

RingCentral Developers

WordPress Plugin Development with RingCentral's API

Peter MacIntyre

@pbmacintyre

Code and this slide deck:

https://github.com/pbmacintyre/April_28_2022_RC_Meetup

November 10, 2021

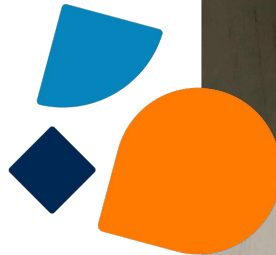
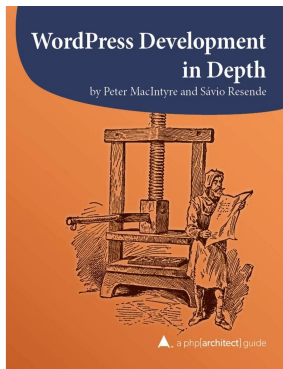
```
async function call_ringout() {  
  try {  
    var resp = await  
platform.post('/restapi/v1.0/account/~/' + accountSid + '/calls', {  
      'from': { 'phoneNumber': RINGCENTRAL_PHONE_NUMBER },  
      'to': { 'phoneNumber': RECIPIENT_PHONE_NUMBER },  
      'playPrompt': false  
    })  
    var jsonObj = await resp.json()  
    console.log("Call placed. Call status: " +  
      jsonObj.status.callStatus)  
  } catch (e) {  
    console.log(e.message)  
  }  
}
```



WordPress Best Practices

About Me

- Over 33 years experience in IT
- NomadPHP Certified Engineer
 - Wrote the test questions
- Twice Zend Certified Engineer (ZCE)
 - ZCE 4.0 & 5.3
- Co-Founder & past Chair of Northeast PHP Conference
- Author / Co-Author of 6 PHP & related books
- Travel Blogger at: milesinmyshoes.com





WordPress Best Practices

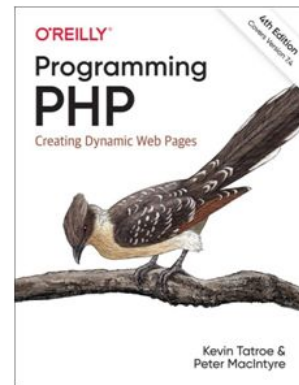
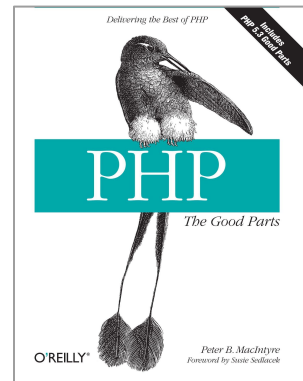
About Me

Conference Speaker

- New Orleans, LA
- Köln, Germany
- Melbourne, Australia
- Winnipeg, Manitoba
- Boston, MA
- Washington, DC
- Las Vegas, NV
- Warsaw, Poland
- Verona, Italy

Live and work in P.E.I. Canada

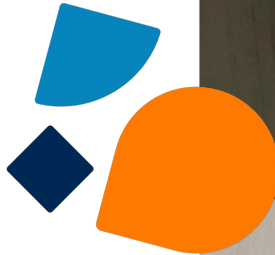
paladin-bs.com



WordPress Best Practices

Overview

WordPress is a great “multi-tool” to use for website development. It can be extended with themes and plugins in almost any direction. This can prove to be problematic as well, since the more tools you add to it the slower it can run. Today we will be taking a high level look at some best practices on how to optimize your site from hosting considerations all the way to what to look for in a theme. Some recommended plugins will also be looked if time permits.



Plugin Development with API

Overview

We will be looking at how to use the RingCentral SMS API within WordPress.

Specifically we will look at the steps to preparing the API and creating a small plugin that will interact with the API to send out SMS text messages. We will also take a look at the developer environment where we establish the connection to that specific part of the overall API ecosystem that RingCentral provides.



Agenda

1

Hosting Environment

- Hosting Features
- Security
- Software Versions
- CDN Options
- Peripheral Features
- Recommended Hosts

2

Themes

- Custom CSS
- Responsive Display
- Speed Optimization
- Page Builder Features
- Support / Documentation

Plugins

- Site Security
- Caching content
- Managing images
- Peace of mind - backups

3

Plugin Development

- Setup environment
- Make RingCentral's SMS API available
- Create developer app for API calls
- Establish credentials
- Send test SMS messages

4

Plugin Extras

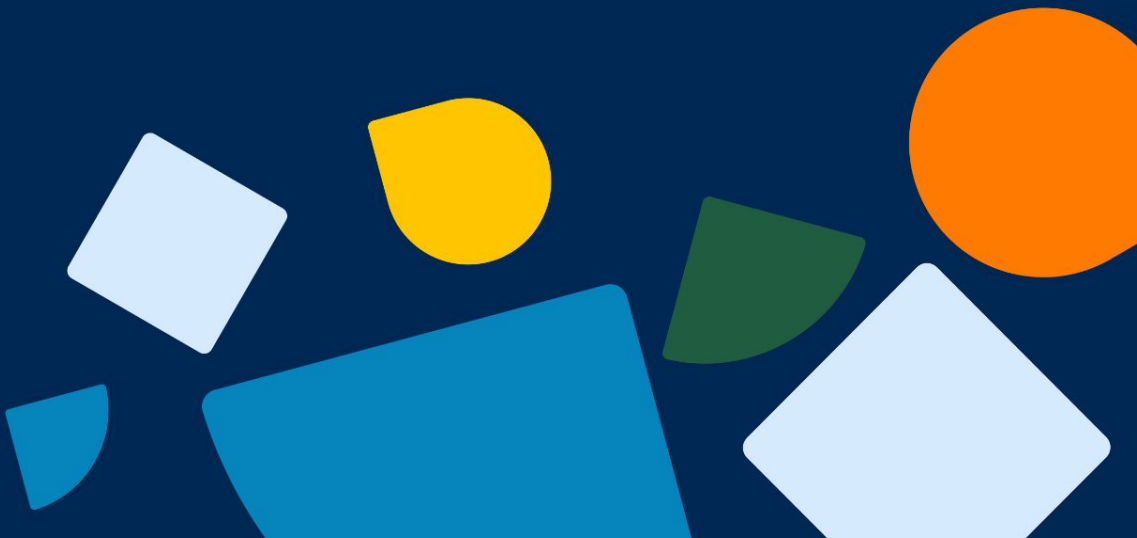
- Prepare code for translation
- Setup translation plugin
- Change display language

Loose Ends

- Additional resources
- Trivia - give away
- Q & A time

Hosting Environment

```
async function call_ringout() {  
  try {  
    var resp = await  
platform.post('/restapi/v1.0/account/~/' + account_id + '/ringout', {  
      'from': { 'phoneNumber': RINGCENTRAL_PHONE_NUMBER },  
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    console.log(e.message)  
  }  
}
```





Hosting Environment

- a) Hosting Features
- b) Security
- c) Software Versions
- d) CDN Options
- e) Peripheral Features
- f) Recommended Hosts

Hosting Environment:

Hosting Features

- a) Price
- b) Watch for introductory fees
- c) Traffic constraints, Upload / Download limitations
- d) Disk space / storage constraints
- e) Bandwidth constraints
- f) Backups, ease of recovery *
- g) Domain / subdomain limits ?



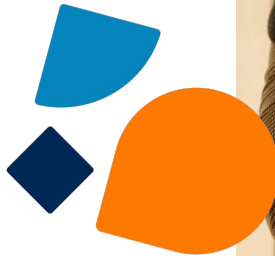


Hosting Environment: Security

- a) HTTPS / SSL Certificate
- b) Spam protection on email
- c) Domain Privacy option
- d) Dedicated IP option

Hosting Environment: Software Versions

- a) cPanel or equivalent
Latest stable version
- b) PHP 7.3 bare minimum
- c) Latest stable database and OS



Hosting Environment:

Peripheral Features

- a) Quick WordPress install
- b) Voice / chat tech support
- c) FTP access
- d) No file size / count limits
- e) No database size limits
- f) Shared hosting or dedicated hosting options
- g) Affiliate Program *





Hosting Environment: Recommended Hosts

- a) Bluehost / Justhost
- b) Site Ground
- c) Go Daddy
- d) Hostgator

Theme Essentials

```
async function call_ringout() {  
  try {  
    var resp = await  
platform.post('/restapi/v1.0/account/~/' + account_id + '/ringout', {  
      'from': { 'phoneNumber': RINGCENTRAL_PHONE_NUMBER },  
      'to': { 'phoneNumber': RECIPIENT_PHONE_NUMBER },  
      'playPrompt': false  
    })  
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Theme Essentials

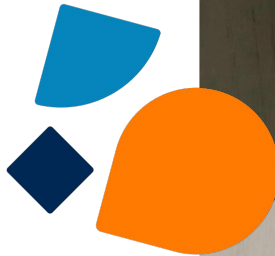
- a) Custom CSS
- b) Responsive Display Options
- c) Speed optimization Features
- d) Header / Footer Settings
- e) Color / Font Options
- f) Page Builder Features
- g) Support / Documentation



Theme Essentials:

Custom CSS

- a) Site wide effect
- b) Page by page option as well
- c) Sometimes overlaps with page builder tool
- d) If not available there are plugins with this capability.





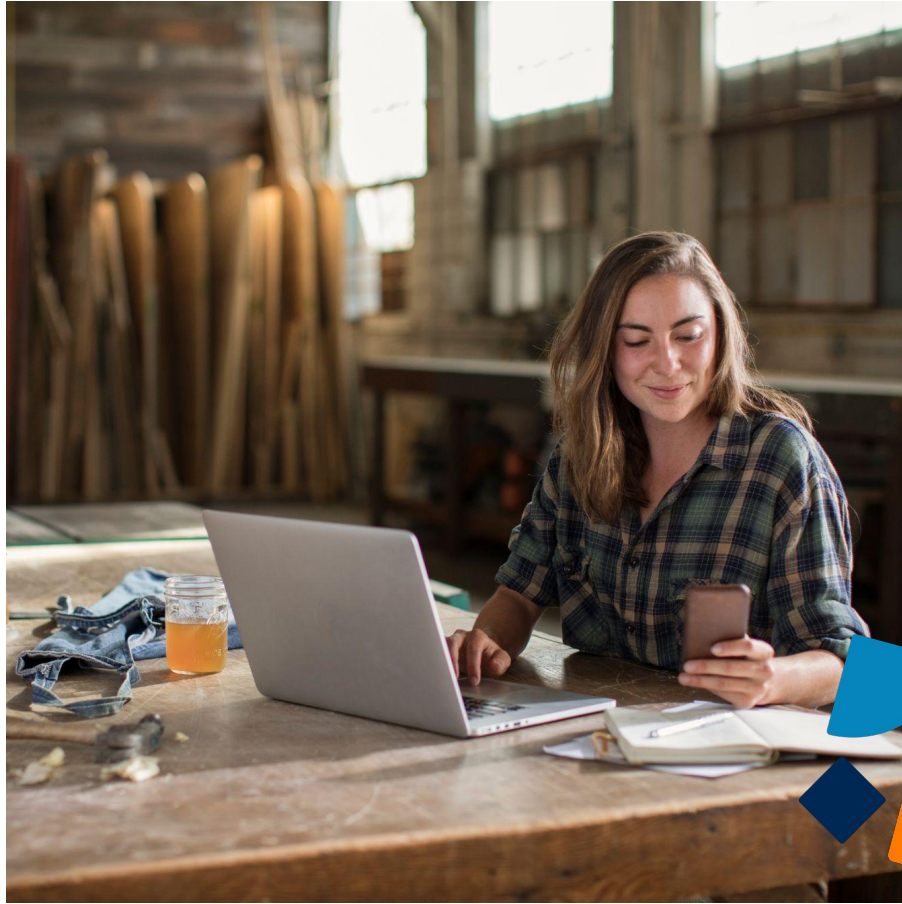
Theme Essentials: Responsive Display

- a) Should be 85 to 90 % responsive
- b) 100% responsive is still hard to find
- c) That is why custom CSS availability is needed

Theme Essentials: Speed Optimizations

- a) Caching features
- b) Minify CSS & JS
- c) Lazy loading images
- d) Again if they are not here
there are plugins to use





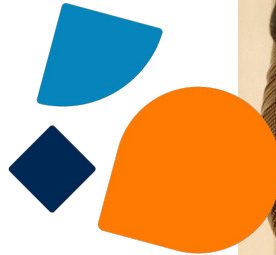
Theme Essentials: Header / Footer Settings

- a) Ability to put in your own
sitewide JS or CSS code
- b) Google Analytics code is a
great example
- c) Copyright or disclaimer links
- footer example

Theme Essentials:

Color / Font Options

- a) Ability to set sitewide color scheme for font, links, visited links, buttons, etc.
- b) Ability to use Google fonts or import your own fonts beyond internet defaults like Verdana





Theme Essentials: Page builder features

- a) Drag & drop page designer
- b) Often implemented by an embedded plugin like WP Bakery or Elementor
- c) If not theme embedded you can still buy these page builders separately

Theme Essentials:

Support / Documentation

- a) Good Documentation
- b) How to videos
- c) How to / Getting started guides
- d) Community forums for user discussion, bug reporting, new features lists, etc.
- e) Ability to ask for specific help via email, chat, phone



Must Have Plugins

```
async function call_ringout() {  
  try {  
    var resp = await  
platform.post('/restapi/v1.0/account/~/' + account_id + '/ringout', {  
      'from': { 'phoneNumber': RINGCENTRAL_PHONE_NUMBER },  
      'to': { 'phoneNumber': RECIPIENT_PHONE_NUMBER },  
      'playPrompt': false  
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```





Must Have Plugins

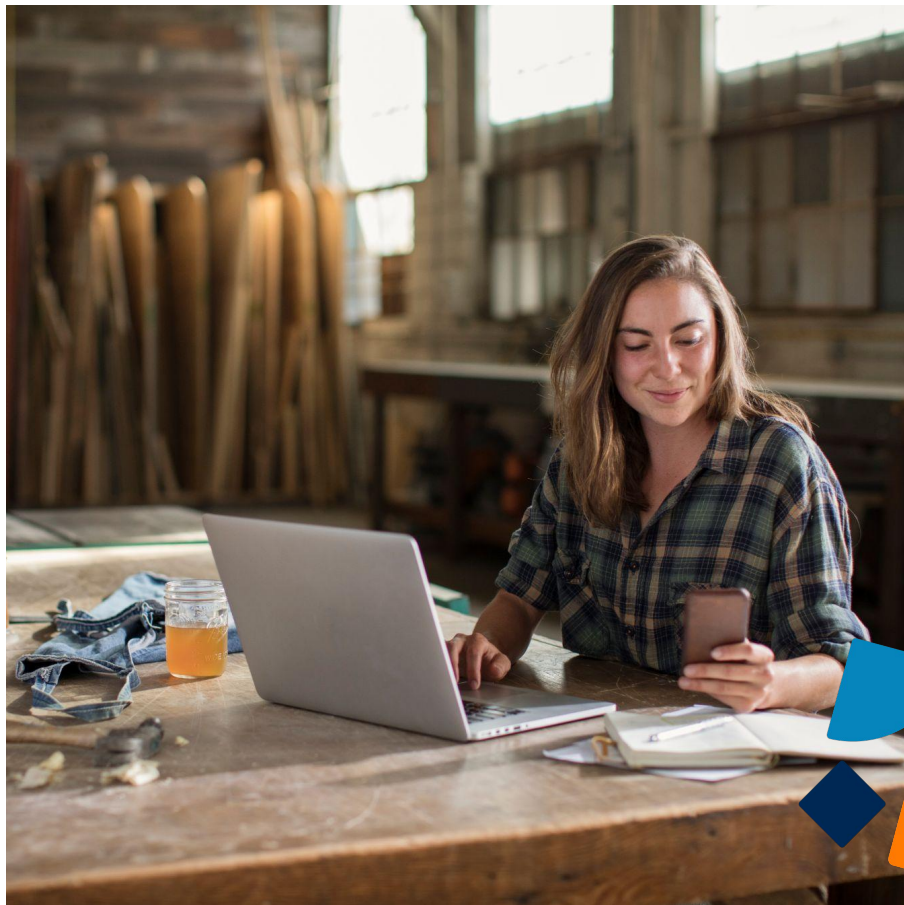
- Akismet
- WordFence Security
- All-in-One WP Migration
- W3 Total Cache
- EWWW Image Optimizer
- WP Rollback

Must Have Plugins:

Akismet

- a) Protects against most comment spam
- b) Built in to most WP basic installs
- c) Activated with free code from their website





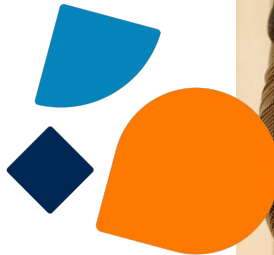
Must Have Plugins: **WordFence Security**

- a) Protects against hacking and brute force attacks
- b) Lots of other site security features
- c) Lock out options / thresholds
- d) Plugin update notifications
- e) Pro Version

Must Have Plugins:

All-in-One WP Migration

- a) Allows for complete site move between web locations
- b) Great for moving staging site to LIVE environment
- c) Doubles as a GREAT site backup / recovery tool
- d) Pro Version highly worth it
- e) “Extensions” add-on valuable too
 - i) Scheduled remote backups
 - ii) Multiple location options





Must Have Plugins: **W3 Total Cache**

- a) Caches site content very well
- b) Great setup Wizard feature
- c) Minifies CSS and JS code
- d) Allows for lazy loading of site images

Must Have Plugins:

EWWW Image Optimizer

- a) Removes META information when uploading to Gallery (smaller file size)
- b) Scans existing images
- c) Lazy loads images
- d) Pro Version





Must Have Plugins: **WP Rollback**

- a) Tracks versions of plugins that were approved by WordPress
- b) Allows for rolling back to older plugin versions if trouble occurs

Nice to Have Plugins

```
async function call_ringout() {  
  try {  
    var resp = await  
platform.post('/restapi/v1.0/account/~/' +  
    'from': { 'phoneNumber': RINGCENTRA  
    'to': { 'phoneNumber': RECIPIENT }  
    'playPrompt': false  
  })  
  var jsonObj = await resp.json()  
  console.log("Call placed. Call status  
jsonObj.status.callStatus)  
} catch (e) {  
  console.log(e.message)  
}  
}
```





Nice to Have Plugins

- Yoast Duplicate Post
- Maintenance Mode
- GDPR Cookie Consent
- WP Forms Lite
- DB for WP Forms
- Available Updates
- Yoast SEO

- Yoast Duplicate Post
 - Quickly clone a page or post
 - Big time saver for layout and design across multiple pages or posts
- Maintenance Mode
 - Suspend Live site on the public side while working on the admin side
- GDPR Cookie Consent
 - EU Cookie compliance confirmation
- WP Forms Lite
 - Design & display contact forms on website

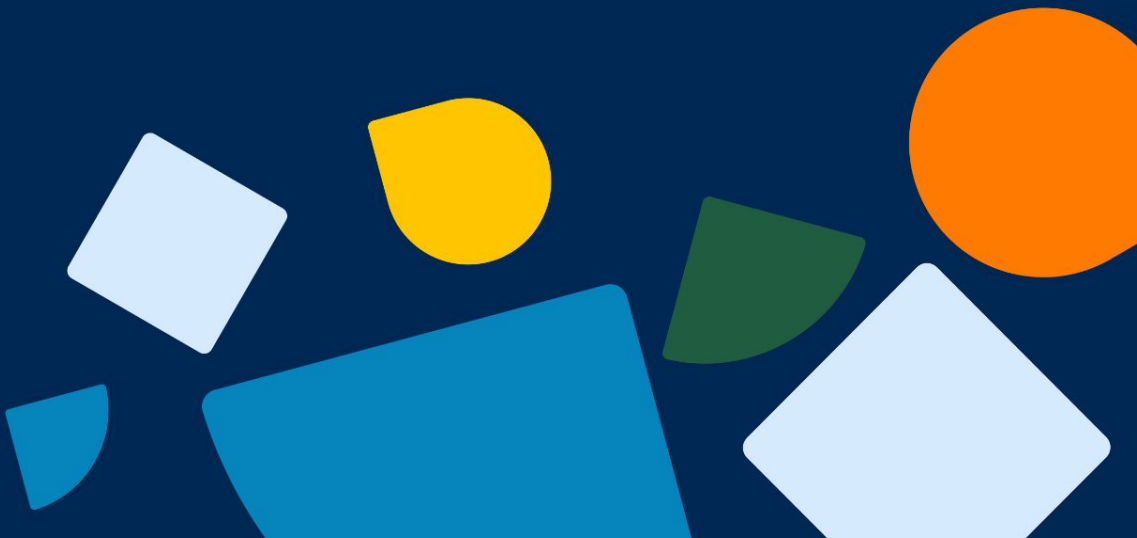
Nice to Have Plugins

- DB for WP Forms
 - Store contents of submitted forms in the DB
 - Viewable in admin
- Available Updates
 - Separate page listing all plugins that are needing an update, saves a few mouse clicks
- Yoast SEO
 - SEO content for sitewide use
 - Can do SEO on a page by page, post by post level

Nice to Have Plugins

Plugin Development

```
async function call_ringout() {  
  try {  
    var resp = await  
platform.post('/restapi/v1.0/account/~/' + account_id + '/ringout', {  
      'from': { 'phoneNumber': RINGCENTRAL_PHONE_NUMBER },  
      'to': { 'phoneNumber': RECIPIENT_PHONE_NUMBER },  
      'playPrompt': false  
    })  
    var jsonObj = await resp.json()  
    console.log("Call placed. Call status: " + jsonObj.status.callStatus)  
  } catch (e) {  
    console.log(e.message)  
  }  
}
```





Setup Environment & Best Practices

1. Don't mess with WordPress Core!
2. Keep your code separate
3. Use WordPress API functions
4. Prefix your code
5. Use OOP whenever possible
6. Follow secure coding practices
7. Use WordPress functions over PHP's
8. Always use WP's database API

DEMO

File Structures

wp-content → plugins:

→ plugin-name

→ assets (screen shots)

→ css

→ images

→ includes (most code here)

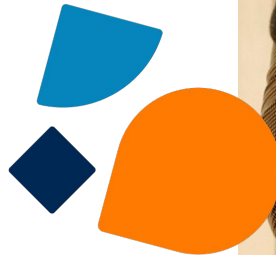
→ RingCentral API Folders

→ js

→ plugin-name.php

→ readme.txt

→ uninstall.php





Main plugin file

1. Should have plugin info in comment block at the top of the file
2. Software License: GPL2 - typically
3. Pre-defined constants plugin data
4. Required resources (CSS, JavaScript, UD functions)
5. Admin Menu placement code, if needed
6. Triggers for install and activation of plugin

DEMO



RC SMS: RingCentral Configurations

Adjust settings to your preferences

Use Embedded Phone? 

☐

Reveal Passwords:

Toggle Passwords

Client ID: *

_QUHFzQNQP6rmbRFD8zE_g

Client Secret Key: *

.....



RingCentral Number: * 

13128589779



To prevent your number from being blocked, please use a Toll Free, SMS enabled phone number. SMS charges may apply. [\[Learn More\]](#)

RingCentral Extension: *

101

RingCentral Password: *

.....

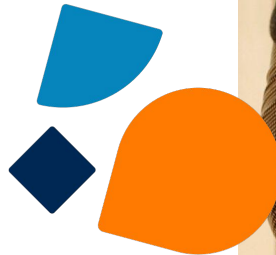
Save Settings

Plugin Fundamentals

Functions file under /includes folder

Call to RingCentral's API within the functions file: `rc_sdk()`

Sending SMS - call to: `rc_send_sms()` function, which calls the `rc_sdk()` function to re-connect to the SDK





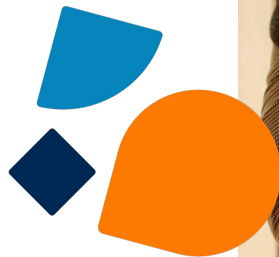
RC SMS: Send an SMS

Provide the necessary data to send an SMS Message

Mobile Number: *

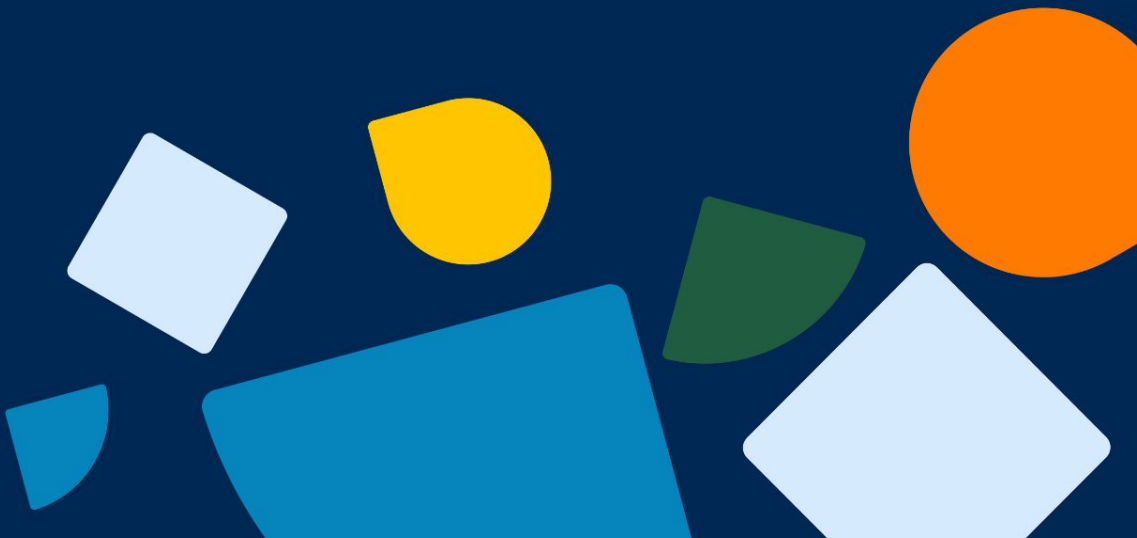
Message Content: *

Send SMS



Internationalization

```
async function call_ringout() {  
  try {  
    var resp = await  
platform.post('/restapi/v1.0/account/~/' + account_id + '/ringout', {  
      'from': { 'phoneNumber': RINGCENTRAL_PHONE_NUMBER },  
      'to': { 'phoneNumber': RECIPIENT_PHONE_NUMBER },  
      'playPrompt': false  
    })  
    var jsonObj = await resp.json()  
    console.log("Call placed. Call status: " + jsonObj.status.callStatus)  
  } catch (e) {  
    console.log(e.message)  
  }  
}
```





Prepare code for Translation

Best to be able to write the translation code while you build the plugin, but this rarely happens.

2 main functions to use

`__()` - 2 parameters, 1st is the text to be translated and 2nd is the domain (your plugin) where the text will reside. Returns translated text, if found, English text if not found.

and

`_e()` - Same as above, except output is sent to the browser right away.

<https://developer.wordpress.org/plugins/internationalization/>

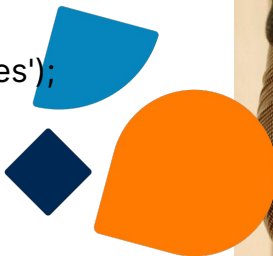
Translation code examples

```
_e("Mobile Number",'ringcentral_sms');
```

```
$message = __('Adjust settings to your preferences!',  
'ringcentral_sms');
```

Invocation code (in main plugin file):

```
function rc_sms_languages() {  
  
    load_plugin_textdomain('ringcentral_sms', false,  
        'ringcentral_sms/languages');  
  
}  
  
add_action('plugins_loaded', 'rc_sms_languages');
```



Plugins / ringcentral-sms / ringcentral-sms-it_IT.po

Editor


Source

File info

Restore

Relocate

Delete

 **Italian** Updated: April 23, 2022 3:33 am – 38% translated, 8 strings (5 untranslated)

 Save

 Revert

 Sync

 Auto

Filter translations





Source text

Translation

Adjust settings to your preferences!

Regola le impostazioni in base alle tue preferenze!

<https://paladin-bs.com/peter-macintyre/>

<https://ringcentral.com/>

Mobile Number

Numero di cellulare

Peter B. MacIntyre

Provide the necessary data to send an SMS Message


Fornire i dati necessari per inviare un messaggio SMS

RingCentral SMS Sample Plugin - FREE

ringcentral-sms

 Source text:

Adjust settings to your preferences!

 Italian translation:

Regola le impostazioni in base alle tue preferenze!



<https://translate.google.com>

RingCentral Developers



RC SMS: Send an SMS

Fornire i dati necessari per inviare un messaggio SMS

Numero di cellulare: *

1-999-999-9999

Message Content: *

DEMO

Send SMS

Additional Resources

```
async function call_ringout() {  
  try {  
    var resp = await  
platform.post('/restapi/v1.0/account/~/' + account_id + '/ringout', {  
      'from': { 'phoneNumber': RINGCENTRAL_PHONE_NUMBER },  
      'to': { 'phoneNumber': RECIPIENT_PHONE_NUMBER },  
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}
```





Additional Resources

- WordPress.org
- Books
- Color Schemes
- Free stock images
- Speed testing your site
- HTTPS validating your site
- Conferences

- WordPress.org
 - Free Theme searching
 - Free Plugin searching
 - Lots of help & Documentation
- Commercial Plugin sites
 - Theme Forest - monthly free items
 - Creative Market
- Books
 - WordPress Development In Depth - phparch.com
 - Professional WordPress Plugin Development - Wrox
- Color Schemes
 - paletton.com

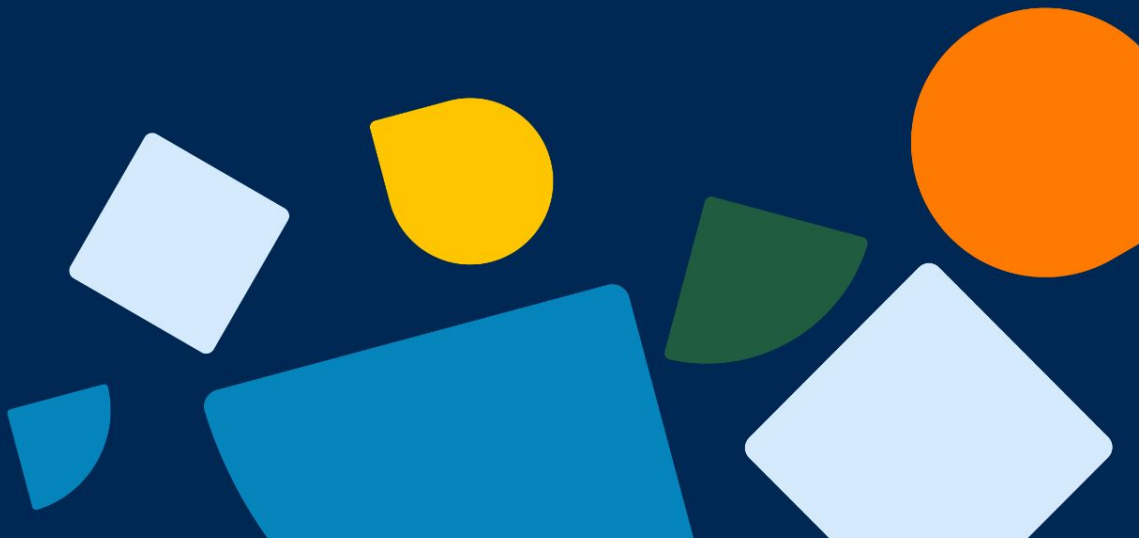
Additional Resources

- Free stock images
 - unsplash.com
 - pexels.com
- Speed testing your site
 - gtmetrix.com
 - tools.pingdom.com
- HTTPS validating your site
 - whynopadlock.com
- Conferences
 - central.wordcamp.org
 - Midwest PHP

Additional Resources

Trivia

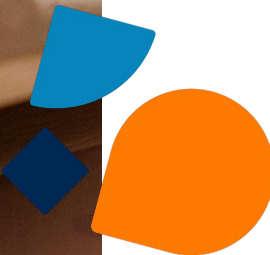
```
async function call_ringout() {  
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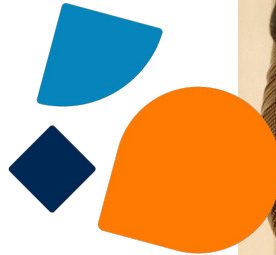
Trivia Question

Besides “Me”, name one other thing that
Prince Edward Island is famous for?



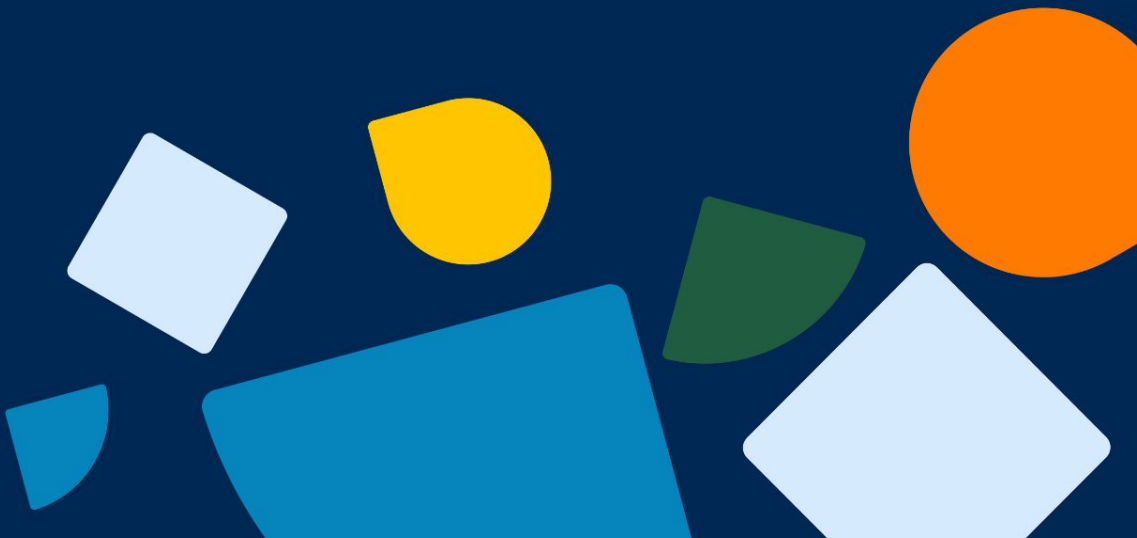
Trivia Question # 2

How many lines of code does it take to activate the RingCentral embedded Phone tool ?



Q & A Time

```
async function call_ringout() {  
  try {  
    var resp = await  
platform.post('/restapi/v1.0/account/~/' + account_id + '/ringout', {  
      'from': { 'phoneNumber': RINGCENTRAL_PHONE_NUMBER },  
      'to': { 'phoneNumber': RECIPIENT_PHONE_NUMBER },  
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RingCentral Developers

Thank you.

peter@paladin-bs.com

developers.ringcentral.com

```
async function call_ringout() {  
  try {  
    var resp = await  
platform.post('/restapi/v1.0/account/~/_ext/  
    'from': { 'phoneNumber': RINGCENTRAL  
    'to': { 'phoneNumber': RECIPIENT },  
    'playPrompt': false  
  })  
  var jsonObj = await resp.json()  
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