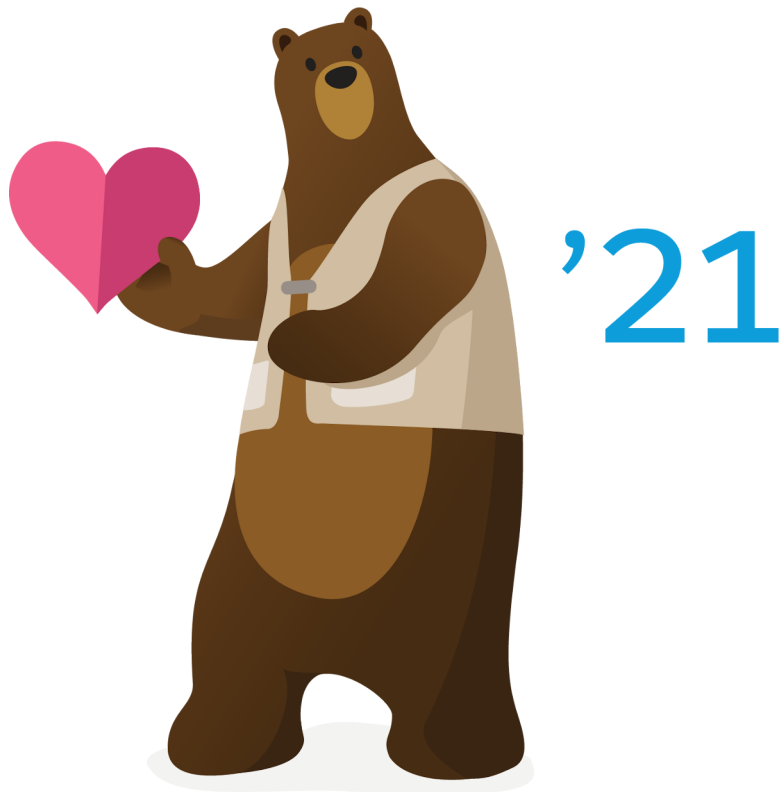




Windows Mobile Peripherals Implementation Guide

Version 51.0, Spring '21



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CHAPTER 1 Peripheral Support for Windows Mobile Field Service Management Overview

In this chapter ...

- [Supported Devices for Windows Mobile Peripherals](#)
- [Installing the Mobile Application](#)

The mobile application includes functionality for field service professionals by providing integration with the barcode scanner and magnetic stripe card reader in select Motorola Windows Mobile devices.

Windows Mobile users can:

- Use the barcode scanner to populate fields or search for records.
- Swipe credit cards to capture payment information.
- Capture signatures.
- Attach new or existing images to records.



Note: Not all components of the Windows Mobile peripherals feature are available in Mobile Lite. Enabling image attachment requires the ability to edit a mobile configuration's data sets, and enabling signature capture requires the ability to mobilize custom objects. With Mobile Lite, you can't edit data sets or mobilize custom objects. Organizations using Mobile Lite can only set up barcode and credit card fields.

Supported Devices for Windows Mobile Peripherals

Using peripherals with the mobile application requires Windows Mobile 6 Professional and a minimum of Salesforce Classic Mobile version 11.0. At least 5 MB of free memory should be available on the device. The mobile application can integrate with the peripherals on these Windows Mobile devices:

- MC55
- MC75
- MC90
- MC95

The mobile application may work on Windows Mobile devices that are not listed here. Any Motorola or Symbol device running SMDK 1.4 or higher and a supported version of Windows Mobile should be compatible. To verify compatibility, contact your account executive for a free trial before purchasing any mobile licenses.

Installing the Mobile Application

To install the mobile client application on a Windows Mobile device:

1. Open your Web browser and navigate to the following URL: `mobile.salesforce.com`. If you received a Salesforce Classic Mobile email message from your Salesforce administrator, you can also click the download link in the message.

 **Note:** The installation process for Windows Mobile requires that you use Internet Explorer as the browser.

2. Download the installer.

If your phone has a touch screen:


- a. Tap the **Download the application** link.
- b. Verify that the `Open file after download` checkbox is selected in the Download dialog.
- c. Select **Yes**.

If your phone does not have a touch screen:

- a. Select **Download**, then select **Yes**.
- b. After the application downloads, select **Done**.

3. Return to the phone's home page. From the Start menu, select Salesforce Classic Mobile or Mobile Lite from the list of installed programs.
4. Read the license agreement and select **I Accept**.
5. Enter your Salesforce username and password.
6. Select **Activate**.

After your username and password are confirmed by Salesforce, the data downloads, and the icon pulses to show activity. The initial data download may last a few minutes. Future updates to the data occur automatically.

 **Note:** Mobile Lite activations may show an error if you have complex page layouts or a large number of custom fields.

7. After your records have been downloaded to the device, the login screen appears. The mobile application remembers your username and only prompts you for your password. Enter your password, and select **Login**.

CHAPTER 2 Setting Up Salesforce for Windows Mobile Peripheral Devices


In this chapter ...

- [Setting Up Barcode Fields](#)
- [Setting Up Credit Cards Fields](#)
- [Enabling Signature Capture](#)
- [Mobilizing Attachments](#)
- [Using Apex with Windows Mobile Peripherals](#)

There are four components of the Windows Mobile peripherals feature: barcode scanning, payment capture, signature capture, and image attachment. The setup process for each component is different. You can enable all of the components or just the ones your organization wants to use.

The following topics explain how to set up each component of the Windows Mobile peripherals feature:

- [Setting Up Barcode Fields](#)
- [Setting Up Credit Cards Fields](#)
- [Enabling Signature Capture](#)
- [Mobilizing Attachments](#)

 **Note:** If you enable signature capture, you must also mobilize attachments.

Setting Up Barcode Fields

Barcode scanning lets mobile users populate fields or search for items in the mobile application using their mobile device's barcode scanner. You can enable certain fields for barcode scanning in the mobile application. A barcode field is simply a custom text field with a specific character string in the field name. The field name—not the field label—is used when referencing the field from the Lightning Platform API. The mobile application recognizes the field as barcode-enabled based on the character string in the field name.

To set up a barcode field:

1. Create a custom field on a standard or custom object.
 - If you're using Salesforce Classic:
 - For standard objects, from Setup, enter an object's name in the Quick Find box, then select **Fields**.
 - For custom objects, from Setup, enter **Objects** in the Quick Find box, then select **Objects**. Click the appropriate object and then scroll down to the Fields & Relationships section.
 - If you're using Lightning Experience, from Setup, at the top of the page, click **Object Manager**. Click the object and then click **Fields & Relationships**.
2. Click **New**.
3. Select `Text` as the data type, then click **Next**.
4. Enter the maximum length for the text field.
5. Enter a field label.

The field name is automatically populated based on the field label you enter. The field name is used by the mobile application when referencing the field from the API.
6. Edit the field name so that it includes the following string: `__barcode__`.

This string enables the field as a barcode field in the mobile application. It isn't case-sensitive. You can insert the string anywhere in the field name as long as you comply with the general formatting requirements for field names. The field name can contain only underscores and alphanumeric characters, and must be unique in your organization. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
7. Select the `External ID` checkbox.

The mobile application performs two types of searches: local and remote. Local search only queries the records stored in the device's database and executes against all barcode-enabled fields. Remote search runs as a sidebar search and only executes against custom fields that are set as an external ID. Selecting the `External ID` checkbox on barcode fields ensures that remote results are returned in the mobile application. For more information on sidebar search, see Searchable Objects and Fields in the Salesforce online help.
8. Enter any field attributes, then click **Next**.
9. In Enterprise, Unlimited, Performance, and Developer Editions, set the field-level security, then click **Next**.
10. Choose the page layouts that should display the field as an editable field.
11. Click **Save**.
12. Optionally create additional barcode fields. An object can have multiple barcode fields.

USER PERMISSIONS

To create or change custom fields:

- Customize Application

Setting Up Credit Cards Fields

Payment capture lets mobile users swipe credit cards to store credit card information in a record's field. You can enable certain fields in Salesforce for capturing credit card data with a Windows Mobile device. A credit card field is simply a custom text field with a specific character string in the field name. The field name—not the field label—is used when referencing the field from the Lightning Platform API. The mobile application recognizes the field as credit card-enabled based on the character string in the field name. Refer to the [notes about credit card fields](#) before implementing payment capture in the mobile application.

To set up a credit card field:

1. Create [another custom field](#).
2. Select **Text** as the data type, then click **Next**.
3. Enter the maximum length for the text field.
4. Enter a field label.

The field name is automatically populated based on the field label you enter. The field name is used by the mobile application when referencing the field from the API. This name can contain only underscores and alphanumeric characters, and must be unique in your organization. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.

5. Edit the field name so that it includes the following string: `_magstripe_`.

This string enables the field as a credit card field in the mobile application. It isn't case-sensitive. You can insert the string anywhere in the field name as long as you comply with the general formatting requirements for field names. The field name can contain only underscores and alphanumeric characters, and must be unique in your organization. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.

6. Enter any field attributes, then click **Next**.
7. In Enterprise, Unlimited, Performance, and Developer Editions, set the field-level security, then click **Next**.
8. Choose the page layouts that should display the field as an editable field.
9. Click **Save**.

Notes about Credit Card Fields

- Each record can contain only one credit card field.
- Although Motorola devices with a magnetic stripe reader recognize several types of information, the mobile application can only capture credit card data.
- When the user swipes a credit card, the mobile application captures the credit card number and expiration date. The data in the field is sent to Salesforce securely over-the-air.
- After mobile users capture credit card information, they can't edit it in the mobile application. When mobile users view the credit card field on the record detail page, the mobile application masks all but the last four digits of the credit card number.
- In Salesforce, the field value isn't masked and is stored in the non-encrypted magnetic stripe-enabled field. The credit card number and expiration date are concatenated into a single text string, and the two values are separated by an equals sign. You can write an [Apex trigger](#) that copies the credit card information into an encrypted field and deletes or masks the original value in Salesforce.
- Salesforce doesn't provide out-of-the-box integration with any system for automatic transaction processing of captured payment information. However, you can write an [Apex trigger](#) that transmits payment information to the necessary vendors.

USER PERMISSIONS

To create or change custom fields:

- [Customize Application](#)

- For information about how to capture payment information in the mobile application, see [Swiping Credit Cards](#) on page 9.

Enabling Signature Capture

Signature capture lets mobile users obtain someone's signature with a stylus and their device's touchscreen and attach the image of the signature to a record.

Signature capture is enabled on a per object basis. The feature is available for custom objects but not standard objects. You set up signature capture by entering a specific character string in the object name. The object name—not the object label—is used when referencing the object from the Lightning Platform API. The mobile application permits users to capture signatures for a record if the object's name contains the character string. Refer to the [notes about signature capture](#) before implementing the feature in the mobile application.

To set up signature capture:

1. Create or edit a custom object so that its object name includes this string: `_sigcap_`

This string enables the object for signature capture in the mobile application. It isn't case-sensitive. You can insert the string anywhere in the object name as long as you comply with the general formatting requirements for object names. The object name can contain only underscores and alphanumeric characters, and must be unique in your organization. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.

For details, see "Create a Custom Object" in the Salesforce Help.

2. Be sure to add the custom object to your mobile configurations.
3. [Mobilize attachments](#). When users capture signatures in the mobile application, the signature is saved as an attachment. Signature capture is not available in the mobile application unless attachments are also available.

USER PERMISSIONS

To create and edit custom objects:

- [Customize Application](#)

Notes about Signature Capture

- Signature capture isn't available in Mobile Lite because Mobile Lite doesn't support custom objects.
- In the mobile application, signature images are saved as a JPG file attachment with the following file name: `salesforce_sig.jpg`. The image size isn't fixed; the size is determined by the dimensions of the signature.
- The mobile application prompts the user to overwrite the signature attachment if the user tried to capture a signature and one already exists for the selected record.
- Mobile users can't edit or delete signature attachments.
- For information about using signature capture in the mobile application, see [Capturing Signatures](#) on page 10.

Mobilizing Attachments

To enable attachments in the mobile application, include the attachments object in your organization's mobile configurations. Mobile users access attachments from a record's Attachments related list. Currently the only type of attachment users can add to Salesforce from the mobile application are image files, which includes [signatures](#). Users can either take pictures, or select existing pictures from their phone's photo album.

To mobilize attachments:

1. From Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations**. Then click the name of a mobile configuration.

2. In the Data Sets related list, click **Edit**.
3. In the data tree, click the name of a parent data set.
4. Click **Add...** to add a child data set.
5. In the popup window, select Attachment, then click **OK**.

As long as you mobilize attachments for one object, the Attachments related list appears in the mobile application for every object that supports attachments.

6. Continue adding attachments as a child data set until you're finished.
7. Click **Done**.

Using Apex with Windows Mobile Peripherals

You can use Apex code to make your organization's integration with Windows Mobile peripheral devices more robust. Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on the Lightning platform server in conjunction with calls to the Lightning Platform API. Using syntax that looks like Java and acts like database stored procedures, Apex enables developers to add business logic to most system events, including button clicks, related record updates, and Visualforce pages. Apex code can be initiated by Web service requests and from triggers on objects.

A *trigger* is Apex code that executes before or after specific data manipulation language (DML) events occur, such as before object records are inserted into the database, or after records have been deleted. Although triggers aren't executed in the mobile client application, they will run server-side after data has been manipulated and submitted to Salesforce. Keep in mind that the mobile application does not maintain an open Internet connection, and it communicates with Salesforce asynchronously through the Lightning Platform API. If the mobile device isn't connected to the Internet and a user manipulates data, the trigger won't execute until the device establishes a connection and transmits the updates to Salesforce.

The following examples demonstrate why you might use Apex triggers with Windows Mobile peripherals in the mobile application:

Bar Code Scanning

Let's assume your organization services printing presses. After replacing a broken component, your field service representative needs to scan the new component's part number with their device's barcode scanner so it can be included in the invoice. Components aren't added directly to the invoice; instead, they're added to the invoice's Parts Used related list. To accomplish this, write an Apex trigger that obtains the new component's record ID based on its scanned part number, which populates the lookup field on the related list entry.

Credit Card Capture

Your company is a direct distributor that serves convenience stores. You load trucks with inventory, assign sales professionals to certain customer groups, and send the trucks around their routes to stock shelves. Your sales professionals accept payment for products at the point of sale by swiping credit cards through their mobile device's magnetic stripe reader. Although scanned credit card data is sent securely over the air, it isn't stored in an encrypted field in Salesforce. Therefore, you need to take steps to secure your customers' sensitive data. Write an Apex trigger that copies the credit card information into an encrypted field and masks the original value.

For detailed information about writing Apex code, see the [Apex Developer Guide](#)

CHAPTER 3 Using Peripherals with Salesforce for Windows Mobile

In this chapter ...

- [Scanning Barcodes](#)
- [Swiping Credit Cards](#)
- [Capturing Signatures](#)
- [Attaching Images](#)

After you [set up the Windows Mobile peripherals feature](#), the mobile application supports the barcode reader, magnetic stripe reader, and camera on [certain Windows Mobile devices](#). The following topics explain how to use the mobile application with Windows Mobile peripheral features:

- [Scanning Barcodes](#)
- [Swiping Credit Cards](#)
- [Capturing Signatures](#)
- [Attaching Images](#)

Scanning Barcodes

Barcode scanning lets you search for items and populate fields in the mobile application using your mobile device's barcode scanner. When you scan a barcode in the mobile application, a search is automatically launched unless you're editing a record. If you scan a barcode while editing a record, the application locates barcode-enabled fields and lets you populate field values with the barcode scanner.

To search for records by scanning a barcode:

1. Activate the barcode scanner on your mobile device.
A scan dialog immediately displays, which gives you the option to type the barcode value, if necessary.
2. Scan a barcode.
The mobile application searches records stored on the device and returns a set of search results on the Home tab.
3. If the record you're looking for isn't in the local search results, click **Search Server** to search for additional records online in Salesforce.
4. Select a record to open it.


To populate a field by scanning a barcode:

1. Edit a record:
 - a. Highlight the record in a list view that you want to change, or open the record's detail page.
 - b. Select **Actions > Edit**.
2. Activate the barcode scanner on your mobile device.
A scan dialog immediately displays, which gives you the option to type the barcode value, if necessary.
3. Scan a barcode.
The mobile application checks whether any of the record's fields have been enabled for barcode scanning. If the record has more than one barcode field, the application prompts you to select the barcode field whose value you want to populate.
4. When you're done editing the record, select **Save**.

Swiping Credit Cards

You can swipe someone's credit card through your device's magnetic stripe reader to capture payment information in a credit card field. To capture credit card information:

1. Open a record, or highlight it in the list view. You can't swipe a credit card while editing a record.
The record must contain one magnetic stripe-enabled field.
2. Select **Actions > Swipe Card**.
3. Swipe the credit card through your mobile device's magnetic stripe reader.
The mobile application stores the credit card number and expiration date in the magnetic stripe-enabled field and displays a confirmation message. If the field already contains data, you are prompted to overwrite the existing credit card information or cancel the action.

 **Note:** After capturing payment information in a credit card field, you can't edit the field. You can only re-swipe the card to overwrite existing credit card information. When displaying the detail page for a record that contains credit card information,

the mobile application shows only the last four digits of the account number. Preceding digits and the expiration date are masked.

Capturing Signatures

Signature capture lets you obtain someone's signature with a stylus and your device's touchscreen and attach the image of the signature to a record. To capture a signature:

1. Open a record, or highlight it in the list view.
2. Select **Actions > Get Signature**.

The application displays a touchpad-sensitive frame where signatures can be drawn. If the record already contains a signature, you're prompted to overwrite the existing signature or cancel the action.

3. Use your mobile device's stylus to draw a signature.
4. Select **Save**.
5. Select **OK** in the confirmation window.

The application saves the signature as a JPG file attachment with the following file name: `salesforce_sig.jpg`. The image size isn't fixed; the size is determined by the dimensions of the signature. You can't edit or delete signature attachments.

Attaching Images

The Attachments related list is available in the mobile application for certain types of records. To view a list of a record's attachments, open a record, scroll down, and select **Attachments**. You can also highlight or open a record and select **Actions > Related To > Attachments**.

With the appropriate permissions, you can edit an attachment's details or delete an attachment. The only type of attachment you can add to Salesforce from the mobile application is an image file. The mobile application lets you attach JPG, BMP, PNG, and GIF files under 5 MB. You can either take a picture, or select existing images from your device's My Pictures folder.

To attach a new image file to a record:

1. Open a record, or highlight it in a list view.
2. Select **Actions > Attach Images > New Image**.
3. Take a picture by selecting **Capture**.
4. If you like the preview, select **Accept**. If not, select **Retake**.
5. Enter the attachment's file name.
6. Optionally, enter details about the attachment, then select **Save**.

To attach existing image files to a record:

1. Open a record, or highlight it in a list view.
2. Select **Actions > Attach Images > Existing Images**.
3. Select the checkboxes next to the pictures you want to upload.

Folders and images are sorted in descending order by the last modified date. Use the Up icon to navigate through the folder structure. Image selection doesn't persist across folders, so you can only upload images from one folder at a time.

4. Select **Upload**:

- To accept the default attachment file name and field values and immediately upload the images to Salesforce, select **Quick Upload**.
 - To edit the information about each image attachment, select **Edit Details**.
5. If you chose **Edit Details**, enter information about the first image attachment. You can preview the image if you want to see it before completing the fields on the page.
 6. Select **Save**.
 7. If you're uploading multiple images, continue entering the attachment details and clicking **Save** until you're done with all the images. If you cancel while editing the attachment details for multiple images, all pending attachment records are discarded, but the images you already uploaded are submitted to Salesforce.

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