

IBM Training

Student Exercises

Lab 3 - Create a Cognitive News Search App

IBM Watson Discovery News Hands-On

Watson Technical Enablement
IBM Federal CTO

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March 2018 edition

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Overview

The web is home to massive amounts of data, with more being created every moment of every day. Organizations that can harness this constant stream of information to gain understanding, plan strategies, and find opportunities will be successful. Developers who can help them do it will be essential.

The Watson Discovery service enables developers to create cloud-native applications for cognitive search and content analytics. Watson Discovery News is available as pre-enriched data collection within Watson Discovery, offering a ready-to-use dataset of the latest news that is updated continuously, with approximately 300,000 new articles and blogs added daily.

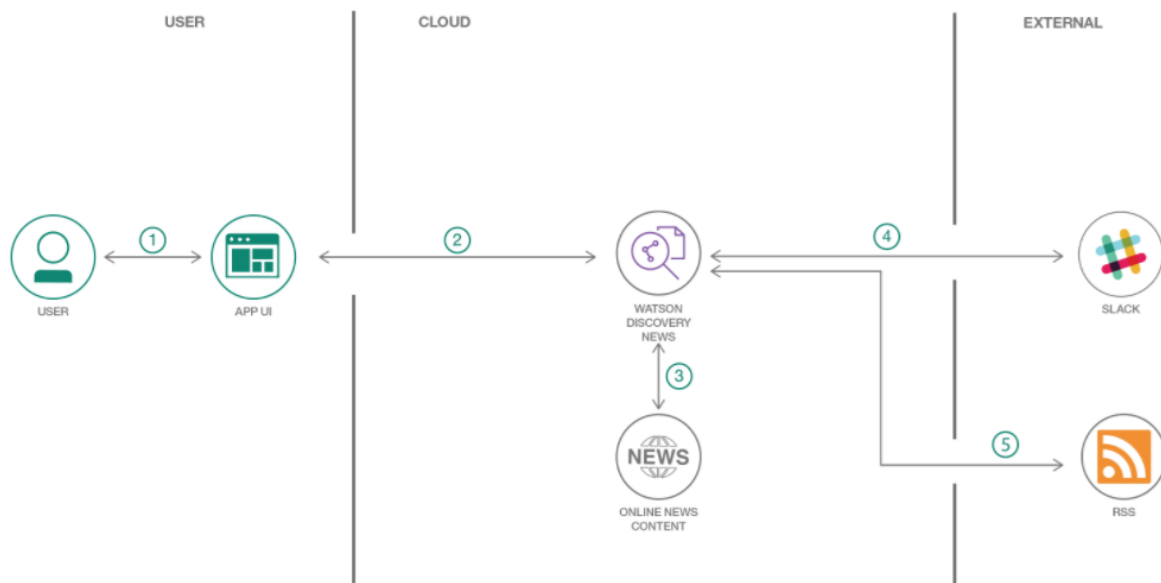
This Code Pattern will demonstrate two use cases for accessing Watson Discovery News:

- **Trending Topics in the News** - Identify popular topics over the past 24 hours. Topics can be general, or for a specific industry or category.
- **Search** - Query for the most relevant new articles about a specific topic or subject. Results will include enrichment data, such as article summary text and sentiment analysis.

Optionally included will be examples of how to:

- Build a **RSS News Feed** generator to push Trending Topic news to your favorite RSS reader.
- Build a **SlackBot** to access the Search feature from Slack.

Flow



1. The user interacts with the app UI to request relevant news content.
2. The app sends user requests to Watson Discovery News
3. The Watson Discovery Service is continually crawling the web to update its Discovery News collection
4. The Watson Discovery Service responds to Slack search requests.
5. The Watson Discovery Service seeds news articles to the RSS Reader.

Included components

- [Watson Discovery](#): A cognitive search and content analytics engine for applications to identify patterns, trends, and actionable insights.

Featured technologies

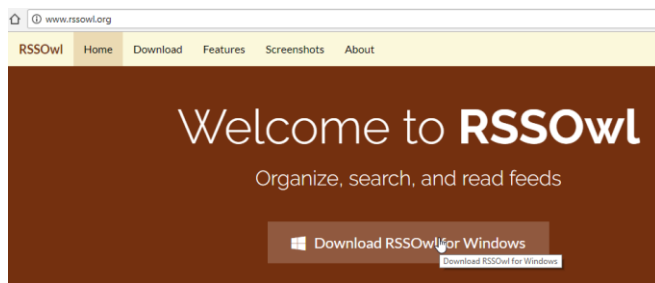
- [Node.js](#) - An asynchronous event driven JavaScript runtime, designed to build scalable applications
- [React](#) - Javascript library for building User Interfaces
- [Express](#) - A popular and minimalistic web framework for creating API and Web server
- [Yarn](#) - Fast, reliable and secure dependency manager for node.js
- [RSS](#) - RSS (Rich Site Summary) is a format for delivering regularly changing web content in our case it will be trending topics
- [Slack](#) - Slack is a cloud-based set of team collaboration tools and services with chat bot integration
- [Botkit](#) - Framework for creating and managing chat bots

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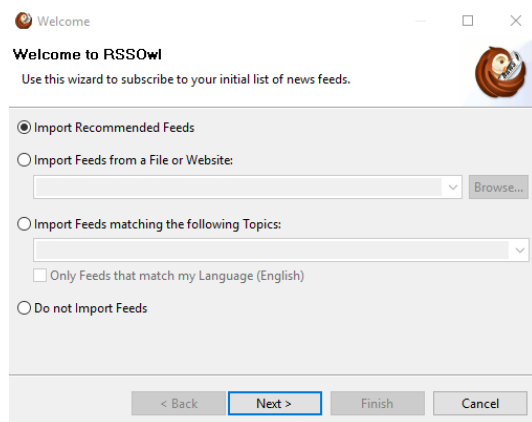
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Pre-requisites:

1. IBM Cloud account
 - a. To register an IBM Cloud account, click the following link: <https://console.bluemix.net/registration>
2. RSS Bot
 - a. Navigate to the RSSOwl website > <http://www.rssowl.org/>
 - b. Download the RSSOwl application.



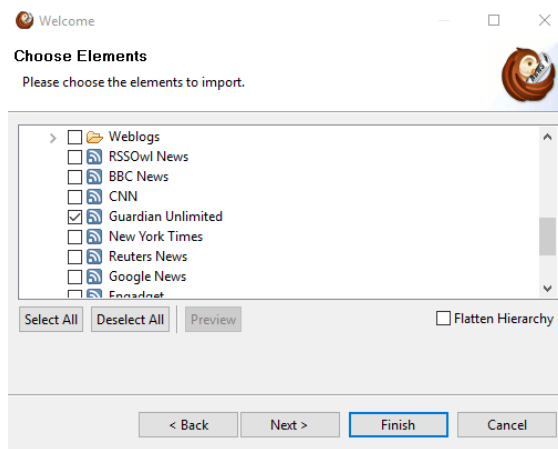
- c. Open the downloaded application.
- d. Follow the Install Wizard steps. Accept all default settings. Click Finish.
- e. The RSSOwl will start. Accept defaults > click next



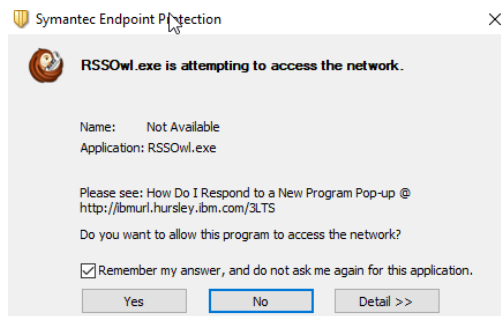
- f. Click the "Deselect All" button > then click on a new(s) feed you would like to receive; e.g. "Guardian Unlimited" > click Finish.

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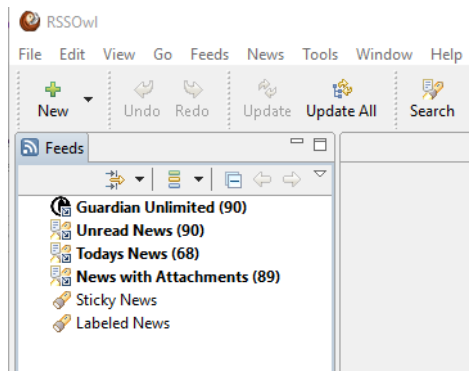
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g. Click “Yes” button if you receive a Symantec Endpoint Protection warning message.



h. Click “Finish” on the “RSSOwl Tutorial” > now you should see the RSS application displayed with your current news feeds.



3. Slack (optional)

a. To register a Slack account, click the following link: <https://slack.com>

4. GitHub (optional)

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Exercise Instructions

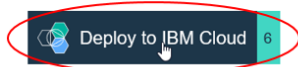
Lesson 1: Deploy to IBM Cloud

1. Go to the web page -> https://github.com/IBM/watson-discovery-news/?cm_sp=IBMCode-_-create-a-cognitive-news-search-app-_-Get-the-Code
2. Press the Deploy to IBM Cloud button on the web page

Steps

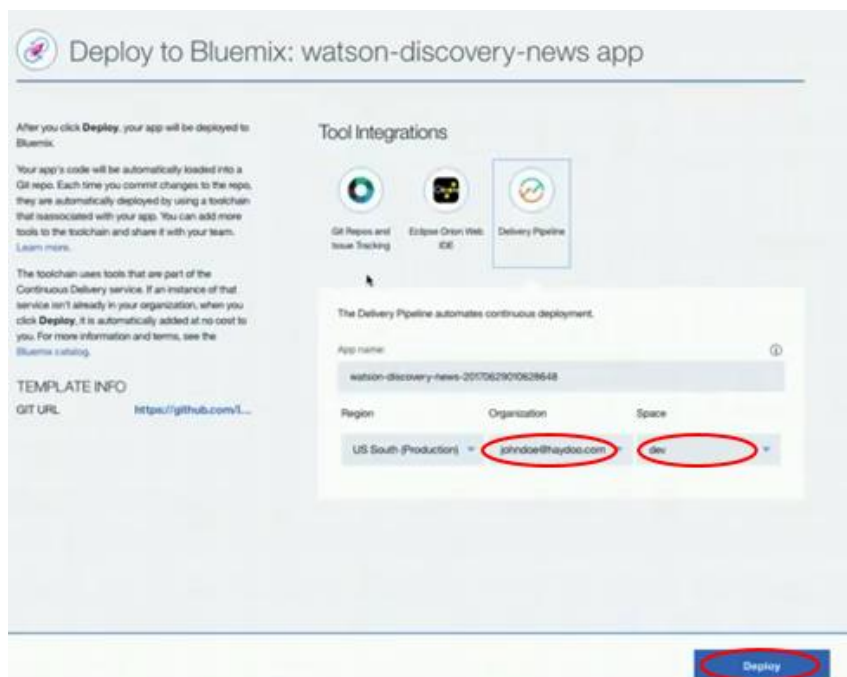
Use the Deploy to IBM Cloud button OR create the services and run locally.

Deploy to IBM Cloud



1. Press the above Deploy to IBM Cloud button and then click on Deploy .
2. In Toolchains, click on Delivery Pipeline to watch while the app is deployed. Once deployed, the app can be viewed by clicking 'View app'.

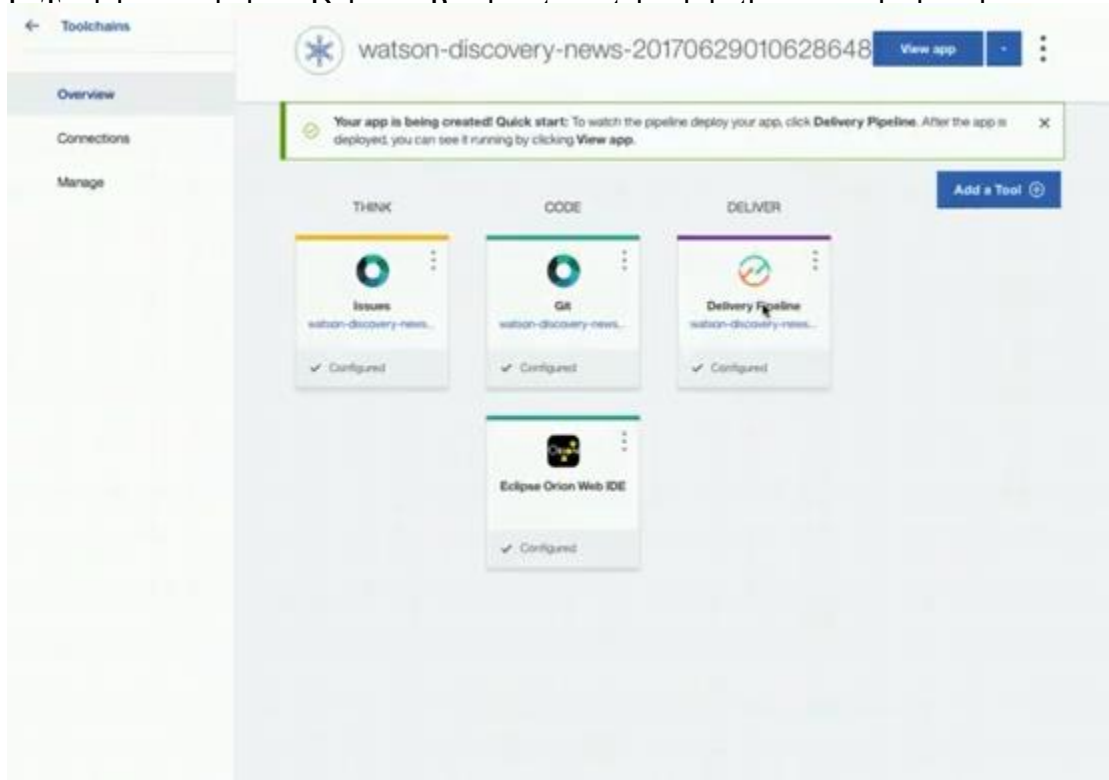
3. Enter your Organization “Watson March PoT” and Space “News”. Then click on Deploy.

A screenshot of the "Deploy to Bluemix: watson-discovery-news app" page. The page has a light blue header with the title. Below the header, there is a section titled "After you click Deploy, your app will be deployed to Bluemix." followed by a paragraph explaining the deployment process. To the right, there is a "Tool Integrations" section with three icons: "Git Repos and Issue Tracking", "Eclipse Orion Web IDE", and "Delivery Pipeline". Below this, there is a section titled "The Delivery Pipeline automates continuous deployment." with a form for "App name" (filled with "watson-discovery-news-2017062910628648"). Below the app name, there are three dropdown menus: "Region" (filled with "US South (Production)"), "Organization" (filled with "john.doe@ibm.com" and circled in red), and "Space" (filled with "dev" and circled in red). At the bottom right, there is a blue "Deploy" button circled in red.

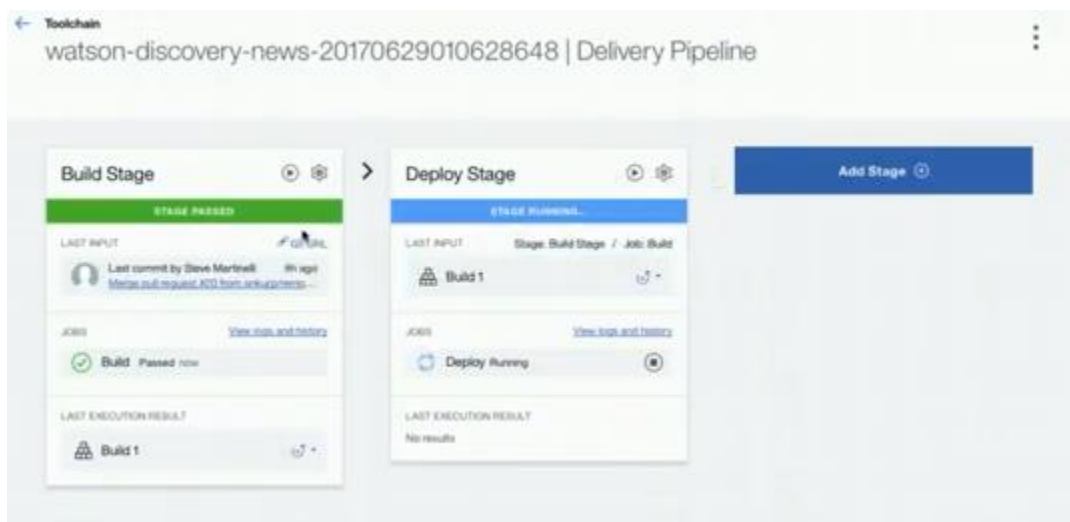
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4. You will see the Delivery Pipeline toolchain in the list.



5. You will see Toolchain > Delivery Pipeline deploy your application. Once deployed, the app can be viewed by clicking 'View app'.



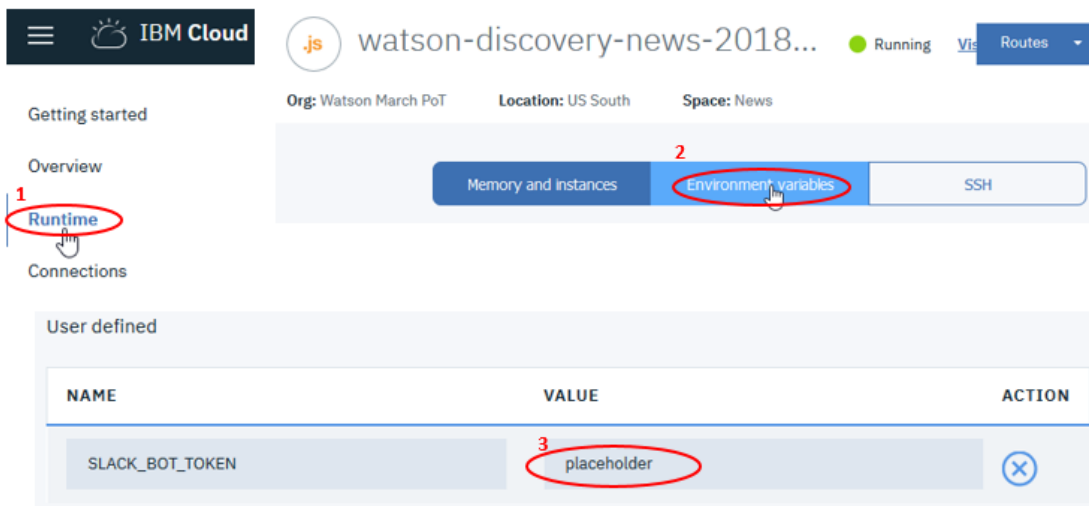
6. Next, you'll need to access your Watson Discovery Service to add a Slack Token. Click on the menu icon > select Dashboard > click on your Watson Discovery service.

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7. Set the Slack Bot variable. Click on “Runtime” in the left-hand menu > click “Runtime Variable” > scroll down to the User Define variables > the system already has a “SLACK_BOT_TOKEN” variable. You will need to replace this with your slack bot variable.



8. To create a Slack Bot token > go back to the “Create a cognitive news search app” web page on GitHub > <https://developer.ibm.com/code/patterns/create-a-cognitive-news-search-app/> > search for “Configure Slack” then click on the URL link. To navigate to Slack Bot Token web page > open your slack workspace in a webpage -> append this “/services/new/bot” on your Slack URL > e.g. <https://leeaisite.slack.com/apps/new/bots> > press return.

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Run locally

NOTE: These steps are only needed when runn

1. Clone the repo
2. Create Watson Services with IBM Cloud
3. Configure Watson Discovery
4. Configure Slack
5. Run the application

9. You should see this Slack bot web page. Give your Slack bot a username; e.g. "watson-bot" > then press "Add bot integration" button.

Browse apps > Custom Integrations > Bots > New configuration

Bots

Connect a bot to the Slack Real Time Messaging API.

Run code that listens and posts to your Slack team just as a user would.

Username

Start by choosing a username for your bot

Usernames must be all lowercase. They cannot be longer than 21 characters and can only contain letters, numbers, periods, hyphens, and underscores. Most people choose to use their first name, last name, nickname, or some combination of those with initials.

Add bot integration

By creating a bot integration, you agree to the [Slack API Terms of Service](#).

10. Slack will generate a Slack bot token. Please copy it and paste it into your Discovery service runtime environment > Slack bot variable. Click Save button > you will see that toolchain is restarting your app.

Integration Settings

API Token

The library you are using will want an API token for your bot.

1. Copy

xoxb-337529198307-Rj0S0s74DZc

Regenerate



Be careful when sharing bot user tokens with applications. Do not publish bot user tokens in public code repositories. [Review token safety tips](#).

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js watson-discovery-news-2018... **Restarting** Visit App URL Routes

4

Org: Watson March PoT Location: US South Space: News

```
"credentials": {
  "url": "https://gateway.watsonplatform.net/discovery/api",
  "username": "9c24e177-41ac-41e9-ba9a-178abd93be80",
  "password": "W6ihXCclyQIB"
},
"syslog_drain_url": null,
"volume_mounts": [],
"label": "discovery",
"provider": null,
"plan": "lite",
"name": "discovery-news-service",
"tags": [
  "watson",
  "ibm_created",
  "ibm_dedicated_public",
  "lite"
]
}
```

Export

User defined

NAME	VALUE	ACTION
SLACK_BOT_TOKEN	xoxb-337529198307-Rj0S0s74Dz	ⓧ

2. Paste

3

Add Save Reset Export

Lesson 2: View Discovery News Trending Topics

1. Click on "Overview" in the left-hand menu. Wait until the application has restarted. Then click on "Routes" and select your "Watson Discovery News" service.

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IBM Cloud

Getting started

1 Overview

Runtime

Connections

Logs

Monitoring

API Management

Org: Watson March PoT Location: US South

Running

2 Routes

3 watson-discovery-news-20180328024200990-preintellect

Edit routes

Manage domains

Buildpack: SDK for Node.js™

Instances: All instances are healthy

Allocation: Still available

Connections (1)

discovery-news-service

Create connection

Runtime cost

\$0.00

Current charges for billing period

\$0.00

Estimated total for billing period (Mar 1, 2018 - Mar 31, 2018)

Current and estimated cost excludes connected services.

View full usage details

Activity feed

2. You will see your Discovery Service display with two options. Click on the “Find Trending Topics in Watson News” URL link.

Watson Home

IBM Watson Discovery Service

This web app showcases multiple ways to utilize the Watson Discovery Service to query data collections, such as Watson News.

Watson News is a pre-enriched dataset that is updated continuously with over 300,000 news articles and blogs a day.

Select from one of the following examples:

- Find Trending Topics in Watson News
- Search Watson News for Specific Topics

Get Started API Reference Documentation Fork on GitHub

Start for free in IBM Cloud

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3. Click on the RSS icon to view the URL and content in JSON format.

Watson Home / Trending News Topics

Trending Topics

This is a web app to help you find Trending Topics in the News using Watson Discovery Service. You can subscribe to these trending topics and the story for that trending topic using a RSS feed reader by clicking on the RSS button below.

Get Started [API Reference](#) [Documentation](#) [Help on GitHub](#) [Feedback](#)

Trending Topics in News

Facebook US Trump China California
U.S. Apple Russia UK NYSE India Google Congress Australia NFL CEO
North Korea Michigan Arizona Hinduism Times

Query to the Discovery Service

```
{
  "return": "enriched_title.entities.text",
  "aggregation": {
    "term(enriched_title.entities.news.count(20).top_hits(1))",
    "filter": "enriched_title.entities.news.count(20).top_hits(1)"
  }
}
```

Trending Topics in Other Categories

You can also view trending topics for certain categories below and subscribe to its RSS feed:

- LAW, GOVT AND POLITICS/LAW ENFORCEMENT/POLICE
- LAW, GOVT AND POLITICS/GOVERNMENT
- BUSINESS AND INDUSTRIAL
- NEWS
- SPORTS/FOOTBALL
- SPORTS
- ART AND ENTERTAINMENT/MOVIES AND TV/MOVIES
- SOCIETY/UNREST AND WAR
- EDUCATION/SCHOOL
- FAMILY AND PARENTING/CHILDREN
- LAW, GOVT AND POLITICS
- LAW, GOVT AND POLITICS/LEGAL ISSUES/HUMAN RIGHTS
- LAW, GOVT AND POLITICS/POLITICS/ELECTIONS
- SPORTS/BASEBALL
- TECHNOLOGY AND COMPUTING
- SPORTS/BASKETBALL
- SOCIETY/CRIME/PERSONAL OFFENSE/HOMICIDE
- LAW, GOVT AND POLITICS/LEGAL ISSUES/LEGISLATION
- FINANCE/INVESTING/STOCKS
- HEALTH AND FITNESS
- ART AND ENTERTAINMENT/MOVIES AND TV/TELEVISION
- SCIENCE/WEATHER
- ART AND ENTERTAINMENT/MUSIC

4. Copy the RSS feed URL > open the RSSOwl app > click File > click Import > paste the URL > click Next.

← → ↺ 🏠

<https://watson-discovery-news-20180328024200990-preintellectual-serfdom.mybluemix.net/trending/feed/>

1. Copy

Undo
Cut
Copy
Paste
Paste & Go
Delete
Select All

This is a "Feed" of frequently changing content on this site.
You can subscribe to this feed to receive updates when this content changes.
Subscribe to this feed using ☐ Always use Live Bookmarks to subscribe to feeds.

Trending Topics in News

Import

Choose Source

Please choose the source of import.

☒ Import Feeds from a File or Website: 2. Paste

<https://watson-discovery-news-20180328024200990-preintellectual-serfdom.mybluemix.net/trending/feed/>

☐ Import Feeds matching the following Topics:

☐ Only Feeds that match my Language (English)

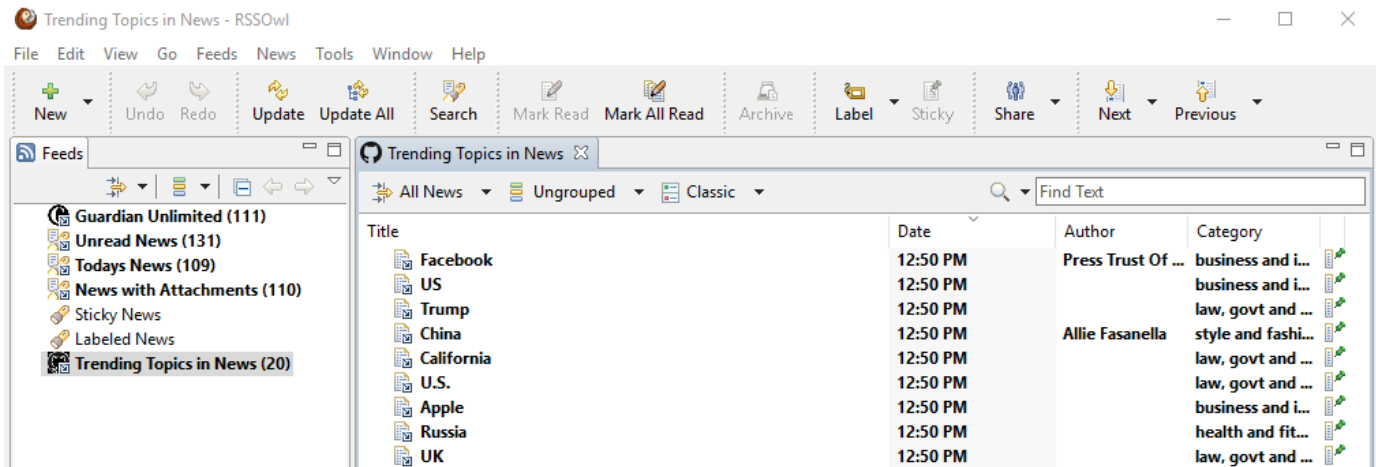
☐ Import Recommended Feeds

< Back **Next >** Finish Cancel

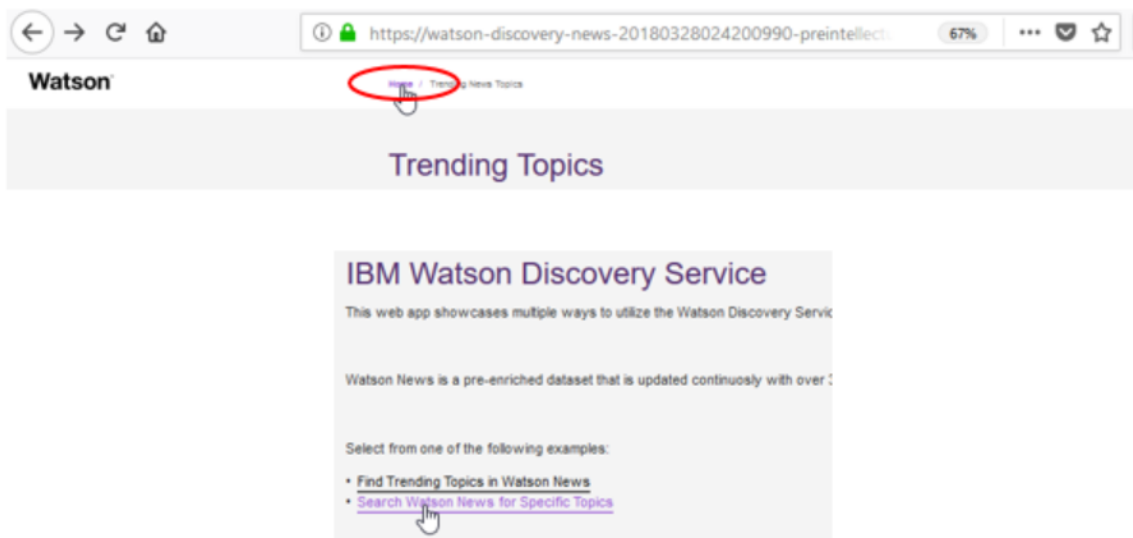
5. Now you should see your Watson Discovery News trending topics in your RSSOwl app.

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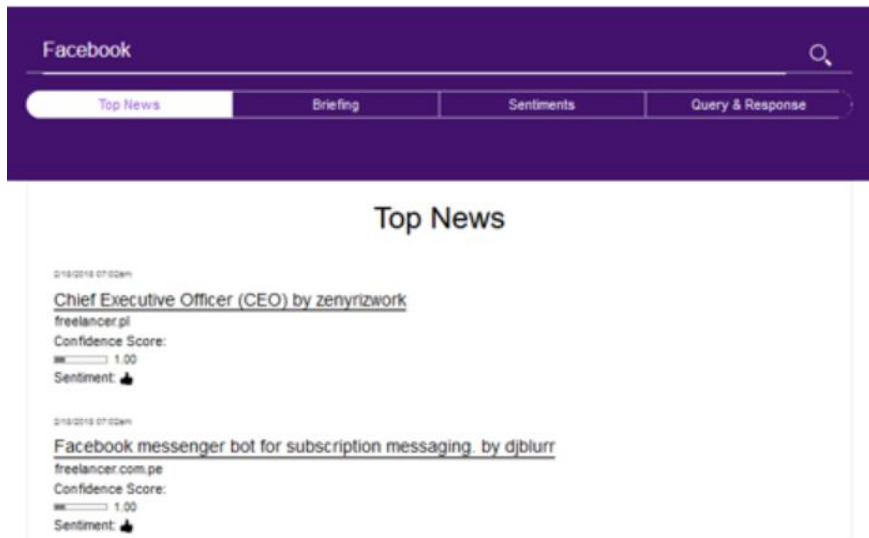
6. Next click on the “Home” URL at the top of the web page. Then click on “Search Watson News for Specific Topics”.



7. This section allows us to search for specific terms in the Discovery News. Please search for the term “Facebook” > click the magnified glass. Please explore the “Briefing”, “Sentiments”, and “Query & Response” functionality.

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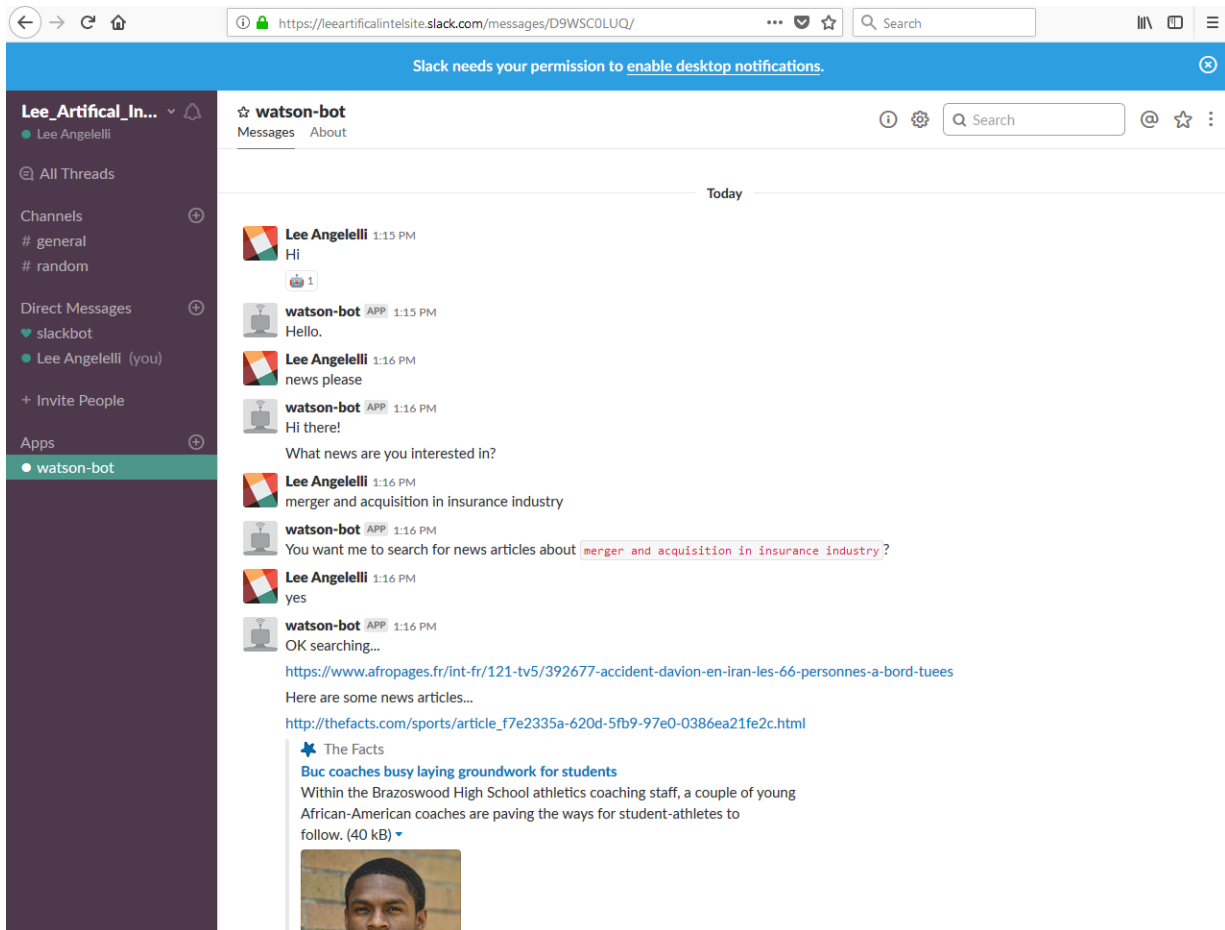
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Lesson 3: Request Slack Bot to Provide You News Feeds

8. Now let's explore the Slat Bot and Watson Discovery News integration functionality. Access your Slack Messages workspace. Open a web browser > type <http://my.slack.com/messages> ; e.g. <https://leeartificialintelsite.slack.com/messages/>
9. Under Apps section - you should see the watson-bot. Click on the Watson-bot. We would like for the Slack Bot to return us news feeds related to "merger and acquisition in insurance industry". Type these sequences of commands.
 - 9.1. Hi
 - 9.2. News please
 - 9.3. merger and acquisition in insurance industry
 - 9.4. yes

Note: The Slack Bot should return a list of news feeds related to > merger and acquisition in insurance industry.



Finished with the Lab!