



THE CUSTOMER SUCCESS PLATFORM

Integrating High-Velocity External Data in Your Salesforce Application

Fusing real time information with Salesforce user's data.

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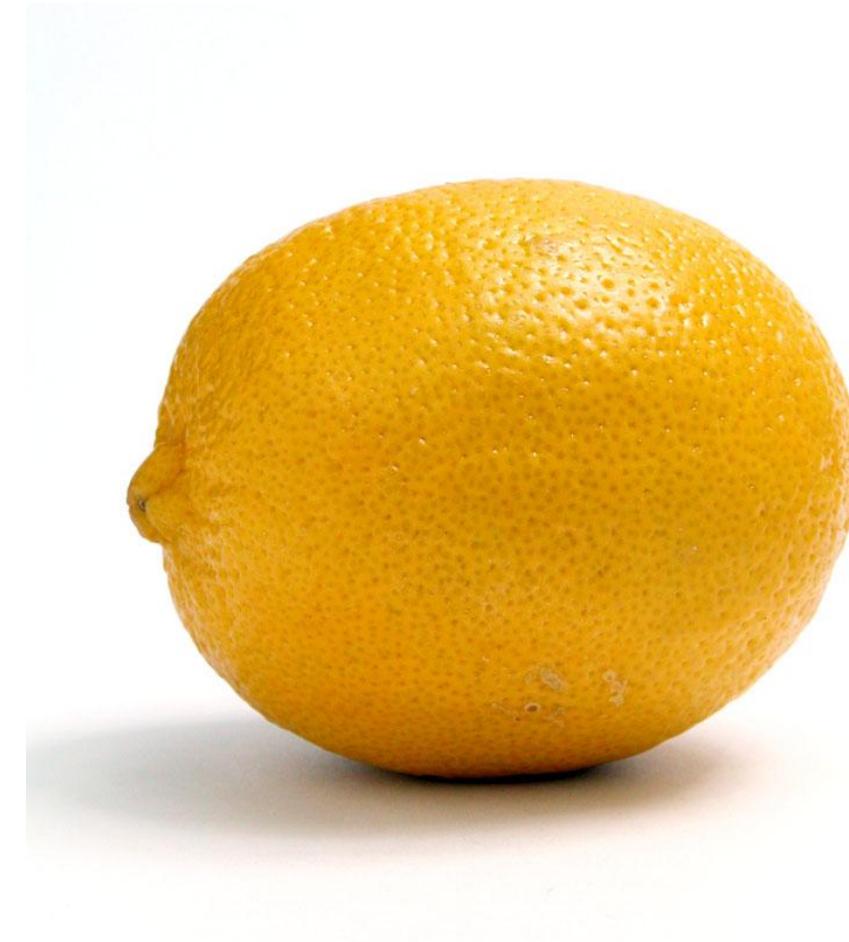


Who We Are

Michael Ellis



Stan Lemon





pardot



E N G A G E

Use Case

- Sales rep sends a 1-1 email campaign to a lead: “Hey, I thought you might be interested in knowing about our latest model of flux capacitor...”
- Customer (Lead) opens email; the email contains a tracker link which is pinged.
- Sales rep immediately sees the email open activity on their Engage Alerts dashboard.
- Customer (Lead) clicks a link within the email to learn more about the latest flux capacitor model.
- Sales rep immediately sees the email click activity on their Engage Alerts dashboard.
- Sales rep counts down a minute, 60...59...
- Sales rep calls Customer (Lead) and sets up a demo of the latest flux capacitor.
- A week later the Sales rep closes the deal! #winning



MONTH

DAY

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DESTINATION TIME

MONTH

DAY

YEAR

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PRESENT TIME

MONTH

DAY

YEAR

HOUR

MIN

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28

8989

AM
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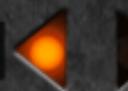
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LAST TIME DEPARTED



TIME CIRCUITS



ALARM CLOCK





Home Leads Contacts

Engage Alerts

Engage Reports

Accounts

Campaigns Chatter

Opportunities

Pardot

Profile

+

Engage Alerts

+ Add New Filter

All Leads and Contacts

Yiping Chen Flashdog This Is - It & 'Yes' Email Click Mar 13, 2:46 pm	Jacob Trainer Plexcode Welcome! Email Open Mar 13, 2:13 pm	Raymond Howard BabbleSet Sales Edge quick form Form Success Mar 13, 10:12 am	Frank Spartan Plexcode Hello Email Open Mar 11, 6:03 pm	Lisa Garza Quimba This Is - It & 'Yes' Email Open Mar 11, 2:52 pm	Nadisha Hill Triozone Thank you for the feedback Email Open Mar 11, 9:05 am	Ben Thom Acamie Subject Email Open
---	--	--	---	---	---	--

My Assigned Leads and Contacts Default

Jacob Trainer Plexcode Welcome! Email Open Mar 13, 2:13 pm	Ollie Zulauf Sawayn-Zemlak and S... Pricing Information Form Success Mar 13, 10:12 am	Ben Thomas Acamie Hello Email Open Mar 11, 6:03 pm
--	---	--

Southern Prospects

Yiping Chen 	Jacob Trainer 	Laura Murphy
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15

Home Leads Contacts

Engage Alerts

Engage Reports

Accounts

Campaigns Chatter

Opportunities

Pardot

Profile +

Engage Alerts

All Leads and Contacts

Yiping Chen
Flashdog

This Is - It & 'Yes'

Email Click

Mar 13, 2:46 pm

My Assigned Leads and Contacts

Jacob Trainer
Plexcode

Welcome!

Email Open Mar 13, 2:13 pm

Southern Prospects

My Assigned Leads and Contacts

+ Add New Filter

Prospect Criteria

- All leads and contacts
- Only my assigned leads and contacts
- Identified company website visitors that have not been matched with a lead or contact

Activity Criteria

* If no activity criteria is selected, all activity will be included.

- | | | |
|---|--|---|
| <input type="checkbox"/> Page Views | <input type="checkbox"/> Forms | <input type="checkbox"/> Email Clicks |
| <input type="checkbox"/> File Downloads | <input type="checkbox"/> Webinars & Events | <input type="checkbox"/> One to One Email Opens |
| <input type="checkbox"/> Paid Search Clicks | <input type="checkbox"/> Site Search | <input type="checkbox"/> All Email Opens |

Geographic Criteria

* If no geographic criteria is selected, all locations will be included.

- | | | | | |
|------------------------------|----------------------|-------|--------------|------------|
| Add a grouping of countries: | Select country group | Add » | California x | New York x |
| Add an individual country: | Select country | Add » | Georgia x | |
| Add a State or Province: | Georgia | Add » | | |

Cancel

Save

Some Considerations for Implementing Engage

- Existing Platform
- Latency
- Data volume could be BIG
- Hydrate real-time data with Salesforce data
- API Limits
- Authentication

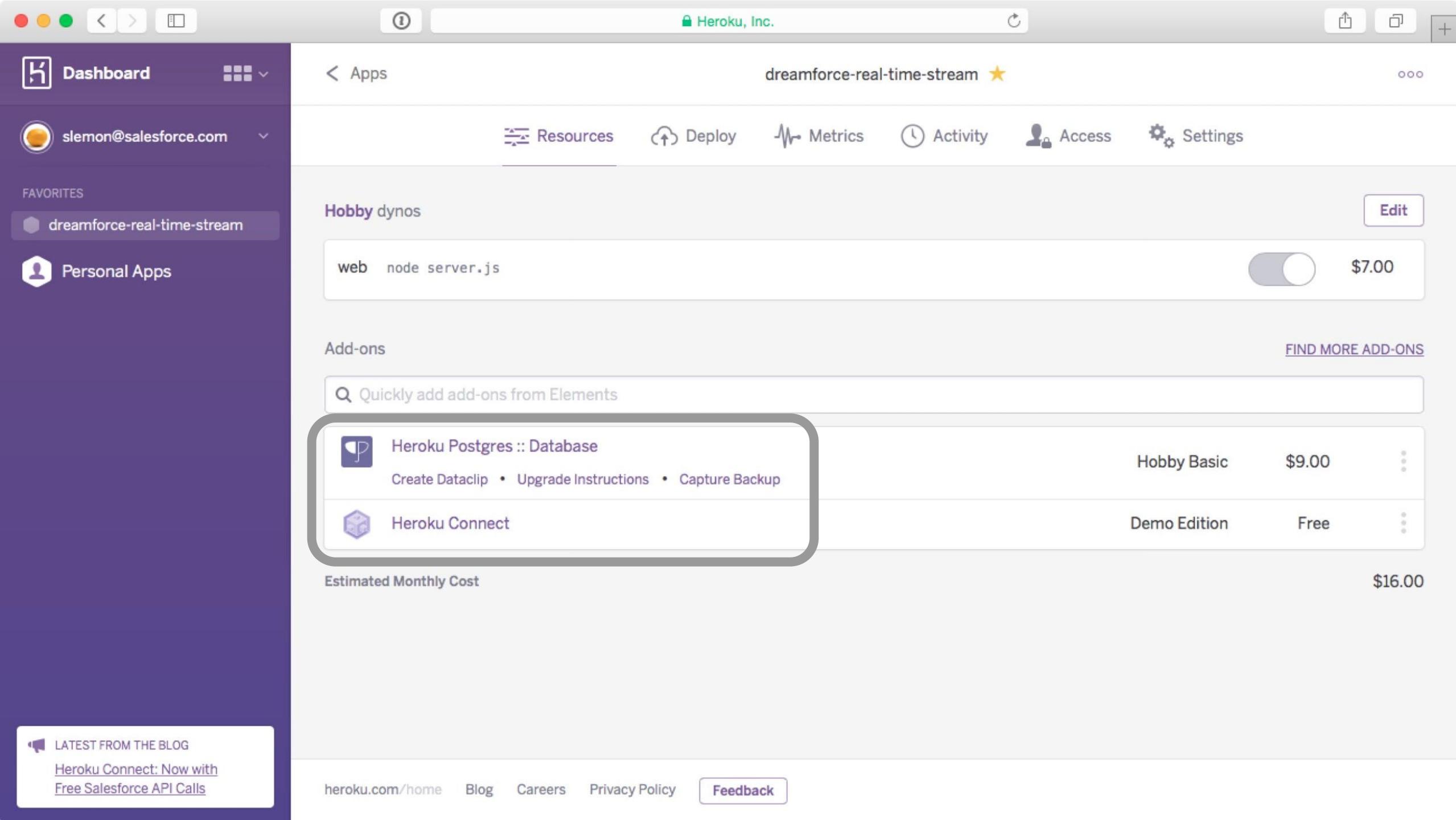


Let's Build a Real Time Stream

We'll call it the... Dream Stream

- Deploy to Heroku
- WebSocket in NodeJS
- OAuth
- Heroku Connect
- VisualForce Page





● dreamforce-real-time-stream
(IDLE)

Overview

Logs

Explorer

Settings ▾



Upgrade to paid version

Database

DATABASE_URL ➔ salesforce (Demo Edition)

SFDC

24 Hour API Usage: 1,653

Authentication

slemon+dreamforce@salesforce.com

Activity

Last Hour ▾

No activity data available for that time period

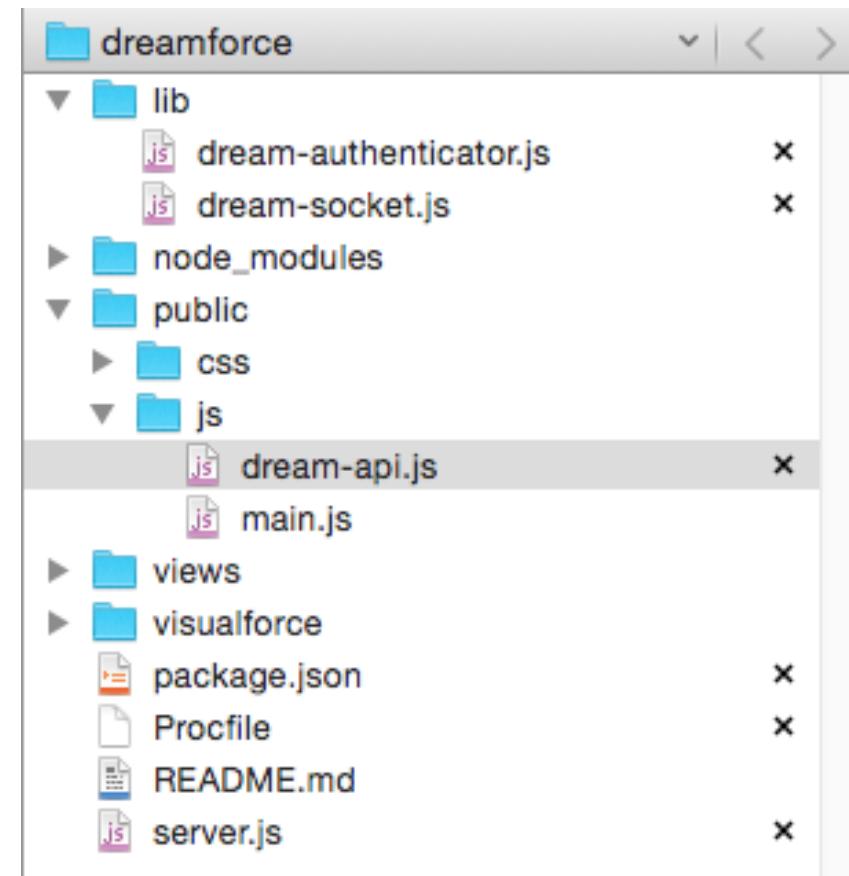
Mappings

+ Create Mapping

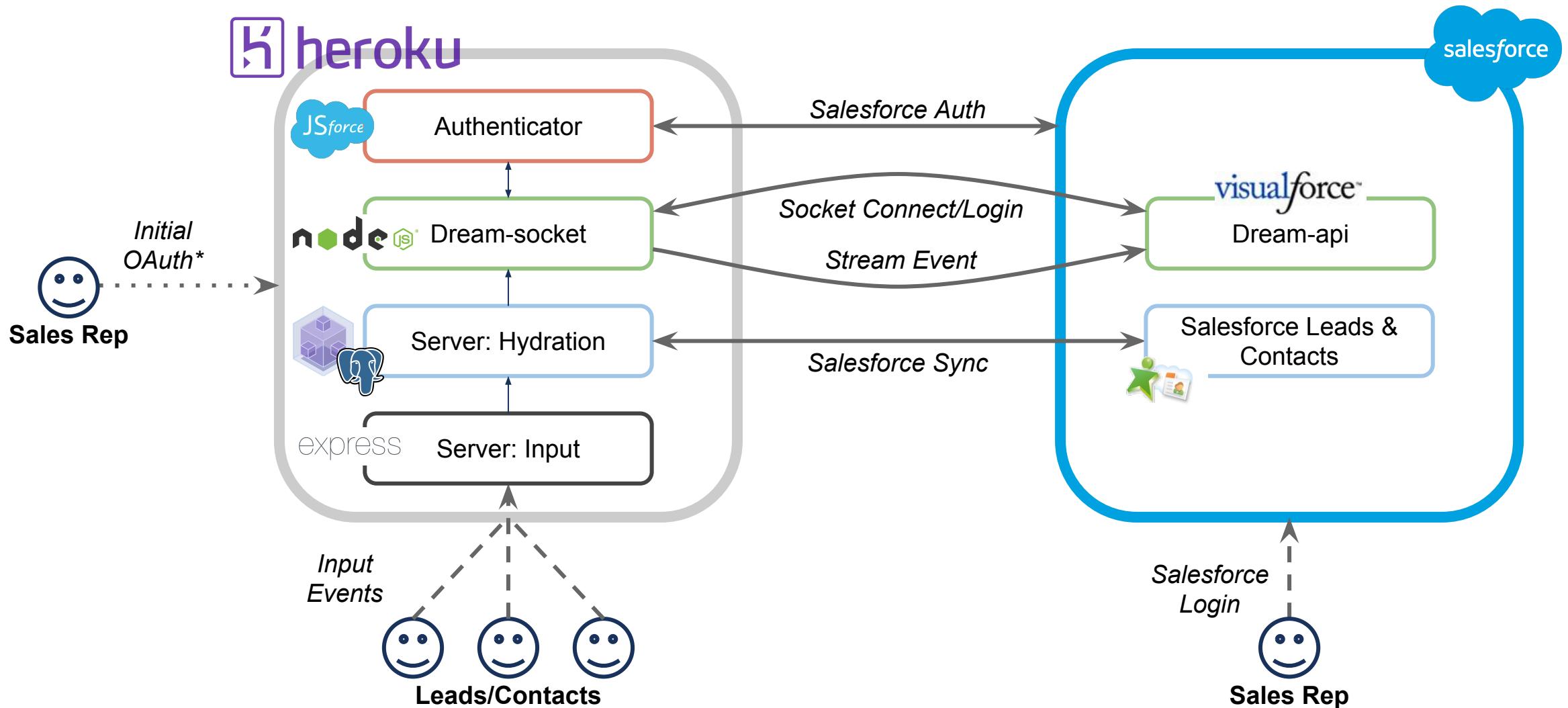
Status	Object	SF Rows	DB Rows	Pending writes to SFDC	Errored Rows	
✓ OK	Account	12	12	-	-	
✓ OK	Contact	20	20	-	-	
✓ OK	Lead	22	22	-	-	
✓ OK	User	3	3	-	-	
Totals:		57	57	-	-	

Dream Stream Project

- Package.json
- Authenticator
- Dream-socket
- Dream-api
- Visualforce
- Server
- Procfile



Dream Stream Architecture



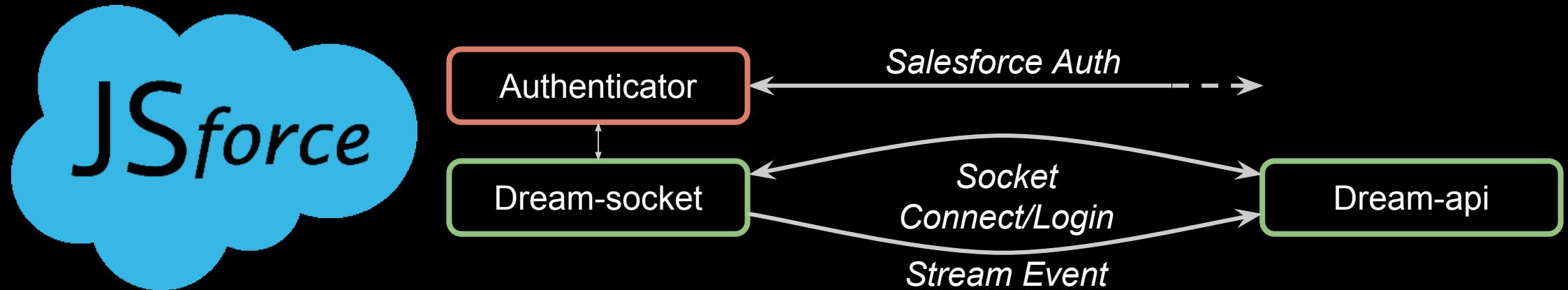
*OAuth also involves communicating with Salesforce (not shown); for Heroku Connect, OAuth is already handled



package.json

```
{  
  "name": "dreamforce-websocket",  
  "description": "Demonstration of OAuth'd websocket",  
  "author": "Stan Lemon <slemon@salesforce.com>",  
  "version": "0.0.1",  
  "private": true,  
  "dependencies": {  
    "express": "3.x",  
    "jade": "0.27.2",  
    "jsforce": "1.4.1",  
    "pg-promise": "^1.8.5",  
    "websocket": "1.0.7"  
  },  
  "scripts": {  
    "server-dev": "node server"  
  }  
}
```

authenticator



<https://jsforce.github.io/>

npm install jsforce

server: socket and console

```
var express = require('express');
var fs = require('fs');
var http = require('http');
var pgp = require("pg-promise");
var DreamSocket = require('./lib/dream-socket');

var db = (new pgp())(process.env.DATABASE_URL);

var server;
var app = express();
var dreamSocket = new DreamSocket(db);

app.set('port', (process.env.PORT || 8082));

app.use(app.router);
app.use(express.static(__dirname + '/public'));
app.set('views', __dirname + '/views');
app.set('view engine', 'jade');

app.get('/', function (req, res) { });
app.get('/send', function(req, res) { });

server = http.createServer(app);

server.listen(app.get('port'), function() {
  console.log('Real Time Stream is running on port ' + app.get('port'));
});

dreamSocket.decorate(server);
```

server: event send

```
app.get('/send', function(req, res) {
  try {
    var message = JSON.parse(req.query.message);

    if (message.email == undefined || message.event == undefined) {
      res.json({ message: "Failure: You must specify an email address and an event!" });
    }

    db.oneOrNone("SELECT c.*, a.name AS account_name, a.website AS account_website FROM salesforce.contact c JOIN salesforce.account a
    .then(function (contact) {
      if (!contact) {
        db.oneOrNone("SELECT * FROM salesforce.lead WHERE email = $1 LIMIT 1", message.email)
          .then(function (lead) {
            if (!lead) {
              res.json({ message: "Failure: Could not find a lead or contact for that email address!" });
            } else {
              message.lead = lead;
              dreamSocket.sendMessage(message);
              res.json({ message: "Success!" });
            }
          }, function (error) {
            res.json({ message: "Failure!", error: error });
          });
      } else {
        message.contact = contact;
        dreamSocket.sendMessage(message);
        res.json({ message: "Success!" });
      }
    }, function (error) {
      res.json({ message: "Failure!", error: error });
    });
  } catch (e) {
    res.json({ message: "Failure: Could not parse message!" });
  }
});
```

```
var DreamApi = function (options) {
  var that = this;

  this.defaults = {};

  this.lastMessageActivityTimestamp = null;

  this.credentials = null;

  this.isReconnecting = false;

  // authenticate
  this.authenticate = function (credentials) {};

  this.processOpenConnection = function () {};

  this.processCloseConnection = function () {};

  this.processIncomingMessage = function (message) {};

  this.connect = function () {};

  this.disconnect = function () {};

  this.authenticateWebSocket = function () {};

  this.processAuthenticationMessage = function (message) {};
}
```

dream-api

visualforce

```
<script src="//ajax.googleapis.com/ajax/libs/jquery/1.11.3/jquery.min.js"></script>
<script src="//dreamforce-real-time-stream.herokuapp.com/js/dream-api.js"></script>
<script>
    function displayMessage(data) {■■■}

    var dreamApi = new DreamApi({
        authenticationSuccess: function(data) {
            displayMessage(data);
        },
        authenticationError: function(data) {
            displayMessage(data);
        },
        processMessage: displayMessage,
        connected: function() {
            dreamApi.authenticate({
                serverUrl: window.location.href.substring(0, window.location.href.search('.com') + 5),
                sessionId: '{!$API.Session_ID}'
            });
        },
        url: 'wss://dreamforce-real-time-stream.herokuapp.com'
    });

    dreamApi.connect();
</script>
```

visualforce: script

```
function displayMessage(data) {
    var now = new Date();

    var date = (now.getMonth() + 1) + "/" + now.getDate() + "/" + now.getFullYear() + ' ' + now.getHours() + ":" + now.getMinutes() + ":" + now.getSeconds();

    var color = 'warning';
    var message = '<div class="pull-right text-muted">' + date + '</div>';

    if (data.type == 'event' && data.contact != undefined) {
        color = 'success';
    }
    if (data.type == 'event' && data.lead != undefined) {
        color = 'info';
    }

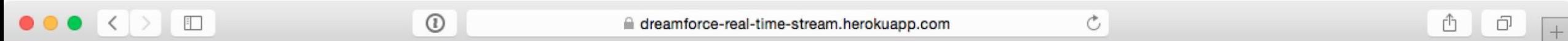
    if (data.event !== undefined) {
        if (data.contact !== undefined) {
            message += '<i class="glyphicon glyphicon-user"/> ';
        } else {
            message += '<i class="glyphicon glyphicon-time"/> ';
        }
    }

    var prospect = data.lead === undefined ? data.contact : data.lead;
    message += '<strong>' + data.event + ':</strong> <a href="' + prospect.email + '">' + prospect.name + '</a> (' + prospect.title + ')';

    if (data.contact !== undefined) {
        message += ' &middot; <a href="' + prospect.account_website + '">' + prospect.account_name + '</a>';
    }
} else if (data.id != undefined && data.email != undefined) {
    message += data.email + ' now logged on!';
}

$('#dream-stream').prepend('<div class="alert alert-' + color + '">' + message + '</div>');
}
```

Live Demo



REAL TIME STREAM CONSOLE

Login

serverUrl

sessionId

SUBMIT



REAL TIME STREAM CONSOLE

```
{  
  "event": "Viewed a webpage",  
  "email": "bertha@fcfcof.net",  
  "lead": {  
    "longitude": null,  
    "id": 22,  
    "emailbounceddate": null,  
    "isunreadbyowner": true,  
    "lastactivitydate": null,  
    "latitude": null,  
    "photourl": "/services/images/photo/00Q610000019HGPEAZ",  
    "isconverted": false,  
    "postalcode": "32306",  
    "lastname": "Boxer",  
    "convertedcontactid": null,  
    "dandbcompanyid": null,  
    "jigsawcontactid": null,  
    "companydunsnr": null,  
    "website": null,  
    "phone": "(850) 644-4200",  
    "createdbyid": "00561000000h4pdAAA",  
    "street": "321 Westcott Building",  
    "cleanstatus": "Pending",  
    "city": "Tallahassee",  
    "lastmodifiedbyid": "00561000000h4pdAAA",  
    "country": "USA",  
    "masterrecordid": null,  
    "converteddate": null,  
    "isdeleted": false,  
    "lastvieweddate": null,  
    "fax": "(850) 644-4300",  
    "numberofemployees": null,  
    "createddate": "2015-08-10T20:04:23.000Z",  
    "ownerid": "00561000000h4pdAAA",  
    "company": "Farmers Coop. of Florida",  
    "name": "Bertha Boxer",  
    "lastreferenceddate": null  
}
```

Wed Aug 12 2015 16:36:31 GMT-0400 (EDT)



Search...

Search

c.na34.visual.force.com

Stan Lemon ▾ Setup Help

Sales ▾

Home

Chatter

Campaigns

Leads

Accounts

Contacts

Opportunities

Forecasts

Contracts

Orders

Cases

Solutions

Products

Reports

Dashboards

+

Create New...

Recent Items

Arthur Song

Josh Davis

Mike Braund

Betty Bair

Bertha Boxer

Kristen Akin

Liz D'Cruz

Lauren Boyle

John Bond

Tim Barr

Recycle Bin

Dream Stream

Clicked on a link: Arthur Song (CEO) · United Oil & Gas Corp.

8/12/2015 16:18:29

Opened an email: Liz D'Cruz (VP, Production) · United Oil & Gas, Singapore

8/12/2015 16:18:29

Viewed a webpage: Mike Braund (VP, Technology)

8/12/2015 16:18:29

Clicked on a link: Betty Bair (VP, Administration)

8/12/2015 16:18:28

Unsubscribed: Lauren Boyle (SVP, Technology) · United Oil & Gas Corp.

8/12/2015 16:18:28

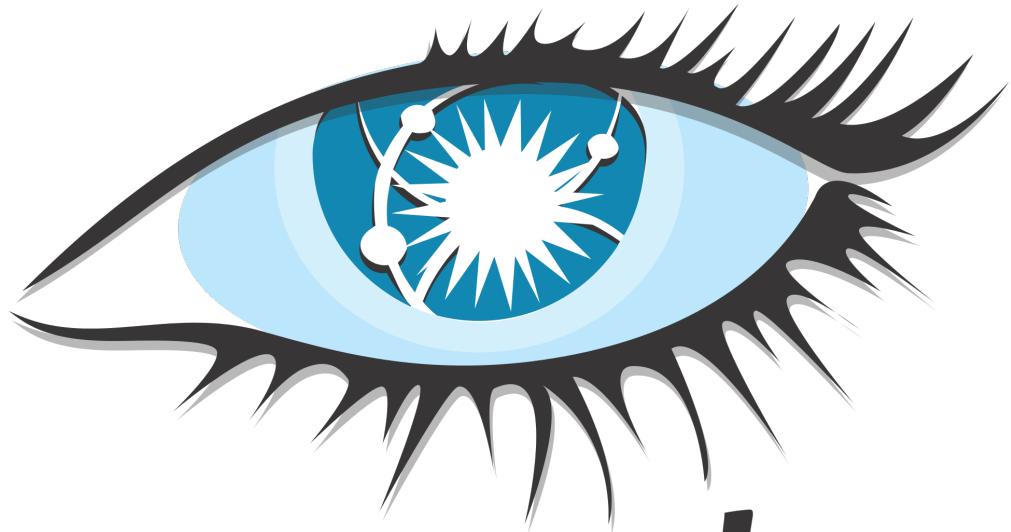
Opened an email: Kristen Akin (Director, Warehouse Mgmt)

8/12/2015 16:18:28

Clicked on a link: John Bond (VP, Facilities) · Grand Hotels & Resorts Ltd

8/12/2015 16:18:27

Event Activity Persistence



cassandra



<http://github.com/stanlemon/dream-stream>



Questions?

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