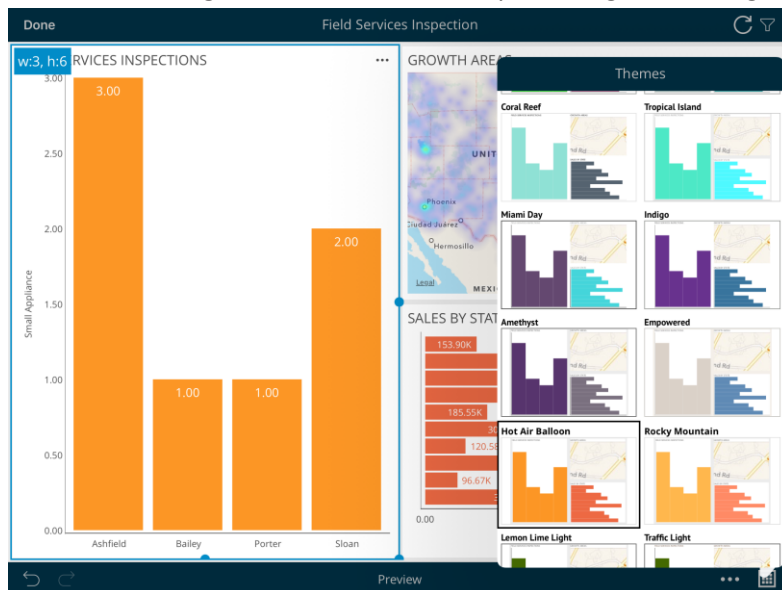
The dashboard settings include many different customizations, including:

- **Dashboard Title** – Short text used to identify the dashboard, also displayed in the initial view.
- **Dashboard Description** – Long text that states the purpose of the dashboard. It's used when exporting the dashboard to a slideshow.
- **Password** – You can define a password that will be required to edit the dashboard.
- **Change Data Sources** – This option prompts a wizard to guide you while connecting the dashboard to a schema compatible data source.

Open the dashboard settings and customize your dashboard:



Tap the button with the **grid** icon to access the style settings and change your theme.



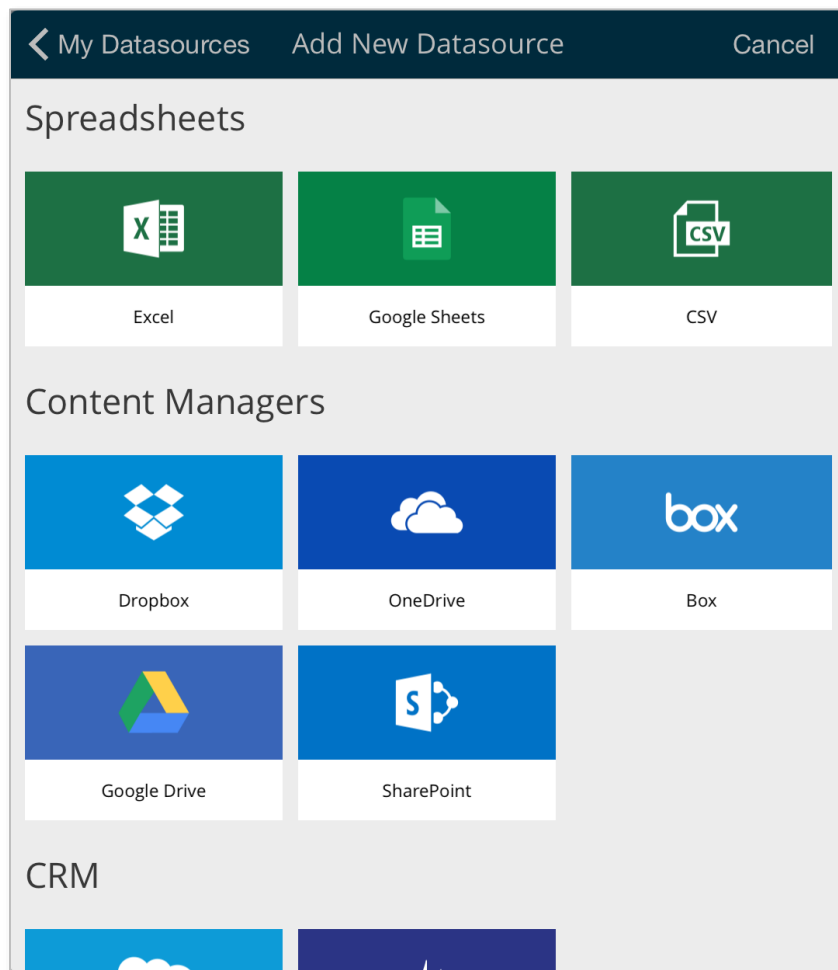
Data Visualization Bundle Features

ReportPlus dashboards display information contained in one or more data sets. Each widget in a dashboard displays information from a specific data set, retrieved from a data source e.g.: Excel spreadsheets, SharePoint files and lists, SQL databases.

With SharePlus Bundle versions, you are not limited to SharePoint content; instead, you can connect to more than 20 different enterprise data sources, including:

- Excel spreadsheets
- SharePoint files and lists
- Analysis Services
- SQL databases
- Reporting Services.
- Dropbox
- Google Drive

The *New Data Source wizard* guides you to configure a new connection, requesting a set of credentials with permissions to read the data.



Configuring the ReportPlus Integration

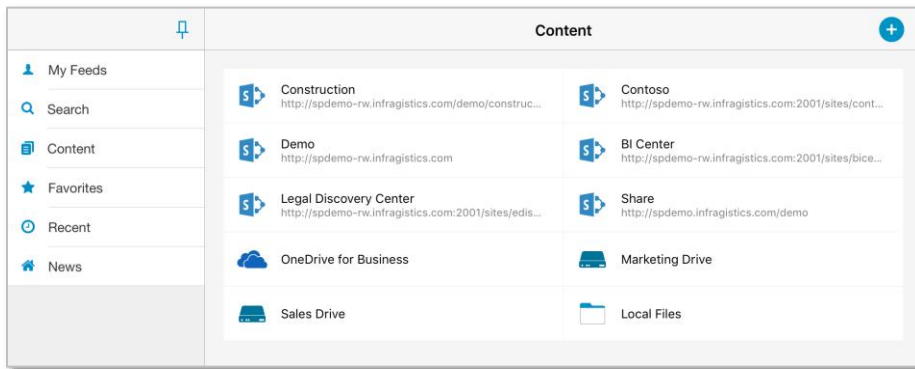
You can configure ReportPlus Integration through the ReportPlus feature in the Configuration File. The feature can be completely disabled through configuration.

```
<key>ReportPlus</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>Features</key>
    <dict>
      <key>DashboardsAdmin</key>
      <dict>
        <key>Enabled</key>
        <true/>
        <key>Settings</key>
        <dict>
          <key>DashboardsAllowUpdate</key>
          <true/>
          <key>DashboardsAllowAdd</key>
          <true/>
        </dict>
      </dict>
    </dict>
  </dict>
</dict>
```

- **DashboardsAllowUpdate** – Allows/Blocks the editing of dashboards in SharePlus.
- **DashboardsAllowAdd** – Allows/Blocks adding new dashboard documents to SharePlus.

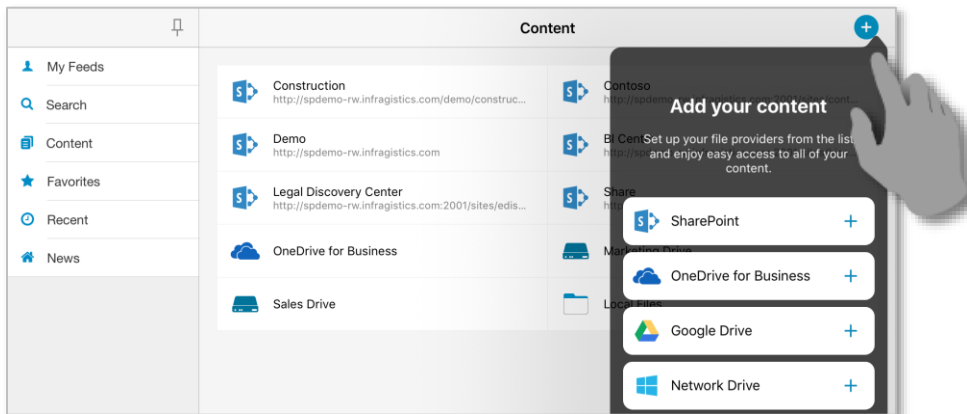
Network Drives

Your files can also be accessed from shared locations across your network. Your drives are displayed in the Contents module under any SharePoint portals you have configured.



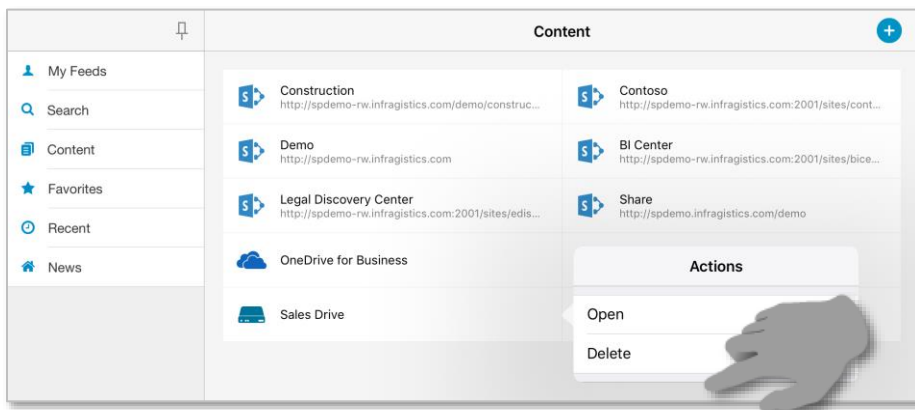
Setting up a new Network Drive

To configure a new Network Drive, tap the “+” icon on the top right corner and select “Network Drive”.



Removing a Network Drive



To remove one of your drives, tap and hold them. Choose *Delete* from the **Actions** menu.



Browsing Files within your Network Drive

When working with your drives, you can open files by just tapping the cell as you do with SharePoint portals. You can also tap over an item and execute a default action; for more information, refer to Actions in the [Items and Documents section](#).

Action buttons/menus

	Add – will enable creating Documents, Folders, ReportPlus Dashboards and adding Photo Albums, Local Files and Folders. You can also take Photos/Videos and Record Audios.
	Refresh – the refresh button will let you retrieve any structural changes for your documents.

Add Button

By tapping the “+” icon, you will be able to:

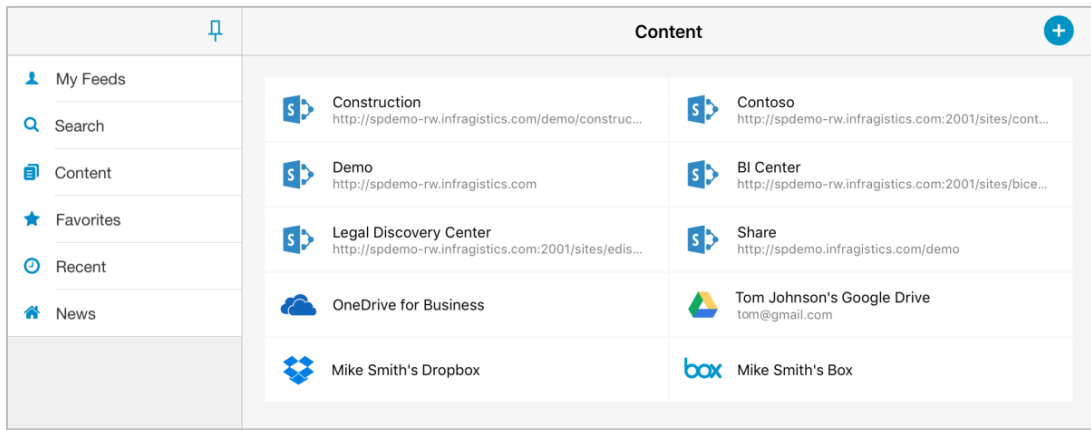
- **Create a Document** using Local Files and your Photo Albums. You can also take photos/videos, record audios and paste any files.
- **Add Folders** to organize your files.

Refresh Button

By tapping the *Refresh* button, you can retrieve any structural changes.

Other Cloud Providers

You can also access files from your personal cloud providers (OneDrive for Business, Google Drive and Dropbox).

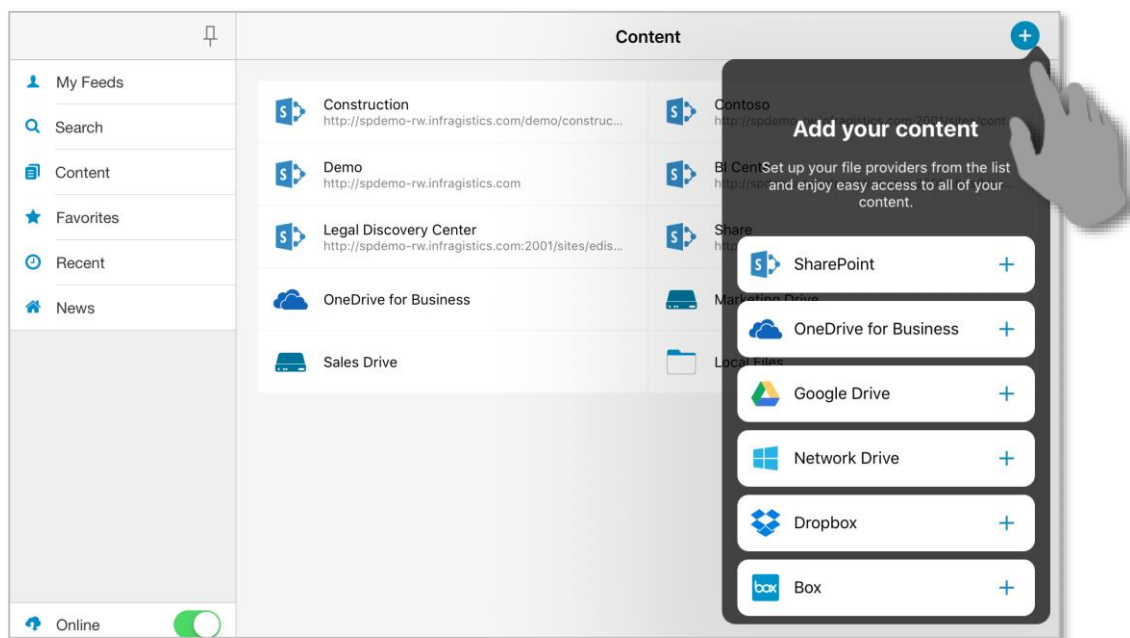


The available content sources are:

Content Source	Type
Box	Cloud storage
Dropbox	Cloud storage
Google Drive	Cloud storage
OneDrive for Business	Office 365 or SharePoint Server personal cloud storage

Setting up a New Content Cloud Provider

To configure any new Content Source, tap the “+” icon on the top right corner.







Removing a Cloud Provider

To remove a content source from SharePlus, tap and hold the item. Choose *Delete* from the **Actions** menu.

Browsing Files with Content Sources

When working with cloud providers, you can open files by just tapping the cell as you do SharePoint sites and module. You can also tap over an item to execute a default action; for more information, refer to Actions in the [Items and Documents section](#).

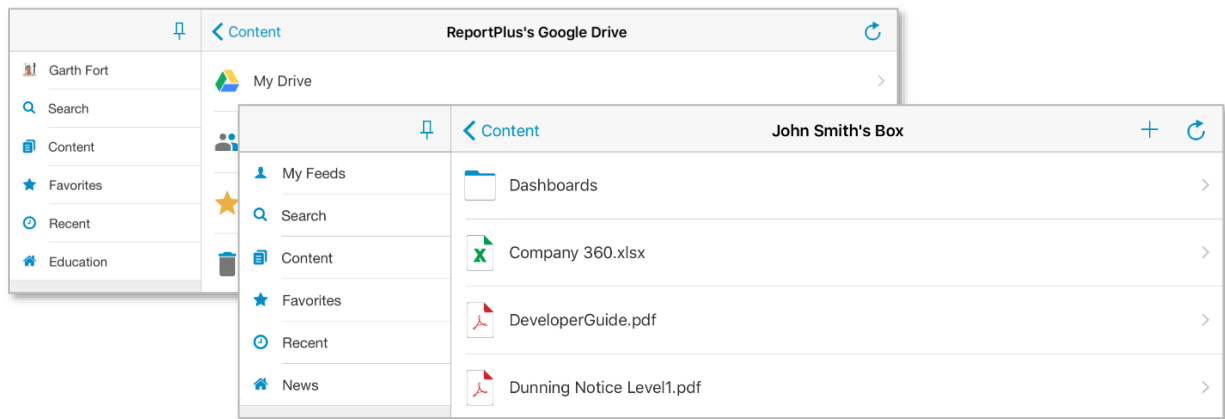
Action buttons/menus

	Add – will enable creating Documents, Folders, ReportPlus Dashboards and adding Photo Albums, Local Files and Folders. You can also take Photos/Videos and Record Audios.
	Refresh – the refresh button will let you retrieve any structural changes for your documents.
	Settings - the wrench button will let you change your View, sort and group and View documents in Web. OneDrive for Business also has a <i>Quick Access</i> menu which will let you access these features.
	Edit – preview one or more selected documents.

The available actions, and the options within them, will be different depending on the cloud provider you choose.

Box, Dropbox and Google Drive

Box, Dropbox, Google Drive, and Network Drives have the same available actions, although you will see that the display for Google Drive is different.



Once you enter the My Drive and Starred folders, you will be able to see the same actions as in Network Drives and Dropbox. The Shared with me section will only allow you to refresh.

Add Button

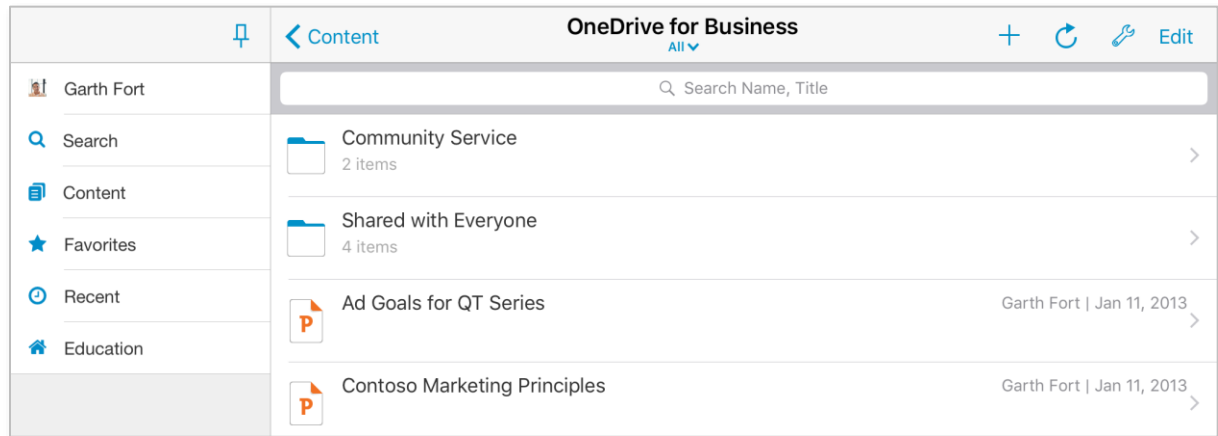
By tapping the “+” icon, you will be able to:

- **Create a Document** using Local Files and your Photo Albums. You can also take photos/videos, record audios and paste any files.
- **Add Folders** to organize your files.

Refresh Button

By tapping the *Refresh* button, you can retrieve any structural changes.

OneDrive for Business



Add Button

By tapping the “+” icon, you will be able to:

- **Create a Document** using Local Files and your Photo Albums. You can also take photos/videos, record audios and paste any files.
- **Add Folders** to organize your files.
- **Add a ReportPlus Dashboard**.

Refresh Button

By tapping the *Refresh* button, you can retrieve any structural changes.

Settings Button

The Settings menu will allow you to control how SharePoint Lists are displayed by configuring the following settings:

- **Views.** Tap *Views* to access SharePlus List Visualizations and SharePoint list views. Scroll up and down to navigate through all available settings.
- **Ad-hoc Sorting & Grouping.** You can specify group criteria by dragging List columns to the **Group By** section or sort criteria by dragging columns to the **Sort By** section.
- **View in Web.** View your documents using the SkyDrive Pro cloud.

Edit Button

By tapping *Edit*, you will be able to preview any files.

Quick Access

You can easily switch the SharePlus Visualizations by tapping the view name to open the Views selector under the list/library name.

Offline Access

Files in the OneDrive for Business personal cloud storage can be synchronized for offline use. For more information on the offline functionality, review the [SharePlus Offline](#) section.

Configuring Network Drives and Other Cloud Providers

You can configure the available Content Sources through the ContentProviders feature in the Configuration File. The feature can be completely disabled through configuration, setting the *Enabled* key to false.

```
<key>ContentProviders</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>Dropbox</key>
    <dict>
      <key>Enabled</key>
      <true>
    </dict>
    <key>Smb</key>
    <dict>
      <key>Enabled</key>
      <true>
    </dict>
    <key>GoogleDrive</key>
    <dict>
      <key>Enabled</key>
      <true>
    </dict>
    <key>Box</key>
    <dict>
      <key>Enabled</key>
      <true>
    </dict>
  </dict>
</dict>
```

- **Box** – Enables/disables Box content source in SharePlus.
- **Dropbox** – Enables/disables Dropbox content source in SharePlus.
- **Smb (Network Drive)** – Enables/disables Network Drives content source in SharePlus.
- **GoogleDrive** – Enables/disables Google Drive content source in SharePlus.

Note: OneDrive will be pre-configured if you are using Enterprise and have Social features enabled. For details about OneDrive for Business configuration refer to *MySiteHost* and *MySiteTitle* in the [“Sites” section](#) in the Configuration chapter.

Search

Nowadays, search can be considered an integral part of any successful SharePoint-related application. As site and folder structures continue to grow, information needs to be easy to find. That is why SharePlus has included a Search module in the SideBar (Enterprise versions) and also an advanced filtering tool for SharePoint lists that allows you to locate relevant items.

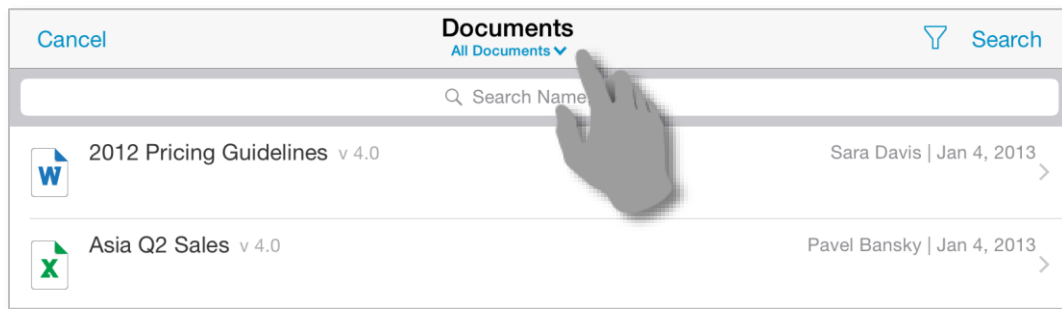
Understanding SharePlus Search

List Filtering Support

SharePlus allows users to filter items within lists and libraries by keyword (name or title) or using the *Advanced Search* tool. These two methods are suited for different situations, the *Advanced List Search* is actually a richer and more complex criteria-based filtering method.

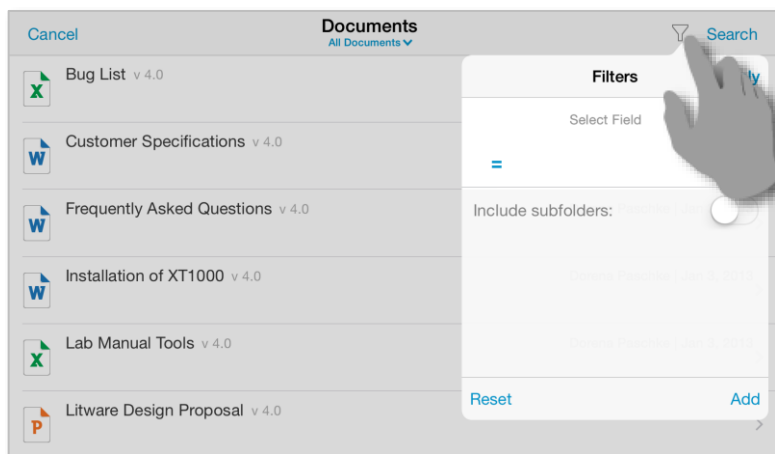
“Standard” Filtering

This filtering method allows the user to locate items based on their name or title. The filtering bar used for this method is displayed on top of any list browsed in SharePlus, and it can be used to quickly find an item within a list filtering by its name or title.



Advanced List Filtering

The *Advanced Search* tool allows users to define complex and powerful filtering criteria within a list. This type of filtering complements the “standard” filtering for those cases that the user needs more control or detailed criteria. To open the *Advanced List Search*, tap the *Advanced* button on the UI, a popover panel is displayed below the filtering bar as shown in the image below.

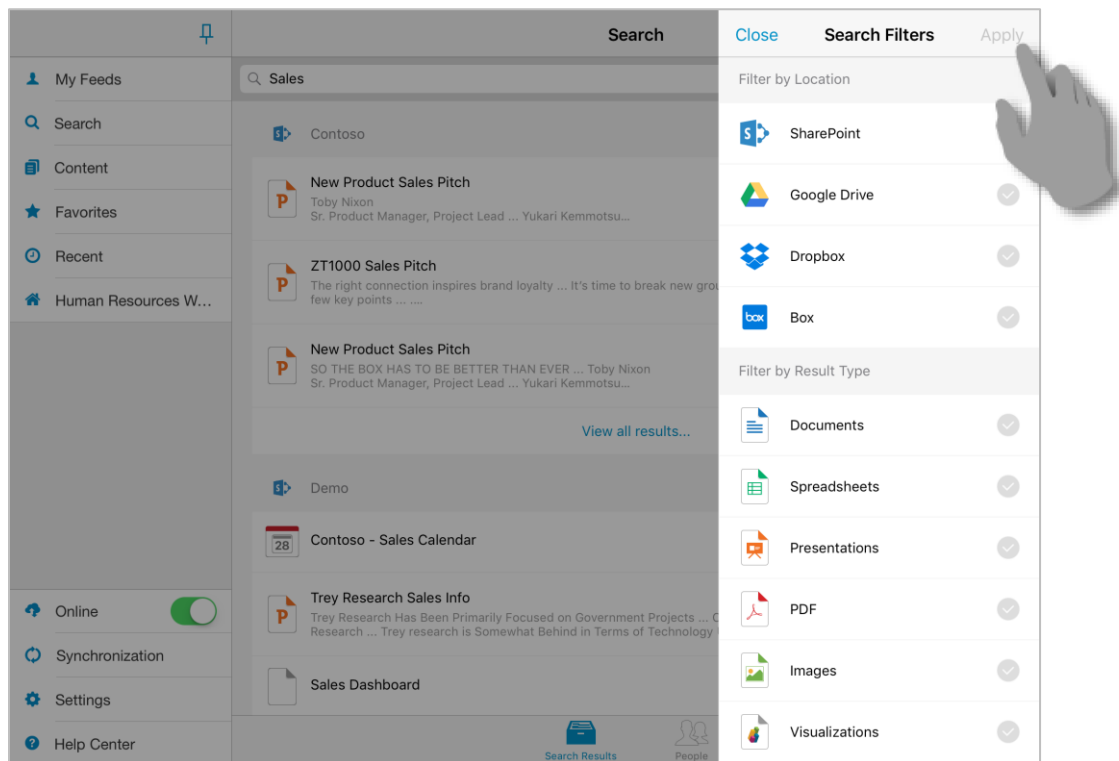


When using the *Advanced Search*, there are a number of elements to take into account:

- The **Advanced button** displays the popover panel.
- **Fields** and also **Conditions** add relevant information to be used by the *filtering criteria*, e.g., “Equals”, “Is null”.
- Extra fields can be included with **And/OR** operators to expand the *filtering criteria*.
- **Sub-folders** can be included.

SharePlus Enterprise Search

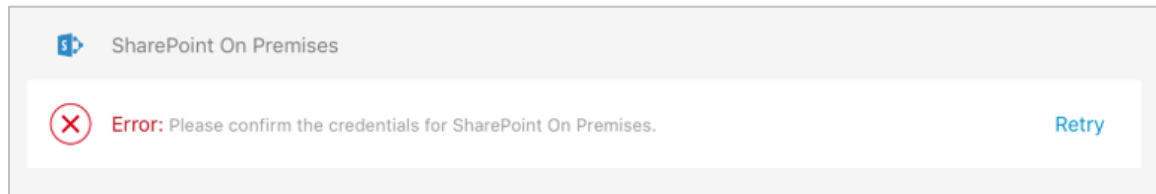
The Search module allows you to search server content by keyword and retrieve results from all connected portals and cloud providers at the same time. For SharePoint, the content is indexed by the SharePoint Search Engine, leveraging the entire SharePoint Search power, including full-text search of all kinds of file formats and even external resources.



The Search Hub provides full control when searching for SharePoint content, you must specify a number of filters that help you narrow the retrieved results.

Filter	Description	Examples
Location	Define the search area	SharePoint site, Google Drive, Dropbox, Box.
Result Type	Specify the expected result type.	Documents, spreadsheets, presentations,pdfs, images, visualizations, files, sites.
Modification Date	Refine the search criteria by date	Past 24 hours, past week, past month, past six months, past year, earlier.
Author	Filter the search by author name	Any potential author name
Scope	Define the relevant search area	All Sites, People.

To open unauthorized content, you need to provide the required credentials.



Search Offline

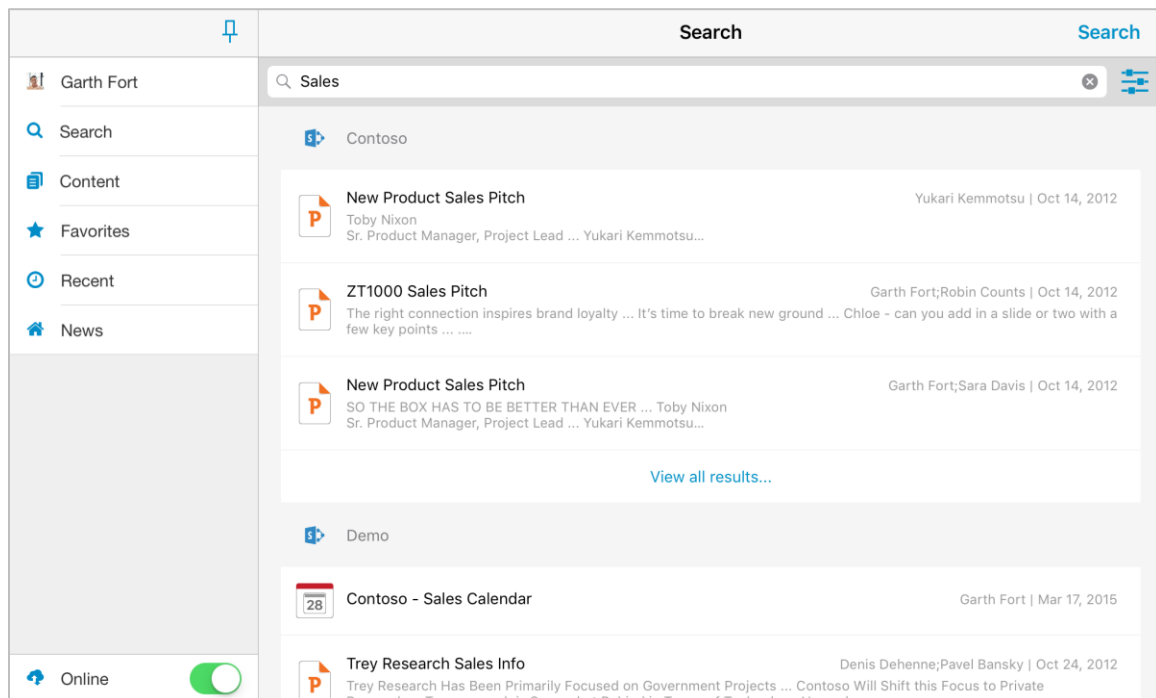
Search results are displayed in an organized list view, but only synchronized content is available (lists or documents that have *Keep Offline* turned on).

For example, the Js Doc Library below is accessible offline while the Images3 library is not.



The green icon in the Js Doc library illustrates that it can be accessed while offline.

If no content is found or no documents have been set to *Keep Offline*, you will see the “No Results” error depicted below.



FAST Search

FAST Search APIs are compatible with SharePoint Search APIs, therefore, the basic core of functionalities provided by FAST Search are supported by SharePlus.

Customizing the Search Module

Search settings can be customized to include/exclude scopes, allowing a better control of the relevant area to be included on the actual search. The GlobalSearch feature from the Configuration File includes three attributes that may be configured to refine the search experience.

GlobalSearch feature Overview

```
<key>GlobalSearch </key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>IncludeScopes</key>
    <string></string>
    <key>ExcludeScopes</key>
    <string>Global Query Exclusion, Rank Demoted Sites</string>
    <key>ProfileDocumentScopes</key>
    <string>All Sites</string>
  </dict>
</dict>
```

- **IncludeScopes** – Search scopes to be displayed. Must be based on the server and can be empty.
- **ExcludeScopes** – Filtered search scopes. SharePlus OOTB has internal scopes that may not be relevant to the user. Value by default: Global Query Exclusion, Rank Demoted Sites.
- **ProfileDocumentsScopes** – Scopes to be included when searching documents associated to the user's profile. Assumes all scopes when not specified.

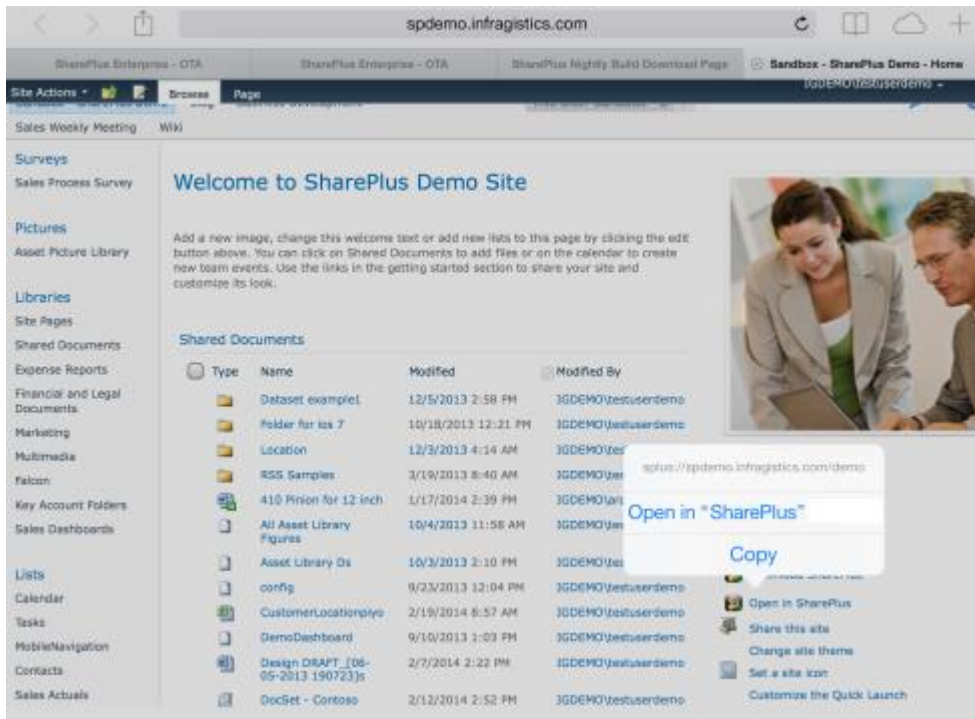
Application Integration

Web-to-App Integration

“Web-to-App” Integration feature allows users to perform certain actions within SharePlus, invoking these actions from HTML content. SharePlus is automatically opened after one of the available actions was called.

SharePlus links or S+ links are basically custom URL Schemes¹³ that start with **splus://** instead of **http://**. In addition, HTTPS channels are also supported by using **spluss://**.

The image below shows a web page about to instruct the browser to invoke SharePlus and navigate to the targeted element natively.



Basic SharePlus Links

Opening a site, list or item in SharePlus is as simple as replacing the **HTTP** protocol by **splus** URL scheme.

Just take the original URL:

<http://<portal>/site/list/item.docx>

And replace:

<splus://<portal>/site/list/item.docx>

¹³ URL Schemes are used by iOS applications to initiate specific requests, for further details refer to [Apple URL Scheme Reference](#) in the iOS App Programming Guide.

The Structure of SharePlus Custom URL Schemes (SharePlus Links)

Custom URL Schemes can include the URL to the SharePoint's site or resource (web, list, item or document) and the action to be performed (if any). In some cases, only application actions can be used, like displaying Favorites or Local Files.

SharePlus links Structure

```
<scheme>://<resource URL>?<resource parameters><SharePlus action and parameters>
```

The structure of SharePlus links always follows this order:

1. The link starts with the **scheme**, “splus://” or “spluss://” on the left-most of the URL.
2. Continues with the **referenced resource** if any (no resources when invoking app actions).
3. Optionally, if you are working with dynamic web pages (.aspx), parameters can be included in the form of key-value pairs.
4. Finally, **SharePlus actions** and their parameters (if any) are located on the right-most of the URL.

Examples:

Invoking a SharePlus application action:

```
splus://?action=settings
```

Invoking an action over a SharePoint resource:

```
splus://portal/site/library/document.docx?action=viewdocument&mode=InSafari
```

Invoking an action over a dynamic web page:

```
splus://dynamicWebServer/page.aspx?color=red&action=full&action=view&mode=InSafari
```

Invoking an action over a ReportPlus dashboard with parameters:

```
splus://portal/site/library/reportPlusDashboard.rplus?country=USA&action=view
```

Note: A referenced resource may need a parameter named “action”. That is not an issue as SharePlus engine searches for the **action** SharePlus link parameter that is located on the right-most of the URL. The **action** parameter can start with “?” or “&” depending on the URL, given that the first parameter of any URL always starts with “?”.

In addition, you can use the **splus-action** SharePlus link parameter, which takes priority over other existing “action” parameters. When required, use **splus-action** instead of just **action**.

URL Encoding

When working with SharePlus links, if the resource URL or the action's parameters include special characters that are not part of the ASCII character-set you need to encode them.

For example, "=" must be replaced with "%3d".

You can encode/decode URLs using free tools like: <http://meyerweb.com/eric/tools/dencoder/>

The Different SharePlus Links

A set of custom URL Schemes can be used to call different actions within SharePlus, enabling a considerable number of application-related behaviors.

Actions Group	Description
SharePoint Navigation	Navigation to Webs, Lists, Items or Documents
Edition	Add/Edit Items or Documents
SharePlus Basic	Navigation within SharePlus components (e.g., Local Files, Favorites, Help)
Configuration Change	Change the Remote Configuration URL or SharePlus Mobile Workspace URL.
Search	Open a query through the Advanced List Search or Enterprise Search (Web).

For a quick reference on SharePlus Links actions and parameters, refer to [Appendix 2](#).

SharePoint Navigation Actions

When invoking navigation actions to SharePoint Webs or Lists, there are three different modes in which you can access the content:

- **InWeb** – A web view is opened from SharePlus displaying the navigation action.
- **InSafari** – iOS Safari browser is invoked by SharePlus, opening with the navigation action.
- **Native** (Default mode) – The navigation action is displayed within SharePlus

Web Samples

- Navigating to a SharePoint Web, opening Safari and requesting the mode to the user.

```
splus://<portal>/site?action=view&mode=InSafari  
splus://<portal>/site/multimedia?action=view&mode=AskUser
```

When navigating sites, the user is prompted to select the mode to be used (SharePlus, Safari, or Web).

List Samples

- Navigating to a SharePoint List, to the default view and also to a specific List View.

```
splus://<portal>/site/calendar?action=view  
splus://<portal>/site/calendar?action=view&viewName=All%20Events
```

- Browsing a list's folder contents, both samples below can be used indistinctly.

```
splus://<portal>/site/Shared%20Documents/RSS%20Samples
```

```
splus://<portal>/site/Shared%20Documents/RSS%20Samples?action=query
```

Item Sample

- Navigating to the details of an item.

```
splus://<portal>/site/Tasks/ID=4
```

Document Samples

- Navigating to the details of a SharePoint Document.

```
splus://<portal>/site/multimedia/Far%20Away.mp3?action=viewitem
```

- Opening a SharePoint Document.

```
splus://<portal>/site/documents/UserGuide.docx?action=viewdocument
```

Editing Actions

These actions may include initial field values to be loaded when opening the SharePoint Add/Edit view. When initial field values are included, there are three important considerations:

- The *field names* must match the names used in SharePoint, including the *ows_prefix*.
- All *field values* must be URL escaped.
- All field values must be included in a specific format, as shown below.

Field type	Format	Examples
Single/Multiple lines of text, Numbers, Currency, Hyperlink	These values need no format.	Text: ows_TextField=Text%20Value Number: ows_NumberField=15
Choice	Values must be separated by “;#” characters (%3B%23 when escaped).	Single: ows_ChoiceField=%3B%23Value1%3B%23 (Non-escaped: ows_ChoiceField=;#Value1;#) Multi: ows_ChoiceField=%3B%23Value1%3B%23Value2%3B%23 (Non-esc: ows_ChoiceField;#Value1;#Value2;#)
Lookup, Person or Group	ItemID;#Name	ows_LookupField=103%3B%23Test (Non-escaped: ows_LookupField =103;#Test)
Date and Time	yyyy-MM-dd'T'HH:mm:ss'Z'	ows_DateField=2012-12-27T16%3A15%3A31Z (Non-esc: ows_DateField =2012-12-27T16:15:31Z)
Yes/No	TRUE or FALSE	ows_YesNoField=TRUE

Samples

- Adding a new document to a SharePoint library.

```
splus://<portal>/site/multimedia/Away.mp3?action=additem&contenttype=audio  
  
splus://<portal>/site/multimedia/Home.mp3?action=additem  
&contenttype=audio&ows_comments=Added%20with%20URL%20schemes
```

- Adding a new item to a SharePoint list.
 - Without providing item field values, an empty new item form will be shown.
 - Providing item field values, a new item form with values filled out will be shown.

```
splus://<portal>/site/Lists/Tasks?action=additem&contenttype=item  
  
splus://<portal>/site/Lists/Tasks?action=additem&contenttype=item&ows_Title=Settle%20price%20with%20providers&ows_Completed=50&ows_Priority=High
```

Note: When you add a new item to a SharePoint list you always need to include the action: "&contenttype=item".

- Editing the metadata associated with a SharePoint item.
 - Without providing item field values, this will show the form's existing values.
 - Providing item field values, this will show the form with the new values.

```
splus://<portal>/site/documents/MeetingNotes.docx?action=additem  
  
splus://<portal>/site/documents/MeetingNotes.docx?action=additem  
&ows_title=New%20title
```

- Editing a new SharePoint Document.

```
splus://<portal>/site/documents/MeetingNotes.docx?action=edititem  
  
splus://<portal>/site/documents/MeetingNotes.docx?action=edititem  
&ows_title=New%20title
```

SharePlus Application Actions

- Invoking a *SharePlus component*.

```
splus://?action=home  
splus://?action=localfiles&folder=Logs  
splus://?action=favorites  
splus://?action=settings  
splus://?action=help  
splus://?action=feedback
```

Configuration Change Actions

These actions let you modify the application's configuration and the SharePlus Mobile Workspace source when included in the Application Home. The *URLSchemes* feature and its settings *AllowConfigurationUpdate* and *AllowWebDashboardUpdate* respectively must be enabled in the application's configuration (Configuration File) for these actions to work.

Samples

- Modifying the Remote Configuration section

```
splus://?action=configurationURL&url=  
https%3A%2F%2Fportal%2FConfigurationFiles%2FCustomConfiguration.plist
```

- Modifying the source of a SharePlus Mobile Workspace in the Application Home

```
splus://?action=webdashboard&source=http%3A%2F%2Fportal%2Fsite%2FSiteAssets%2FDemo.web.zip&title=MyCustomMobileWorkspace
```

Values	Description
source	The URL to the resource or the local path to an existing web resource. An empty value will disable SharePlus Mobile Workspaces feature.
title	This is an optional value and sets the new title for the dashboard.

Search Actions

Using these actions, you can open a query to a list in the Advanced List Search, as you would from the UI. The Advanced Search feature filters items by the specified fields' value, using a specific operator. Only one field can be filtered at a time. E.g., `ows_Title:contains(SharePlus)`
Format to be used:

```
fieldname:operator(value)
```

Operators	Description
equals	The field value must be exactly the same
notequals	The field value must be different
greater	The field value must be greater
greaterorequal	The field value must be greater or equal
lower	The field value must be lower
lowerorequal	The field value must be lower or equal
isnull	The field value must not be specified (isnull())
isnotnull	The field value must not be specified (isnotnull())
beginswith	The field value must start with the value specified
contains	The field value must contain the value specified

The Search Module (Enterprise) can also be opened from a search action, and search queries can be constructed using the keyword query syntax. Advanced filtering can be achieved through property restrictions, for further details refer to the [Property Restriction Keyword Queries](#) MSDN article.

Samples

- Performing a search in the Search Module on a specific site.

```
splus://<portal>/site?action=search
splus://<portal>/site?action=search&query=pdf
```

- Performing a custom search on a SharePoint List.

```
splus://<portal>/site/multimedia?action=query&filter=ows_Title:contains(Text)&filtertitle=Text%20Filter&includesubfolders=true
```

Configuring Web-to-App Integration

You can configure SharePlus custom URL Schemes for your application through the URLSchemes feature in the Configuration File. The feature can be completely disabled through configuration.

```
<key>URLSchemes</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>AllowConfigurationUpdate</key>
    <false/>
    <key>AllowWebDashboardUpdate</key>
    <true/>
    <key>ExternalAppSchemes</key>
    <array/>
  </dict>
</dict>
```

- **AllowWebDashboardUpdate** – Enables/Disables the ability to update the SharePlus Mobile Workspace’s source using URL Schemes.
- **AllowConfigurationUpdate** – Enables/Disables the ability to update the Configuration URL by using URL Schemes.
- **ExternalAppSchemes** – Specifies an array of allowed custom URL Schemes that can open external apps.

Note: This setting disables the *Configuration.setRemoteFileSource* JavaScript API method which is also used to update the Remote Configuration URL.

Using SharePlus Links

Using this versatile feature, you can invoke SharePlus from iOS Safari, from the email client, from QR code readers, and from any other application that handles HTML content.

Invoke SharePlus from Safari

You can recommend using SharePlus to the users that access the SharePoint site in Safari, from a mobile device. There are a number of possibilities or paths that you can follow to achieve this which require a custom implementation. Below you can find two commonly used methods.

Implementing a Mobile landing page

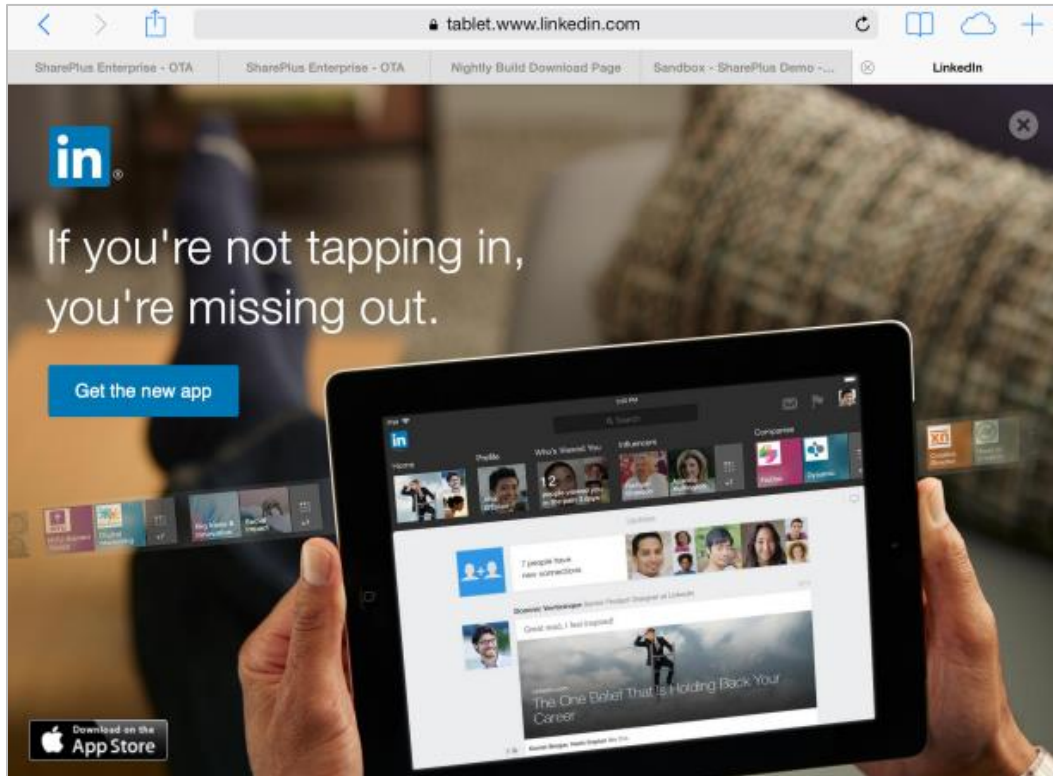
When the user navigates to the SharePoint site, the server can identify the client technology through the HTTP user agent. For further details, see <http://detectmobilebrowsers.com/>. In the case of mobile devices, the server detects iOS and the client browser and then redirects the user to the custom mobile landing page. The standard SharePoint site is displayed for PCs.

Using a mobile landing page allows you to display an easy-to-navigate page with eye-catching design and buttons leading to actionable content, thus inviting the user to install SharePlus.

The custom page could include two buttons:

- An “Install SharePlus” button, which will trigger the installation of SharePlus using Over-The-Air deployment.
- An “Open in SharePlus” button, which will launch SharePlus passing the URL of the current site.

Note: The HTTP User Agent can be easily tricked. Because of that, the mobile landing page solution can be a weak one when you take security into account.



Customizing the SharePoint site

The SharePoint site could include a custom button on the SharePoint Ribbon, which will include a SharePlus link to invoke SharePlus. This solution can be achieved through a small code snippet located either on the SharePoint master page (server) or on the page’s JavaScript (client).

The link included on the HTML page can be static or dynamically rendered using JavaScript either by the server or the client.

Note: When including S+ links as hyperlinks within SharePoint, you have to use an HTML Forms Web Part. This is the only web part that doesn’t check or rewrite the included HTML.

Send SharePlus Links by E-mail

Once you have the SharePlus Link ready, you can share the link by sending it through e-mail. When the user follows the link within the device, SharePlus is invoked and the specified action is called.

Invoke SharePlus from a QR Code

SharePlus links can be set as QR Code Data. After creating the QR Code, users are allowed to scan the code to invoke any SharePlus behavior specified in the SharePlus link. For example, a company that stores technical specification documents in SharePoint can enable employees to open those documents directly from SharePoint using QR Codes. The codes will be created using SharePlus Links, associating a SharePoint document to a QR Code. Employees later scan a specific QR Code in their devices, opening the associated SharePoint document.

App-to-App Integration

SharePlus can be invoked from a native iOS application, from Objective-C code, using custom URL schemes (SharePlus links). This communication between other applications and SharePlus can initiate specific requests, switching the control to SharePlus.

Communication process between other applications and SharePlus (quick description):

1. An NSURL object with SharePlus custom URL Scheme is created.
2. The object is passed to the *openURL:* method of the shared *UIApplication* object.
3. The *openURL:* method launches SharePlus, which has been registered to receive URLs of that type (SharePlus custom URL Schemes).
4. SharePlus takes control.

For further details, refer to [Communicating with Other Apps](#) in the iOS App Programming Guide.

Setting a Custom Email Client

SharePlus can configure the settings for 3rd party email client that overrides the iOS email client. The *EmailClient* feature in the Configuration File is used to configure these settings. HTTP or HTTPS based URLs are accepted in all cases.

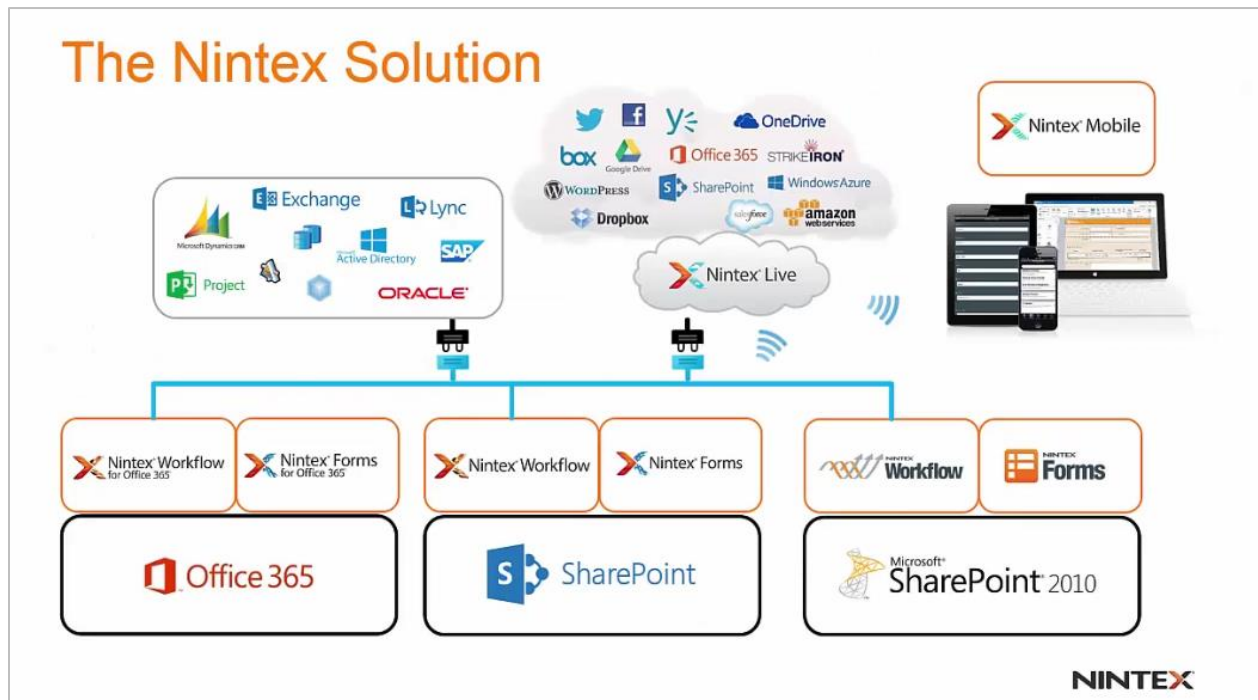
```
<key>EmailClient</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>AllowDefault</key>
    <true/>
    <key>ClientName</key>
    <string></string>
    <key>Schema</key>
    <string>mailto://[To]?subject=[Subject]?body=[Body]</string>
  </dict>
</dict>
```

- **AllowDefault** – Allows SharePlus to work with iOS default email client when the 3rd party email client is not available on the device.
- **ClientName** – Custom client name. This is the 3rd party email client application name.
- **Schema** – Custom URL schema with mailto protocol. The available tokens are:
 - [To]
 - [Subject]
 - [Body]

Nintex Integration

Introduction to Nintex

Nintex's offering includes different workflow automation processes built on [Nintex's platform architecture](#), which includes Nintex Workflows, Nintex Forms, Nintex Mobile, and other end user products. These processes provide a cost-effective strategy for businesses looking to streamline and ease everyday processes.



Nintex solutions include:

- **Nintex Forms, both for Office 365 and SharePoint.** These allow you to build and customize forms in a simple format. SharePlus supports viewing these forms and saving the information entered in them from SharePlus or using the Nintex Mobile app.
- **Nintex Workflows, both for Office 365 and SharePoint.** These allow you to automate processes using an intuitive format. SharePlus supports workflows and displays any tasks or actions created through them.
- **Nintex Mobile.** SharePlus Mobile Workspaces integrate with the Nintex mobile application. You can use your own SharePlus mobile workspace that includes a Nintex-specific widget. This widget allows the navigation to specific Nintex forms within the Nintex Mobile app, and you can even preload fields in the form.

SharePlus' Integration with Nintex

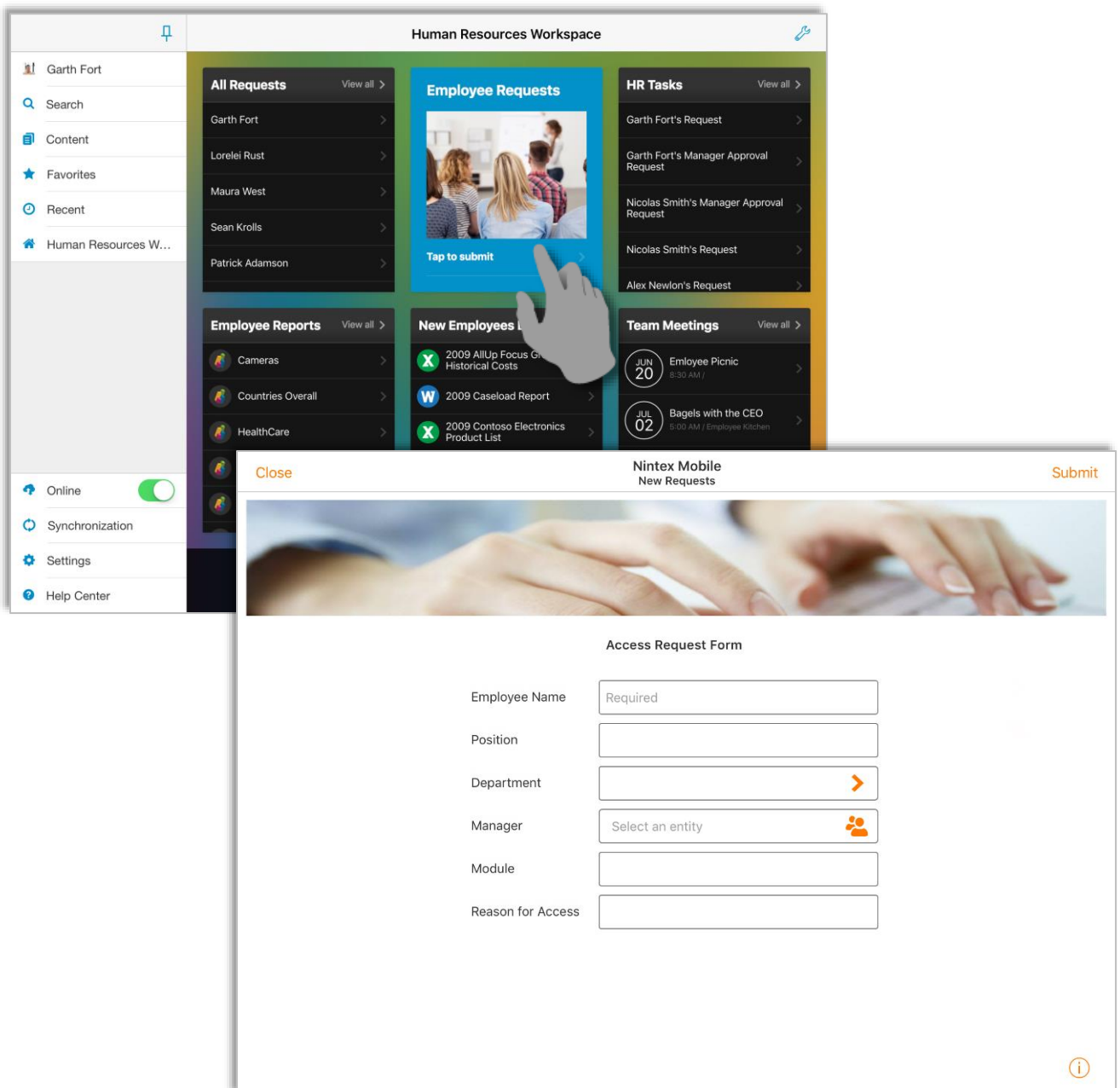
SharePlus integrates with Nintex in two different ways:

- Through the Nintex widget included in SharePlus Mobile Workspaces, which can interact with the Nintex Mobile application.
- With Nintex forms and tasks embedded inside SharePlus.

Working with Mobile Workspaces and Nintex Mobile

The Nintex Mobile application is designed for mobile devices and can be used to visualize and save forms, respond to tasks, saving the information to the server.

With SharePlus' MobileWorkspace Generator you can get your own custom mobile workspace that includes a Nintex-specific widget. This widget allows you to communicate with the Nintex Mobile app and work even while offline.



Nintex Widget features

You can navigate from SharePlus to a specific form within Nintex Mobile, complete the information and save the item to SharePoint, and finally return to SharePlus. Use this widget to:

- **Navigate to a specific form** – Go from SharePlus to the Nintex Mobile app. Navigate from the Nintex widget to a Nintex Form within the Nintex Mobile app.
- **Preload Form fields** – Send pre-loaded fields to a specific form displayed in the Nintex Mobile app.
- **Return to SharePlus** – You can use a S+ link to specify a course of action once the form is submitted in the Nintex Mobile app. By default you return to SharePlus Application home.
- **Use a specific URL schema** – The widget allows you to use different URL schemes to navigate to customized Nintex mobile apps besides the standard one.

Working with Forms and Tasks embedded in SharePlus

With SharePlus' support for Nintex On-Premises and Nintex for Office365, you can view and complete your forms within SharePlus, saving your information to a new item in SharePoint.

If there are any workflows associated with your SharePoint lists, you will also be able to handle them within the application.

The screenshot displays the SharePlus application interface. On the left is a navigation sidebar with a user profile 'Garth Fort' and menu items: Search, Content, Favorites, Recent, and News. The main area shows two overlapping 'New Item' forms. The top form is the 'Undergraduate Studies Admission Form' from Eastern State University, which includes a header with the university logo and a text prompt: 'Please fill in the following form to schedule an interview...'. Below this, there are input fields for 'Complete Name', 'Contact Phone', and a dropdown for 'Please select the...'. The bottom form is the 'Repair Squad' form, which has a header with the company logo and address. It contains several input fields: 'Repair Order #', 'Employee Name', 'Date' (with a date and time picker set to 12 AM), 'Service ID', 'Client Name', 'Contact Phone', 'Time Slot', and 'Final Cost'.

Nintex for Office365

Nintex for Office365 is delivered through the SharePoint App model, meaning that both forms and workflows are completely integrated into Office365. There is no need to install or configure any additional software.

As for Nintex within the application, SharePlus is completely integrated with the application for both SharePoint 2013 and SharePoint 2010, so both forms and tasks associated with any existing workflow will be displayed in the native SharePlus view.

Nintex Forms in Office 365

As mentioned above, forms are visualized in SharePlus natively. Both the *Cancel* and *Save* buttons are integrated in the application, so you only need to fill in your form, hit “Save” and a new item will be added to your SharePoint list.

Note: The form might take a few seconds to load; please be advised that you cannot fill the form until it is fully loaded.

The screenshot displays the 'CPD Submission Extension Request Form' within the SharePlus application. The interface includes a top navigation bar with 'Cancel', 'New Item', and 'Save' buttons. A left sidebar contains navigation links: 'Garth Fort', 'Search', 'Content', 'Favorites', 'Recent', 'Human Resources W...', 'Online' (with a toggle switch), 'Synchronization', 'Settings', and 'Help Center'. The main form area has a dark blue header with the title 'CPD Submission Extension Request Form' and the 'Natrpharm' logo. The form fields include: 'Name (as registered with GPhC)', 'GPhC registration number', 'Address', 'Date of call letter', 'Current submission deadline', 'Contact telephone number(s)' (a dropdown menu with 'Please select a value...' selected), and 'Contact email'. Below these fields, a note states: 'All requests for extensions must be accompanied by supporting evidence. For example, a letter from a medical professional or a MATB1 form. Applications with no evidence will not be considered and will be returned.' A section for 'Reason for extension request' features a large text area. At the bottom, there is a 'List of documentary evidence provided:' section with an 'Add Attachment' button. The bottom of the application window shows navigation arrows.

All Nintex’s form controls are supported in SharePlus; for controls such as dropdown lists, you will see the native SharePlus visualization.

Once the form has been completed, the resulting information will be tracked as a SharePlus item inside the corresponding list.

If tapped, the custom form will be displayed within SharePlus. To edit the field's data, simply tap the wrench icon and select *Edit Properties*.

Nintex Workflows in Office 365

Like Nintex forms for Office 365, Nintex workflows are also visualized natively in SharePlus and all Nintex's workflow controls are also supported in SharePlus

Tasks associated with a workflow can be viewed both natively and with a personalized Nintex form; SharePlus supports both visualizations as well.

In the case below, a task has been created for a Human Resources-related Nintex form. The list to which the form was associated was configured to trigger two workflows:

- A manager approval request workflow, through which the request was either approved or denied by the general manager for the employee's department.
- A request workflow, through which the request was either approved or denied by the person's direct manager.

In the second case, no Nintex task form was associated to the resulting task, so it is displayed in the usual SharePlus format. There is a new button, *Complete*, which allows you to access the *Approved* and *Rejected* options present in the workflow task. **The native SharePlus view is the default view for any tasks associated to a workflow.**

The screenshot shows the 'Shona Rutten's Request' task form in SharePlus. The interface includes a left sidebar with navigation options: Garth Fort, Search, Content, Favorites, Recent, and Human Resources W... The main area displays the task title 'Shona Rutten's Request' with a sub-message: 'A new request has been submitted. Please approve or deny'. Below this, there are sections for 'ATTACHMENTS' (with an 'Add' button) and 'PROPERTIES'. The properties section contains fields for 'Task Name*' (Shona Rutten's Request), 'Start Date' (Start Date), 'Due Date' (Due Date), 'Assigned To' (Test Contributor), '% Complete' (0.00%), and 'Description'. At the top right, there are buttons for 'Cancel', 'Complete', 'Save as Draft', and 'Save'. A dropdown menu is open under the 'Complete' button, showing 'Approved' and 'Rejected' options.

The task will then be marked as *Completed* in the corresponding task list in SharePlus.

The screenshot shows the 'Manage Requests' task list in SharePlus. The interface includes a left sidebar with navigation options: Garth Fort, Search, Content, and Favorites. The main area displays a list of tasks. The first task is 'Garth Fort's Request' with a title, 'Completed: No', 'Due Date:', and 'Assigned To: Test Contributor'. The second task is 'Garth Fort's Manager Approval Request' with a title, 'Completed: No', 'Due Date:', and 'Assigned To: Test Contributor'. The list is titled 'Manage Requests' with a sub-header 'All Tasks'. There are buttons for '+', 'Refresh', 'Filter', and 'Edit' at the top right.

Task Name	Title	Completed	Due Date	Assigned To
Garth Fort's Request		No		Test Contributor
Garth Fort's Manager Approval Request		No		Test Contributor

In the first case, however, the task form associated to the workflow was personalized through Nintex to show a company-compliant request. This is natively visualized in SharePlus, with both the *Cancel* and *Save* buttons displayed within the application.

Nintex for SharePoint (On-Premises)

Nintex for SharePoint is radically different from Office365, since it offers the possibility to interact between on-premises and cloud applications. You can connect to services like Office365, but you can also fetch data from other non-SharePoint environments.

As for Nintex within the application, SharePlus displays both forms and task workflows in a web format. Like Office365 workflow tasks, in the On-Premises version you can also assign a personalized task form; this, however, will still be displayed in a web format.

Nintex Forms (On-Premises)

As mentioned above, on-premises forms are visualized in a web format within SharePlus. As with Office365, both the *Cancel* and *Save* buttons are integrated in the SharePlus application, so you will only need to fill in your form, hit *Save* and a new item will be added to your SharePoint list.

Note: The form might take a few seconds to load; please be advised that you cannot fill the form until it is fully loaded.

All form controls supported in Nintex are supported in SharePlus; for controls such as dropdown lists, you will see the native SharePlus visualization. Once the form has been completed, the resulting information will be tracked as a SharePlus item inside the corresponding list.

If tapped, the custom form will be displayed within SharePlus. To edit the data entered in any of the fields, simply tap the wrench icon and select *Edit Properties*.

Nintex Workflows (On-Premises)

Unlike Office 365, On-Premises Nintex workflows are visualized in a web view, as with forms, which means that you will see an interface similar to the one you would see in SharePoint. All workflow controls are supported.

In the case below, a task was created for a RepairSquad group. The list to which the form was associated to was configured to trigger two workflows:

- A time slot approval, through which the request was either approved or denied by the general manager if the time slot was correct.
- A budget approval, which was approved or denied depending on the price entered by the Employee.

Whether the tasks are personalized through Nintex or are left as they come by default, the resulting task in SharePlus is displayed in a web format, with the *Approve* and *Reject* options visible in the task body.

Known Limitations

When connecting with Nintex forms in the Nintex Mobile app

Nintex Forms need to have a Nintex mobile layout applied to be accessible from the Nintex Mobile application

Forms always need to have at least one Nintex mobile layout to be accessible from the Nintex Mobile application. Among other things, this will mean that if a user has a Nintex widget in a Mobile Workspace linked to a form, that form will need to have a Nintex layout to work.

Nintex Mobile app needs to be configured correctly for Nintex widgets to work in a Mobile Workspace

When using the Nintex widget in a Mobile Workspace pointing to a Nintex form, the Nintex Mobile application needs to be configured to point to the site where that form is applied.

When visualizing Nintex forms and tasks within SharePlus

Nintex Forms can only be accessed online

Nintex forms require an active, working internet connection. Therefore, Nintex forms opened within SharePlus from a synchronized Mobile Workspace or a SharePlus list will not load.

If there are limitations to a Nintex form on the Safari browser, the same limitations will apply in SharePlus

The limitations applicable to a Nintex form's layout that are visible in Safari will also apply to the SharePlus application.

Nintex Forms cannot be edited or managed through SharePlus

Users will not be able to modify or manage Nintex forms through the SharePlus applications. They will be able to see forms and fill in fields, but not create new forms or edit existing ones.

Nintex Workflows cannot be manually started from SharePlus

SharePlus does not allow for users to manually trigger a workflow. The workflow must be set to automatically start through Nintex for the workflow actions to be reflected in SharePlus.

Appendices

Appendix 1: Configuration File Reference

Appendix 2: SharePlus Links Reference

Appendix 3: Document Changelog

Appendix 1: Configuration File Reference

SharePlus is able to centrally configure default behaviors and feature trimming using a configuration file with a specific structure. This is an XML file that can be previously established by the user or even updated remotely from a repository.

Structure and XML Details

The configuration file has a **plist** extension, which internally is just an XML with a pre-define structure that it's needed for the application in order to correctly recognize and process the information.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN"
"http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
  <dict>
    <key>ConfigManager</key>
    <dict>...</dict>
    <key>Features</key>
    <dict>...</dict>
    <key>Pages</key>
    <dict>...</dict>
    <key>Accounts</key>
    <dict>...</dict>
    <key>Sites</key>
    <dict>...</dict>
    <key>Variables</key>
    <dict>...</dict>
  </dict>
</plist>
```

This file has six root items

- **ConfigManager:** Attributes related to the remote configuration setup.
- **Features:** Attributes related to the application's features.
- **Pages:** Attributes that define pages (or view containers) that can be used when first accessing the application, sites, and/or sub-sites.
- **Accounts:** Attributes that define site's accounts.
- **Sites:** Attributes that define possible connection configurations.
- **Variables:** Attributes for custom behaviors.

Configuration File - Required Keys

In order for the application to launch, there are certain keys that **always** need to be present in the configuration file. The "Key is Required" specification in each key will let you know if it is required or not.

ConfigManager

In this section you will find the following keys:

```
<key>ConfigManager</key>
<dict>
  <key>ConfigurationURL</key>
  <string>http://pathToRepository/SharePlus_Config.plist</string>
  <key>ConfigurationVersion</key>
  <string>3</string>
  <key>MustLoadRemoteConfig</key>
  <false/>
  <key>ConfigurationProviderID</key>
  <integer>0</integer>
  <key>ConfigurationAccountName</key>
  <string></string>
  <key>ConfigurationAuthProviderID</key>
  <integer>0</integer>
</dict>
```

For each feature, we will find the following common children:

- **Enabled:** Tells the app if the feature is enabled. It is a **Boolean** field, so the possible values for this entry are **<true/>** or **<false/>**
- **Settings:** Which represents a dictionary (key-value pair) of the needed parameter to configure the specified feature. The keys in a dictionary are always strings, but the value for a specific key could be of one of the following types:
 - **String:** any string is accepted
 - **Integer:** any number value is accepted
 - **Boolean:** only **<true/>** or **<false/>** values are accepted.

The following are the possible entries in the **ConfigManager** section:

- **ConfigurationURL:** Represents the URL of the repository where the configuration file will be stored for future updates.
 - **Key is Required:** No
 - **Possible values:** HTTP or HTTPS based URLs are accepted (Strings).
- **ConfigurationVersion:** Indicates the current version of the configuration file. This number lets the administrators keep track of the different configuration files.
 - **Key is Required:** No
 - **Possible values:** any string
- **MustLoadRemoteConfig:** Indicates if loading remote configuration is mandatory. This means that if the application cannot access the given URL, the application won't let the user use the application.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** **<false/>**

- **ConfigurationProviderID:** Indicates the ID of the configuration provider to be used. This value references the app.plist configuration providers section.
 - **Key is Required:** No
 - **Possible values:** Integer. The possible values are:
 - 0 – Endpoint Provider (default)
 - 1 – Library-based Provider
 - **Default Value:** 0
- **ConfigurationAccountName:** Indicates the account to be used when retrieving the remote Configuration File. Should reference by name an account defined in the accounts section.
 - **Key is Required:** No
 - **Possible values:** any string
- **ConfigurationAuthProvider/ ConfigurationAuthenticationProviderID:** Indicates the authentication mode required by the server to retrieve the remote Configuration File:
 - **Key is Required:** No
 - **Possible values:** this is an integer field and the possible values are:
 - 0 - for Windows Based authentication
 - 1 - for Form Based authentication
 - 2 - for Office 365 authentication
 - 3 - for Web Login authentication
 - **Default Value:** 0

The Accounts section represents a collection of accounts that will be pre-loaded in the application, following the configuration given in each item.

Features

The feature section is directly related to the application's behavior and feature trimming. Every feature is represented by a dictionary structure and most of these entries follow a pattern:

```
<key>FeatureName</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>...</dict>
</dict>
```

This means that for each feature we will find the following common children:

- **Enabled:** Tells the app if the feature is enabled. It is a **Boolean** field, so the possible values for this entry are **<true/>** or **<false/>**
- **Settings:** Which represents a dictionary (key-value pair) of the needed parameter to configure the specified feature. The keys in a dictionary are always strings, but the value for a specific key could be of one of the following types:
 - **String:** any string is accepted
 - **Integer:** any number value is accepted
 - **Boolean:** only **<true/>** or **<false/>** values are accepted.

As an example, the following is the **EmailDocument** feature structure:

```
<key>EmailDocument</key>
<dict>
  <key>Enabled</key>
  <true/>
  <key>Settings</key>
  <dict>
    <key>BCC</key>
    <string/>
    <key>Body</key>
    <string>Sent via [ProductSignature]</string>
    <key>CC</key>
    <string/>
    <key>Subject</key>
    <string>[DocumentName]</string>
    <key>To</key>
    <string/>
  </dict>
</dict>
```

As you can see, you will find the **Enabled** key and the **Settings** key. In this case, the settings key will represent relevant data for the email action, such as the subject or recipients of the email.

Features Specifications

The following are the possible entries in the **Feature** section:

- **Alerts:** Allow the usage of alerts/notifications in SharePlus.
 - **CheckTime:** The interval of time (in seconds) that the application waits to check for modifications over items marked with alerts.
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - **Default Value:** 90
 - **Providers:** Allows specifying from which sources the application will be getting the alerts.
 - **Favorites:** Allows the creation of alerts from Favorites.
 - **AllowFromItems:** Enable/Disable alerts for items.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowFromLists:** Enable/Disable alerts for lists.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **Manual:** Allows the creation of alerts when browsing lists or items.
 - **AllowFromItems:** Enable/Disable alerts for items.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowFromLists:** Enable/Disable alerts for lists.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **AnnotationEditor:** Allows configuring multiple settings for the Annotation Editor such as Shapes, Freehand tool, Text and Markups features.
 - **FreeText:** Allows specifying the style for any free text annotations.
 - **FillColor:** Define the color for free text annotations
 - **Key is Required:** No
 - **Possible Values:** Should be RGBA color values.
 - **Default Value:** rgba:0,0,255,0
 - **FontName:** Define the font name for free text annotations.
 - **Key is Required:** No
 - **Possible Values:** CSS-recognized font names.
 - **Default Values:** Helvetica
 - **FontSize:** Define the font size for free text annotations
 - **Key is Required:** No
 - **Possible Values:** Integer
 - **Default Value:** 15
 - **LineColor:** Define the line color for free text annotations.
 - **Key is Required:** No
 - **Possible Values:** RGBA values
 - **Default Value:** rgba:0,0,255,0

- **LineWidth:** Define the line width for free text annotations.
 - **Key is Required:** No
 - **Possible Values:** Integer
 - **Default Value:** 4
- **TextColor:** Define the color of the text for free text annotations.
 - **Key is Required:** No
 - **Possible Values:** RGBA values
 - **Default Value:** rgba:0,0,0,100
- **Transparency:** Define the transparency for free text annotations.
 - **Key is Required:** No
 - **Possible Values:** Integer
 - **Default Value:** 100
- **Freehand:** Allows specifying the style for any free hand annotations.
 - **LineColor:** Define the Line Color for all freehand annotations.
 - **Key is Required:** No
 - **Possible Values:** RGBA values
 - **Default Value:** rgba:0,0,255,100
 - **LineWidth:** Define the line width for free hand annotations.
 - **Key is Required:** No
 - **Possible Values:** Integer
 - **Default Value:** 4
 - **Transparency:** Define the transparency for free hand annotations.
 - **Key is Required:** No
 - **Possible Values:** Integer
 - **Default Value:** 85
- **Markups:** Allows specifying the options and style for all markup.
 - **AllowHighlight:** Enable/Disable highlighting for all markup.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **StrikeOut:** Enable/Disable strike out for all markup.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **Allow Underline:** Enable/Disable underlining for all markup.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **Highlight Color:** Define the highlight color for all markup.
 - **Key is Required:** No
 - **Possible Values:** RGBA values
 - **Default Value:** rgba:255,255,0,100
 - **Line Color:** Define the line color for all markup.
 - **Key is Required:** No
 - **Possible Values:** RGBA values
 - **Default Value:** rgba:0,0,255,100
 - **Transparency:** Define the transparency for all markup.
 - **Key is Required:** No
 - **Possible Values:** Integer
 - **Default Value:** 100
- **Note:** Enable/disable notes for all markup.

- **SaveOptions:** Allows you to specify the Save options for your edited document.
 - **CopyToLocalFiles:** Enable/Disable the option to copy your edited document to the Local Files folder.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **SaveAsDraft:** Enable/Disable the option to save your edited document as a draft.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **SaveToLocalFile:** Enable/Disable the option to save your edited document to your Local Files folder.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **SaveToOtherLocation:** Enable/Disable the option to save your edited document to a different location.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **SaveToServer:** Enable/Disable the option to save your edited document to a server.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
- **Shapes:** Allows you to specify the options and style for all your shapes.
 - **AllowArrow:** Enable/Disable the ability to insert arrows in annotations.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **AllowCircle** Enable/Disable the insertion of circles in annotations.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **AllowLine** Enable/Disable the insertion of lines in annotations.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **AllowSquare** Enable/Disable the insertion of squares in annotations.
 - **Key is Required:** No
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **FillColor:** Define the color for shapes in annotations.
 - **Key is Required:** No
 - **Possible Values:** Should be RGBA color values.
 - **Default Value:** rgba:0,0,255,0
 - **LineColor** Define the line color for all shapes.
 - **Key is Required:** No
 - **Possible Values:** RGBA values
 - **Default Value:** rgba:0,0,255,100

- **LineWidth:** Define the line width for free hand annotations.
 - **Key is Required:** No
 - **Possible Values:** Integer
 - **Default Value:** 4
 - **Transparency:** Define the transparency for all markup.
 - **Key is Required:** No
 - **Possible Values:** Integer
 - **Default Value:** 100
 - **Stamp:** Allows you to specify the style for your stamps.
 - **Transparency:** Define the transparency for all markup.
 - **Key is Required:** No
 - **Possible Values:** Integer
 - **Default Value:** 100
- **AuthenticationSettings:** Configure authentication settings required for specific scenarios related to detecting lost sessions.
 - **LoginBodyPatterns:** Allows the scanning of the body of HTTP server responses that notify a lost user session. SharePlus searches different patterns in the server's response using ICU regular expressions.
Example: *form action="post" url="logout.aspx"*
 - **Key is Required:** No
 - **Possible values:** Array of Strings
 - **LoginHeaderPatterns:** Allows the detection of HTTP Headers in server responses that notify a lost user session. SharePlus searches different patterns in the server's response using ICU regular expressions.
Example: *Set-Cookie: NSC_TMAP=xyz;Path=/;expires=Wednesday, 09-Nov-2015 23:12:40 GMT;Secure;*
 - **Key is Required:** No
 - **Possible values:** Array of Strings
 - **LoginUrlPatterns:** Allows the detection of a login webpage in the server in case an error is returned. SharePlus searches different patterns in the server's returned URL using [ICU regular expressions](#).
Example: *https://myserver.com/timeout*
 - **Key is Required:** No
 - **Possible values:** Array of Strings
 - **WebBasedAutoLogin:** Enable/Disable the web-based auto login mechanism, which consists on SharePlus resolving credentials entered automatically.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **WebLoginSettings:** Configure authentication settings required for web-based authentication mechanisms.
 - **AllowResetCredentialCache.** Defines whether cookies are reset or not during the WebLogin authentication process. *It is set to YES by default, allowing for cookies to be reset.*
 - **Key is Required:** Yes
 - **Possible Values:** Boolean
 - **Default Value:** <true/>

- **AllowSupportWindowsAuthentication.** Enables/Disables the Windows/NTLM authentication mechanism during the WebLogin authentication process.
 - **Key is Required:** Yes
 - **Possible Values:** Boolean
 - **Default Value:** <true/>
 - **F5HeuristicEnabled.** Enables/Disables F5 heuristics to allow SharePlus to recognize when to close the WebLogin popup.
 - **Key is Required:** Yes
 - **Possible Values:** Boolean
 - **Default Value:** <false/>
 - **HtmlManipulationDisabled.** Enables/Disables HTML manipulation in the WebLogin screen. *For F5 authentication mechanisms, it is recommended that the value is set to "YES".*
 - **Key is Required:** Yes
 - **Possible Values:** Boolean
 - **Default Value:** <false/>
- **AuthenticationTimeBomb:** When the Authentication Time Bomb feature is enabled, it requires user authentication against the server within a specific period of time.
 - **AllowedTime:** Maximum period of time (hours) that the user can work with the app without login in again.
 - **Key is Required:** No
 - **Possible values:** Integer
 - **Default Value:** 10
 - **AttemptFailedMessage:** Message shown every time the user fails to enter valid credentials and still has attempts left. If empty, no message will be shown. Available Tokens: [AttemptsLeft] - number of remaining attempts. This token can be inserted into the message. (e.g. "You have [AttemptsLeft] attempt(s) left").
 - **Key is Required:** No
 - **Possible values:** String
 - **LimitReachedMessage:** Message shown when the user fails to input valid credentials and has no more attempts left. If empty, the app will show the default message (i.e. "You have reached the maximum attempts allowed. Existing data was deleted.")
 - **Key is Required:** No
 - **Possible values:** String
 - **MaxAttempts:** Maximum amount of failed authentication attempts before all the site's data is wiped.
 - **Key is Required:** No
 - **Possible values:** Integer
 - **Default Value:** 3
- **Contacts:** Allows the user to add contacts from a List to the Device contacts.
- **ContentProviders:** Defines the settings for all Document Viewers.
 - **Box:** Enables/Disables the possibility to add Box content sources to access its files.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>

- **Dropbox:** Enables/Disables the possibility to add Dropbox content sources to access its files.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **Smb:** Enables/Disables the possibility to add Network Drives content sources to access its files.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **GoogleDrive:** Enables/Disables the possibility to add Google Drive content sources to access its files.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **DocumentPrint:** Allows the user to print documents using iOS native AirPrint service.
- **DocumentViewer:** Defines all Document viewers' settings.
 - **ForceWebViewForOffice:** Enables/Disables the use of *Quick look*, a native view that can display any type of document but does not support swipe between documents. The alternative, Web view, can't display Office Macros.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **SwipeDocumentsEnable:** Enables/Disables Swipe Documents feature – Swipe through list documents when opening a single document from a library or list.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **SwipeListTemplates:** Enables/Disables the swipe document feature only for the specified list templates. If *SwipeDocumentsEnable* is enabled the specified list templates will have Swipe Documents enabled. Otherwise, the list templates will have swipe documents disabled.
Default values: 109, 851. These numbers are linked to a list template in SharePoint. 109 is a Picture Library and 851 is an Assets Library.
 - **Key is Required:** No
 - **Possible values:** String
 - **Default Value:** 109, 851.
 - **TabsEnable:** Enables/Disables tabbed previewing for documents. All documents from a list are opened in different tabs when opening a single document.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Values:** <true/>
 - **TabsListTemplates:** Enables/Disables tabbed previewing feature only for the specified list templates. If *TabsEnable* is enabled the specified list templates will have tabbed previewing enabled. If *TabsEnable* is disabled, the list templates will have tabbed previewing disabled. Default value is BLANK. These numbers are linked to a list template in SharePoint.
 - **Key is Required:** No
 - **Possible values:** String

- **EmailClient:** Settings for third-party email client. Overrides iOS email client.
 - **AllowDefault:** Allows the app to work with iOS' default email client if the third-party email client it is not available on the device.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **ClientName:** Custom client name. This is the third-party email client application name.
 - **Key is Required:** No
 - **Possible values:** String
 - **Schema:** Client's URL schema. Example: [mailto://\[To\]?subject=\[Subject\]?body=\[Body\]](mailto://[To]?subject=[Subject]?body=[Body]). Available tokens: [To], [Subject], [Body].
 - **Key is Required:** No
 - **Possible values:** String
- **EmailDocument:** Allows the user to send documents via e-mail.
 - **BCC:** Default email addresses to be included in the BCC field when composing a new message. Defined as comma-separated email addresses (e.g. : example1@domain.com, example2@domain.com)
 - **Key is Required:** No
 - **Possible values:** String
 - **Body:** Text to be used as the default message body. Available Tokens: [DocumentName], [DocumentURL], [ProductSignature], [NewLine].
 - **Key is Required:** No
 - **Possible values:** String
 - **CC:** Default email addresses to be included in the CC field when composing a new message. Defined as comma-separated email addresses (e.g. : example1@domain.com, example2@domain.com)
 - **Key is Required:** No
 - **Possible values:** String
 - **Subject:** Default SUBJECT when composing a new message. Available Tokens: [DocumentName]. Adding [DocumentName] to the subject line will add the document's title.
 - **Key is Required:** No
 - **Possible values:** String
 - **To:** Default email addresses to be included in the TO field when composing a new message. Defined as comma-separated email addresses (e.g. : example1@domain.com, example2@domain.com)
 - **Key is Required:** No
 - **Possible values:** String
- **EmailURL:** Allows the user to send the URL of a document via e-mail.
 - **AllowHTML:** Allows the user to send the message body in HTML format.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **BCC:** Default email addresses to be included in the BCC field when composing a new message. Defined as comma-separated email addresses (e.g. : example1@domain.com, example2@domain.com)
 - **Key is Required:** No
 - **Possible values:** String

- **Body:** Text to be used as the default body in the message. Available Tokens: [DocumentName], [DocumentURL], [ProductSignature], [NewLine], [SharePlusURL]. The [SharePlusURL] token is replaced by the document's splus link.
 - **Key is Required:** No
 - **Possible values:** String
- **CC:** Default email addresses to be included in the CC field when composing a new message. Defined as comma-separated email addresses (e.g. : example1@domain.com, example2@domain.com)
 - **Key is Required:** No
 - **Possible values:** String
- **Subject:** Default SUBJECT when composing a new message. Available Tokens: [DocumentName], [ProductSignature], [DocumentURL]. Adding [DocumentName] to the subject line will add the document's title.
 - **Key is Required:** No
 - **Possible values:** String
- **To:** Default email addresses to be included in the TO field when composing a new message. Defined as comma-separated email addresses (e.g. : example1@domain.com, example2@domain.com)
 - **Key is Required:** No
 - **Possible values:** String
- **Favorites:** Enables marking items, folders, lists, libraries and sub sites as favorites and accessing them from the "Favorites" folder in SharePlus home screen.
 - **AllowInItems:** Allows to favorite items and folders.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowInLists:** Allows to favorite lists and libraries.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowInWebs:** Allows to favorite sub-sites.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **Feedback:** Allows the application to send user feedback about the application's usage.
 - **BCC:** Default email addresses to be included in the BCC field when composing a new message. Defined as comma-separated email addresses (e.g. : example1@domain.com, example2@domain.com)
 - **Key is Required:** No
 - **Possible values:** String
 - **Body:** Text used as message default body. Available Tokens: [DocumentName], [DocumentURL], [ProductSignature], [NewLine], [FeedbackType]
 - **Key is Required:** No
 - **Possible values:** String
 - **CC:** Default email addresses to be included in the CC field when composing a new message Defined as comma-separated email addresses (e.g. : example1@domain.com, example2@domain.com)
 - **Key is Required:** No
 - **Possible values:** String

- **Subject:** Default SUBJECT when composing a new message. Available Tokens: [DocumentName], [FeedbackType]
 - **Key is Required:** No
 - **Possible values:** String
- **To:** Default email addresses to be included in the TO field when composing a new message. Defined as comma-separated email addresses (e.g. : example1@domain.com, example2@domain.com). This setting cannot be blank since the address is also used for error reporting.
 - **Key is Required:** No
 - **Possible values:** String
- **UserVoiceClient:** The UserVoice API key, which can be included for the feedback to be forwarded to the corresponding user account.
 - **Key is Required:** No
 - **Possible Values:** String
- **GlobalSearch:** Enterprise Search settings.
 - **ExcludeScopes:** Filtered search scopes. SharePlus OOTB has internal scopes that may not be relevant for the user. Excluded scopes by default: Global Query Exclusion, Rank Demoted Sites.
 - **Key is Required:** No
 - **Possible values:** String
 - **IncludeScopes:** Search scopes to be displayed. All search scopes must be based on the server based. If no match is found the setting is ignored.
 - **Key is Required:** No
 - **Possible values:** String
 - **ProfileDocumentsScopes:** Allows setting the scopes in which documents associated to the user's profile are searched. If not specified, is assumes all scopes.
 - **Key is Required:** No
 - **Possible values:** String
 - **SearchTextMinLength:** The defined minimum length for the Enterprise Global Search.
 - **Key is Required:** No
 - **Possible values:** Integer
 - **Default Value:** 0
- **GlobalSettings:** Predefined configuration for the application's global settings. These are the app's factory settings for all users, which can't be changed via remote configuration.
 - **AutoHideNavigator:** Enable/Disable the Sidebar (left pane) auto hide behavior. If enabled, the Sidebar will be displayed only the first time the user runs the app. By default, this setting is disabled and the Sidebar is displayed.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **ConnectionTimeout:** Amount of seconds the app waits for a response before assuming the connection has timed out.
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - **Default Value:** 240

- **DisableAutoLockMustBePluggedIn:** Enables the *DisableAutoLockOnSync* and *DisableAutoLockOnPreview* options only if the device is plugged in.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **DisableAutoLockOnPreview:** Prevents the device from locking when previewing documents.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **DisableAutoLockOnSync:** Prevents the device from locking during the synchronization process.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **EnableLog:** Enable the Log Recorder to record all your activity, the app's requests, and server's responses. Logs will be generated in the Local Files under the "Logs" folder.
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - 0. False (default)
 - 1. True
 - **Default Value:** 0
- **ExternalBrowser:** Specifies the external browser that will be used. Possible values are *chrome* or *safari*.
 - **Key is Required:** No
 - **Possible values:** String
 - **Default Value:** safari
- **NetworkStack:** Specifies the method uses in the networking layer. Legacy is recommended for NTLM scenarios.
 - **Key is Required:** No
 - **Possible values:** Integer
 - 0. Legacy (ASIHTTPRequest).
 - 1. Standard(NSURLConnection).
 - 2. Modern (NSURLSession)
 - **Default Value:** 0
- **PreviewDocumentsOnTap:** Show document preview as the default action when tapping on it instead of displaying the item details. Items details will still be available on a different view.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **RemoveLocalFilesAfterUpload:** Remove the local copy of a file after it has been uploaded.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>

- **SSLLevel:** For iOS specific interoperability issues regarding SSL certificates, SharePlus has the option of changing the SSL level allowing you to secure HTTP connections (HTTPS)
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - 0. Negotiated
 - TLS v1
 - SSL v2
 - SSL v3
 - 100. None
 - **Default Value:** 0
- **StartupModule:** Specifies the application module to be loaded by SharePlus when opening the application from scratch. Possible values include all Row Identifiers specified in the NavigatorTableDefinition.plist file.
 - **Key is Required:** No
 - **Possible values:** String
 - **ContentsHub** – to reference the Content Module.
 - **Recents** – to reference the Recents Module.
 - **Favorites** – to reference the Favorites Module.
 - **Home** – to reference the default Application Home Module.
 - **Search** – to reference the Search Module
 - **Social** – to reference the Social Module.
- **SyncIdleTime:** Specifies the wait time value in seconds, after being idle, before triggering the synchronization process.
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - **Default Value:** 60
- **UploadMethod:** Specifies the method used to upload files, PUT or POST.
 - **Key is Required:** No
 - **Possible values:** Integer
 - 0. WebDav (PUT) (default)
 - 1. WebService (POST)
 - **Default Value:** 0
- **UserAgent:** SharePlus' user agent. If empty, the app will use the standard Mozilla user agent.
 - **Key is Required:** No
 - **Possible values:** String
 - **Tokens:** [AppName], [AppVersion], [DeviceInfo], [DeviceUA]
- **Help:** Replace or hide SharePlus' Help.
 - **HelpURL:** URL to an online help page to replace the app's if no per-device URLs are defined.
 - **Key is Required:** No
 - **Possible values:** HTTP or HTTPS based URLs are accepted (String).
 - **HelpURL-iPad:** URL to an online help page to replace the app's when the app is running in an iPad.
 - **Key is Required:** No
 - **Possible values:** HTTP or HTTPS based URLs are accepted (String).

- **HelpURL-iPhone:** URL to an online help page to replace the app's when the app is running in an iPhone.
 - **Key is Required:** No
 - **Possible values:** HTTP or HTTPS based URLs are accepted (String).
- **ShowAboutUs:** Shows/Hides the app's About Us on the app's global settings.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **ShowFAQ:** Shows/Hides the app's FAQ on the app's global settings.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **ShowHelp:** Shows/Hides the app's Help on the app's global settings.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **HomeManagement:** Allows the configuration of the Application Home page and the Default Site Home page.
 - **AllowSetAsHome:** Enables/Disables the inclusion of the “Set as Home” action among the possible actions displayed for an item.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AppPageName:** Defines the page name to be used as Application Home. The page name must match the name of an existing page in the Pages section.
 - **Key is Required:** Yes
 - **Possible values:** String
 - **DefaultSitePageName:** References the page to be used as Site Home by default. The page name must match the name of an existing page in the Pages section.
 - **Key is Required:** Yes
 - **Possible values:** String
 - **InheritParentPage:** When true, sub-sites inherit pre-configured pages from their parent site.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **ShowMainAreaButton:** If false, hides the Application Home button (Main Area).
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **ShowNavigatorButton:** If false, hides the Application Home button (SideBar).
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **ImageManagement:** Enables you to adjust size and quality of the captured images before being uploaded.
 - **DefaultNamePrefix:** Default filename prefix for pictures to be uploaded.
 - **Key is Required:** No
 - **Possible values:** String

- **Qualities:** Available quality options (options names may vary, but values must be between 5 and 100).
 - **High**
 - **Key is Required:** Yes
 - **Possible values:** Integer (from 5 – 100)
 - **Default Value:** 100
 - **Low**
 - **Key is Required:** Yes
 - **Possible values:** Integer (from 5 – 100)
 - **Default Value:** 30
 - **Normal**
 - **Key is Required:** Yes
 - **Possible values:** Integer (from 5 – 100)
 - **Default Value:** 60
- **Ratios:** Available size ratios (the name of each ratio may vary, but values must be between 5 and 100)
 - **Actual Size**
 - **Key is Required:** Yes
 - **Possible values:** Integer (from 5 – 100)
 - **Default Value:** 100
 - **Large**
 - **Key is Required:** Yes
 - **Possible values:** Integer (from 5 – 100)
 - **Default Value:** 75
 - **Medium**
 - **Key is Required:** Yes
 - **Possible values:** Integer (from 5 – 100)
 - **Default Value:** 50
 - **Small**
 - **Key is Required:** Yes
 - **Possible values:** Integer (from 5 – 100)
 - **Default Value:** 25
- **ItemsManagement:** Enable/Disable list content management via User Interface.
 - **AllowAdd:** Allows users to add items.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowApproveReject:** Allows users to Approve/Reject items.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowCheckOut:** Allows users to check out items.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowCopyURL:** Allows users to Copy item's URL.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>

- **AllowDelete:** Allows users to delete items.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **AllowEdit:** Allows users to edit items.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **AllowEmailURL:** Allows users to Email item's URL.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **AllowOpenInSafari:** Tells the application if the option "Open In Safari" must be shown in the WebBrowser when pre-viewing items i.e.: Links
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **AllowSaveAsDraft:** Allows users to Save items as drafts.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **ListManagement:** Enable/Disable list settings management via User Interface.
 - **AllowAdvanceSearch:** Enables the list's Advanced Search.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowManualSorting:** Allows the user to set sorting criteria.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowOffline:** Enable/Disable the offline support within the app. When disabled, SharePlus hides the online/offline toggle.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **ShowItemsCount:** Shows/Hides items count in the navigator's lists.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **LocalFiles:** Local Files section settings.
 - **AllowCopyToLocalFiles:** Allows copying documents from libraries to Local Files.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowEmailDocument:** Allows sending documents via email from Local Files.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>

- **AllowSubfolderInSelector:** Displays a file browser when copying a file from a list/library to Local Files.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **SwipeDocumentsEnable:** Enable/Disable Swipe Documents feature - Swipe through Local Files documents when opening a single document.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **TabsEnable:** Enable/Disable tabbed previewing for documents - Have all documents from Local Files opened in different tabs when opening a document.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **LocationServices:** Allows the user to get geo-location data.
 - **AutoStartLocation:** If enabled, tapping the Location Services button will automatically retrieve your location's coordinates. If disabled, the user will have to manually trigger the coordinates' retrieval.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **LogHandler:** Saves internal logging into Local Files under the Logs folder.
 - **Services:** Defines event logging type. Accepted values: errors (error logging only), all (all events are logged).
 - **Key is Required:** Yes
 - **Possible values:** String (errors / all)
 - **Default Value:** all
- **OfficeWeb:** These entries allow you to customize the URL used to view/edit office documents in Office Web Apps.
 - **Edit_Excel_Url:** Edit Excel files app URL.
 - **Key is Required:** Yes
 - **Possible values:** String
 - **Edit_OneNote_Url:** Edit One Note files app URL.
 - **Key is Required:** Yes
 - **Possible values:** String
 - **Edit_PowerPoint_Url:** Edit PowerPoint files app URL.
 - **Key is Required:** Yes
 - **Possible values:** String
 - **Edit_Word_Url:** Edit Word files app URL.
 - **Key is Required:** Yes
 - **Possible values:** String
 - **OpenInExternalBrowser:** When true, the *Edit in Web* action is performed using the defined ExternalBrowser (Global Settings). When false, the embedded browser is used.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **View_Excel_Url:** View Excel files app URL.
 - **Key is Required:** Yes
 - **Possible values:** String

- **View_OneNote_Url:** View One Note files app URL.
 - **Key is Required:** Yes
 - **Possible values:** String
- **View_PowerPoint_Url:** View PowerPoint files app URL.
 - **Key is Required:** Yes
 - **Possible values:** String
- **View_Word_Url:** View Word files app URL.
 - **Key is Required:** Yes
 - **Possible values:** String
- **OpenIn:** Allows the user to use the Apple's Open In protocol in order to share documents with other applications.
 - **AllowConfigurationUpdate:** Enable/Disable the possibility to load a Configuration File using the Open In protocol.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowOtherExtensions:** If false, only allows opening documents on predefined extensions' apps.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **Annotation:** Allows you to specify which annotations will be sent to a specific *appId* (applies to OpenIn functionality).
 - **Key is Required:** Yes
 - **Possible values:** Dictionary
 - **Filters:** Allows you to filter OpenIn apps based on file extension (only one by extension).
 - **Key is Required:** No
 - **Possible values:** Dictionary
 - **ShowButtonInViewer:** Shows/Hides the "Edit" button in document preview top bar.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **ShowButtonInViewer-iPad:** Show/Hide "Edit" button in document preview top bar on iPad devices.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **ShowButtonInViewer-iPhone:** Show/Hide "Edit" button in document preview top bar on iPhone devices.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **PDFViewer:** PDF Viewer settings.
 - **MaxZoom:** Lets the maximum zoom multiplier value for zooming in PDFs.
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - **Default Value:** 1000

- **MinZoom:** Lets the minimum zoom multiplier value for zooming out PDFs.
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - **Default Value:** 90
- **PageFit:** Configures page fit feature.
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - 0 – Fit page
 - 1 – Fit width
 - 2 – Fit height
 - **Default Value:** 1
- **ShowNavigationButtons:** Enables PDF Navigation Buttons in the bottom toolbar.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **VerticalScroll:** Sets scroll type to vertical.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **Passcode:** Passcode Lock settings.
 - **DefaultPasscode:** Default Passcode Lock code.
 - **Key is Required:** No (if *MustUsePasscode* is set to false).
 - **Possible values:** 4 digits Integer.
 - **EnablePasscode:** Enable/Disable passcode lock feature by default.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **EnablePasscodeLockInactivityTime:** Enables/Disables the Passcode Lock within the timeframe defined in PasscodeLockInactivityTime.
 - **Key is Required:** Yes
 - **Possible Values:** Boolean
 - **Default Value:** </false>
 - **MustUsePasscode:** Forces the user to work with the Passcode Lock and requires the user to set it up on the first run.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **PasscodeLockBackgroundTime:** Time in minutes before the app locks when it is kept opened in the background.
 - **Key is Required:** Yes
 - **Possible Values:** Integer
 - **Default Value:** 0
 - **PasscodeLockInactivityTime:** Idle time in minutes before the app locks. Accepted values: 0 (disabled), 5, 10, 15, 30, 45, 60.
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - **Default Value:** 0

- **PasscodeFailsHandle:** Actions performed and messages displayed when Passcode Lock authentication fails.
 - **BlockApp:** Blocks the application.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **MaxAttempts:** Maximum authentication attempts.
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - **Default Value:** 0
 - **Message:** Message shown when the user fails to input the valid passcode and has no more attempts left.
 - **Key is Required:** No
 - **Possible values:** String
 - **WipeData:** When true, clears internal app data when the user has no attempts left (Local Files, Offline cache, internal DB and other user data).
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **Pasteboard:** Enable/Disable copy & cut functionality from sensible application places.
- **PictureBoard:** Picture Board visualization settings. This visualization is only available for Picture and Assets libraries.
 - **HideInfoButton:** Hides the button on the bottom right corner of the pictures.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **ReportPlus:** Enables/disables ReportPlus dashboards. This includes the creation, opening, and editing of dashboards.
 - **DashboardsAllowAdd:** Allows/Blocks adding new dashboard documents to SharePlus.
 - **Key is Required:** No.
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **DashboardsAllowUpdate:** Allows/Blocks the editing of dashboards in SharePlus.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **SessionManagement:** The session management feature lets Shareplus behave as a session based application. This means that the application will save data of the current session while being active and reset to its initial state when the session ends (i.e. the session expires or the user logs out). Different behaviors for the session timeout and actions to perform after the session expires may vary based on configuration.
 - **AllowFromInactivity:** Specifies whether the session will be handled by the *InactivityExpirationTime* or not.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>

- **AllowLogOut:** Enables the log out button in the interface to manually reset the session.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **ApplyFromBackground:** Applies actions when returning from an inactive scenario. Possible actions are: Reset Password, Timeout, Wipe Data, Wipe Local Files, and Reset Sites Cache.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **ApplyFromScratch:** Applies the actions when the application starts.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **ApplyFromTimer:** Applies the actions after a session timeout. The duration of the session can be specified using the Timeout parameter.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **ApplyToBackground:** Applies actions when the app is entering a background state.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **InactivityExpirationTime:** Amount of hours the application will keep a session alive without being active.
 - **Key is Required:** Yes
 - **Possible values:** Integer
 - **Default Value:** 0
- **ResetPasswords:** Action to reset the password of all the existing accounts.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **Timeout:** Duration of the session in minutes (i.e. Session timeout).
 - **Key is Required:** No
 - **Possible values:** Integer
 - **Default Value:** 10
- **WipeAccounts:** This action deletes all existing accounts, leaving the existing portals with no account associated.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **WipeAlerts:** This action deletes all created alerts and their definitions in the app.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>

- **WipeData:** Action to resets all of the existing content in the device. If one or more sites are defined in the configuration file, they will be reloaded automatically in the interface.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **WipeFavorites:** This action deletes all Favorites in the app.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **WipeLocalFiles:** This action deletes all local files available in the Local Files section of the app.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **WipeSitesCache:** This action deletes all cached data such as documents, images or thumbnails for all existing sites. This action does not make any change on the database; this means all lists configurations will remain intact.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **SitesAdmin:** Site administration settings.
 - **AllowAdd:** Allow the user to add new connections to the application. If *SitesAdmin* feature is disabled, this value is disregarded.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowDelete:** Allow the user to delete existing connections in the application. If *SitesAdmin* feature is disabled, this value is disregarded.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowUpdate:** Allow the user to edit existing connections in the application. If *SitesAdmin* feature is disabled, this value is disregarded.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **CredentialStorageClass:** Sets the class that implements the credentials storage. Possible values: *SPCredentialsStorageKeyChain* – to store in the keychain.
 - **Key is Required:** No
 - **Possible values:** String
 - **Default Value:** *SPCredentialsStorageKeyChain*
 - **RememberUserName:** Always saves the username in the Keychain to suggest it on the login alert. If the *CredentialStorageType* field is set to 1, *RememberUserName* field is set to TRUE. If the username is different from the previous one, it will delete the site's data.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>

- **SupportMyProfile:** Enables “My Profile” feature. This feature will only work on preconfigured sites.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **SupportMySite:** Enables “My Site” feature. This feature will only work on preconfigured sites that have also enabled “My Site” support. The user’s “My Site” will be displayed only if created in the SharePoint server.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **TouchID:** Enables or disables the Touch ID authentication layer for the Passcode Lock feature.
- **URLSchemes:** Enable and configure custom URL Schemes in SharePlus.
 - **AllowConfigurationUpdate:** Enable/Disable the ability to update the Configuration URL using URL Schemes or the *Configuration.setRemoteFileSource* JavaScript API method.
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowWebDashboardUpdate:** Enable/Disable the ability to update the SharePlus Mobile Workspace’s source using URL Schemes.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **ExternalAppSchemes:** Specifies an array of allowed custom URL Schemes that can open external apps.
 - **Key is Required:** No
 - **Possible values:** Array of Strings
 - Specifies an array of allowed custom URL Schemes that can open external apps.
- **VersionHandle:** Automatic updates settings.
 - **DeferBlockToTimeSpan:** Time limit for users to update the app. When this limit is reached, the app becomes blocked.
 - **Key is Required:** No
 - **Possible values:** String
 - **ImmediateBlock:** Blocks the application when a new version of the app becomes available until it is updated.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
 - **LastVersion:** Last version of the app. If this value is different to the one on the remote configuration file, the app will alert there is an update available.
 - **Key is Required:** No
 - **Possible values:** String
 - **URL:** URL where the update is hosted for downloading.
 - **Key is Required:** Yes
 - **Possible values:** String

- **ViewInWeb:** Enables View In Web feature to view a web version of the current resource or location in a Safari-like window.
 - **AllowInList:** Enables View In Web feature for Lists.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowInProfile:** Enables View In Web feature for People Profile.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowInSite:** Enables View In Web feature for Sites.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowInWeb:** Enables View In Web feature for sub sites.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowOpenInSafari:** Indicates if the "Open In Safari" option must be shown in the WebBrowser in "View in Web" actions.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **WebDashboard:** Configures SharePlus API options.
 - **BridgeEnabled:** Enable/Disable SharePlus JavaScript API functions.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **WebManagement:** Determines if the user is able to reorder sub sites in the navigation pane of the application.
 - **AllowManualSorting:** Determines if the user is able to reorder website links in the navigation pane of the application.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **WiFiSharing:** Allows the user to share data via WiFi from the Local Files section in the application.
 - **AllowDownload:** Allows the user to download content from the application via WiFi.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
 - **AllowUpload:** Allows the user to upload content to the application via WiFi.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>

Pages

This section is dedicated to the Pages definition, which can be pre-loaded by the application. The following code sample shows you how they should be defined.

```
<key>Pages</key>
<array>
  <dict>
    <key>PageName</key>
    <string>DefaultSitePage</string>
    <key>ShowSelector</key>
    <false/>
    <key>ViewParts</key>
    <array>
      <dict>
        <key>ViewControllerID</key>
        <integer>0</integer>
        <key>Title</key>
        <string>Custom SharePlus Mobile Workspace</string>
        <key>Settings</key>
        <dict>
          <key>Source</key>
          <string>Documents/Demo.web.zip</string>
          <key>SourceType</key>
          <integer>1</integer>
        </dict>
      </dict>
      <dict>
        <key>ViewControllerID</key>
        <integer>1</integer>
        <key>Title</key>
        <string>ReportPlus dashboard</string>
        <key>Settings</key>
        <dict>
          <key>Source</key>
          <string>http://serverPath/dashboard.rplus</string>
          <key>SourceType</key>
          <integer>0</integer>
        </dict>
      </dict>
    </array>
  </dict>
</array>
```

The Pages section represents a collection of pages/view containers that are pre-loaded by the application.

Available key/values are as follows:

- **PageName:** A name for the page. This name will be used to reference the page when configuring Home content for the application, sites, and/or sub-sites.
 - **Key is Required:** Yes
 - **Possible values:** Any string
- **ShowSelector:** Enables/Disables the possibility to select between the different View Parts from a page/view container. Does nothing when there is only one View Part specified.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <true/>
- **ViewParts:** Array of the View Part elements defined for the page.
 - **Settings:** Allows the configuration of any settings required for the View Part to display its content. Current View Parts use Source and SourceType, but different View Parts may use different settings as required.
 - **Source:** Specifies the source location of the SharePlus Mobile Workspace or ReportPlus Dashboard. The source can be a URL or a local path inside the application.
 - **Key is Required:** Yes
 - **Possible values:** String
 - **SourceType:** Sets the source type of the SharePlus Mobile Workspace or ReportPlus Dashboard.
 - **Key is Required:** Yes
 - **Possible values:** this is an integer field and the possible values are
 - **0** - to reference an URL to download the file
 - **1** - to reference a path inside the application
 - **Default Value:** 0
 - **Title:** Specifies the title to be displayed on the top toolbar for this View Part.
 - **Key is Required:** No
 - **Possible values:** String
 - **ViewControllerID:** Specifies the ID defined in the app.plist for the View Controller to be used.
 - **Key is Required:** Yes
 - **Possible values:** this is an integer field and the possible values are
 - **0** - for SPWebDashboardViewController
 - **1** - for SPReportPlusDashboardViewController
 - **2** - for SPWebAndListViewPartViewControler
 - **Default Value:** 0

Accounts

This section is dedicated to the information of the accounts that can be pre-loaded on the application. Here's is how it look like:

```
<key>Accounts</key>
<array>
  <dict>
    <key>Name</key>
    <string>My Account</string>
    <key>CredentialStorageClass</key>
    <string/>
    <key>Domain</key>
    <string>yourDomain</string>
    <key>Username</key>
    <string>yourUserName</string>
    <key>Password</key>
    <string/>
    <key>UseCertificate</key>
    <false/>
    <key>CertificateName</key>
    <string/>
    <key>CertificatePassword</key>
    <string/>
    <key>isDefault</key>
    <false/>
    <key>AllowDelete</key>
    <true/>
  </dict>
  <dict>...another account...</dict>
</array>
```

The Accounts section represents a collection of accounts that will be pre-loaded in the application, following the configuration given in each item.

- **AllowDelete:** Specifies if this account can be modified or deleted.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **CertificateName:** If client side certificate is set to <true/>, provide here the certificate file name.
 - **Key is Required:** No
 - **Possible values:** any string
- **CertificatePassword:** If a password is needed for the client certificate, you can specify it here.
 - **Key is Required:** No
 - **Possible values:** any string

- **CredentialStorageClass:** Sets the class that implements the storage for the credentials. Used only for this account. Possible values: SPCCredentialsStorageKeyChain – to store in the keychain. The default value is SPCCredentialsStorageKeyChain.
 - **Key is Required:** No
 - **Possible values:** any string
- **Domain:** Domain name.
 - **Key is Required:** No
 - **Possible values:** any string
- **IsDefault:** Specifies if this account is the Default Account. When a site does not have an account set, the Default Account is used.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **Name:** A name for the account.
 - **Key is Required:** Yes
 - **Possible values:** any string
- **Password:** User's password.
 - **Key is Required:** No
 - **Possible values:** any string
- **UseCertificate:** Tells the app if the connection needs a client side certificate (.p12 file)
 - **Key is Required:** No
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **Username:** User's username.
 - **Key is Required:** No
 - **Possible values:** any string

Regarding security, we recommend **not** to specify the passwords in the configuration file. If the connection needs a password, which is not given, the application will prompt the user to introduce his credentials in the first online access to the site.

Sites

This section is dedicated to the information of the sites that can be pre-loaded on the application. Here's is how it look like:

```
<key>Sites</key>
<array>
  <dict>
    <key>Name</key>
    <string>Share</string>
    <key>URL</key>
    <string>http://mydomain.com/Sites/MySite</string>
    <key>AuthMode</key>
    <integer>0</integer>
    <key>AccountName</key>
    <string>Share's account</string>
    <key>SupportMySite</key>
    <true/>
    <key>MySiteHost</key>
    <string/>
    <key>MySiteTitle</key>
    <string/>
    <key>SupportMyProfile</key>
    <true/>
    <key>ProfileHost</key>
    <string/>
    <key>ViewMode</key>
    <integer>0</integer>
  </dict>
  <dict>...another site...</dict>
</array>
```

The Sites section represents a collection of sites that will be pre-loaded in the application, following the configuration given in each item.

- **AccountName:** The name of an account in “Accounts” section used to connect to the site.
 - **Key is Required:** No
 - **Possible values:** any string
- **AuthMode:** Refers to the authentication mode accepted by the server. There are three options for this key:
 - **Key is Required:** Yes
 - **Possible values:** this is an integer field and the possible values are
 - **0** - for Windows Based authentication
 - **1** - for Form Based authentication
 - **2** - for Office 365 authentication
 - **3** - for Web Login authentication
 - **Default Value:** 0

- **MySiteHost:** The URL where “My Site” pages are hosted. If the token “[accountName]” is used it will be replaced with the user account name. Example:
https://rootUrl/personal/[accountName]
 - **Key is Required:** No
 - **Possible values:** any string
- **MySiteTitle:** The name of the “OneDrive for Business” drive in the Content section.
Example: My Personal ODB
 - **Key is Required:** No
 - **Possible values:** any string
- **Name:** A name for the site.
 - **Key is Required:** Yes
 - **Possible values:** any string
- **ProfileHost:** The URL where the person profile-related pages are hosted. If this is empty, the root URL will be used concatenated with “/my”.
 - **Key is Required:** No
 - **Possible values:** any string
- **SupportMyProfile:** Enables/Disables “My Profile” feature. Only one site can have this setting in YES.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **SupportMySite:** Enables “My Site” feature. Only one site can have this setting in YES.
 - **Key is Required:** Yes
 - **Possible values:** Boolean
 - **Default Value:** <false/>
- **URL:** The URL to the site.
 - **Key is Required:** Yes
 - **Possible values:** any string. http and https URLs are accepted.
- **ViewMode:** Allows you to pre-configure how a Site is viewed in SharePlus.
 - **Key is Required:** No
 - **Possible values:** this is an integer field and the possible values are
 - **0** - for the native view (within SharePlus)
 - **1** - for view in web (opens a web view)
 - **2** - for view in Safari
 - **3** - Ask User (Will always open a selection menu with options 0 to 2)
 - **Default Value:** 0

Variables

This section is empty by default and its items should be previously agreed depending on the user’s needs.

Notes

In remote configuration scenarios, it is not mandatory to fill all of the items in the file. This means that the application will merge the data to the local settings automatically if a remote configuration URL is provided.

Appendix 2: SharePlus Links Reference

CATEGORY	ACTIONS (?)	PARAMETERS (&)	SAMPLES
SharePoint Navigation	view – Navigate to SharePoint (sites, lists and libraries)	<u>OPTIONAL</u> - <i>mode</i> – InWeb, InSafari, Native (default) - <i><list/library parameter></i> - Add list/libraries parameters to make navigation more specific	SITES splus://<portal>/site?action=view&mode=InSafari splus://dynamicWebServer/page.aspx?color=red&action=view&mode=InSafari LISTS AND LIBRARIES splus://<portal>/site/calendar?action=view splus://<portal>/site/calendar?action=view&viewName=All%20Events
	viewdocument – Open a SharePoint document or ReportPlus dashboard.	<u>OPTIONAL</u> - <i>mode</i> – InWeb, InSafari, Native (default) - <i>filter</i> for ReportPlus (must be existing filter within ReportPlus)	DOCUMENTS splus://portal/site/library/document.docx?action=viewdocument&mode=InSafari splus://<portal>/site/multimedia/Away.mp3?action=viewdocument REPORTPLUS DASHBOARD splus://portal/site/library/reportPlusDashboard.rplus?country=USA&action=viewdocument
	viewitem – Open the properties of a document	<u>OPTIONAL</u> - <i>mode</i> – InWeb, InSafari, Native (default)	splus://<portal>/site/multimedia/Away.mp3?action=viewitem splus://<portal>/site/Tasks/ID=4 splus://<portal>/site/list/item.docx?action=viewdocument
SharePoint Search	search – Search for a document on a site	-	splus://<portal>/site?action=search
	query – Custom search on a SharePoint List	<u>OPTIONAL</u> - <i>filters</i> (SEE TABLE 1 for filter formatting)	splus://<portal>/site/multimedia?action=query&filter=ows_Title:contains(Text)&filtertitle=Text%20Filter&includesubfolders=true
SharePoint Edition	additem – Add new item to SharePoint	-	plus://<portal>/site/multimedia/Away.mp3?action=additem&contenttype=audio
	edititem – Edit existing item in SharePoint	<u>OPTIONAL</u> - <i>filters</i> (SEE TABLE 2 for operators)	splus://<portal>/site/multimedia/Away.mp3?action=edititem splus://<portal>/site/multimedia/Home.mp3?action=additem&contenttype=audio&ows_comments=Added&with&20URL&20schemes&ows_title=New%20title
SharePlus actions	favorites - Go to Favorites	-	splus://?action=favorites
	help - Go to Help	-	splus://?action=help
	home -Go to Home	-	splus://?action=home
	localfiles - Go to Local Files	<u>OPTIONAL</u> - <i>folder</i> – go to specific folder	splus://?action=localfiles splus://?action=localfiles&folder=logs
	settings -Go to Settings	-	splus://?action=settings
SharePlus configuration	configurationURL – remote config update	<u>MANDATORY</u> - <i>URL</i> – link to new config File <u>OPTIONAL</u> - <i>user-agent, timeout</i>	splus://?action=configurationURL&url= https%3A%2F%2Fportal%2FConfigurationFiles%2FCustomConfiguration.plist
	reloadconfig – reload remote config	-	splus://?action=reloadconfig
	webdashboard – modify the source of a mobile workspace in the Application Home	<u>MANDATORY</u> - <i>source</i> – URL to resource or local path to web resource. <u>OPTIONAL</u> - <i>title</i>	splus://?action=webdashboard&source= http%3A%2F%2Fportal%2Fsite%2FAssets%2FCustomMobileWorkspace.web.zip&title=MyMobileWorkspace

Table 1: Query Operators

Operators	Description
equals	The field value must be exactly the same
notequals	The field value must be different
greater	The field value must be greater
greaterorequal	The field value must be greater or equal
lower	The field value must be lower
lowerorequal	The field value must be lower or equal
isnull	The field value must not be specified (isnull())
isnotnull	The field value must not be specified (isnotnull())
beginswith	The field value must start with the value specified
contains	The field value must contain the value specified

Table 2: Editing Formatting

Field type	Format	Examples
Single/Multiple lines of text, Numbers, Currency, Hyperlink	These values need no format.	Text: ows_TextField=Text%20Value Number: ows_NumberField=15
Choice	Values must be separated by “;#” characters (%3B%23 when escaped).	Single: ows_ChoiceField=%3B%23Value1%3B%23 (Non-escaped: ows_ChoiceField=;#Value1;#) Multi: ows_ChoiceField=%3B%23Value1%3B%23Value2%3B%23 (Non-esc: ows_ChoiceField;#Value1;#Value2;#)
Lookup, Person or Group	ItemID;#Name	ows_LookupField=103%3B%23Test (Non-escaped: ows_LookupField =103;#Test)
Date and Time	yyyy-MM-dd'T'HH:mm:ss'Z'	ows_DateField=2012-12-27T16%3A15%3A31Z (Non-esc: ows_DateField =2012-12-27T16:15:31Z)
Yes/No	TRUE or FALSE	ows_YesNoField=TRUE

Appendix 3: Document Changelog

Version	Chapter	Section	Description
3.1	Introducing SharePlus	Functional Overview	Minor fixes about availability in different licence modes.
	Configuration	Site Configuration a.k.a. "MobileNavigation"	Added a new column (List URL Name) to better identify libraries/lists.
	Deployment	Application Re-signing	"The Application Re-signing Process" section (outdated) was removed.
	Advanced Configuration	User Experience Configuration	Using themes to change the app's color palette was deprecated and thus removed from the guide.
	Advanced Features	Application Integration	The samples' information for S+ links was improved around adding items.
3.0.2	-	-	Updated search descriptions and the Search Module with the new global search (SharePoint sites and cloud providers).
3.0.1	Advanced Features	Configuring Web-To-App Integration	Added a new setting to control custom URL Schemes that open external apps.
	Appendices	Configuration File Reference	Updated with the latest changes.
3.0	Introducing SharePlus	All sections	Added new Content Module and reorganized information within the chapter.
			Updated screenshots with the new sidebar.
			Updated screenshots with new ReportPlus lightweight charts.
	Several chapters	Several sections	Updated screenshots with the new sidebar.
	Planning SharePlus	System Requirements	Updated Mobile OS support to iOS9 or above.
	Configuration	The "Global Settings" Section	Updated the Startup Module settings to reflect the app changes in 4.8 version.
	Advanced Features	Data Visualization	Updated screenshots with new ReportPlus lightweight charts.
		Network Drives	Added a new section
		Other Cloud Providers	Added a new section
		Configuring Network Drives and Other Cloud Providers	Updated with OneDrive for Business configuration.
		Search	

		Nintex Integration	Updated screenshots with the new sidebar.
	Appendices	Configuration File Reference	Updated with the latest changes.
2.9	Introducing SharePlus	All sections	Updated with Data Visualization features available for non-Enterprise versions.
	Advanced Features	Data Visualization	Updated with new Data Visualization icons in SharePlus.
		Nintex Integration	Updated with new Data Visualization icons in SharePlus.
2.8	Planning SharePlus	Planning Security	Added information about Touch ID
	Configuration	Central Application Configuration	Added Touch ID key description.
	Advanced Features	Content Sources	Added OneDrive for Business offline support.
	Appendices	Configuration File Reference	Added Touch ID key description.
2.7.3	Advanced Features	Nintex Integration	Added information about the Nintex widget interaction with the Nintex Mobile app
		ReportPlus Integration	Added information on ReportPlus Links schemes.
2.7.2	Configuration	Central Application Configuration	Added the DeviceUA token description
	Appendices	Configuration File Reference	Added the DeviceUA token
		SharePlus Links Reference	Corrected actions for the the SharePoint Navigation section.
2.7.1	Introducing SharePlus	All sections	ReportPlus screenshots updated
	Advanced Features	Content Sources	Added information on Box.
		ReportPlus Integration	ReportPlus screenshots updated
2.7	Introducing SharePlus	Functional Overview	Added Nintex general information
	Configuration	Central Application Configuration	Updated Sites section with corresponding keys.
			Updated description for AutoHideNavigation key.
	Advanced Features	Application Integration	Note added about splus-action.
		Nintex Integration	Added information on the Nintex-SharePlus integration.
	Appendices	Configuration File Reference	Updated with information on which keys are required for application to launch correctly.

2.6	Appendices	Configuration File Reference	Updated with the latest changes on sites and new settings for Authentication Settings.
2.5	-	-	The term “Launchpad” was deprecated, we now use “SharePlus Mobile Workspace”.
	Planning SharePlus	Network Layer	Improved with network information about MDM app versions.
	Appendices	Configuration File Reference	Updated with the latest changes on settings and new settings for Authentication Settings.
2.4	All chapters	All sections	Updated all screenshots to reflect new icons.
2.3	Introducing SharePlus	Functional Overview	Added Content Sources general information.
	Advanced Features	Content Sources	Added a new section about Content Sources
2.2	Appendices	SharePlus Links Reference	New Quick Reference table added with existing actions and parameters.
2.1	Introducing SharePlus	Functional Overview	Added the PDF link highlight functionality. ReportPlus Integration was updated.
	Deployment	Ad-hoc Deployment	Removed support for IPCU installation; as of iOS 8, it is no longer supported.
	Advanced Configuration	User Experience Configuration	Added iOS 9 support for images.
		ReportPlus Integration	ReportPlus Integration was updated.
2.0.2	Deployment	Enterprise Deployment	iOS 9 untrusted sources and OTA installation.
2.0.1	Advanced Features	Search	Added Offline Search
2.0	Introducing SharePlus	Welcome to SharePlus!	Two images were updated.
		Functional Overview	Added the PDF search functionality.
			The Views selector was included in Quick Access.
			MDM Integration was updated with new MDMs.
	Planning SharePlus	System Requirements	Section was updated (iOS 6 is no longer supported).

		Planning Security	MDM Servers was updated with new MDMs.
			Information about Integrated client-side Certificates was improved.
	Configuration	Remote Configuration	Added a missing setting for server authentication when retrieving a Configuration File.
			Removed a deprecated setting: ForceResetSettings.
		Site Configuration a.k.a. "MobileNavigation"	Added the ManualOrderSupport column.
	Deployment	MDM Integration	SharePlus integration with MDMs was updated, including minor fixes and new supported MDMs.
	Advanced Configuration	Application Re-Branding	Added iPhone 6 and iOS 8 support. Removed iOS6 support.
		Offline Support	Major update was included to reflect the current sync modes.
		Support Enablement	Added information about troubleshooting errors with SharePlus.
	Advanced Features	ReportPlus Integration	Configuring the ReportPlus Integration was updated.
		Application Integration	The structure of SharePlus URL schemes was updated and slightly improved.
	Appendices	Configuration File Reference	Updated with the latest changes on settings.
1.2.1	Configuration	Site Configuration a.k.a. "MobileNavigation"	Added missing information about how to configure the current site itself.
1.2	Introducing SharePlus	Welcome to SharePlus!	Removed MAC from SharePlus platforms.
		Functional Overview	Table fix regarding Favorites and removal of QuickOffice in favor of Office for iPad functionality.
	Planning SharePlus	Planning Configuration	Global Settings screenshots were updated. Accounts can now be managed from Settings.
		Planning Connectivity	The File Upload method and Network Layer configuration information were included.

		Planning Security	Integration with QuickOffice was removed as Office for iPad saves documents straight to SharePoint by sharing credentials.
	Configuration	Configuring Features	Added new settings to the Global Settings section.
		Site Configuration a.k.a. “MobileNavigation”	Several missing columns were added.
	Advanced Configuration	User Interface Behavior	Added Office documents preview setting and included minor fixes on descriptions
	Advanced Features	Application Integration	Fixed SharePoint Navigation actions, “InBrowser” replaced by “InWeb”.
	Appendices	Configuration File Reference	Updated with the latest changes on settings.
1.1	Deployment	Application Re-signing	Added a new sub section about Certificates, app IDs, and other concepts: iOS App Re-signing Concepts.
	-	-	The Web Developer Guide was renamed as Launchpads Developer Guide.
	Configuration	Central Application Configuration	The merge between local and remote configuration is explained in Working with Remote Configuration.
		Site Configuration a.k.a. “MobileNavigation”	Adjusting Site Home was updated as multiple values are now allowed in the Home column.
	Advanced Configuration	Home Customization	Site Home configuration was updated and now allows multiple values in the Home column.
			Default Homes configuration has minor fixes and was renamed to Default Home – Portal and sites.
1.0.1	Introducing SharePlus	Functional Overview	Table fix regarding ReportPlus Integration.
	Planning SharePlus	Configuration “Injection”	Texts slightly improved.
		MDM Integration	Texts slightly improved.
	Configuration	Remote Configuration	Minor fix on code snippet sample.
		Configuration “Injection”	Section updated (JS API) and texts improved.

		Site Configuration a.k.a. "MobileNavigation"	Fixes on descriptions, screenshots, and links.
		Server Configuration	Section updated to SharePoint 2010 server version.
	Deployment	Web Deployment using SharePoint	Screenshots update in Configuring Automatic updates.
		MDM Integration	Texts slightly improved.
		Ad-Hoc Deployment	Minor screenshot fix.
		Distribution Certificate And Provisioning Profile	Minor fixes on Getting the Distribution Certificate steps.
	Advanced Configuration	Application Re-Branding	Section updated, fixes on graphic assets.
	Advanced Features	ReportPlus Integration	Minor fixes on screenshots.
		Application Integration	URL encoding information added.
	Appendices	Creating my IG Account	Section removed.