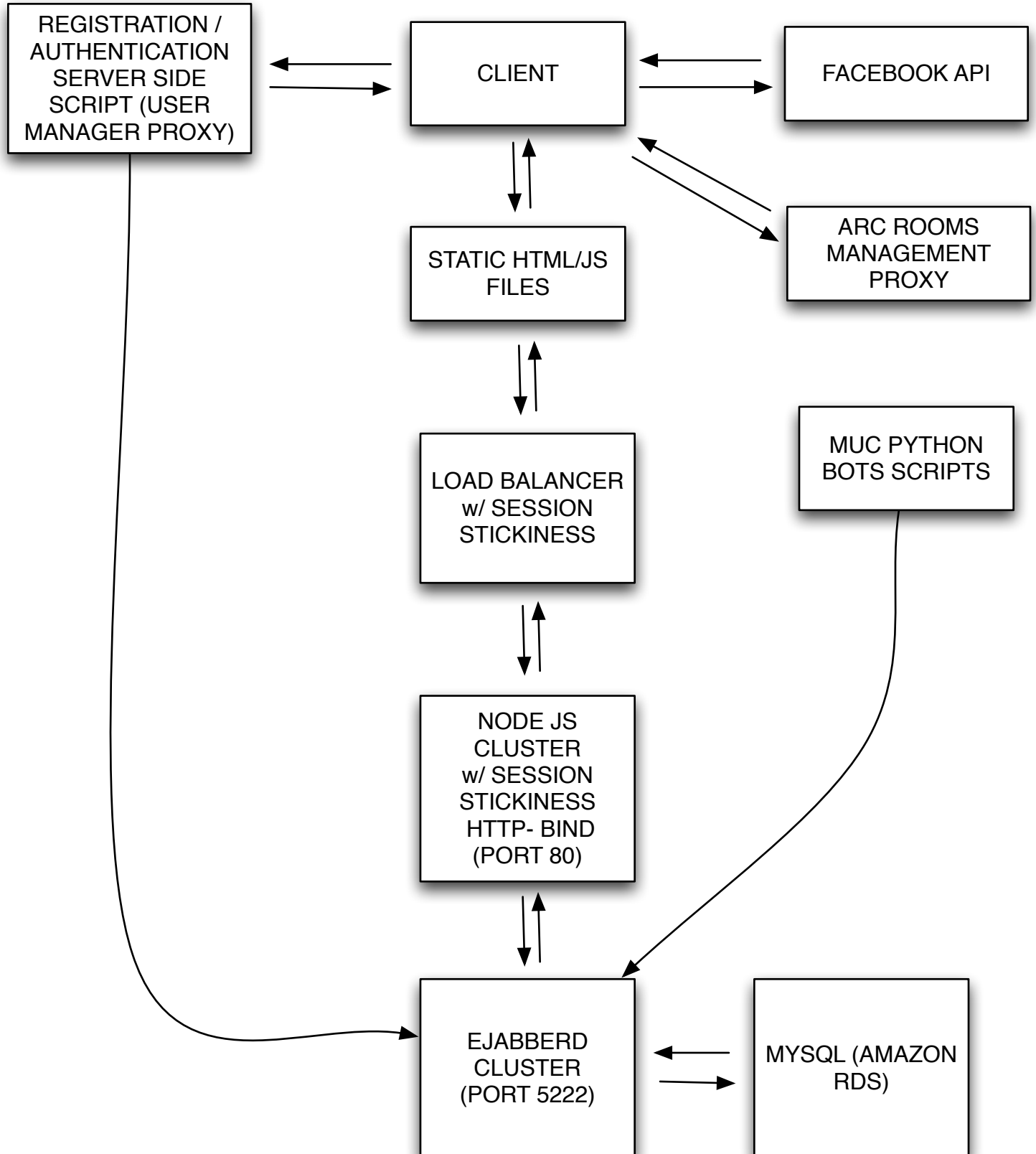


CHAT SERVICE



PUBLIC CHAT

2 USER ROLES



VISITOR



- NOT AUTHENTICATED ON FACEBOOK (ANONYMOUS)
- CAN VIEW CHAT ROOM MESSAGES
- CANNOT POST MESSAGES
- CANNOT HAVE PRIVATE CONVERSATIONS WITH OTHER MEMBERS



PARTICIPANT



- AUTHENTICATED ON FACEBOOK
- CAN VIEW CHAT ROOM MESSAGES
- CAN POST MESSAGES
- CAN HAVE PRIVATE CONVERSATIONS WITH OTHER MEMBERS

MUC BOT

- THE MUC BOT WILL BE AN AUTOMATED AGENT, RESPONSIBLE TO SET THE USER'S ROLE WHEN THE USER ENTERS A CHAT ROOM
- IF THE USER IS AUTHENTICATED ON FACEBOOK AND HAS ITS VCARD NICKNAME PROPERTY SET AS ITS FACEBOOK ID, THE BOT WILL GRANT THE USER THE STATUS 'PARTICIPANT' .
- IF THE USER IS NOT AUTHENTICATED, THE BOT WILL GRANT THE USER THE STATUS 'VISITOR'.
- EACH ROOM SHOULD HAVE A MUC BOT
- IT'S POSSIBLE TO HAVE ONE MUC BOT FOR MULTIPLE ROOMS, BUT THIS WOULD GIVE THE BOT A POTENTIALLY IMMENSE ROSTER LIST, WHICH COULD NEGATIVELY AFFECT THE SERVER PERFORMANCE.
- ONE ALTERNATIVE IS TO DEVELOP A CUSTOM ERLANG COMPONENT THAT WILL BE PLUGGED IN INTO THE EJABBERD SERVER.

ROLE: VISITOR (Cannot send messages)

guest_00011

FB CONNECT

loren ipsum

loren ipsum

loren ipsum

loren ipsum

loren ipsum

loren ipsum

loren ipsum

SEND



VIRTUAL HOST: public.mtvn

CONNECT TO FACEBOOK
TO PARTICIPATE

ROLE: PARTICIPANT (Can send messages)

ISAAC SILVA

CONNECTED

loren ipsum

loren ipsum

loren ipsum

loren ipsum

loren ipsum

loren ipsum

loren ipsum

SEND

VIRTUAL HOST: conference.MTVN

USER MANAGER PROXY

CURRENT FLOW

- 1) WHEN USER AUTHENTICATES ON FACEBOOK, IT'S REDIRECTED TO THE APPLICATION MAIN PAGE WITH AN AUTHENTICATION TOKEN APPENDED ON THE URL
- 2) THE CLIENT SETS ITS FACEBOOK SESSION ID AND STATE ON HTML5 LOCAL STORAGE
- 3) THE CLIENT SENDS A GET REQUEST TO FACEBOOK OPEN GRAPH IN ORDER TO RETRIEVE ITS USER ID, NAME AND OTHER PERSONAL INFORMATION
- 4) ONCE THE CLIENT RECEIVES THE REQUESTED DATA, THE CLIENT WILL SAVE THIS DATA ON HTML5 LOCAL STORAGE
- 5) WITH THIS FACEBOOK DATA IN MEMORY, THE CLIENT WILL THEN POST A REQUEST TO MTVN USER MANAGER CHAT PROXY WITH ITS FACEBOOK USER ID.
- 6) THE MTVN USER MANAGER PROXY WILL CHECK THE REQUESTED FACEBOOK USER ID AGAINST FACEBOOK IN ORDER TO CHECK IF THE USER IS A VALID ONE.
- 7) THE MTVN USER MANAGER PROXY WILL ATTEMPT TO REGISTER THE USER WITH THE JABBER SERVER, USING THE FACEBOOK UID AS THE JABBER USERNAME.
- 8) THE USERJABBER PASSWORD WILL BE GENERATED WITH A COMBINATION OF THE USER ID WITH A SECRET HASH KEY, THAT WILL BE STORED ON THE SERVER.
- 9) THE SERVER SENDS BACK TO THE CLIENT, ITS JABBER USERNAME AND PASSWORD

USER MANAGER PROXY

ALTERNATE FLOW

- 1) WHEN USER AUTHENTICATES ON FACEBOOK, THE BROWSER IS REDIRECTED TO THE USER MANAGER PROXY URL THAT IS SETUP ON THE SPECIFIED FACEBOOK APPLICATION
- 2) THE USER MANAGER PROXY WILL GET OTHER INFORMATION FROM THE FACEBOOK USER AND WILL GENERATE THE JABBER USERNAME AND PASSWORD.
- 3) THE JABBER USERNAME WILL BE THE FACEBOOK UID AND THE PASSWORD WILL BE A COMBINATION OF THE FACEBOOK USER UID WITH A SECRET HASH KEY
- 4) THE SERVER SENDS BACK TO THE CLIENT, ITS JABBER USERNAME AND PASSWORD

USER MANAGER PROXY

SECURITY

- 1) THERE ARE SECURITY IMPLICATIONS RELATED TO SENDING THE JABBER USERNAME/PASSWORD IN A PLAIN TEXT (WITHOUT SSL OR ANY OTHER ENCRYPTION). THIS IS BEEN DONE TWICE IN THE AUTHENTICATION/REGISTRATION PROCESS: WHEN THE CLIENT RECEIVES THE JABBER USERNAME/PASS FROM THE USER MANAGEMENT PROXY AND WHEN THE CLIENT TRIES TO CONNECT TO THE JABBER SERVER THOROUGH HTTP-BIND (BOSH)
- 2) ONE POSSIBLE SOLUTION IS THE USE OF XMPP SESSION ATTACHMENT

PRIVATE ONE-TO-ONE CHAT OUTSIDE ROOM

1) IT'S NOT POSSIBLE TO MAINTAIN A PRIVATE CONVERSATION WITH A USER IN A CERTAIN ROOM IF ONE OF THE USERS LEAVES THE ROOM

2 SOLUTIONS

- ONE SOLUTION IS TO AUTOMATICALLY SUBSCRIBE THE USER TO AN 'INVISIBLE' ROOM ONCE THE USER IS GIVEN A JID FROM THE SERVER (EITHER ANONYMOUS OR AUTHENTICATED)

- ONE PROBLEM WITH THIS APPROACH IS THE ROSTER NUMBER FOR THIS INVISIBLE ROOM, WHICH COULD NEGATIVELY AFFECT THE CLIENT'S BANDWIDTH AND THE SERVER'S PERFORMANCE.

- ANOTHER SOLUTION IS TO NOT DISCONNECT THE USER FROM THE ROOM ONCE THE USER 'LEAVES' THE ROOM IN THE UI (WHEN IT CLICKS 'BACK' TO RETURN TO THE ROOM'S LIST.

- ONE PROBLEM WITH THIS APPROACH IS THE BANDWIDTH THAT WILL TAKE TO MAINTAIN ALL THE ROOMS' MESSAGE ROUTING AND ROSTER MANAGEMENT, WHICH COULD NEGATIVELY AFFECT THE CLIENT SIDE AND IN A SMALLER MEASURE THE SERVER SIDE.

ARC'S ROOMS MANAGEMENT PROXY

1) RECEIVES A GET REQUEST FROM THE MTVN CHAT APPLICATION UNIQUE ID AND RETURNS A JSON LIST OF ROOMS, INCLUDING THE CELEBRITY ROOM AND ITS CONFIGURATION IN A JSON FORMAT

2) THE CELEBRITY ROOM WILL BE BASED ON THE PUBLISHER-SUBSCRIBER FORMAT. ITS CONFIGURATION SETTINGS SHOULD INCLUDE THE NODE ID AND THE START-END TIME FOR THE EVENT.

CLIENT DEPLOYMENT

- 1) THE CLIENT CODE WILL NEED TO STORE THE FACEBOOK APPLICATION KEY AND ITS UNIQUE ARC APPLICATION ID
- 2) THE CODE CAN BE DEPLOYED IN AN IFRAME AND THE CONFIGURATION SETTINGS (FACEBOOK APPLICATION KEY AND ARC UNIQUE APP ID) CAN BE APPENDED AS QUERY STRING PARAMETERS TO THE URL
- 3) POTENTIAL DRAWBACKS WITH THIS APPROACH ARE THE ORIENTATION ROTATION RESIZING AND THE PARENT-CHILD LIMITATIONS BET. THE IFRAME AND ITS PARENT CONTAINER, SPECIALLY REGARDING USER AUTHENTICATION IN DIFFERENT DOMAINS.

SERVER DEPLOYMENT

- 1) SETUP EJABBERD CLUSTER
- 2) SETUP BOSH (HTTP-BIND) CLUSTER: XMPP NODE JS
- 3) SETUP LOAD BALANCER FOR HTTP-BIND
- 4) SETUP MYSQL WITH EJABBERD USING AMAZON RDS
- 5) SETUP LOAD TEST USING TSUNG(<http://vidorsolutions.blogspot.com/2010/12/load-testing-ejabberd-xmpp-server-with.html>, <https://pdincau.wordpress.com/2010/08/01/testing-your-xmpp-external-component-using-tsung-and-ejabberd-part-2/>)
- 6) SETUP RIGHT SCALE INSTANCE PROVISIONING SCRIPTS
- 7) SETUP RIGHT SCALE TRIGGER RULES AND MONITORING
- 8) SETUP FINAL LOAD TESTING (XMPP AND HTTP)

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CMS AND CONTENT TYPES

Dashboard

http://administration

Google

APP MANAGER DASHBOARD (DEV PATROL)

User Name

Password

Login

Dashboard

⏪

⏩

🏠

🖨

+

🌐

http://administration

Google

Welcome User Name | [Logout](#)

My Apps

My Profile

My Apps

Actions

-- Select One --

Go

New App

App	Date	Author ▼	Published
<div>App name</div>	creation date	author name	published
<div>App name</div>	creation date	author name	unpublished
<div>App name</div>	creation date	author name	unpublished
<div>App name</div>	creation date	author name	unpublished
<div>App name</div>	creation date	author name	unpublished
<div>App name</div>	creation date	author name	unpublished

Dashboard

http://administration

Google

Welcome User Name | [Logout](#)

My Apps

My Profile

My Apps // New App

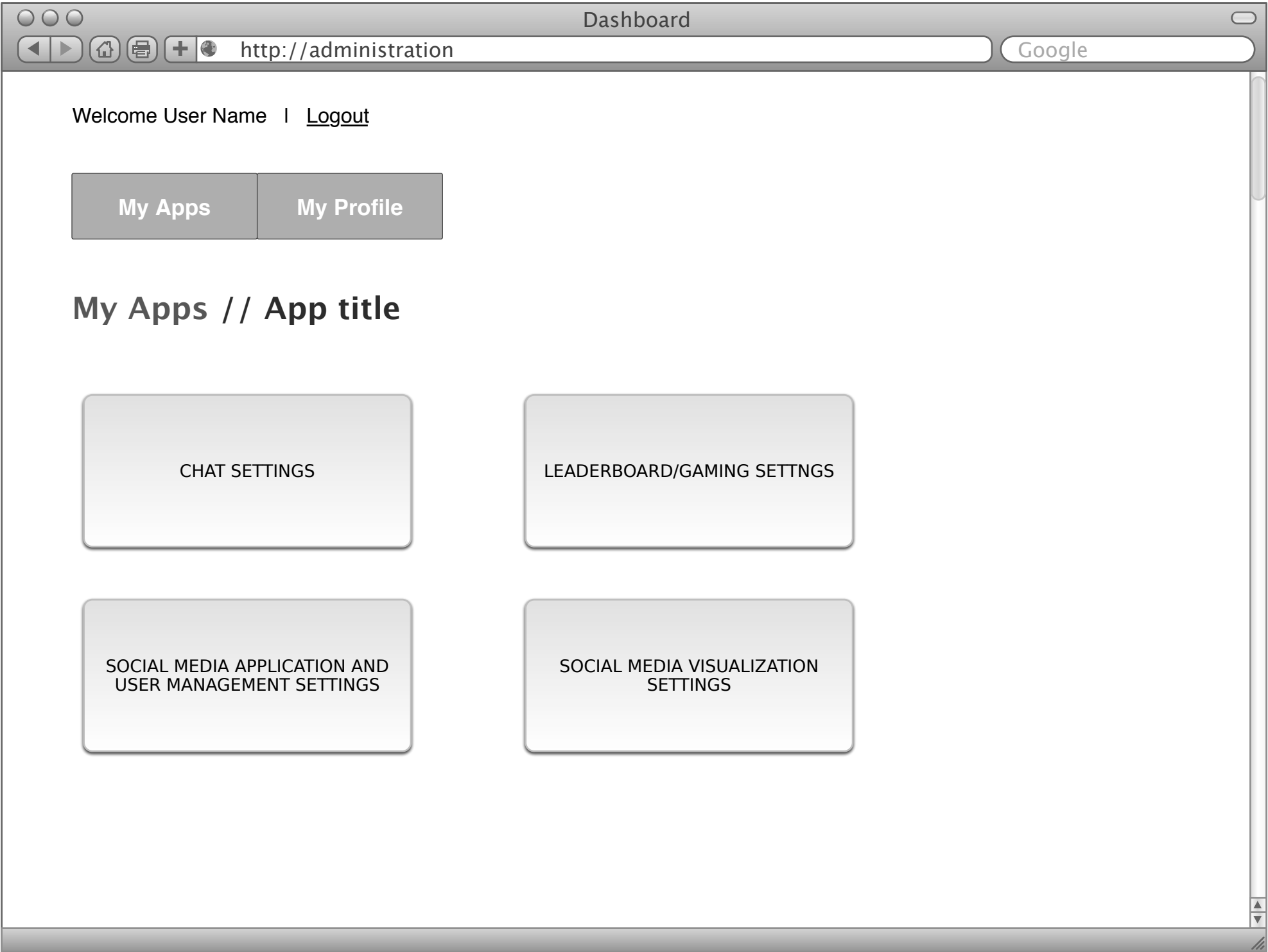
App Title

App Facebook Secret Key

App Twitter Secret Key

Cancel

Save



Dashboard

http://administration

Google

Welcome User Name | [Logout](#)

My Apps

My Profile









My Apps // App title // CHAT SETTINGS

Actions

-- Select One --

Go

New Channel

Channel	Capacity	Type ▼	Published	
 Channel name	unlimited	celebrity	published	
 Channel name	1000	regular	published	<div>send announcement</div>
 Channel name	100	regular	published	<div>send announcement</div>
 Channel name	500	regular	published	<div>send announcement</div>
 Channel name	500	regular	unpublished	<div>send announcement</div>
 Channel name	500	regular	unpublished	<div>send announcement</div> 

Dashboard

http://administration

Google

Welcome User Name | [Logout](#)

My Apps

My Profile

My Apps // App title // CHAT SETTINGS // New Channel type Regular

Channel Name

Brief description

Thumbnail
Picture
Upload

Capacity

App ID/Name

Dashboard

http://administration

Google

Welcome User Name | [Logout](#)

My Apps

My Profile

My Apps // App title // CHAT SETTINGS // New Channel type Celebrity

Event/Channel Name

Date Begin

Date End

Brief description

Thumbnail Picture Upload

App ID/Name

to be continued...