

# Wix Apps Workshop

Building Applications for websites

Lior Shefer SDK Team Lead

# Agenda

- What is a Wix app
- App Market
- The Vine app - sample app for the London hackathon
- Anatomy of a Wix application
- Registering an app in Wix Dev Center
- JS SDK
- Widget, Page and Settings endpoints

# What is a Wix app

A web application, built using HTML5 technologies.

Installed into websites.

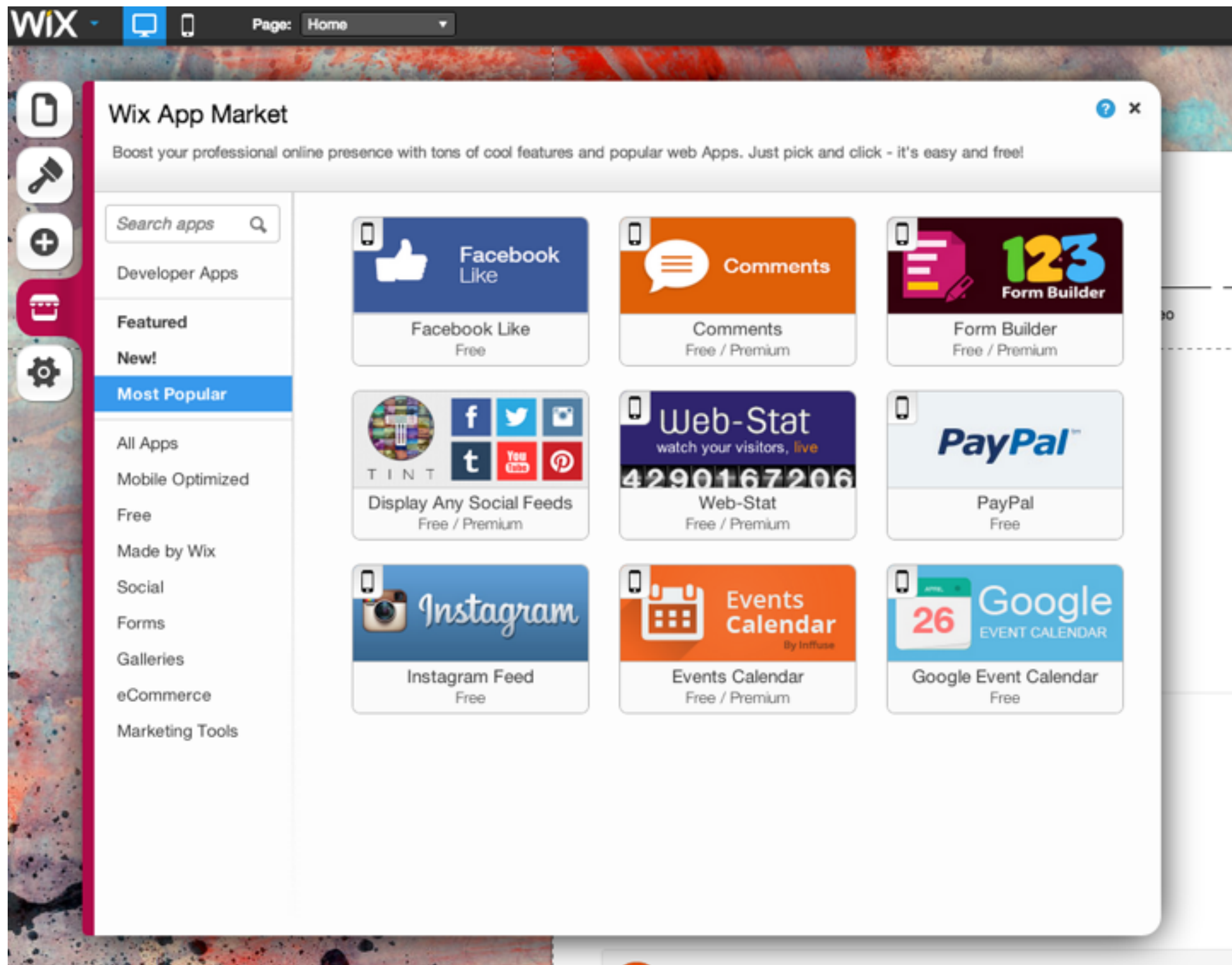
With Deep Linking and SEO support.

Delivered as multiple iframes.

You can use any programming language you like

Java, Ruby, Javascript, Python, C#, Scala etc.

# Anatomy of a Wix Application



# Anatomy of a Wix Application

Types of applications:

Widget app

Page app

Multi Widget app

Back Office app

Hybrid app

# Building Apps For the App Market

In this workshop, we will build a Wix App using Node.js and Angular.

However, a Wix App can be built using any web technology.

Our toolbox:

Express - Version 3+

Angular - Version 1.2+

Heroku for hosting our app.

# Getting the Sample App Code

The Wix Sample App for the hackathon is on Github:

<https://github.com/wix/london-hackathon-vine-app>

Run the app locally:

```
git clone git@github.com:wix/london-hackathon-vine-app.git
```

```
npm start
```

# The Vine App

# FUNKYBAND

[Home](#)
[News](#)
[Gigs](#)
[Album](#)
[Video](#)
[Contact](#)

**Vine App**

Search for Vine videos, or see popular videos.

♥ from the Wix SDK team

## MUSICSTREAM

stooop Funkyband

SOUNDCLOUD

3:18

Cookie policy

This app lets you display Vine videos on your site.

**Color Settings:**

Set the widget colors

**Description container**

**Search button**

**Video Description**

**Video Username**











**Video Background**











[General Settings](#)

[Font Settings:](#)



# The Project Structure

- ▼  public
  - ▶  fonts
  - ▶  images
  - ▼  scripts
    - ▶  controllers
    - ▶  directives
    - ▶  services
    -  app.js
  - ▶  styles
  - ▶  views

- ▼  app
  - ▼  views
    - ▼  partials
      -  head.ejs
      -  index.ejs
      -  invalid-secret.ejs
      -  settings.ejs
    -  authentication.js
    -  routes.js
    -  vine.js

# server.js

...

*//API*

```
app.get('/vine/popular/:size', routes.vinePopular);
app.get('/vine/search/:q/:size', routes.vineSearch);
app.get('/vine/:videoId', routes.vineGetVideo);
```

*//Templates*

```
app.get('/widget', authenticate, routes.widget);
app.get('/settings', authenticate, routes.settings);
```

```
function authenticate(req, res, next) {
  if (req.query.debug) {
    next();
  } else {
    var authentication = new Authentication();
    authentication.authenticate(req, res, next);
  }
}
```

...

# authentication.js

```
var url = require('url');
var APP_SECRET = '2a918fb5-3c64-42fd-a429-44ee53c59fe7';
var crypto = require("crypto");

function Authentication() {
  this.authenticate = function(req, res, next) {
    var url_parts = url.parse(req.url, true);
    var query = url_parts.query;
    if (query.instance || query.origCompId || query.compId) {
      verify = verifyInstance(query.instance, APP_SECRET);
      if (verify.valid) {
        var key = JSON.parse(verify.key).instanceId + ':';
        if (query.origCompId) {
          key = key + query.origCompId;
        } else if (query.compId) {
          key = key + query.compId;
        }
        req.key = key;
        next();
      } else {
        res.render('invalid-secret');
      }
    } else {
      res.render('invalid-secret');
    }
  }
}
```

# routes.js

```
var vine = require('./vine.js');

exports.widget = function(req, res) {
  res.render('index', { debug: req.query.debug || false });
};

exports.settings = function(req, res) {
  res.render('settings', { });
};

exports.vineSearch = function(req, res){
  vine.search(req.params.q || 'funny', req.params.size || 6, function(data){
    res.setHeader('Content-Type', 'application/json');
    res.end(JSON.stringify(data));
  });
};

...
```

# index.ejs

```
<!doctype html>
<html class="no-js">
<head>
  <% include ../views/partials/head %>
  <style wix-style>
    body {
      background-color: {{style.bgColor}};
    }
    .jumbotron {
      background-color: {{style.searchBoxColor}};
    }
    .btn-primary {
      background-color: {{style.buttonColor}};
    }
    .meta p.description {
      color: {{style.descriptionColor}};
      {{style.descriptionFont Body-S}};
    }
    .meta .username {
      color: {{style.usernameColor}};
      {{style.usernameFont Body-S}};
    }
  </style>
</head>
<body ng-app="vineApp">
<div class="container" ng-view=""></div>
</body>

<script>
  angular.module('vineApp').constant('config', {
    standAlone: <%- debug %>
  });
</script>
</html>
```

# head.ejs

...

```
<script src="/bower_components/jquery/dist/jquery.js"></script>
<script src="/bower_components/angular/angular.js"></script>
<script src="/bower_components/bootstrap/dist/js/bootstrap.js"></script>
<script src="/bower_components/angular-resource/angular-resource.js"></script>
<script src="/bower_components/angular-cookies/angular-cookies.js"></script>
<script src="/bower_components/angular-sanitize/angular-sanitize.js"></script>
<script src="/bower_components/angular-route/angular-route.js"></script>
<script src="/bower_components/angular-animate/angular-animate.js"></script>
<script src="/bower_components/underscore/underscore.js"></script>
<script src="/bower_components/angular-loading-bar/src/loading-bar.js"></script>
<script src="http://sslstatic.wix.com/services/js-sdk/1.39.0/js/Wix.js"></script>
```

...

# settings.ejs

```
<!doctype html>
<html class="no-js">
<head>
  <link type="text/css"
href="/bower_components/wix-ui-lib2/ui-lib.min.css" rel="stylesheet">
  <% include ../views/partials/head %>
  <script src="/bower_components/wix-ui-lib2/ui-lib.min.js"></script>
</head>
<body ng-app="vineApp" class="settings">
<div class="container" ng-view=""></div>
</body>
<script>
  angular.module('vineApp').constant('config', {
    view: 'settings'
  });
</script>
</html>
```

# app.js

angular

```
.module('vineApp', [
    'vineApp.services',
    ...
])
.config(function ($routeProvider, config) {
    $routeProvider
        .when('/', {
            templateUrl: '/views/search.html',
            controller: 'MainCtrl'
        })
        .when('/popular/:size', {
            templateUrl: '/views/popular.html',
            controller: 'PopularCtrl'
        })
        .when('/video/:id', {
            templateUrl: '/views/fullPage.html',
            controller: 'VideoCtrl'
        })
        ...
    }
});
```



# main.js

```
angular.module('vineApp')
  .controller('MainCtrl', function ($scope, $window, $sce, $routeParams, $timeout,
    Wixservice, DataService, config, Search) {
    $scope.search = function (q) {
      var keyword = q || config.query;
      if(!config.standAlone){
        Wixservice.getStyleParam('numbers', 'numberOfVideos', function(size) {
          doSearch(keyword, size);
        });
      } else {
        doSearch(keyword, config.size || 6);
      }
    };

    var doSearch = function (keyword, size) {
      $scope.keyword = keyword + ": getting " + size + " results";
      Search.query({term: keyword, size: size}, function (data) {
        var videos = data;
        _.each(videos, function (video) {
          video.videoUrl = $sce.trustAsResourceUrl(video.videoUrl);
          video.avatarUrl = $sce.trustAsResourceUrl(video.avatarUrl);
        });
        $scope.videos = videos;
        ...
      });
    };

    if ($routeParams.q) {
      $scope.search($routeParams.q);
    }
  });
```

# Registering applications with Heroku

Register to Heroku

You will need to login to Heroku at  
<http://www.heroku.com>

Download Heroku toolbelt  
<https://toolbelt.heroku.com>

# Registering applications with Heroku

Create and deploy an App

```
git init
```

```
git add
```

```
git commit -m 'my commit message'
```

```
heroku login
```

```
heroku create
```

```
git push heroku master
```

# Anatomy of a Wix Application

How it works:

**You** (the app developer) provide iframe endpoints.

A **Site Owner** uses the WIX editor to add apps to their website using drag & drop from the app market.

The **Wix Platform** generates a new instance for every website.

The Site Owner publishes their website.

Site Visitors view the Wix user's websites with the installed apps.

# Anatomy of a Wix Application

Endpoints are web URLs that when called, render HTML iframes (or SEO inclusion HTML).

Accessed with dedicated URL parameters (the Wix **endpoint API**).

The **Wix Platform** generates a new instance for every website - instance, viewMode, compId, locale, etc.

Include the Wix.js for the use of Wix JS API.

# Understanding App Instance

How do I customize (associate) my app for a specific website?

e.g., Associate an account, customize style, data, etc.

When a site owner adds an app component (Widget or Page) to his site, a new “**instance**” of the app is generated by the Wix platform.

# Understanding App Instance

Site + App ➡ “instanceld”

The “instanceld” is a GUID

AFF5016D-2914-4D63-A38C-A6DC4E432ED7

Unique & persistent for each site-app relation.

# The Instance parameter

The instance parameter encodes the “instanceId”

Passes as a URL query parameter for endpoints  
(and available via the JS SDK)

Encoded & Signed (HMAC-SHA1 256)



# The Instance parameter

What it looks like:

```
vrinSv2HB9tqbnJ6RSwoMgVamAixpmmsA0I6eAan960.eyJpbnN0YW5jZU  
lkIjoieYwZmNTAxNmQtMjkxNC00ZDYzLWEzOG
```

## Instance JSON

```
{  
  "instanceId" : "aff5016d-2914-4d63-a38c-a6dc4e432ed7",  
  "signDate" : 1336914487311,  
  "uid" : "86c6c550-2042-494e-86cc-ac65f8862e11",  
  "permissions" : "OWNER",  
  "vendorProductId" : "Premium package name",  
  "ipAndPort" : "217.24.15.12/1531",  
  "demoMode" : "false"  
}
```

# The Instance parameter

```
{  
  "instanceId" : "aff5016d-2914-4d63-a38c-a6dc4e432ed7",  
  "signDate" : 1336914487311,  
  "uid" : "86c6c550-2042-494e-86cc-ac65f8862e11",  
  "permissions" : "OWNER",  
  "vendorProductId" : "Premium package name",  
  "ipAndPort" : "217.24.15.12/1531",  
  "demoMode" : "false"  
}
```

signDate, ipAndPort - Verification that a request for an endpoint is from a Wix Site

uid - Site Users Management

vendorProductId - Premium Package Management

demoMode - Integration with Wix Templates

# Registering a Wix App @ the Wix Dev Center

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## Market your App to the world's largest base of website owners

Integrate an existing App or create a new one

[HOW IT WORKS](#)
[ADD YOUR APP](#)

54,500,000+	45,000	34,000	11
Wix users	New people join every day	Apps installations per day	Languages supported

## Key Benefits

- ✓ Launch your App instantly to a whole new market
- ✓ Enjoy a revenue stream based on a monthly subscription model
- ✓ It's totally FREE! No service fee required

## Developer Stories



Vincent Lamanna  
CakeMail Inc.

The platform and the documentation are great! - The Wix App Market team is very responsive and the App publishing process is pretty tight.

## Our Next Event



# Registering a Wix App @ the Wix Dev Center

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Create a New App

Get your app keys



App Name: \*

Vine London Hackathon

Register Your App

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[Test your app >](#)

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# Registering a Wix App @ the Wix Dev Center

Get your app keys | Vine London Hackathon



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[Create a New App](#)

## Your App key

App Name:

Vine London Hackathon

App key:

13a4a718-72ee-a195-9ead-daa8592a95f9

App Secret key:

2c762c19-6d68-497c-aa7b-d7e43333bf16

Note: this section is mandatory, however, you will be able to come back to it and change it later.

## Related documentations

[Registration guide >](#)

[Test your app >](#)

[Marketing materials guideline >](#)

Need more help?

[Get support >](#)

## App Endpoints



Choose your App type:

- ☐ Widget
- ☐ Fixed Position Widget
- ☐ Page
- ☐ BackOffice



# Registering a Wix App @ the Wix Dev Center

Wix Dev Center - Add Widget Endpoint

☐ Widget Endpoint Definitions Define your App configurations

☒ Endpoint Settings Define your app settings configurations

Settings URL \*

Width \*

Height \*

☐ Widget Endpoint Content Define the extension test and image

Wix Dev Center - Add Widget Endpoint

☐ Widget Endpoint Definitions Define your App configurations

☐ Endpoint Settings Define your app settings configurations

☒ Widget Endpoint Content Define the extension test and image

Endpoint name \* [See Example](#)

Endpoint Icon (30px X 30px)  
 No file chosen

Endpoint description \* [See Example](#)

☐ Extension is Essential ?



# Set your endpoints

In the app we registered, the endpoints are in the **Server.js** class.

Widget:

<http://<heroku-app-name>.herokuapp.com/widget>

Settings:

<http://<heroku-app-name>.herokuapp.com/settings>

# The javascript SDK

The Javascript SDK exposes operations to be used by the App

## Wix.\* APIs

Can be used by: widgets, pages and modal dialog endpoints.

Can change: widget height, refresh app, get site info, history and event listeners

## Wix.Settings.\* APIs

Can be used by settings endpoints

Can open billing page, get site info, refresh app

## Wix.Utils.\*

Can be used by all endpoints

Getters for different attributes (locale, uid, demo mode, etc).



# Widget Application

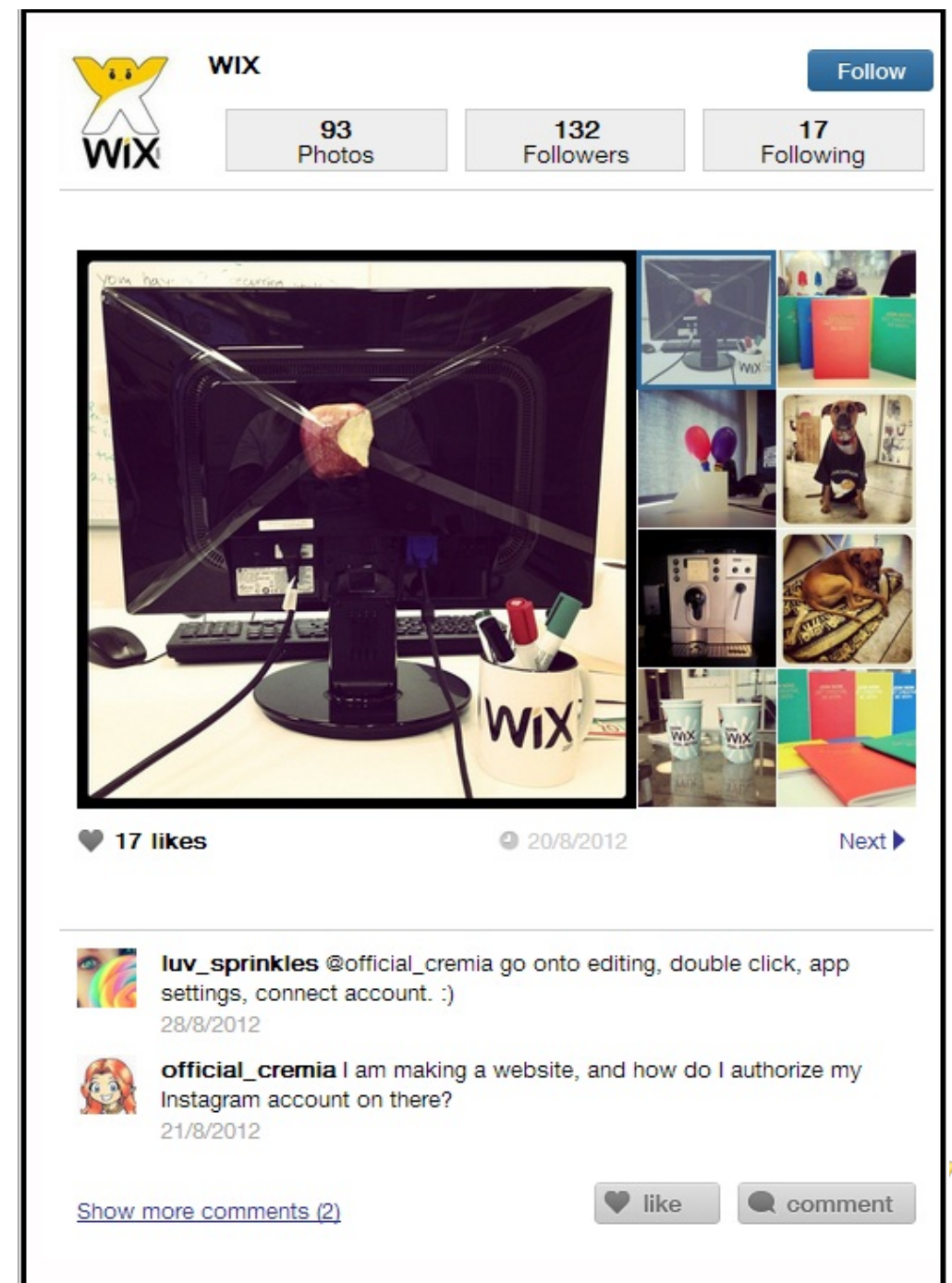
A Widget App is an element within a page.

The Site Owner can position and resize the Widget app, to fit it into a desired location within the page.

A Widget app is simply an iframe which contains your Widget.

The app also has an endpoint for an SEO version of the content in your Widget.

The Site Owner interacts with a Widget App like he does with any other Wix Component!



# Widget endpoint

**[web-endpoint-url]?  
 instance=[signed-instance-data]&  
 cacheKiller=[cacheKiller]&  
 compId=[compId]&  
 viewMode=[viewMode]&  
 deviceType=[deviceType]&  
 local=[locale]**

# Widget endpoint

Name	Value
web-endpoint-url	The endpoint URL as supplied during the app registration in the dev center.
instance	The signed instance as described here
cacheKiller	The cacheKiller is there to ensure no caching of the iframe content by the host browser
compId	The ID of the Wix component which is the host of the iframe. The compId can be used to distinguish between multiple instances of the same Widget in a site.
viewMode	Site view mode i.e., preview or site
deviceType	Site device type i.e., desktop or mobile
local	Site locale e.g., 'en'

# Page Application

A Page App is a full-page app with internal pages.

When a site owner adds a Page app, a new page will be created within his website.

This type of app is useful for you if you are interested in creating an app which has internal pages, such as

- a blog
- a forum
- a product catalog

Each internal page of your app will have its own URL (deep-linking)  
Its own content for SEO



# Page endpoint

**[web-endpoint-url]?  
 instance=[signed-instance-data]&  
 cacheKiller=[cacheKiller]&  
 compId=[compId]&  
 viewMode=[viewMode]&  
 deviceType=[deviceType]&  
 local=[locale]&  
 section-url=[section-url]&  
 width=[width]&  
 target=[target]**

# Page endpoint

Name	Value
section-url	The base url of the app section, as it appears in the browser.
target	The target attribute that must be added to all href anchors within the app frame
width	The width of the frame to render in pixels

# Application Settings

The Settings of an app encompass anything that the site owner can modify the app or the app's content.

- The settings panel of an app is accessed by clicking the app in the Wix Editor.
- Next to the app, a settings panel opens.

The screenshot shows the settings panel for the 123ContactForm app. The panel has a title bar with the text "123ContactForm" and a close button. The main content area is divided into several sections. The top section features the 123ContactForm logo on the left and a text block on the right that says: "Create any contact form, event registration form, online survey and order form as easy as 1-2-3. Use the existing templates, by entering your email address below, or [signup](#) for a free 123ContactForm account and create your own custom forms!". Below this text is a link "Don't have a 123ContactForm account? [Create one](#)" and a blue button labeled "Connect Account". The middle section has a "Choose your form" label, a dropdown menu currently set to "Contact Form", and a link "Advanced Settings. Want to customize the form even more? Please [signup](#).". Below this is a field for "Email to receive form submissions" with an "Update" button. The bottom section displays three color theme options: "Turquoise", "Desert Glow", and "Classic Grey". Each option is represented by a square with a colored top-left corner and a white bottom-right corner. The "Classic Grey" option is highlighted with a red border. Navigation arrows are visible on the left and right sides of the theme selection area.

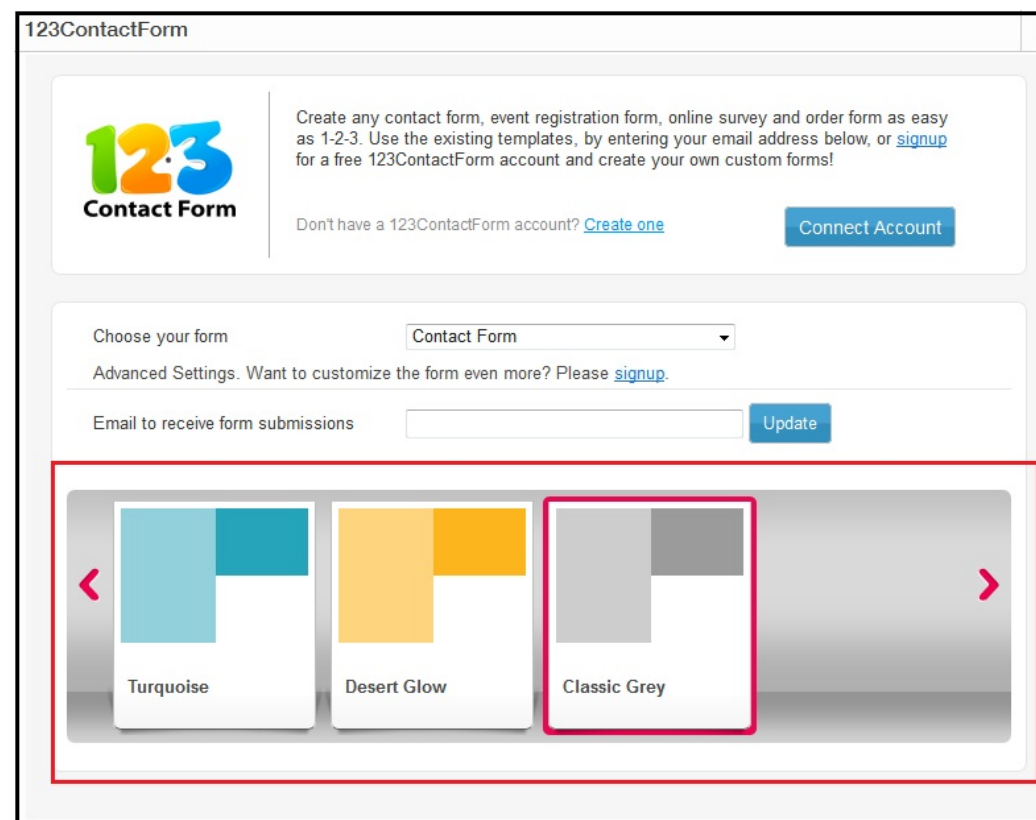


# Application Settings

Unlike the app itself, the settings of an app can only be seen and accessed by the site owner.

Use the Settings to

- Tailor the application to a specific site
- Tailor a specific view of the application (in case of multiple widgets)
- Connect Account / Register / Login



The screenshot shows the '123ContactForm' settings window. At the top left is the '123Contact Form' logo. To its right, text explains that users can create contact forms, event registration forms, online surveys, and order forms easily using templates or by creating a free account. Below this text are links for 'Create one' and a 'Connect Account' button. A section titled 'Choose your form' features a dropdown menu set to 'Contact Form' and a link to 'Advanced Settings'. Below this is a field for 'Email to receive form submissions' with an 'Update' button. At the bottom, a carousel of three color themes is displayed: 'Turquoise', 'Desert Glow', and 'Classic Grey'. The 'Classic Grey' theme is highlighted with a pink border, and the entire carousel area is enclosed in a red border.



# Settings endpoint

**[web-endpoint-url]?  
 instance=[signed-instance-data]&  
 compId=[compId]&  
 width=[width]&  
 local=[locale]&  
 origCompId=[origCompId]**

# Settings endpoint

Name	Value
web-endpoint-url	The endpoint URL as supplied during the app registration in the dev center.
instance	The signed instance as described here
compld	The ID of the Wix component which is the host of the iframe. The compld can be used to distinguish between multiple instances of the same Widget in a site.
OrigCompld	The ID of the component which associated with the app settings panel (in the site)
Width	The width of the frame to render in pixels
local	Site locale e.g., 'en'

