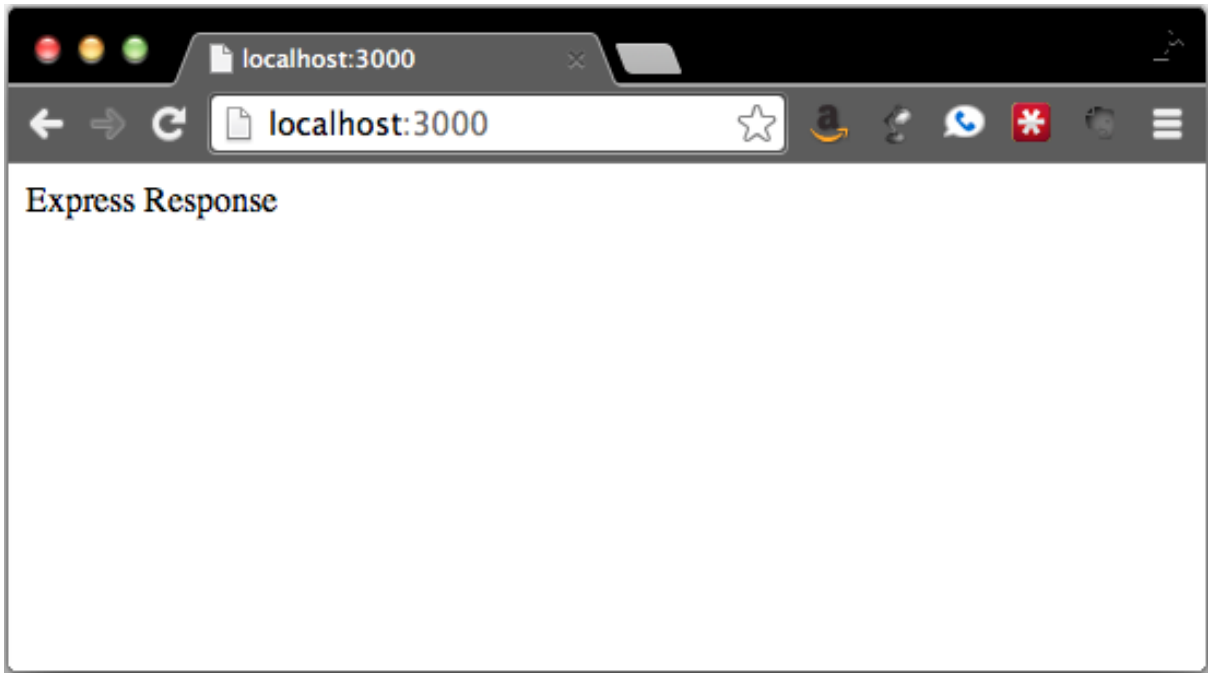
Chapter 1




```
.
├── app.js
└── routes
    └── index.js
```

```
.
├── app.js
├── middleware
|   ├── errorhandlers.js
|   └── log.js
├── node_modules
├── routes
|   └── index.js
├── static
|   └── static.txt
└── views
```

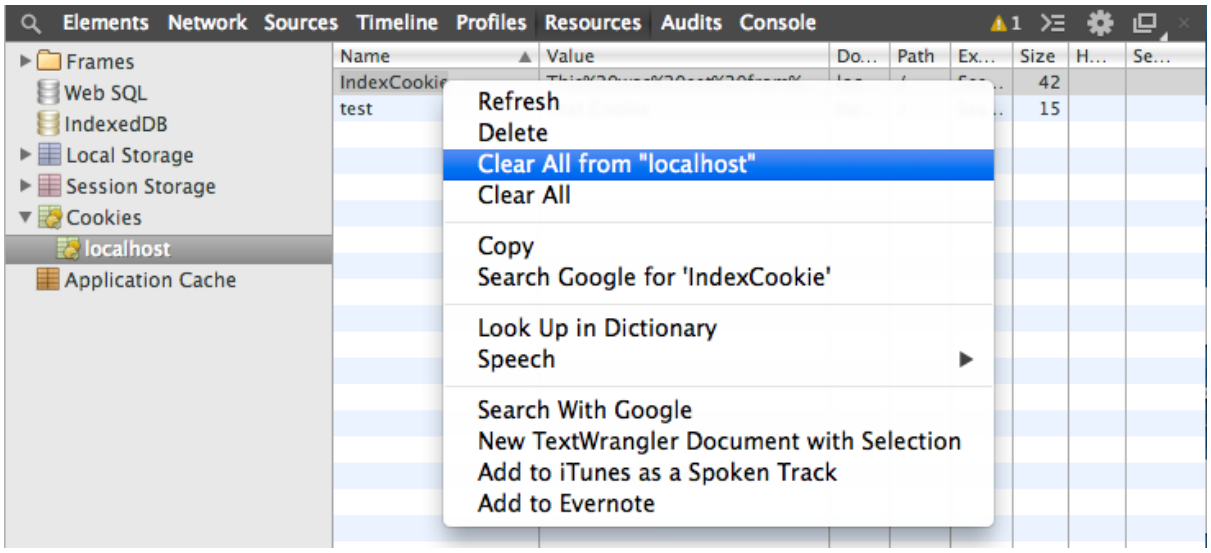
Index

PacktChat

Index
Cookie passed: {"test":"Test Cookie"}

PacktChat

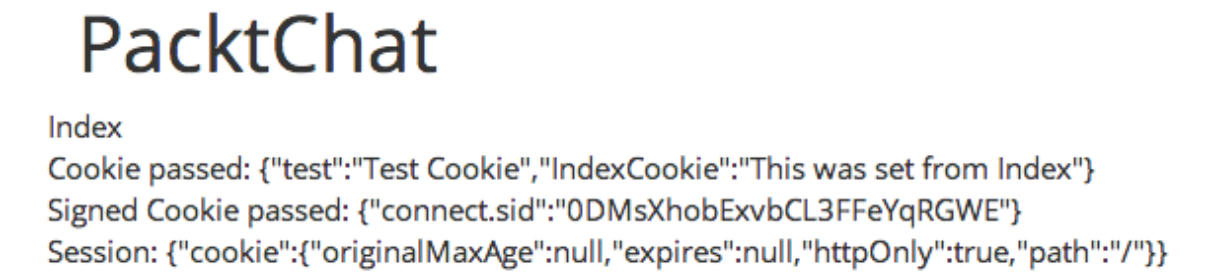
Index
Cookie passed: {"test":"Test Cookie","IndexCookie":"This was set from Index"}

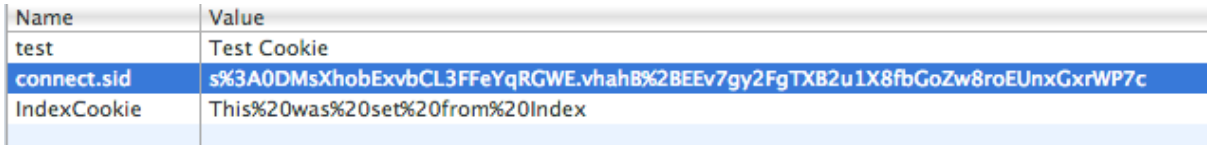



```
/
[Error: `secret` option required for sessions]
```

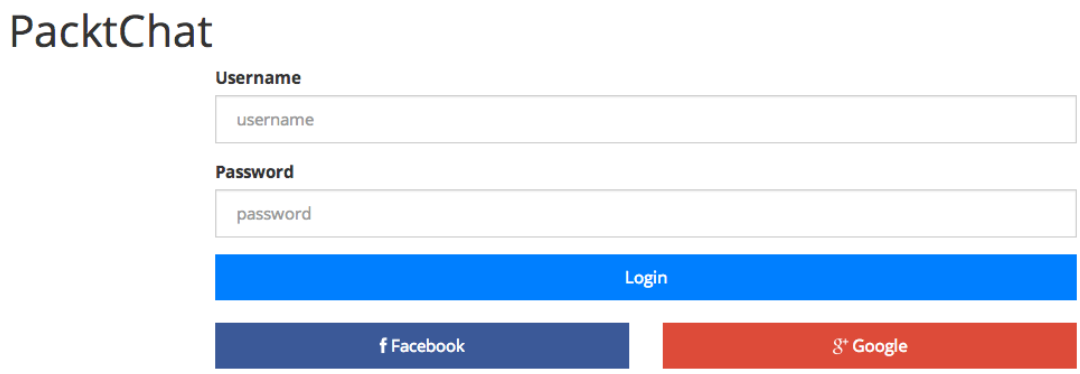
PacktChat

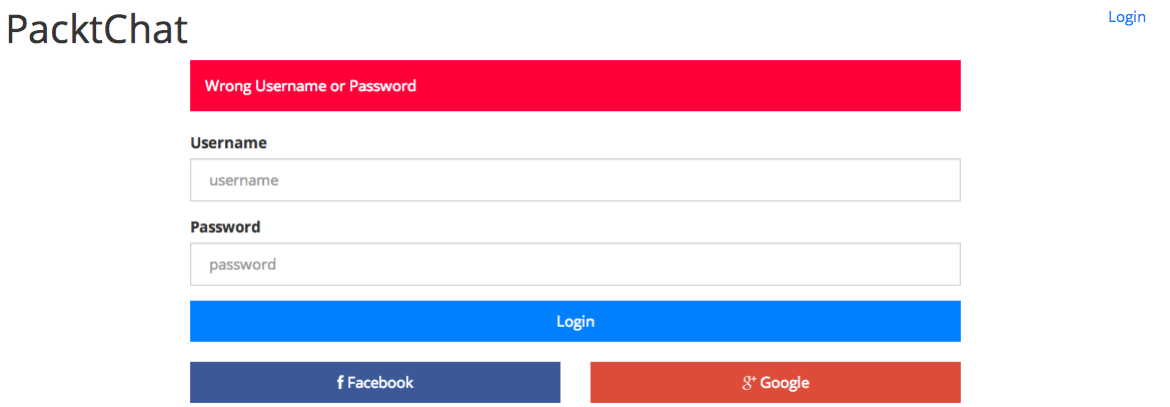
Index
Cookie passed: {"test":"Test Cookie","connect.sid":"s:l9vJYsdMJ5DquOUqTDp0HhjD.ZWbMdo/J6oD6qqExln94TP5PgilnU4wC+Olm76yCjaM","IndexCookie":"This was set from Index"}
Session: {"cookie":{"originalMaxAge":null,"expires":null,"httpOnly":true,"path":"/"}}



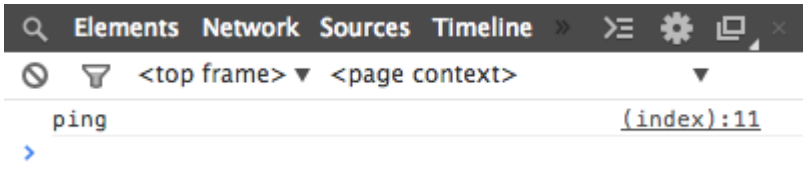


Name	Value
test	Test Cookie
connect.sid	s%3A0DMsXhobExvbCL3FFeYqRGWE.vhahB%2BEEv7gy2FgTXB2u1X8fbGoZw8roEUnxGxrWP7c
IndexCookie	This%20was%20set%20from%20Index





Chapter 2



Josh Ping

- Josh has joined
- Brian has joined
- Josh has pinged!
- Brian has pinged!

Josh Ping

Pings sent: 3

- Brian has joined
- Josh has joined
- Josh has pinged!
- Josh has pinged!
- Josh has pinged!

Josh Ping

Pings sent: 2

- Brian has joined
- Brian has pinged!
- Brian has pinged!

Josh Ping

- Brian has joined
- Brian has left :(

```
▼<li>
   "Brian"
   <button class="private_ping" data-socket="rrsfiJYsYYG4Y7ygrSV_">Ping Me</button>
  </li>
```

Josh

Default Join Ping

Users

- Brian Ping Me
- Kevin Ping Me

Events

- Ping from Kevin sent directly to you!
- Ping from Kevin
- Ping from Brian
- Ping from Brian sent directly to you!
- Ping from Brian sent directly to you!

VIP Join Ping

Users

- Kevin Ping Me
- Brian Ping Me

Events

- Ping from Brian sent directly to you!
- Ping from Brian sent directly to you!
- Ping from Brian
- Ping from Brian
- Ping from Kevin

```
▼ Watch Expressions
▼ io.nsps: Object
  ▶ /: Namespace
  ▼ /vip: Namespace
    ▶ _events: Object
    ▶ acks: Object
    ▶ adapter: Adapter
    ▼ connected: Object
      ▶ iNuUs-o17Moutm7jAAAA: Socket
    ▶ fns: Array[0]
      ids: 0
      name: "/vip"
    ▶ server: Server
    ▶ sockets: Array[1]
```

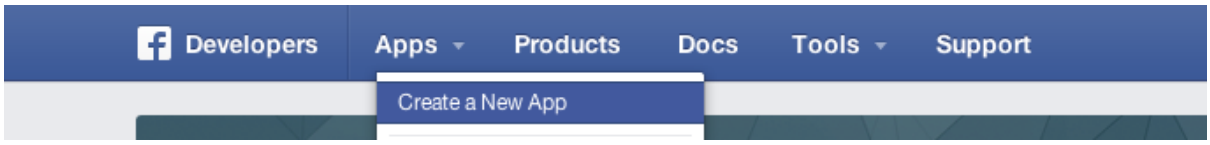
```
▼ Watch Expressions
▼ io.sockets.adapter: Adapter
  ▶ encoder: Encoder
  ▶ nsp: Namespace
  ▼ rooms: Object
    ▶ : Array[0]
    ▶ 3tEhBwhj9d34eJU2AAAA: Array[0]
    ▶ ikr3pDEdUpZiGSEXAAAB: Array[0]
    ▼ vip: Array[0]
        3tEhBwhj9d34eJU2AAAA: true
        ikr3pDEdUpZiGSEXAAAB: true
        length: 0
  ▶ sids: Object
```

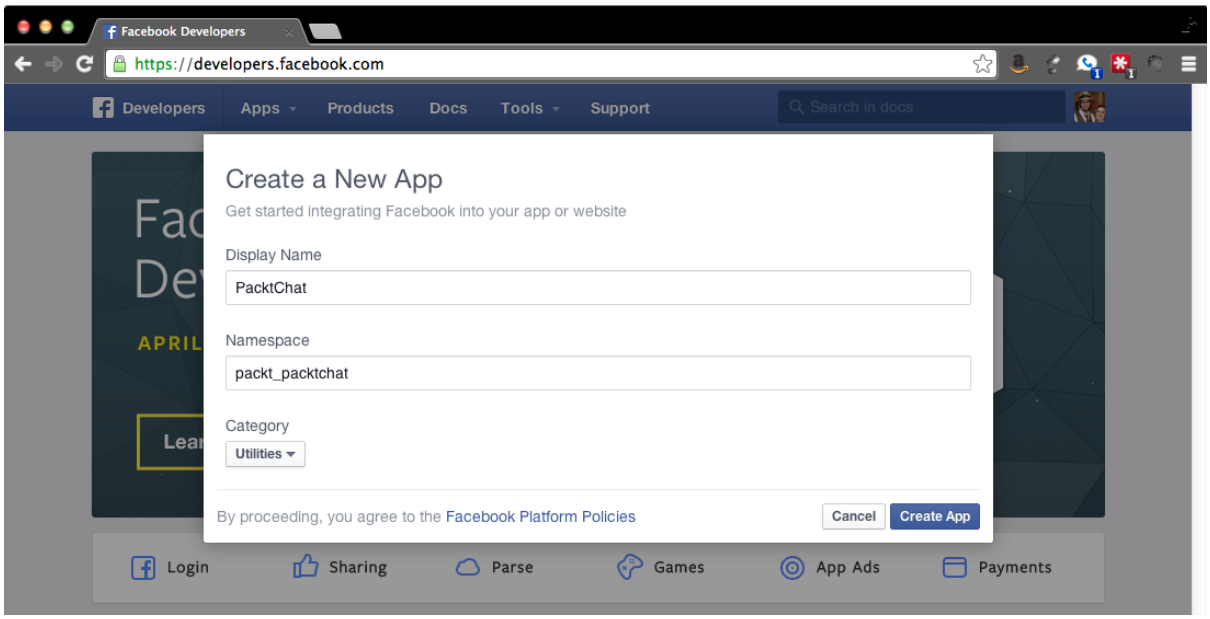
```
Object {message: "Hey!"}                                    (index):28
> |
```

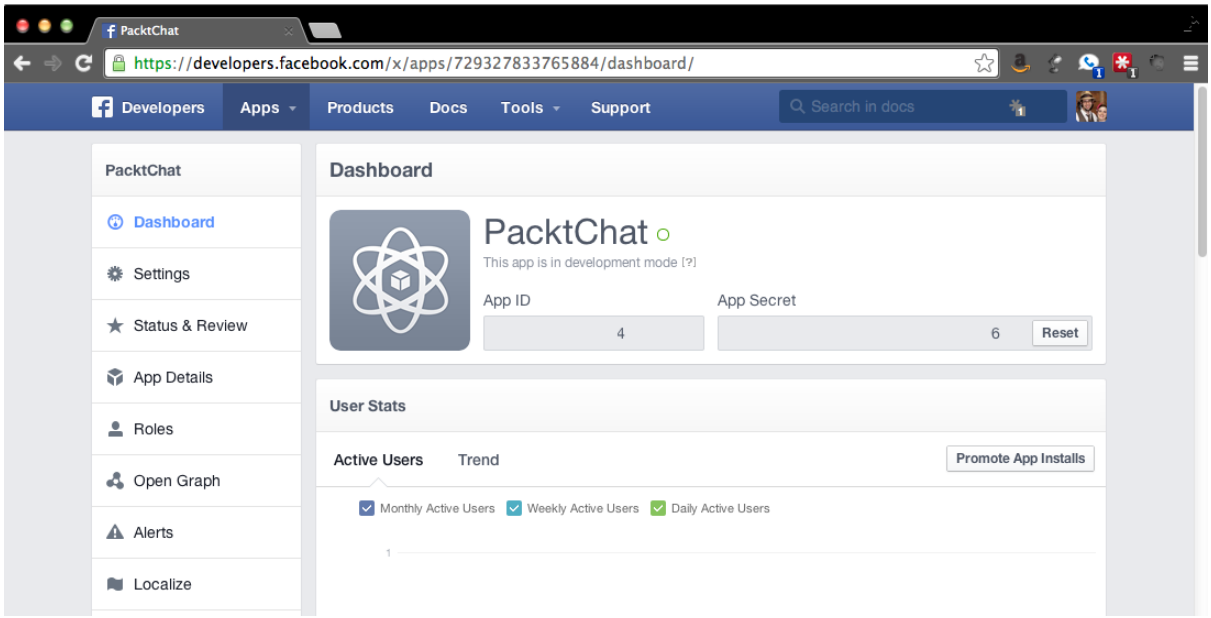
```
▼ parsedCookie: Object
    connect.sid: "s:f0WO6MohcxtjvlyQI1iZ6AYx.vMqCF23fVF3Tu5EwdgIVcyNb4TP9M8fkIaogE8uCVGw"
  sid: "f0WO6MohcxtjvlyQI1iZ6AYx"
```

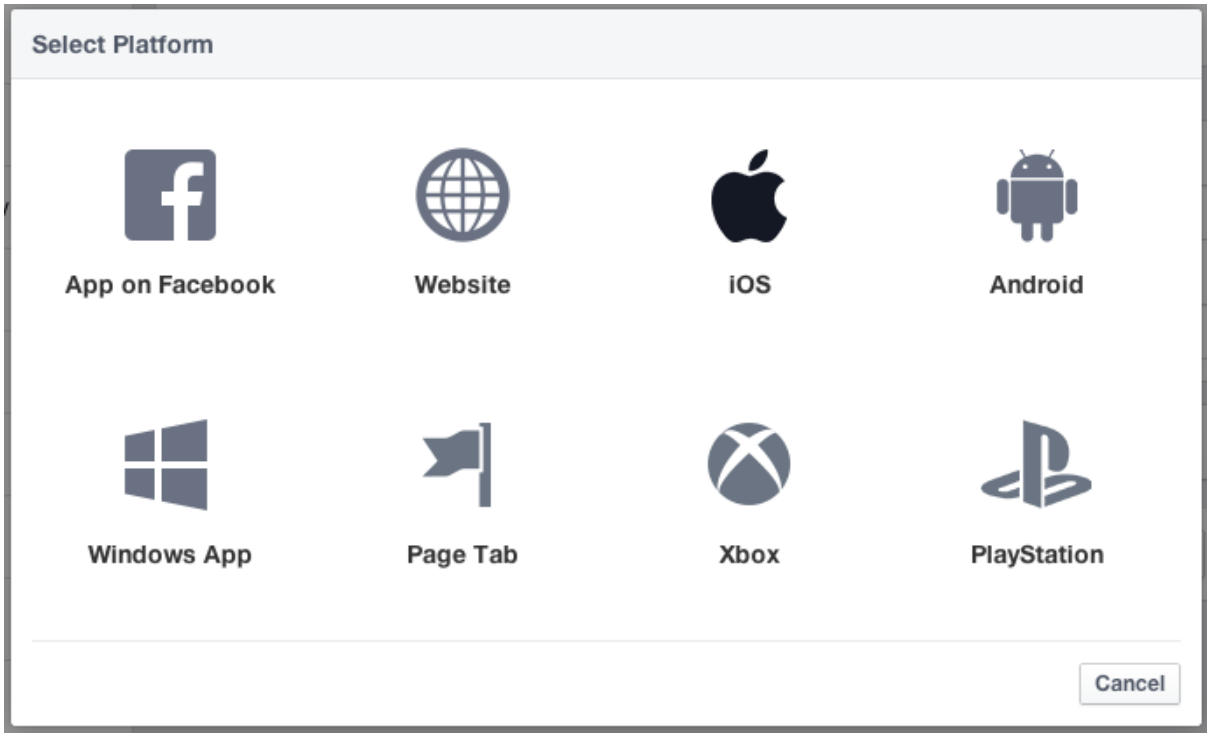
```
Object {message: "Hey!"}                    chat:28
Object {username: "joshua"}                 chat:28
>
```

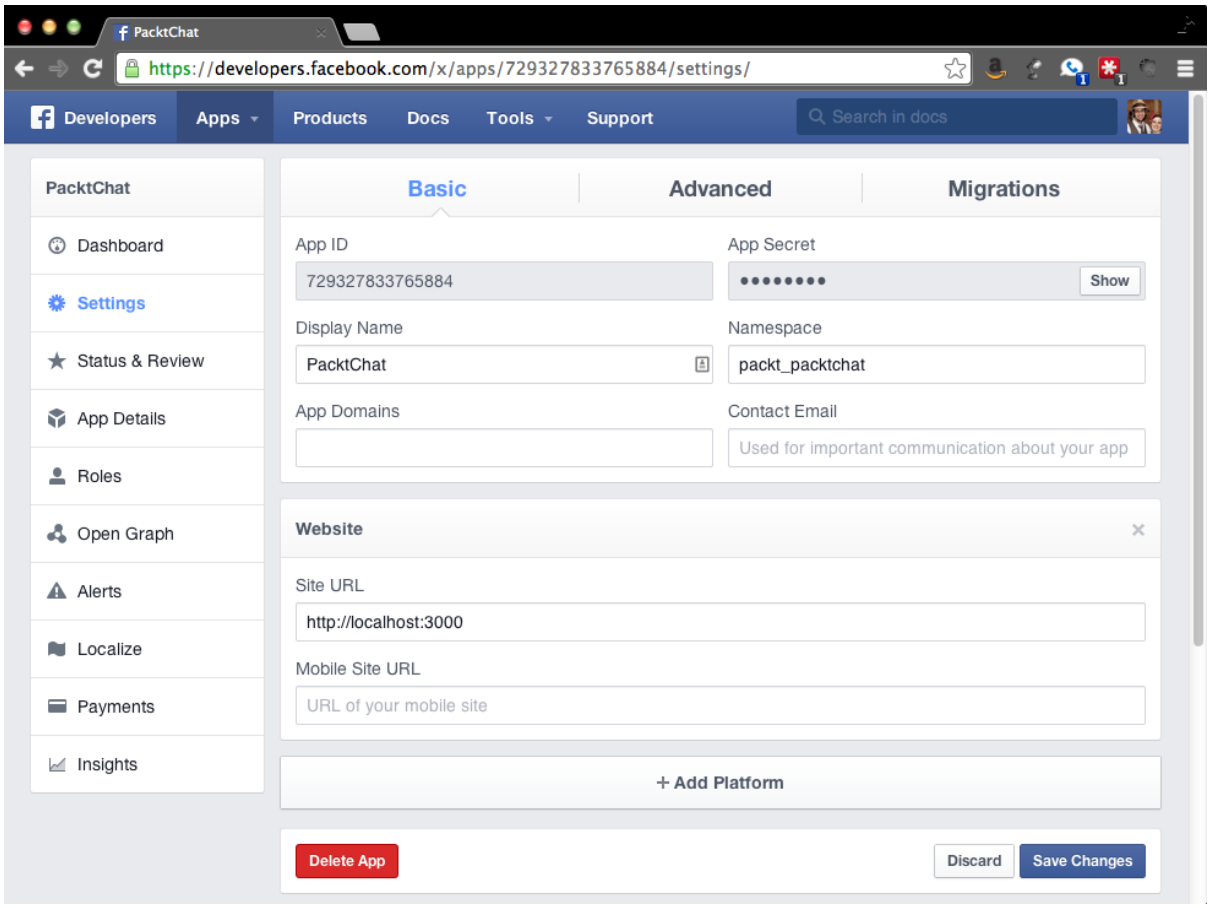
Chapter 3

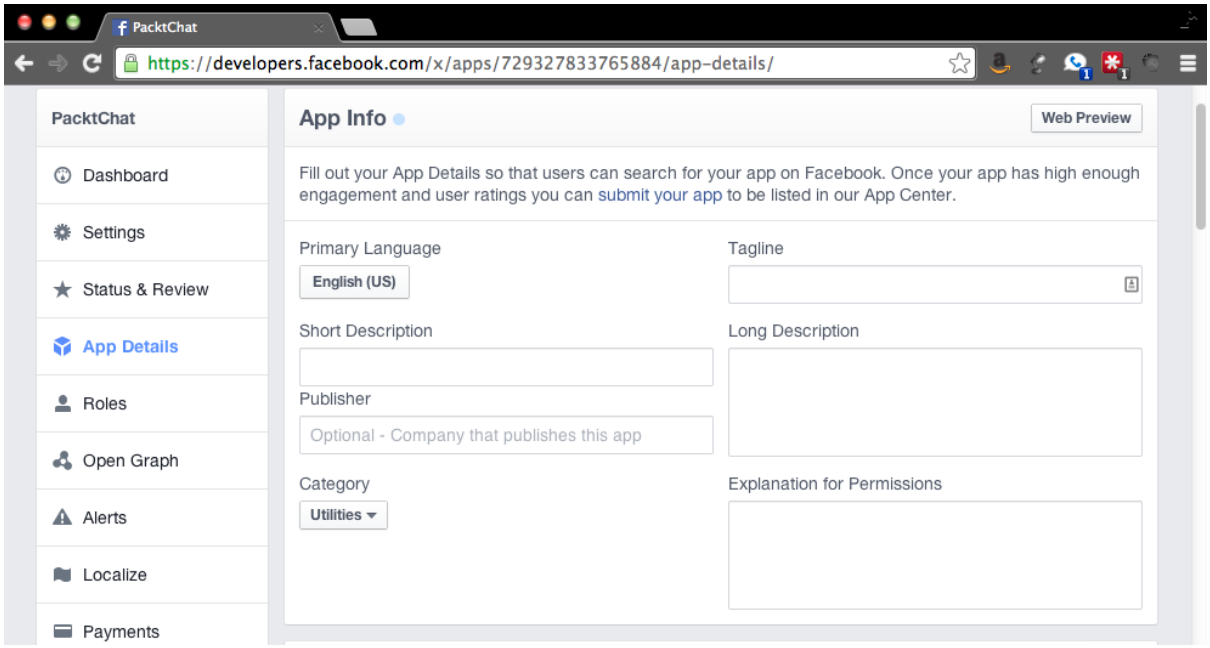







Select Platform
App on Facebook
Website
iOS
Android
Windows App
Page Tab
Xbox
PlayStation
Cancel


PacktChat
https://developers.facebook.com/x/apps/729327833765884/settings/
Developers
Apps
Products
Docs
Tools
Support
Search in docs
PacktChat
Dashboard
Settings
Status & Review
App Details
Roles
Open Graph
Alerts
Localize
Payments
Insights
Basic
Advanced
Migrations
App ID
729327833765884
App Secret
Show
Display Name
PacktChat
Namespace
packt_packtchat
App Domains
Contact Email
Used for important communication about your app
Website
Site URL
http://localhost:3000
Mobile Site URL
URL of your mobile site
+ Add Platform
Delete App
Discard
Save Changes


PacktChat
https://developers.facebook.com/x/apps/729327833765884/app-details/
PacktChat
Dashboard
Settings
Status & Review
App Details
Roles
Open Graph
Alerts
Localize
Payments
App Info
Web Preview
Fill out your App Details so that users can search for your app on Facebook. Once your app has high enough engagement and user ratings you can submit your app to be listed in our App Center.
Primary Language
English (US)
Tagline
Short Description
Long Description
Publisher
Optional - Company that publishes this app
Category
Utilities
Explanation for Permissions

PacktChat will receive the following info: your public profile and friend list.
This does not let the app post to Facebook.
Cancel
Okay

PacktChat

Login

Permissions error

Username

username

Password

password

Login

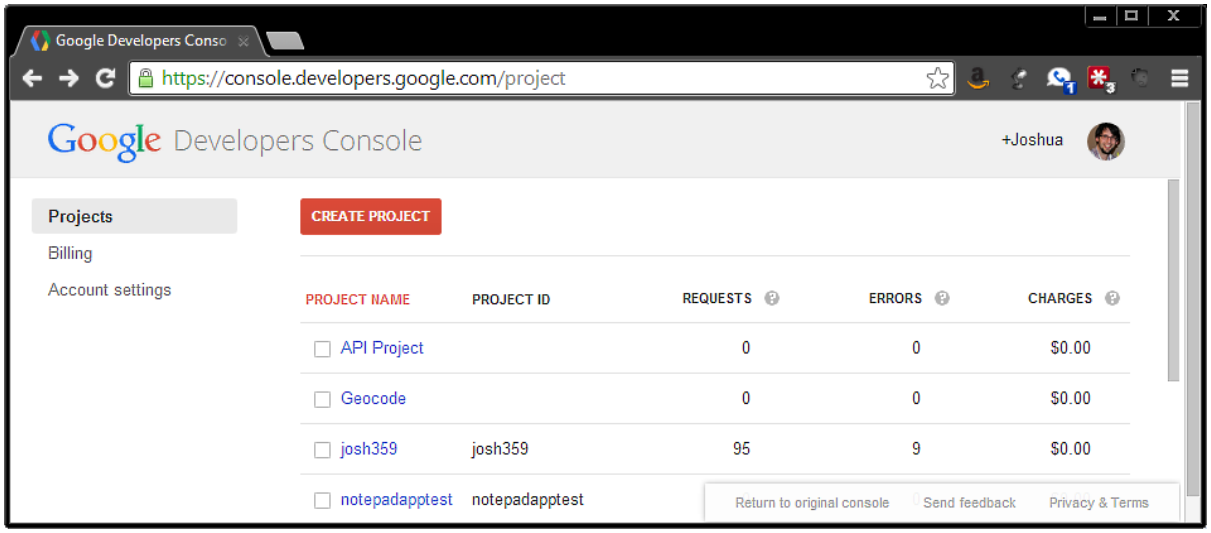
f Facebook

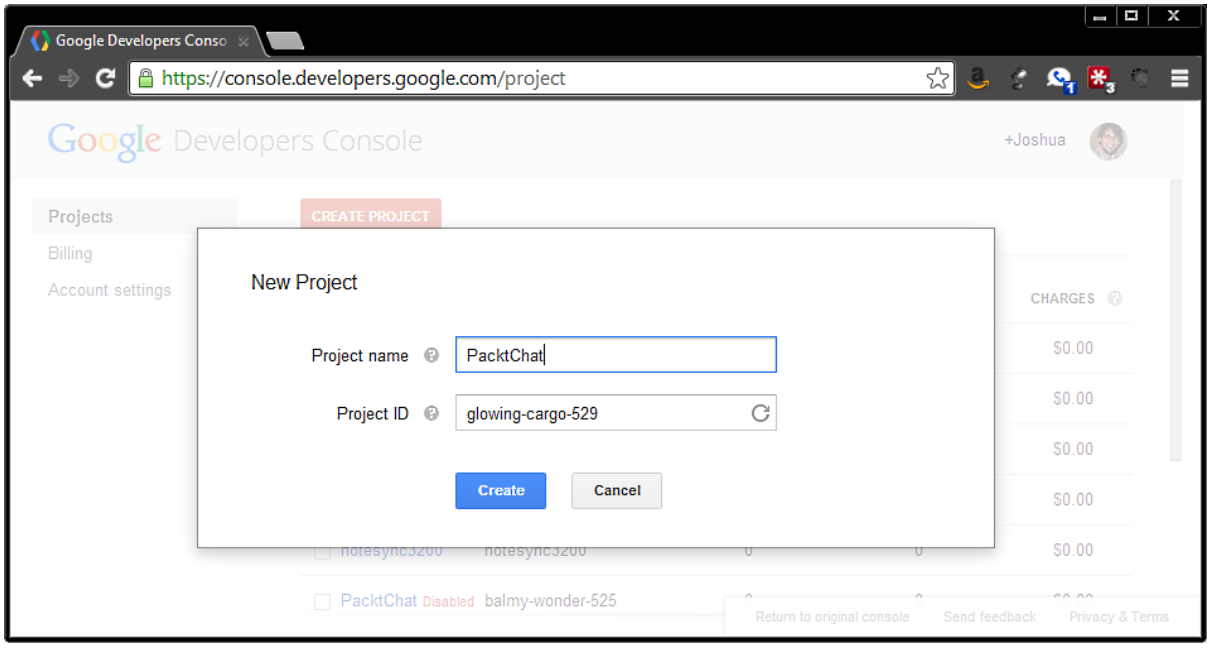
g+ Google

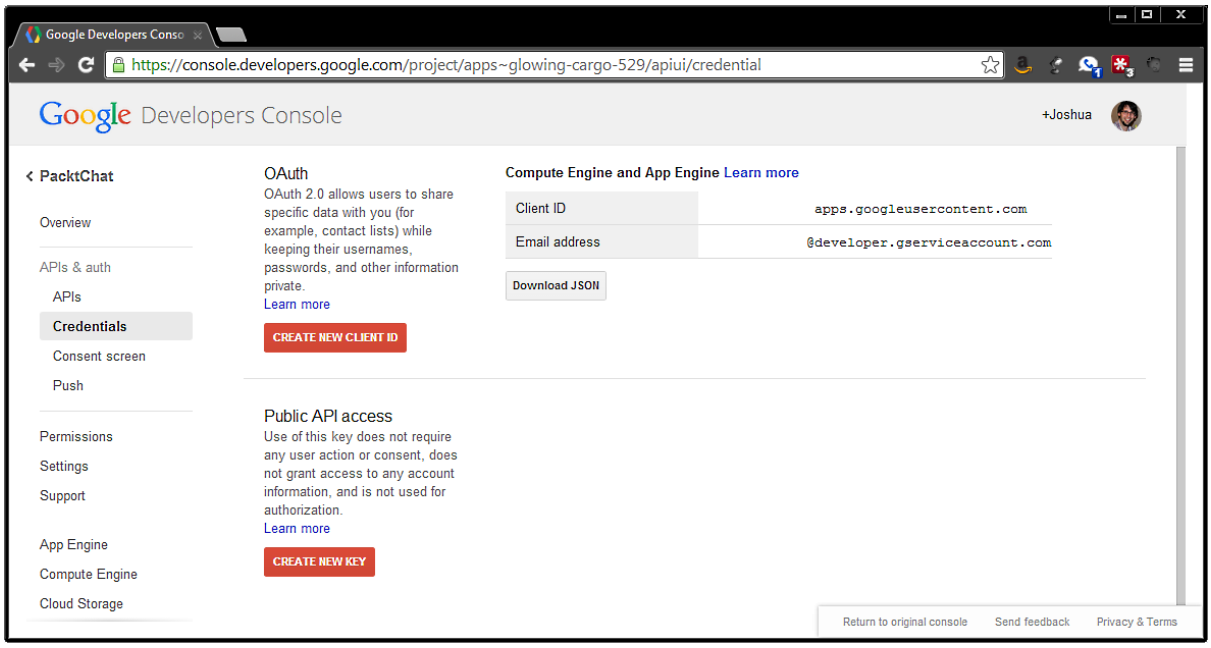
PacktChat

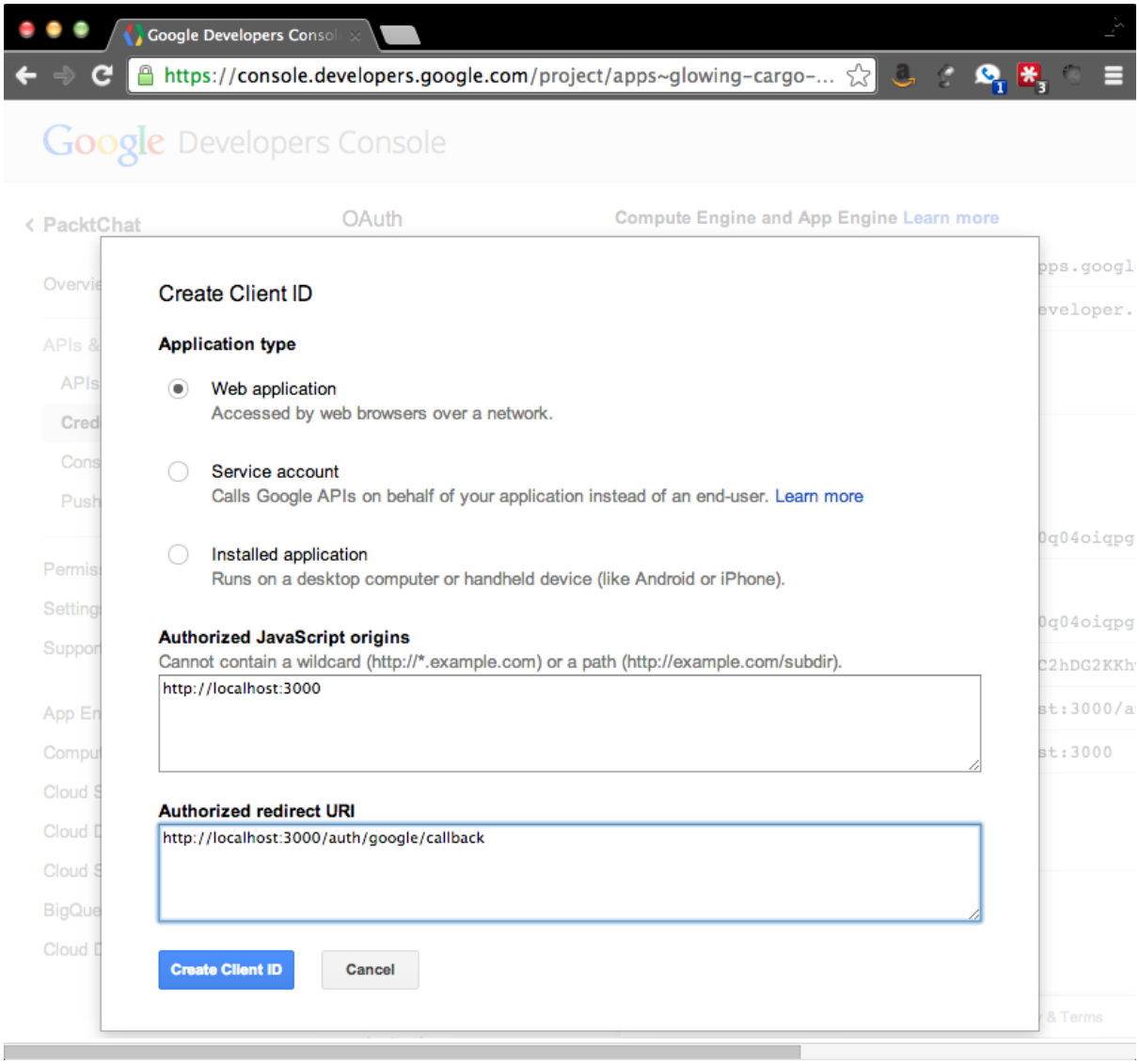
Hello Joshua Johanan Logout

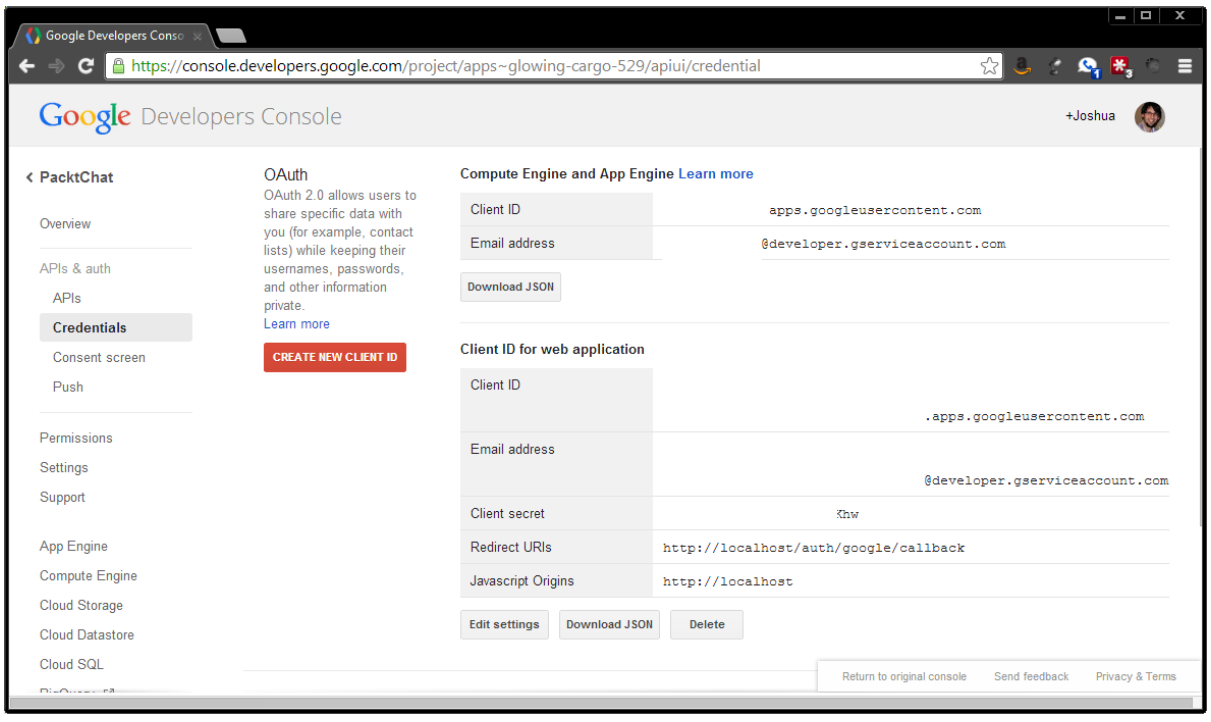
Chat

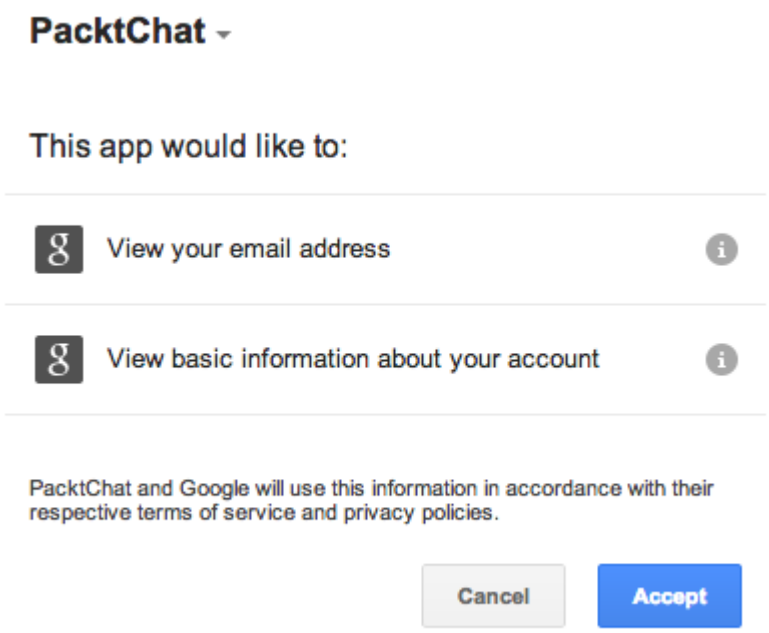


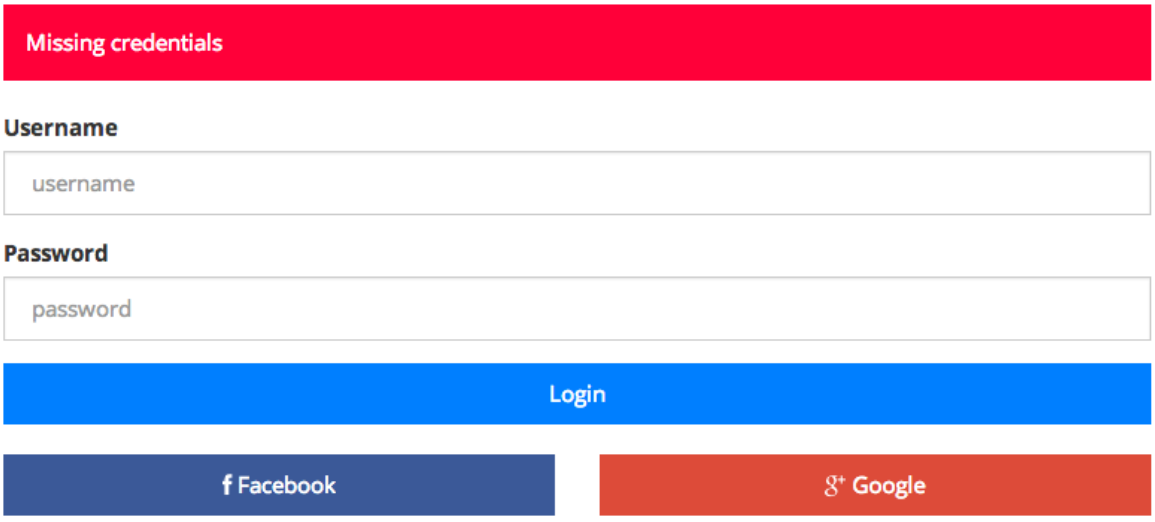

Google Developers Conso
https://console.developers.google.com/project
Google Developers Console
+Joshua
Projects
Billing
Account settings
CREATE PROJECT
New Project
Project name
PacktChat
Project ID
glowing-cargo-529
Create
Cancel
CHARGES
$0.00
$0.00
$0.00
$0.00
$0.00
PacktChat Disabled balmy-wonder-525
Return to original console
Send feedback
Privacy & Terms


Google Developers Conso
https://console.developers.google.com/project/apps~glowing-cargo-529/apiui/credential
Google Developers Console
+Joshua
PacktChat
Overview
APIs & auth
APIs
Credentials
Consent screen
Push
Permissions
Settings
Support
App Engine
Compute Engine
Cloud Storage
OAuth
OAuth 2.0 allows users to share specific data with you (for example, contact lists) while keeping their usernames, passwords, and other information private.
Learn more
CREATE NEW CLIENT ID
Compute Engine and App Engine Learn more
Client ID
apps.googleusercontent.com
Email address
@developer.gserviceaccount.com
Download JSON
Public API access
Use of this key does not require any user action or consent, does not grant access to any account information, and is not used for authorization.
Learn more
CREATE NEW KEY
Return to original console
Send feedback
Privacy & Terms


Google Developers Console
https://console.developers.google.com/project/apps~glowing-cargo-...
Google Developers Console
PacktChat
OAuth
Compute Engine and App Engine Learn more
Create Client ID
Application type
Web application
Accessed by web browsers over a network.
Service account
Calls Google APIs on behalf of your application instead of an end-user. Learn more
Installed application
Runs on a desktop computer or handheld device (like Android or iPhone).
Authorized JavaScript origins
Cannot contain a wildcard (http://*.example.com) or a path (http://example.com/subdir).
http://localhost:3000
Authorized redirect URI
http://localhost:3000/auth/google/callback
Create Client ID
Cancel


Google Developers Console
https://console.developers.google.com/project/apps~glowing-cargo-529/apiui/credential
Google Developers Console
+Joshua
PacktChat
Overview
APIs & auth
APIs
Credentials
Consent screen
Push
Permissions
Settings
Support
App Engine
Compute Engine
Cloud Storage
Cloud Datastore
Cloud SQL
OAuth
OAuth 2.0 allows users to share specific data with you (for example, contact lists) while keeping their usernames, passwords, and other information private.
Learn more
CREATE NEW CLIENT ID
Compute Engine and App Engine Learn more
Client ID
apps.googleusercontent.com
Email address
@developer.gserviceaccount.com
Download JSON
Client ID for web application
Client ID
.apps.googleusercontent.com
Email address
@developer.gserviceaccount.com
Client secret
Xhw
Redirect URIs
http://localhost/auth/google/callback
Javascript Origins
http://localhost
Edit settings
Download JSON
Delete
Return to original console
Send feedback
Privacy & Terms

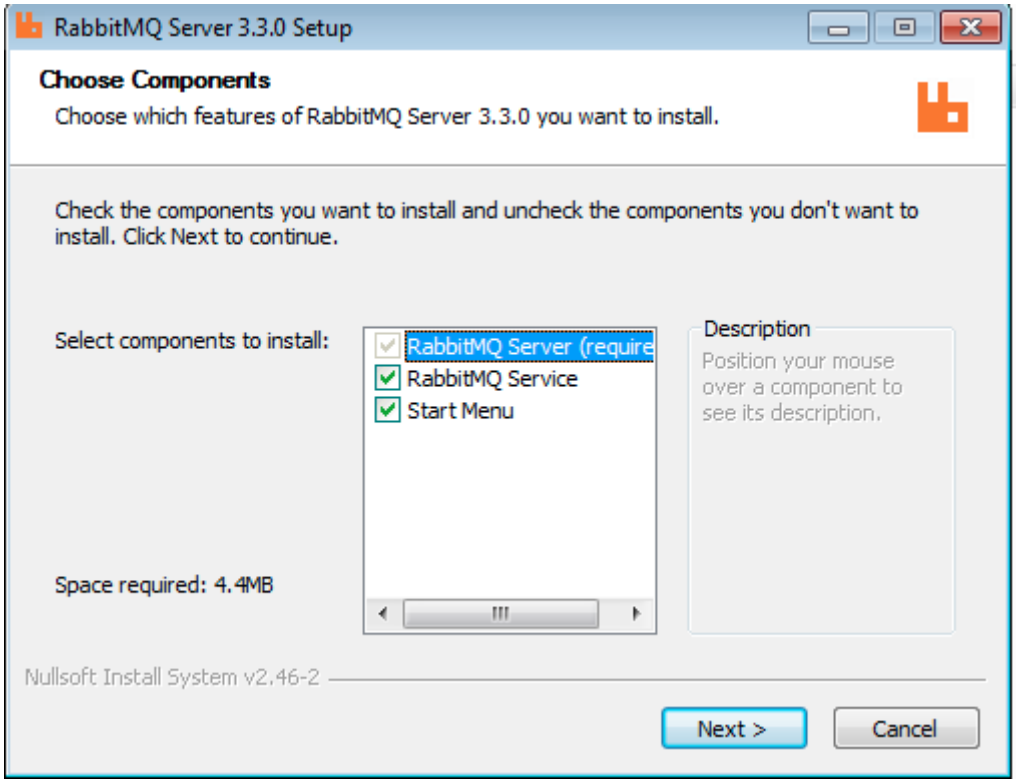

PacktChat
This app would like to:
View your email address
View basic information about your account
PacktChat and Google will use this information in accordance with their respective terms of service and privacy policies.
Cancel
Accept

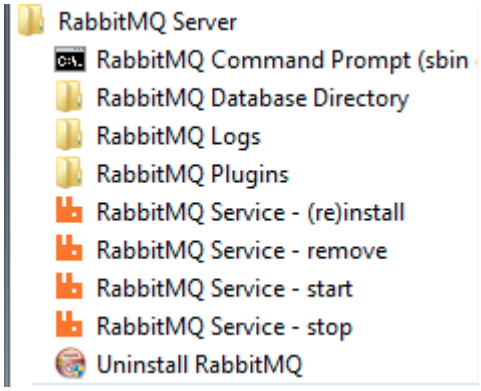

Missing credentials
Username
username
Password
password
Login
Facebook
Google

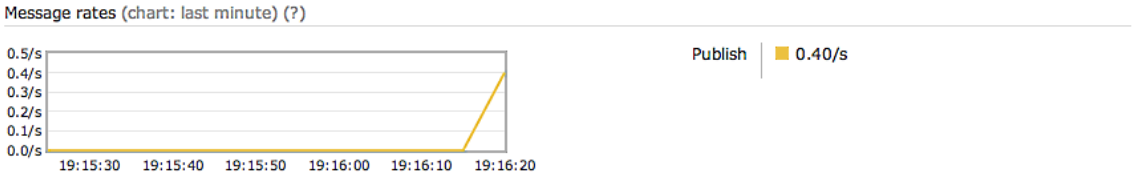
Chapter 4

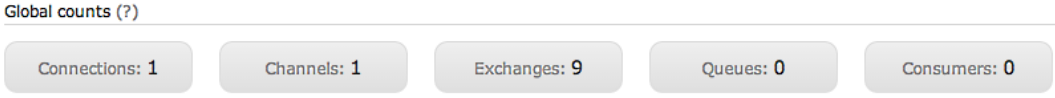
```
joshuas-mini:~ jjohanan$ brew install rabbitmq
==> Downloading http://www.rabbitmq.com/releases/rabbitmq-server/v3.2.3/rabbitmq
Already downloaded: /Library/Caches/Homebrew/rabbitmq-3.2.3.tar.gz
==> /usr/bin/unzip -qq -j /usr/local/Cellar/rabbitmq/3.2.3/plugins/rabbitmq_mana
==> Caveats
Management Plugin enabled by default at http://localhost:15672

Bash completion has been installed to:
  /usr/local/etc/bash_completion.d

To have launchd start rabbitmq at login:
    ln -sfv /usr/local/opt/rabbitmq/*.plist ~/Library/LaunchAgents
Then to load rabbitmq now:
    launchctl load ~/Library/LaunchAgents/homebrew.mxcl.rabbitmq.plist
Or, if you don't want/need launchctl, you can just run:
    rabbitmq-server
==> Summary
🍺  /usr/local/Cellar/rabbitmq/3.2.3: 1038 files, 25M, built in 5 seconds
```

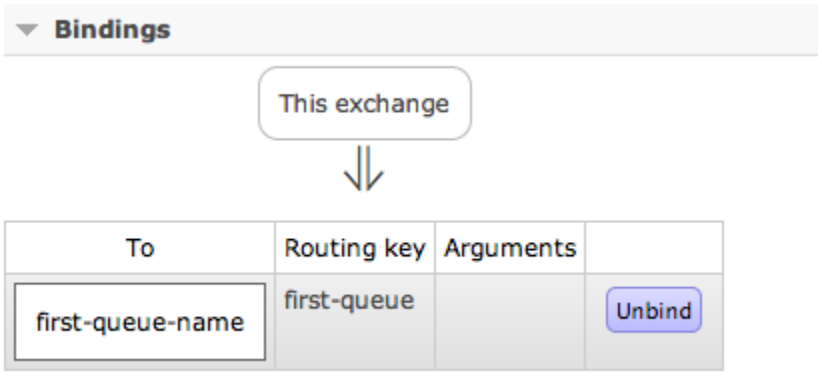
```
              RabbitMQ 3.2.3. Copyright (C) 2007-2013 GoPivotal, Inc.
  ##  ##      Licensed under the MPL.  See http://www.rabbitmq.com/
  ##  ##
  ##########  Logs: /usr/local/var/log/rabbitmq/rabbit@localhost.log
  ######  ##        /usr/local/var/log/rabbitmq/rabbit@localhost-sasl.log
  ##########
              Starting broker... completed with 10 plugins.
```

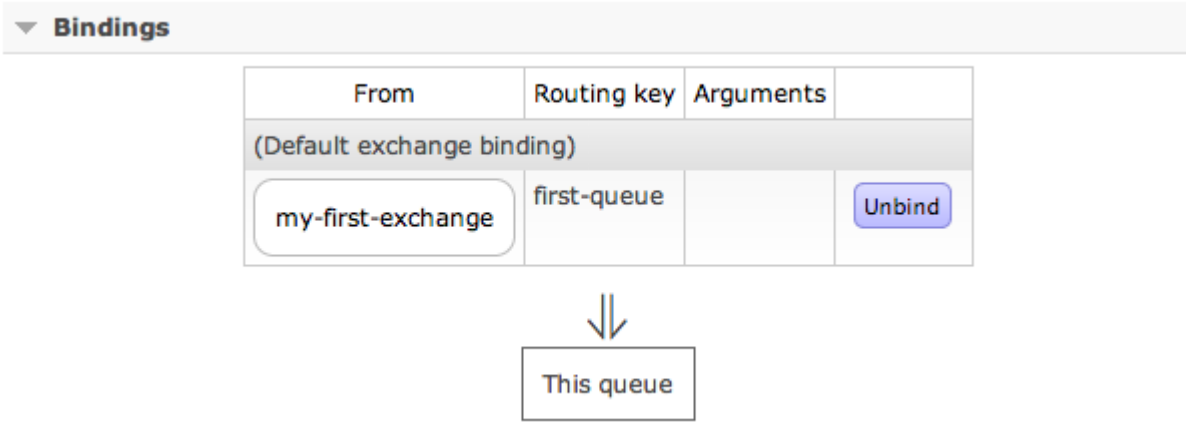



RabbitMQ Server
RabbitMQ Command Prompt (sbin
RabbitMQ Database Directory
RabbitMQ Logs
RabbitMQ Plugins
RabbitMQ Service - (re)install
RabbitMQ Service - remove
RabbitMQ Service - start
RabbitMQ Service - stop
Uninstall RabbitMQ


Message rates (chart: last minute) (?)
0.5/s
0.4/s
0.3/s
0.2/s
0.1/s
0.0/s
19:15:30
19:15:40
19:15:50
19:16:00
19:16:10
19:16:20
Publish
0.40/s


Global counts (?)
Connections: 1
Channels: 1
Exchanges: 9
Queues: 0
Consumers: 0


Bindings
This exchange
To
Routing key
Arguments
first-queue-name
first-queue
Unbind


Bindings
From
Routing key
Arguments
(Default exchange binding)
my-first-exchange
first-queue
Unbind
This queue

Publish message

Routing key: first-queue

Delivery mode: 1 - Non-persistent

Headers: (?) = String

Properties: (?) =

Payload: OK

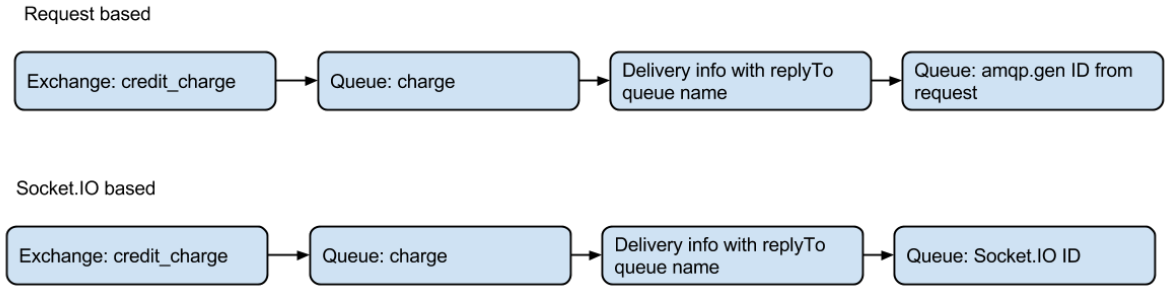
Publish message

Overview					Messages			Message rates		
Name	**Exclusive**	Parameters	**Policy**	**Status**	**Ready**	**Unacked**	**Total**	**incoming**	**deliver / get**	**ack**
first-queue-name				Idle	9	0	9	0.00/s	0.00/s	

```
{ message: '/' }
{ message: '/favicon.ico' }
{ message: '/' }
{ message: '/favicon.ico' }
{ message: '/' }
{ message: '/favicon.ico' }
{ message: '/' }
{ message: '/favicon.ico' }
{ data: <Buffer 4f 4b>, contentType: undefined }
```

Overview					Messages			Message rates		
Name	**Exclusive**	Parameters	**Policy**	**Status**	**Ready**	**Unacked**	**Total**	**incoming**	**deliver / get**	**ack**
debug.log				Idle	7	0	7	0.00/s	0.00/s	
error.log				Idle	1	0	1	0.00/s	0.00/s	

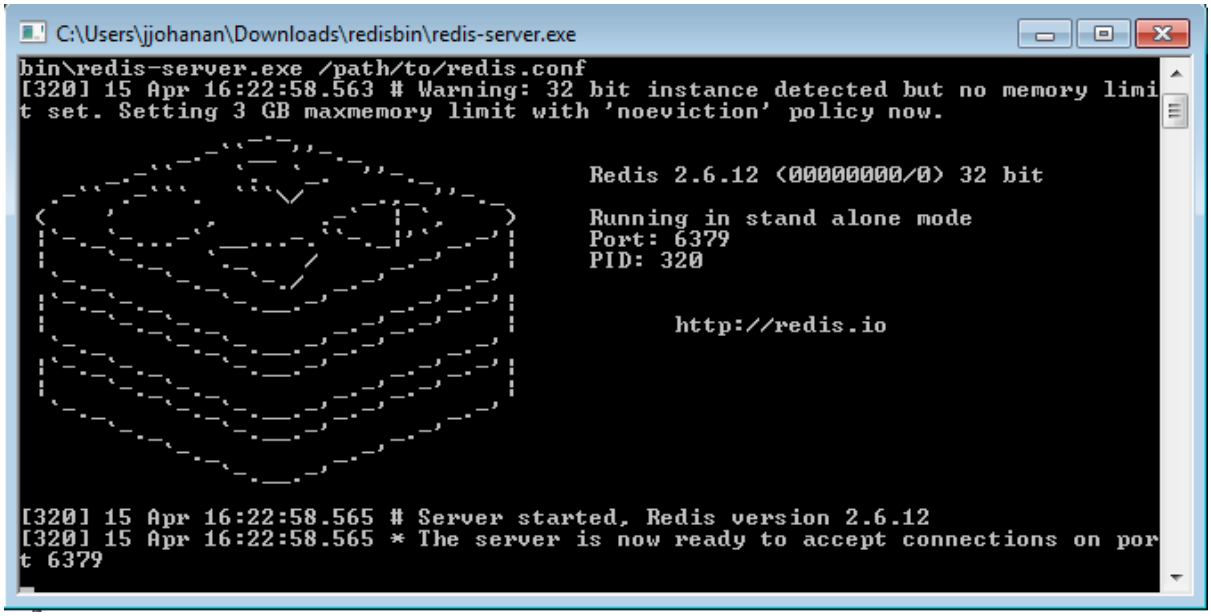
```
Debug-Routing:debug.log{"url":"/css/style.css","ts":1397101112047}
Debug-Routing:debug.log{"url":"/","ts":1397103518502}
Debug-Routing:debug.log{"url":"/css/cosmo.min.css","ts":1397103518634}
Debug-Routing:debug.log{"url":"/css/style.css","ts":1397103518634}
Error-Routing:error.log{"error":"A contrived error","ts":1397101111988}
```



Chapter 5

```
joshuas-mini:finalChapters jjohanan$ brew install redis
==> Downloading https://downloads.sf.net/project/machomebrew/Bottles/redis-2.8.5
Already downloaded: /Library/Caches/Homebrew/redis-2.8.5.mavericks.bottle.tar.gz
==> Pouring redis-2.8.5.mavericks.bottle.tar.gz
==> Caveats
To have launchd start redis at login:
    ln -sfv /usr/local/opt/redis/*.plist ~/Library/LaunchAgents
Then to load redis now:
    launchctl load ~/Library/LaunchAgents/homebrew.mxcl.redis.plist
Or, if you don't want/need launchctl, you can just run:
    redis-server /usr/local/etc/redis.conf
==> Summary
🍺  /usr/local/Cellar/redis/2.8.5: 10 files, 1.2M
joshuas-mini:finalChapters jjohanan$
```

```
joshuas-mini:~ jjohanan$ redis-server
[1194] 13 Apr 17:23:49.473 # Warning: no config file specified, using the defaul
t config. In order to specify a config file use redis-server /path/to/redis.conf
[1194] 13 Apr 17:23:49.474 * Max number of open files set to 10032
                _.-
            _.-``__ ''-._
       _.-``    `.  `_.  ''-._           Redis 2.8.5 (00000000/0) 64 bit
   .-`` .-```.  ```\/    _.,_ ''-._
  (    '      ,       .-`  | `,    )     Running in stand alone mode
  |`-._`-...-` __...-.``-._|'` _.-'|     Port: 6379
  |    `-._   `._    /     _.-'    |     PID: 1194
   `-._    `-._  `-./  _.-'    _.-'
  |`-._`-._    `-.__.-'    _.-'_.-'|
  |    `-._`-._        _.-'_.-'    |           http://redis.io
   `-._    `-._`-.__.-'_.-'    _.-'
  |`-._`-._    `-.__.-'    _.-'_.-'|
  |    `-._`-._        _.-'_.-'    |
   `-._    `-._`-.__.-'_.-'    _.-'
       `-._    `-.__.-'    _.-'
           `-._        _.-'
               `-.__.-'

[1194] 13 Apr 17:23:49.475 # Server started, Redis version 2.8.5
[1194] 13 Apr 17:23:50.015 * DB loaded from disk: 0.539 seconds
[1194] 13 Apr 17:23:50.015 * The server is now ready to accept connections on po
rt 6379
```



```
127.0.0.1:6379> KEYS *
 1) "message:4:user"
 2) "user:josh"
 3) "user:3"
 4) "message:2:user"
 5) "message:5"
 6) "user:2"
 7) "user:brian"
 8) "message:3:user"
 9) "message:1"
10) "message:2"
```

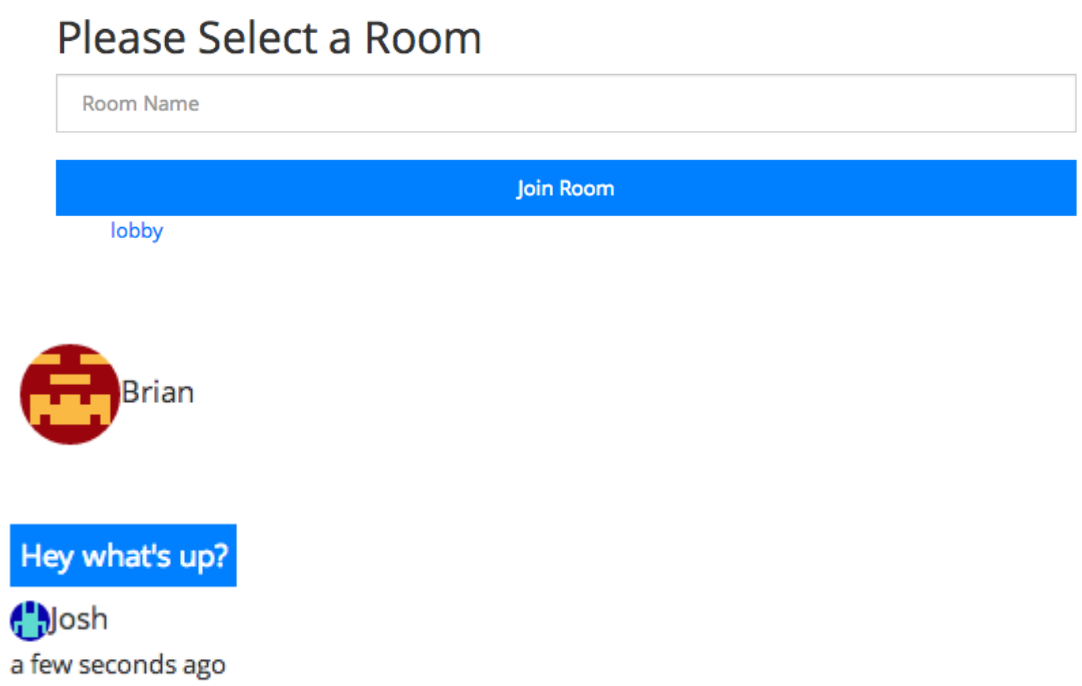
```
[1351] 19 Apr 16:16:43.079 * 1 changes in 3600 seconds. Saving...
[1351] 19 Apr 16:16:43.079 * Background saving started by pid 1523
[1523] 19 Apr 16:16:43.080 * DB saved on disk
[1351] 19 Apr 16:16:43.180 * Background saving terminated with success
```

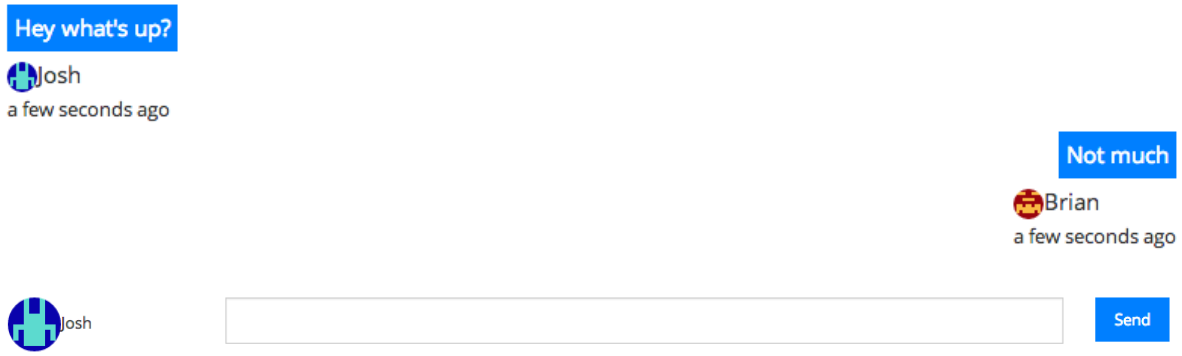
```
[1351] 19 Apr 15:16:42.209 # Server started, Redis version 2.8.5
[1351] 19 Apr 15:16:42.216 * DB loaded from disk: 0.007 seconds
[1351] 19 Apr 15:16:42.216 * The server is now ready to accept connections on po
rt 6379
```

Pub/Sub

- {"channel":"testpubsub","message":"Hey!"}
- {"channel":"testpubsub","message":"Another message"}

Chapter7





Chapter 8

```
routes.js
✔ indexRouteTest

OK: 2 assertions (11ms)
```

```
Coverage summary
Statements   : 67.5% ( 54/80 )
Branches     : 28.57% ( 4/14 )
Functions    : 43.48% ( 10/23 )
Lines        : 67.5% ( 54/80 )
```

Code coverage report for **All files**

Statements: **67.5%** (54 / 80) Branches: **28.57%** (4 / 14) Functions: **43.48%** (10 / 23) Lines: **67.5%** (54 / 80) Ignored: none

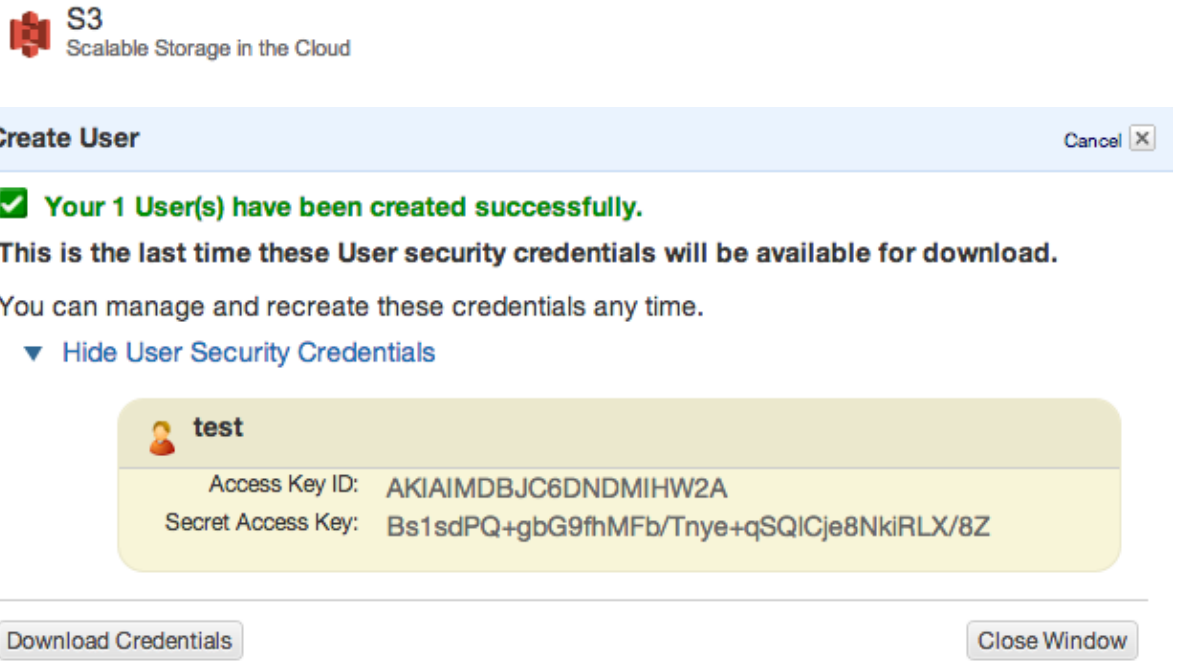
File	Statements		Branches		Functions		Lines	
grunt_stuff/	100.00%	(2 / 2)	100.00%	(0 / 0)	100.00%	(0 / 0)	100.00%	(2 / 2)
grunt_stuff/middleware/	100.00%	(20 / 20)	100.00%	(4 / 4)	100.00%	(5 / 5)	100.00%	(20 / 20)
grunt_stuff/passport/	43.33%	(13 / 30)	0.00%	(0 / 4)	0.00%	(0 / 10)	43.33%	(13 / 30)
grunt_stuff/routes/	67.86%	(19 / 28)	0.00%	(0 / 6)	62.50%	(5 / 8)	67.86%	(19 / 28)

Generated by istanbul at Sun Aug 10 2014 16:28:28 GMT-0400 (EDT)

```
20  1 function register(req, res){
21  1   res.render('register', {title: 'Register', message: req.flash('error')});
22    };
23
24  1 function registerProcess(req, res){
25      if (req.body.username && req.body.password)
26      {
27        user.addUser(req.body.username, req.body.password, config.crypto.workFactor, function(err, profile){
28          if (err) {
29            req.flash('error', err);
30            res.redirect(config.routes.register);
31          }else{
32            req.login(profile, function(err){
33              res.redirect(config.routes.chat);
34            });
35          }
36        });
37      }else{
38        req.flash('error', 'Please fill out all the fields');
39        res.redirect(config.routes.register);
40      }
41    };
42
```

```
Linting js_src/src/chat.pre.js ...ERROR
[L19:C4] W033: Missing semicolon.
  }
```

```
Running "uglify:dist" (uglify) task
File static/js/ChatPage.4ab2340aa3394a13c6bb25699fb9ee31dad585c8.min.js created:
 15.06 kB → 9.91 kB
File static/js/Frameworks.4ab2340aa3394a13c6bb25699fb9ee31dad585c8.min.js create
d: 1.29 MB → 337.82 kB
```



Chapter 9

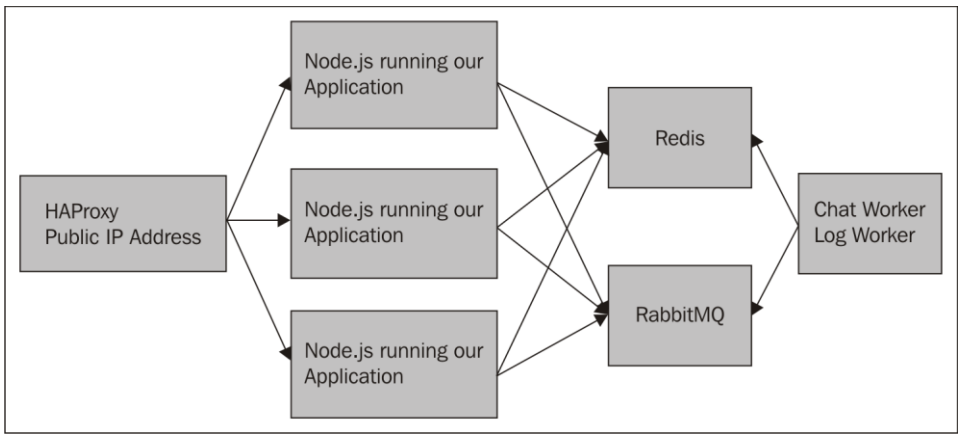
```
ec2-50-19-156-37.compute-1.amazonaws.com | success >> {
    "changed": false,
    "ping": "pong"
}
```

```
└── ansible
    └── roles
        └── redis
            └── tasks
                └── main.yml
```

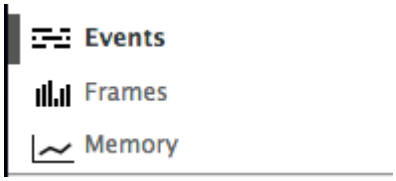
```
TASK: [redis | Install Redis] *************************************************
ok: [ec2-50-19-156-37.compute-1.amazonaws.com]

TASK: [redis | Bind to all Interfaces] ****************************************
ok: [ec2-50-19-156-37.compute-1.amazonaws.com]
```

```
├── rabbitmq
|   ├── files
|   |   └── rabbitmq.config
|   └── tasks
|       └── main.yml
```

SERVERID	54.88.29.185



Chapter 10



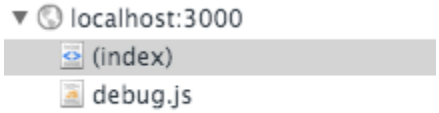
Name Path	Method	Status Text	Type	Initiator	Size Content	Time Latency	Timeline
localhost	GET	200 OK	text/html	Other	197 B 11 B	5 ms 4 ms	

Name Path	Method	Status Text	Type	Initiator	Size Content	Time Latency	Timeline 10 ms 15 ms
localhost	GET	500 Internal Se	text/html	Other	243 B 11 B	14 ms 14 ms	

▼ **Response Headers** view source

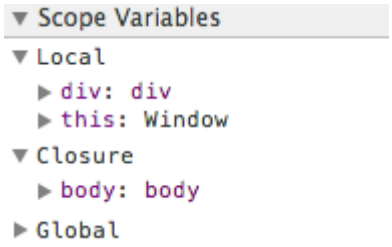
Connection: keep-alive
Content-Length: 11
Content-Type: text/html; charset=utf-8
Date: Mon, 07 Jul 2014 03:00:34 GMT
ETag: W/"b-222957957"
Important-Header: test-value
X-Powered-By: Express

localhost	POST	200 OK	text/html	Other	168 B 6 B	3 ms 2 ms



debug.js ×

```
1  (function(){
2    var body = document.body;
3    (function(){
4      var div = document.createElement('div');
5      body.appendChild(div);
6    })();
7
8  })();
9
```




```
webkit-devtools-agent: Spawning websocket service process...
webkit-devtools-agent: A proxy got connected.
webkit-devtools-agent: Waiting for commands...
webkit-devtools-agent: Websockets service started on 0.0.0.0:9999
```

Self ▼	Total	Aver...	Calls	Function	
64.85%	64.85%	64.85%	0	(program)	
34.98%	34.98%	34.98%	0	▶ CPUWaster	/Users/jjohanan/django/finalChapters/debug/requests/app.js:7

Constructor	Di...	Objects Count	Shallow Size	Retained Size ▼
▶ Object	2	529 1%	16 248 0%	5 835 520 77%

▼ (closure)	3 031	3	+3 028	218 232	216	+218 016
▼ function() @98237	•			72		
▶ express :: function cre						
▶ server :: Server @6262						
▶ shared :: (shared funct						
▶ 64 :: function() @1039						
▶ __proto__ :: function E						

Object's retaining tree

Object
▼ [1386] in Array @98461
▼ request in @62623
▶ _events in Server @62621

Comparison ▼ Class filter Snapshot 1 ▼

Constructor	# New ▼	# Delet…	# Delta	Alloc. Size	Freed Size	Size Delta
▶ (array)	62 282	544	+61 738	2 451 860	66 988	+2 384 872
▶ (system)	34 466	1 800	+32 666	326 584	30 460	+296 124
▶ (closure)	32 226	926	+31 300	1 160 136	33 336	+1 126 800
▶ Object	30 187	76	+30 111	485 832	2 240	+483 592
▶ HTMLDi…	30 001	0	+30 001	600 016	0	+600 016
▶ Detache…	30 000	0	+30 000	0	0	0