CP3⬛⬛⬛⬛⬛SCAN ™

Mobile Barcode Scanning for Salesforce ® *and NFC!*

support@cp3cloud.com

www.cp3cloud.com

CP3Cloud is a mobile application development company focused on the Lightning Platform. Our goal is create straightforward, easy to use, and easy to maintain software for the AppExchange community.

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Requirements

Mobile

CP3Scan requires…

- iOS™ 10 or higher

- Android™ 6.0 (Marshmallow) or higher

CP3 Cloud may periodically change our support policy.

Make sure that you can receive emails from support@cp3cloud.com to ensure that you are notified in a timely manner.

Salesforce

CP3Scan requires…

- Lightning Platform™ Enterprise (or higher)

- The CP3 Scan AppExchange™ App

The CP3Scan Trial is functionally identical to the purchased version. Purchase CP3Scan via the Salesforce AppExchange™ prior to the 15 day expiration to ensure uninterrupted use.

Unlimited Sandbox orgs are included in your CP3Scan license.

Plans as low as $500/yr

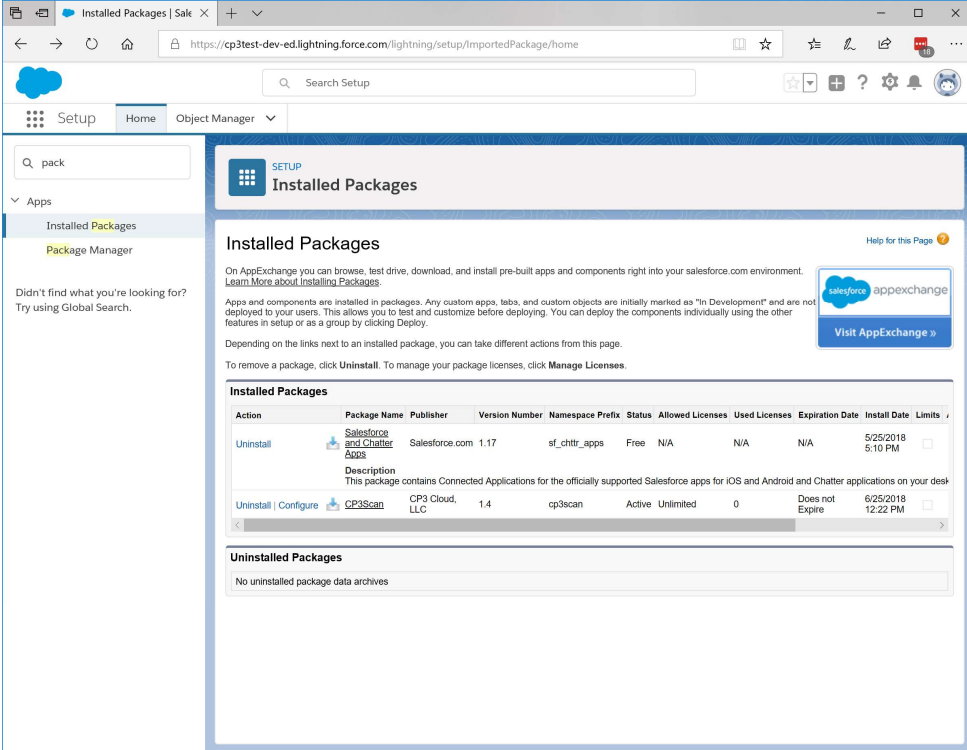| <10 Users	10-100 Users	>100 Users
Up to ten users	10-50 Users	10-50 Users
Flat annual fee	Flat annual fee	Flat annual fee
Email Support	Email Support	Email Support
$500/yr	$1000/yr	$2000/yr

All prices in US Dollars.
Ask about implementation support options.

Setup Instructions

The CP3Scan Package

The CP3Scan configuration screen is available from the "Installed Packages" configuration screen.

Scan Profile List

You can view a list of configured Scan Profiles. Click "New" or "Edit" to create or edit an existing Profile.

Only Active profiles will be available on mobile devices.

Scan Profile Screen

The Scan Profile screen provides a guided configuration process.

1. Select the Barcode contents and barcode type
    *   Enter a regular expression if you want to only recognize some barcodes

2. Select the Salesforce Action
    *   Choose an existing SObject and Field
    *   These will be used for External ID Lookups, or to Insert a new record

3. Select the Mobile Action

4. Configure Barcode Security (optional)

See the "Advanced Configuration" section for more information about Platform Events, Apex Handlers, and SObject JSON

Salesforce Actions

Action	Description	Content Types
Validate	Validates that a Salesforce ID matches the correct Object type and that the record actually exists, or looks up the Salesforce ID based on the provided field value.	Salesforce ID External ID
Insert	Inserts a new record into Salesforce.	SObject JSON – Inserts a record using the field values you provide. External ID – Inserts a record, putting the content of the barcode into the field and object you specify.
Update	Updates a record in Salesforce.	SObject JSON – Updates a record using the field values you provide. If you specify an External ID field, CP3 Scan will try to update an existing record by looking up that value.
Upsert	Inserts or updates a record in Salesforce.	SObject JSON – Updates a record using the field values you provide. If you specify an External ID field, CP3 Scan will try to update an existing record by looking up that value. External ID – If you specify an External ID field, CP3 Scan will try to update an existing record by looking up that value. Otherwise a new record will be created.
Apex	Calls an Apex handler that you write. The handler must extend the ScanHandler interface.	Any content type. If the content type is Salesforce ID, External Id, or SObject JSON, and you provide an External ID field in the configuration, the Platform Event will contain the ID of the related Salesforce record.
CP3 Scan Platform Event	Inserts a record into the CP3Scan platform event. You can write your own Process Builder flows or Triggers to take action based on these events.	

Mobile Actions

| Action	Description
Display Error Message Only	The mobile application will flash GREEN if the server operation completed successfully. If the server operation did not complete, the screen will turn RED and display an error message. The user will have to press "OK" to continue after an error.
Display Message	The mobile application will turn GREEN and display a success message. If the server operation did not complete, the screen will turn RED and diplay an error message. In either case the user will have to press "OK" to continue.
Launch Salesforce Mobile	The mobile application will flash GREEN if the server operation completed successfully and attempt to launch Salesforce Mobile using the Salesforce ID of the record that was processed. If the server operation did not complete, the screen will turn RED and display an error message. The user will have to press "OK" to continue.
Launch Browser	The mobile application will flash GREEN if the server operation completed successfully, and will attempt to launch a Mobile browser or application using the URL returned by the server. If the server operation did not complete, the screen will turn RED and display an error message. The user will have to press "OK" to continue. This feature requires you to write a custom Apex Handler.

Barcode Types

| Family	Description
Linear Barcode	CP3Scan supports most common linear (one bar) barcode formats, including Code 39, interleaved 2 of 5, ITF-14, UPC, EAN, and more! Most word processing and reporting tools support one or more linear barcode types. Linear barcodes support a limited number of characters, and some only support numeric or alphanumeric content. You should use linear barcodes to store asset tags, inventory numbers, or Salesforce IDs.
2D Barcode	2D Barcodes include the popular QR Code, Aztec, and Datamatrix formats. Several web services exist to create 2D barcodes, and some reporting tools can create them natively. 2D barcodes support a large amount of data, as much as thousands of characters. You should use 2D barcodes when you need to store JSON or XML content, including Salesforce SObject JSON.
Near Field Communication (NFC)	Both Android and iOS devices support NFC communication. NFC devices include asset tags, inventory tags, conference badges, and security badges. The data format of NFC tags is highly variable, and is usually not easy to decipher without help from your IT department. Please consider using your 15 day trial to try out all your NFC devices, or contact support@cp3cloud.com for assistance.

User Instructions

Use your Salesforce Login

Because CP3 Scan is based on the Salesforce Mobile SDK, you can login with your normal corporate login.
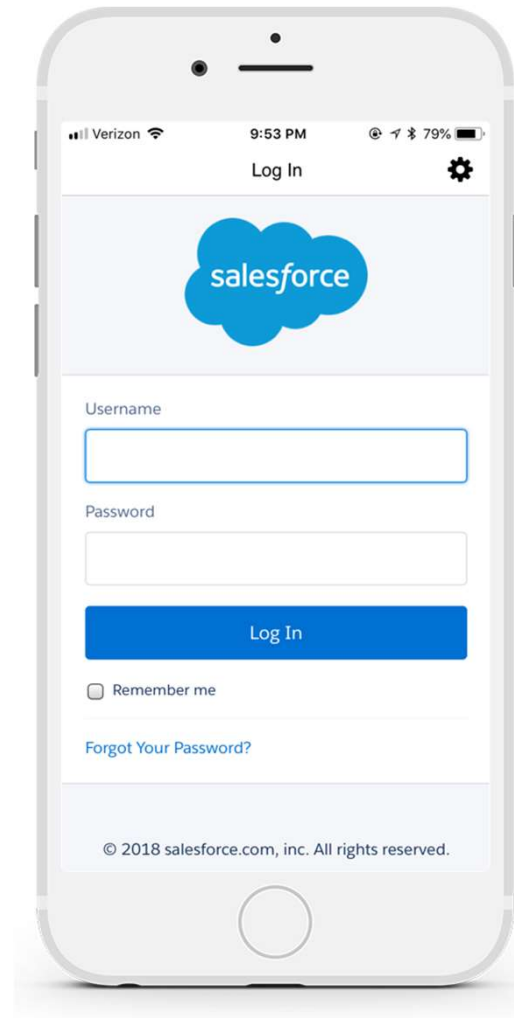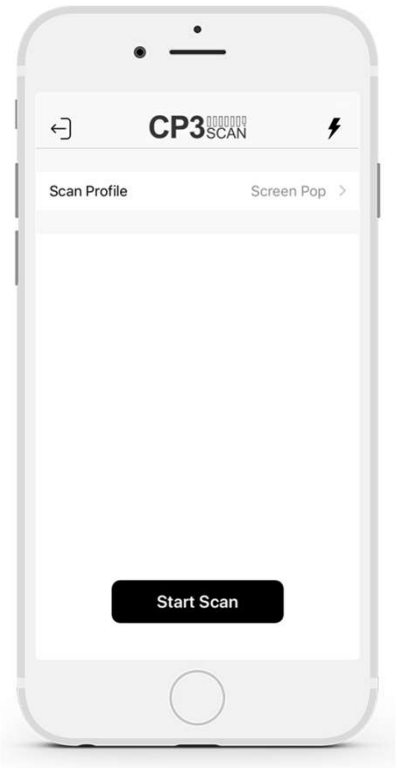
As easy as 1... 2... 3...

Select a Profile
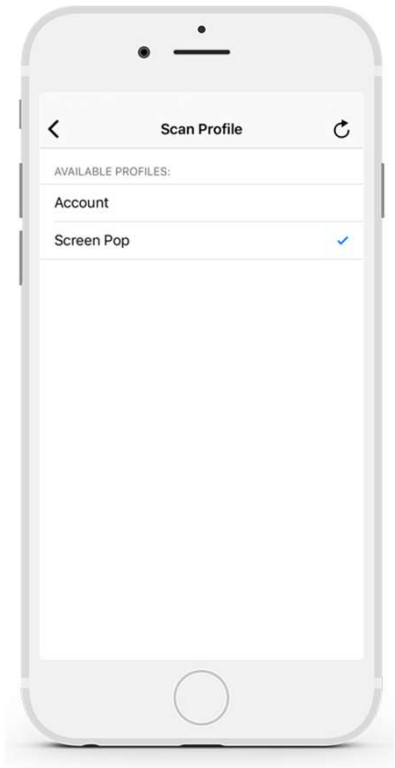
Click "Start Scan"

Scan a Barcode

Use Cases

Open Salesforce (Mobile)

Use CP3Scan to open a customer record in Salesforce and/or Salesforce Mobile by scanning a barcode.

To use this profile, install the CP3 Barcode and CP3 Screen Pop Lightning managed package:

Managed Package (Production)

Managed Package (Sandbox)

Inventory tracking

Use CP3Scan to take inventory, including:

- Construction equipment

- IT assets

- Store inventory

This Use Case takes advantage of Process Builder and Flow. Install the Inventory Tracking managed package:

Managed Package (Production)

Managed Package (Sandbox)

1. Create a new object called "Touch"
   - Create a Lookup to the standard "Asset" object
   - Create a text field called "Barcode"

2. Create a new Flow
   - Look up the parent asset with a Serial Number that matches the scanned barcode
   - Update the Asset field on "Touch" to point to that object

3. Create a Process Builder
   - When a new Touch is added
   - Call the Flow you created above

4. Configure a new Scan Profile
   - Insert a new Record
     - Select the "Touch" object
     - Select the "Barcode" Field
   - Choose "External ID" as the Content Type

- OPTIONAL: Use Profiles to limit access to the "Touch" object…
  - So that only authorized users can scan barcodes.
  - Check the "Enforce Roles/Profiles" box on the Scan Profile.

Physical Security

Scan employee and guest badges to check for authorized access.

To use this profile, configure and log in to Salesforce Mobile. Because this profile's Action is "Validate", nothing will happen on the Salesforce side. If a Contact with the matching Salesforce ID exists, Salesforce Mobile will be launched. If no matching user exists, the device will flash red.

Install the Physical Security managed package:

Managed Package (Production)

Managed Package (Sandbox)

Conference Check-in

Use CP3Scan to check-in customers at a conference:

This Use Case extends the ScanHandler abstract class.

Because Handlers are synchronous, you <u>will</u> be warned if a Campaign Member record cannot be created.

Install the Conference managed package:

Managed Package (Production)

Managed Package (Sandbox)

- Create a new Trigger
  - <u>After insert</u> to the <u>CP3 Scan Platform Event</u>
  - Using the Record ID value from the Platform event…
  - Create a new Campaign Member record
    - For the campaign of your choice
    - For the Contact matching the scanned ID

- Create a new Scan Profile
  - Select the "CP3 Scan Platform Event" action
  - Select the "Salesforce ID" Content Type
    - Select the "Contact" Object
    - Select the "Contact ID" Field

- OPTIONAL: Use Profiles to limit access to the "Campaign Member" object…
  - So that only authorized users can scan barcodes.
  - Check the "Enforce Roles/Profiles" box on the Scan Profile.

Frequently Asked Questions

Support

We have unusual requirements. Can you help us?

We are always happy to hear about new use cases for CP3 Scan. If you don't find your use case already documented here, email support@cp3cloud.com with your requirements and we will try to help.

We cannot accommodate telephone support requests at this time.

Can you help us implement CP3Scan?

Contact sales@cp3cloud.com to discuss a professional services engagement.

Can you help us build barcode scanning into our own software?

Contact sales@cp3cloud.com to discuss a professional services engagement.

Barcodes

You don't support our preferred barcode type. Can you add it?

We support most barcode formats via Native Mobile APIs. Please contact support@cp3cloud.com to confirm.

The most common 2D barcode type is QR Code, which supports a very large amount of content. Use it when you need to store SObject JSON content or a large amount of raw text.

The most common linear barcode type is Code 128. Because Code 128 can support most ASCII characters, it is perfect for storing Salesforce IDs or External IDs.

How do we make barcodes?

Most report builders and word processing tools support Barcode generation.

We don't provide a Barcode API, but there are a number of free and paid services available:

https://www.barcodes4.me/

https://goqr.me/

https://github.com/metafloor/bwip-js/wiki/Online-Barcode-API

https://products.aspose.cloud/barcode/cloud

New Features

We would like you to add <a new feature> to your software. Will you?

We will certainly consider it! Contact us at sales@cp3cloud.com to discuss options.

Advanced Configuration
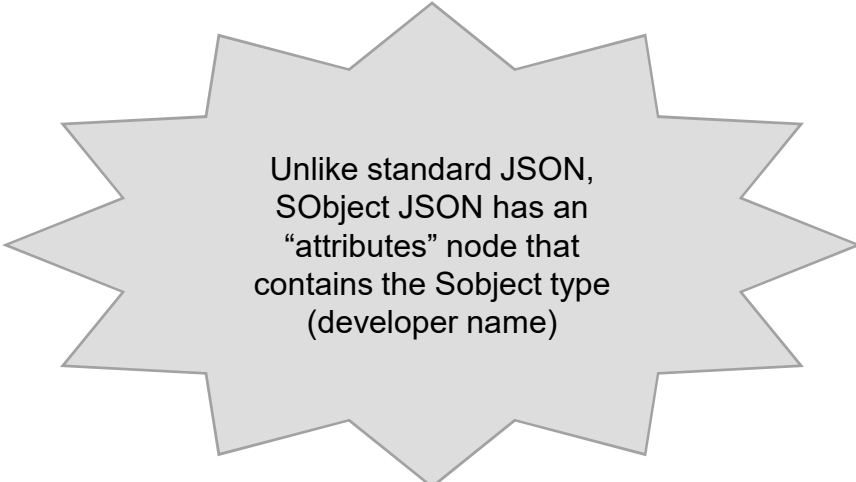
SObject JSON

Any of the supported operations support SObject JSON as content.

If you provide a Salesforce ID, it will be used as the ID for a Platform Event or for an Upsert or Update.

If you set an External ID field in the Scan Profile, CP3 Scan will try to look up a record using the value you provide, and will use the ID of that record for further processing.

```json
{
  "attributes": {
    "type": "Account"
  },
  "Name": "CP3Cloud, LLC",
  "Type": "Prospect",
  "Description": "A premier developer of straightforward Mobile applications"
}
```

Unlike standard JSON, SObject JSON has an "attributes" node that contains the Sobject type (developer name)

Apex Handler

CP3 Scan provides two ways to implement complex logic:

- A custom Apex handler

- The CP3 Scan Platform Event

- The custom Apex handler must implement the ScanHandler interface
  - The class and handle() method must be in the global scope
  - The handle() method has two parameters:
    - A ScanProfile__mdt (custom metadata) object that will be provided by CP3 Scan
    - A Payload object containing:
      - The Barcode Content
      - The Salesforce Record ID
      - The Payload Type
  - The handle() method returns a Response object containing:
    - A code ("OK")
    - A message
    - A Salesforce ID (optional)

- Any response code other than "OK" will be interpreted as an error
  - If your Scan Profile launches Salesforce Mobile, the "id" field in the Response will be used to launch the application
  - If your Scan Profile launches a URL, the contents of the "message" field will be used
  - Otherwise, the message may be displayed to the user

CP3 Scan Platform Event

CP3 Scan provides two ways to implement complex logic:

- A custom Apex handler

- The CP3 Scan Platform Event

The CP3Scan Platform Event has three fields:

- Scan Profile
  - The name of the Scan Profile

- Record ID
  - The Salesforce ID
  - This will only be present if the barcode contains a Salesforce ID or an External ID (and you provided an External ID Field name)

- Payload
  - The raw contents of the barcode