

Wherefore Art Thou, OAuth?

# What is OAuth?

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- ▶ Your Valet Key for the Web

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- ▶ Delegated Authentication Protocol

# What is OAuth?

- ▶ Your Valet Key for the Web
- ▶ Delegated Authentication Protocol
- ▶ Yet Another Community-driven Protocol

# Use Case Zero

magnolia

+



OpenID

# Use Case Zero

twitter

?



OpenID

# Federated Sign In

## Sign In

Email Address or Screen Name:

Password:

**SIGN IN**

[Forgot Your password?](#)

# Federated Sign In

## Sign In Using Your Magnolia ID

Email Address or Screen Name:

Password:

**SIGN IN** [Forgot Your password?](#)

## Sign In Using Your OpenID

OpenID URL:

 OpenID lets you safely sign in to different websites with a single password. [Get an OpenID.](#)

**SIGN IN WITH OPENID**

# API Access



The image shows a web form for API access, titled "magnolia" with a logo. The form contains several input fields and a "Save" button. The fields are labeled "URL", "Title", "Description", and "Tags". The "URL" field contains "http://ma.gnolia.com/". The "Title" field contains "Your Home on Ma.gnolia". The "Description" field is empty. The "Tags" field is empty. At the bottom of the form, there is a "Save" button, a five-star rating system, and a small icon of a notepad and pencil.

**magnolia**

**URL**  
http://ma.gnolia.com/

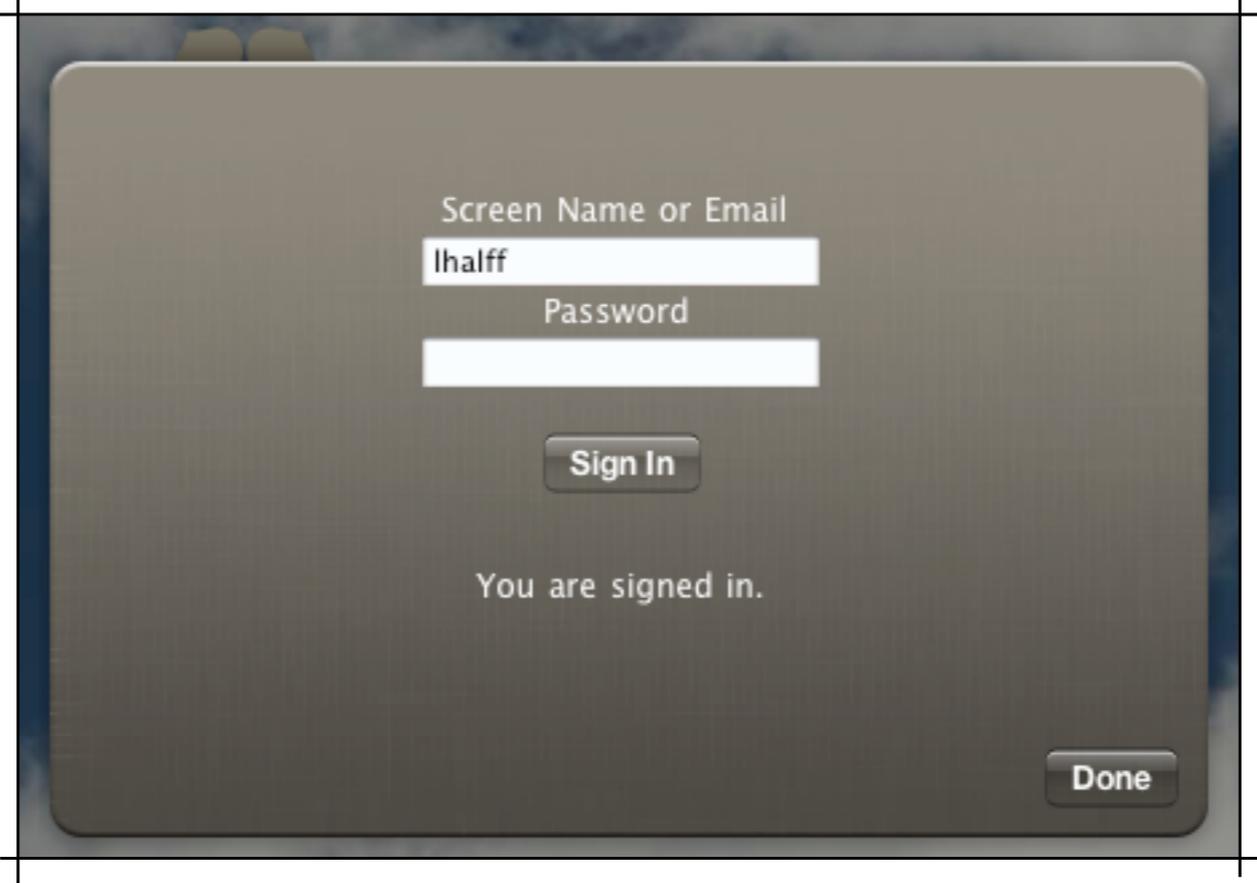
**Title**  
Your Home on Ma.gnolia

**Description**

**Tags**

  ★★★★★ **Save**

# API Access



A screenshot of a login dialog box with a dark gray background and rounded corners. The dialog is centered on a blurred background. It contains the following elements:

- Text label: "Screen Name or Email"
- Text input field: "lhalff"
- Text label: "Password"
- Text input field: (empty)
- Button: "Sign In"
- Text message: "You are signed in."
- Button: "Done" (located in the bottom right corner)

# Phishing

**facebook**

**Invite Your Friends**

 **Web Email** (Hotmail, Gmail, Yahoo, etc.)

Invite contacts from your email address book.

Your Email:

Password:

[Find Your Friends](#)

We won't store your password or contact anyone without your permission.

# Phishing

**facebook**

**Invite Your Friends**

 **Web Email** (Hotmail, Gmail, Yahoo, etc.)

Invite contacts from your email address book.

Your Email:

Password:

[Find Your Friends](#)

We won't store your password or contact anyone without your permission.

**Search Web Email (Hotmail, Yahoo, Gmail, Etc.)**

Your Email  @ [Select...](#)

Email Password

[continue »](#)

**🔒 Email Security**  
We don't store your login, your password is submitted securely, and we don't email without your permission.

# Phishing

**facebook**

**Invite Your Friends**

 **Web Email** (Hotmail, Gmail, Yahoo, etc.)

Invite contacts from your email address book.

Your Email:

Password:

**Find Your Friends**

We won't store your password or contact anyone without your permission.

**Search Web Email (Hotmail, Yahoo, Gmail, Etc.)**

Your Email  @

Email Password

**continue »**

**🔒 Email Security**  
We don't store your login, your password is submitted securely, and we don't email without your permission.

**Are your friends already on Yelp?**

Many of your friends may already be here, now you can find out. Just log in and we'll display all your contacts, and you can select which ones to invite! And don't worry, we don't keep your email password or your friends' addresses. We loathe spam, too.

Your Email Service   Hotmail     AOL Mail   Gmail

Your Email Address  (e.g. bob@gmail.com)

Your Gmail Password  (The password you use to log into your Gmail email)

**Check Contacts**

# Phishing

**facebook**

**Invite Your Friends**

 **Web Email** (Hotmail, Gmail, Yahoo, etc.)

Invite contacts from your email address book.

Your Email:

Password:

**Find Your Friends**

We won't store your password or contact anyone without your permission.

**Search Web Email (Hotmail, Yahoo, Gmail, Etc.)**

Your Email  @

Email Password

**continue »**

**🔒 Email Security**  
We don't store your login, your password is submitted securely, and we don't email without your permission.

## Find the people you know on FriendFeed

Enter your webmail username and password to import your address book, and select contacts to subscribe to or invite to FriendFeed. We won't store your username or password, and we won't send email to any of your friends without your approval.

Email address

Email Password

**Import address book**

**Are your friends already on Yelp?**

Many of your friends may already be here, now you can find out. Just log in and we'll display all your contacts, and you can select which ones to invite! And don't worry, we don't keep your email password or your friends' addresses. We loathe spam, too.

Your Email Service   Hotmail     Mail  

Your Email Address  (e.g. bob@gmail.com)

Your Gmail Password  (The password you use to log into your Gmail email)

**Check Contacts**

# Phishing

**facebook**

**Invite Your Friends**

 **Web Email** (Hotmail, Gmail, Yahoo, etc.)

Invite contacts from your email address book.

Your Email:

Password:

**Find Your Friends**

We won't store your password or contact anyone without your permission.

**Search Web Email (Hotmail, Yahoo, Gmail, Etc.)**

Your Email  @  Select... ▾

Email Password

**continue »**

**🔒 Email Security**  
We don't store your login, your password is submitted securely, and we don't email without your permission.

## Find the people you know on FriendFeed

Enter your webmail username and password to import your address book, and select contacts to subscribe to or invite to FriendFeed. We won't store your username or password, and we won't send email to any of your friends without your approval.

Email address

Email Password

**Import address book**

## Import webmail contacts

Find out which of your webmail contacts are already on LinkedIn.

Select your webmail service:

Windows Live Hotmail  **YAHOO!**  Gmail  AOL  Other

Username:  @gmail.com

Password:

**Upload Contacts**

 Your privacy is our top concern. Your contacts are your private information. LinkedIn will not store your username and password and any information you upload will be securely imported for your own use. LinkedIn will not send your contacts any e-mail. For more information please see the [LinkedIn Privacy Policy](#).

**Are your friends already on Yelp?**

Many of your friends may already be here, now you can find out. Just log in and we'll display all your contacts, and you can select which ones to invite! And don't worry, we don't keep your email password or your friends' addresses. We loathe spam, too.

Your Email Service  **msn** Hotmail  **YAHOO!** MAIL  AOL Mail  Gmail

Your Email Address  (e.g. bob@gmail.com)

Your Gmail Password  (The password you use to log into your Gmail email)

**Check Contacts**

# Delegated Authentication

- ▶ Grant 3rd Party Application access to account
- ▶ User does not give 3rd Party Application credentials
- ▶ Control 3rd Party Application access to account

# What Was Already Out There?

- ▶ FlickrAuth
- ▶ BBAuth
- ▶ AuthSub
- ▶ OpenAuth
- ▶ Amazon Web Services

# The Opportunity

- ▶ Manage API access to services with federated sign in.
- ▶ Render the password anti-pattern obsolete, teach end users not to accept it, and reduce phishing opportunities.
- ▶ Build a community standard useable by even the smallest consumers or service providers as well as the largest.
- ▶ Standardize existing delegated authentication patterns already vetted by larger institutions.
- ▶ Proliferate protocol libraries so the code to protect and access resources only had to be written once.

# Who Helped Develop OAuth?

- ▶ Ma.gnolia
- ▶ Twitter
- ▶ Six Apart
- ▶ Flickr
- ▶ Pownce
- ▶ Jaiku
- ▶ Yedda
- ▶ Wesabe
- ▶ AOL
- ▶ Google
- ▶ Yahoo
- ▶ Stamen

# Use Cases

- ▶ Primary: Three Legged
- ▶ Secondary: Two Legged

# Three Legged

- ▶ Used to request permission to access a specific user's protected resources
- ▶ Requires Involvement of three parties: User, Service Provider, Consumer
- ▶ Examples: Contacts import, photo printing, bookmark synchronizing, location sharing, shopping cart or account updates

# Two Legged

- ▶ Used to access public resources, yet provider is still able to manage access and usage for a consumer.
- ▶ Used to access resource that are private to specific consumers.
- ▶ Requires Involvement of only two parties: Service Provider and Consumer
- ▶ Examples: searches for publicly accessible data, consumer validated super-user level access

# Who's Using OAuth?

- ▶ Google
- ▶ Yahoo!
- ▶ MySpace
- ▶ Netflix
- ▶ SmugMug
- ▶ Photobucket
- ▶ Ma.gnolia
- ▶ Fire Eagle
- ▶ Brightkite
- ▶ GetSatisfaction
- ▶ Meetup.com
- ▶ 88 Miles
- ▶ thmbnl
- ▶ Praized
- ▶ Yammer
- ▶ Agree2
- ▶ Ohloh

# Three Legged Contact Import

The screenshot displays the FriendFeed website interface. At the top left is the "friendfeed" logo. To its right is a search bar with a "Search" button. In the top right corner, the user's name "Larry Half" is displayed along with navigation links for "Friends", "Tools", "Account", and "Sign out".

On the left side, there is a vertical navigation menu with the following items: "5 requests" (with an envelope icon), "Home", "Favorites", "Personal", "Professional new list", "Me", "Rooms", and "Everyone".

The main content area is titled "Friends" and features a horizontal menu with tabs: "Subscriptions", "Subscribed to me", "Ignored", "Imaginary", "Recommended", "Stats", and "Find + Invite". Below this menu, the heading "Find the people you know on FriendFeed" is followed by the text: "Import your address book to find out who's already using FriendFeed. We won't email any of your friends without your approval." Three import options are listed: "Gmail Import from Gmail", "Yahoo! Mail Import from Yahoo Mail", and "Hotmail Import from Hotmail".

At the bottom of the page, a copyright notice reads: "©2008 FriendFeed - About - Blog - Tools - API - Help - Terms of Use - Privacy".

# Three Legged Contact Import

**Google Accounts**

**A third party service is requesting permission to access your Google Account.**  
In order to authorize a third party service to access your account, you must sign in.

Sign in with your  
**Google Account**

Email:

Password:

Remember me on this computer.

[I cannot access my account](#)

**Don't have a Google Account?**  
[Enter your email address](#)

©2008 Google - [Google Home](#) - [Terms of Service](#) - [Privacy Policy](#) - [Help](#)

# Three Legged Contact Import

@gmail.com | [Google Home](#) | [Help](#) | [My Account](#) | [Sign Out](#)

**Google**  
Accounts **Access Request**

The site **friendfeed.com** is requesting access to your Google Account for the product(s) listed below.

 **Google Contacts** - <http://www.google.com/m8/feeds>

**friendfeed.com** is only requesting **one-time access**. If it needs access in the future, you will be prompted again for permission. friendfeed.com will not have access to your password or any other personal information from your Google Account. [Learn more](#)

# Three Legged Contact Import

The screenshot shows the FriendFeed website interface. At the top left is the "friendfeed" logo. To its right is a search bar with the text "Search". In the top right corner, the user's name "Larry Half" is displayed along with navigation links for "Friends", "Tools", "Account", and "Sign out".

On the left side, there is a navigation menu with the following items: "5 requests" (with an envelope icon), "Home", "Favorites", "Personal", "Professional new list", "Me", "Rooms", and "Everyone".

The main content area is titled "Friends". Below the title are several filter tabs: "Subscriptions", "Subscribed to me", "Ignored", "Imaginary", "Recommended", "Stats", and "Find + Invite".

The main message reads: "1 of your contacts are already using FriendFeed. Subscribe to them below." Below this, it says "You're already subscribed on FriendFeed to 4 of your contacts." A table below this message contains one row with a checked checkbox, a small profile picture, a double-headed arrow, and a "(view feed)" link.

<input checked="" type="checkbox"/>	Select/Deselect all
<input checked="" type="checkbox"/>	  (view feed)

# Two Legged Public Search

Yahoo! My Yahoo! Mail Welcome, Sign Out

## YAHOO! DEVELOPER NETWORK

MY PROJECTS APIs & WEB SERVICES RESOURCES COMMUNITY SUPPORT

YDN / My Projects

### My Projects

#### OAuth Applications

**YOU DON'T HAVE ANY OAUTH APPS.** [New Application](#)

OAuth is a new open protocol for secure API authentication. OAuth provides access to Yahoo!'s newest APIs & web services.

Use OAuth if your app accesses any public API or social services like the Yahoo! Status, Profiles, or Updates APIs.

#### Open Applications

**YOU DON'T HAVE ANY OPEN APPS.** [New Application](#)

The [Yahoo! Application Platform](#) (YAP) lets you build and launch apps using a new set of social APIs on Yahoo!. Get started now and delight the largest daily viewing audience on the web.

#### Browser-based Authentication Protected Applications

**YOU DON'T HAVE ANY BBAUTH APPS.** [New Application](#)

[Browser-based authentication](#) (BBAuth) lets your apps access Yahoo! users' data (with their permission) via secure APIs.

BBAuth was created at Yahoo! to provide a Single Sign-On (SSO) facility, with access to any public API. Use it to access Yahoo!'s classic [Address Book](#), [Mail](#), and [MyBlogLog](#) APIs.

#### YOUR DEVELOPER PROFILE

**Public Information:**  
**Larry Half**

**Private Information:**

#### POPULAR APIS

- **Maps APIs**  
Easily embed rich and interactive maps into your web and desktop applications.
- **Flickr API**  
Flickr exposes a rich set of Web services that make the service highly hackable.
- **Yahoo! Mail APIs**  
Build applications to perform tasks such as listing messages, displaying folders and more.
- **Yahoo! Address Book API**  
Use the API for social network invitations, email address auto-complete, and a variety of other options.
- **Search APIs**  
Access Yahoo! Search content and services in your favorite programming languages.

[See all Yahoo! APIs](#)

# Two Legged Public Search

## So, you want to use some Yahoo! APIs...

We need some information from you... To use Yahoo! Web Services, we need some information about you and the application you're building. We collect this information to get a better understanding of how Yahoo! Web Services are being used and to protect the security and privacy of Yahoo! users. *All questions are required*



### About your application

Application Name:

Kind of Application:

Description:

### Security & Privacy

Yahoo! APIs use the [OAuth protocol](#) for secure validation of API usage and end-user authentication, if needed.

- Access Scopes:  This app will only access public APIs, Web Services, or RSS feeds.  
 This app requires access to private user data.

### Contact information

Just in case something comes up and we need to get ahold of you :-)

Application Owner:

Contact Email:

Terms of Use:  I have read and agree to the Yahoo! Developer Network [Terms of Use](#).

# Two Legged Public Search

The screenshot shows the Yahoo! Developer Network interface for a 'Two Legged OAuth Demo'. At the top, there are navigation links for 'Yahoo!', 'My Yahoo!', and 'Mail', along with a 'Welcome, [username]' message and a 'Sign Out' link. The main header features the 'YAHOO! DEVELOPER NETWORK' logo and a search bar. Below this is a navigation menu with 'MY PROJECTS', 'APIs & WEB SERVICES', 'RESOURCES', 'COMMUNITY', and 'SUPPORT'. The breadcrumb trail indicates the user is in 'YDN / My Projects / Key Created: Two Legged OAuth Demo'.

A green checkmark icon is followed by the heading 'Your API Key has been approved!'. Below this, a message states: 'This API Key allows you to write an application that interacts with OAuth-enabled and public Yahoo! APIs.' An information icon indicates that this information will always be available in the 'MY PROJECTS' section.

### Two Legged OAuth Demo Details

**API Key** (OAuth consumer key)

`dj0yJmk9M0Z1TkVieXhLWFJsJmQ9WVdrOU1YaHNNRTFYTTJNbWNHbzIOREV6TWp`

Your API Key is a required parameter when making calls to Yahoo! APIs & web services

**Shared Secret**

[Redacted]

Your Shared Secret is used to hash a URL and create a unique signature

**Access Scopes**

API NAME	DESCRIPTION	PERMISSIONS

Your application will be able to make calls to the following secure Yahoo! APIs & web services using OAuth

**Application ID**

[Redacted]

Your Application ID is unique to your application

#### NEXT STEPS...

- Mashing up with BBAuth Yahoo! APIs, Flickr or Upcoming?**  
Your Application Key can be used with any public Yahoo! API
- Learn how to make authenticated API & Web Services calls with OAuth**  
OAuth is a simple, secure, and quick way to publish and access
- Some APIs you can use with this key**
  - Maps**  
Easily embed rich and interactive maps into your web and desktop



# Two Legged Public Search

## Search the News via YQL

Internet

### Results

- **Obama to use Internet to address nation** 2008/11/15 [UPI](#)  
WASHINGTON, Nov. 15 (UPI) -- U.S. President-elect Barack Obama says he will use Internet videos to update the nation in a modern version of Franklin Roosevelt's "fireside chats" on radio.
- **Internet Video in Korea Eclipses the DVD** 2008/11/14 [New York Times](#)  
I read an interesting item on Bloomberg the other day about how Warner Brothers is scaling back its DVD operation in South Korea because of rampant illegal movie downloading. But at the same time it is greatly expanding its authorized Internet movie distribution.
- **Two nabbed in internet-based prostitution sting** 2008/11/15 [NBC 2 Fort Myers](#)  
Punta Gorda Police Detectives arrested two in to an Internet-based prostitution investigation.
- **Internet IQ Checklist for Journalists** 2008/11/15 [Poynter Institute](#)  
Evaluating online information is one of the trickiest and most important parts of using the Internet in your reporting, so I thought I'd follow up Sree's tips on judging accuracy with a checklist to help guide you.
- **Two arrested in Internet-based prostitution sting** 2008/11/15 [WINK TV Southwest Florida](#)  
Punta Gorda Police Detectives tell WINK News they arrested two people after a month long internet-based prostitution investigation.
- **Internet war fires up golfers** 2008/11/15 [Daily Telegraph](#)  
AN internet war has added a bitter edge to this year's summer of golf, with threats of legal action and recriminations over an ugly feud that has become very public.
- **Internet Explorer Mobile 6 Only Coming to New Models** 2008/11/15 [Brighthand](#)  
Microsoft has revealed that the next version of Internet Explorer Mobile will only be released on new models. There will be no official way for current users to get this upgrade.
- **Student arrested for internet threat** 2008/11/15 [KPUA AM 670 Hilo](#)  
Detectives from the Hawaii Police Department's Criminal Investigations Section have arrested a 25-year-old student at the University of Hawaii at Hilo. Robert Scales of Hilo was arrested for first-degree terroristic threatening after he posted a perceived threatening message on an internet website.
- **National Internet Exchange starts operations in Ahmedabad** 2008/11/15 [Calcutta News](#)  
The National Internet Exchange of India (Nixi) has set up its new hub in Ahmedabad, a move that would help internet service providers in Gujarat reduce bandwidth expenses.
- **Obama to use Internet to address nation** 2008/11/15 [Moldova.org](#)  
U.S. President-elect Barack Obama says he will use Internet videos to update the nation in a modern version of Franklin Roosevelt's fireside chats on radio. Obama Saturday recorded the weekly four-minute Democratic address for radio and then posted a YouTube video on his transition site, Change.gov., the Los Angeles Times reported. Obama plans to post such videos weekly to spread word of his ...