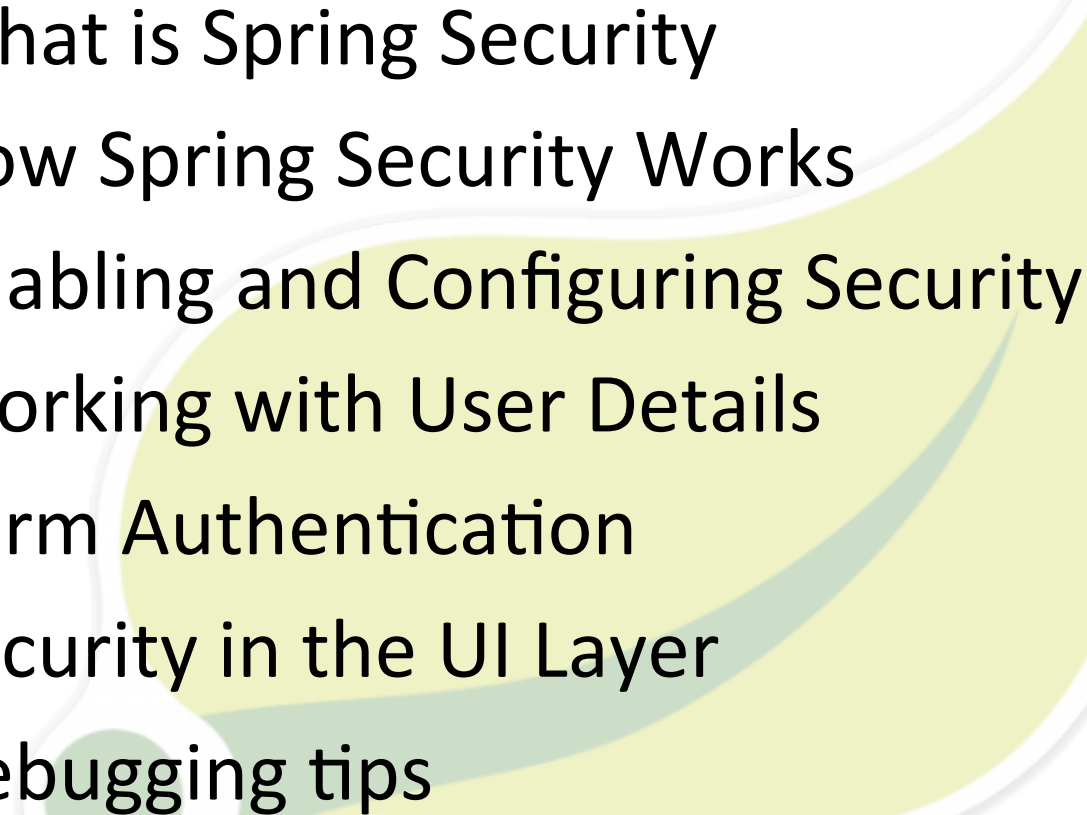


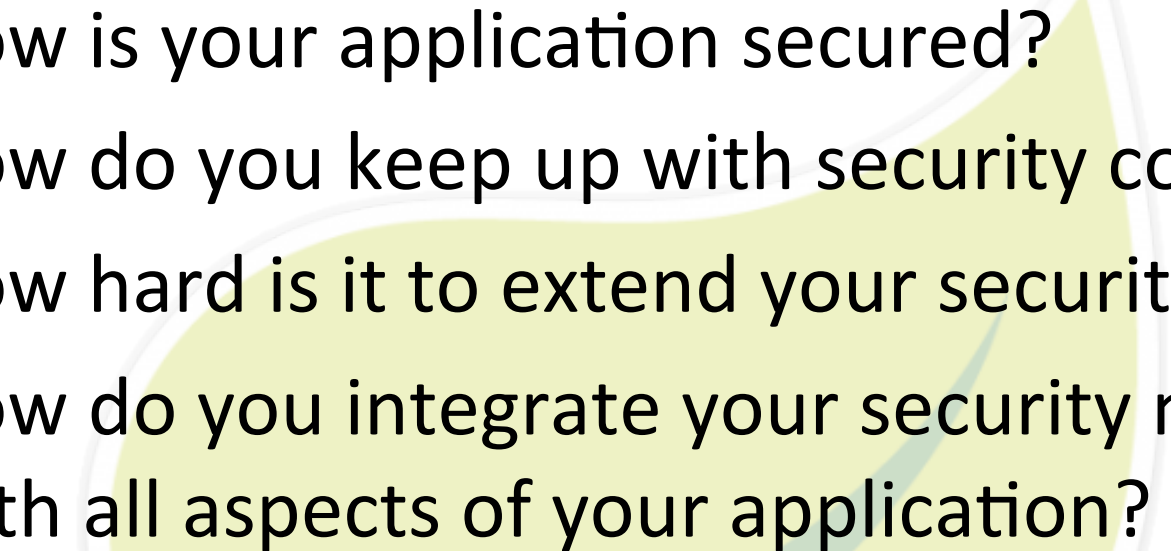
# Spring Security 101

An Introduction To Securing Spring  
Applications

# Agenda

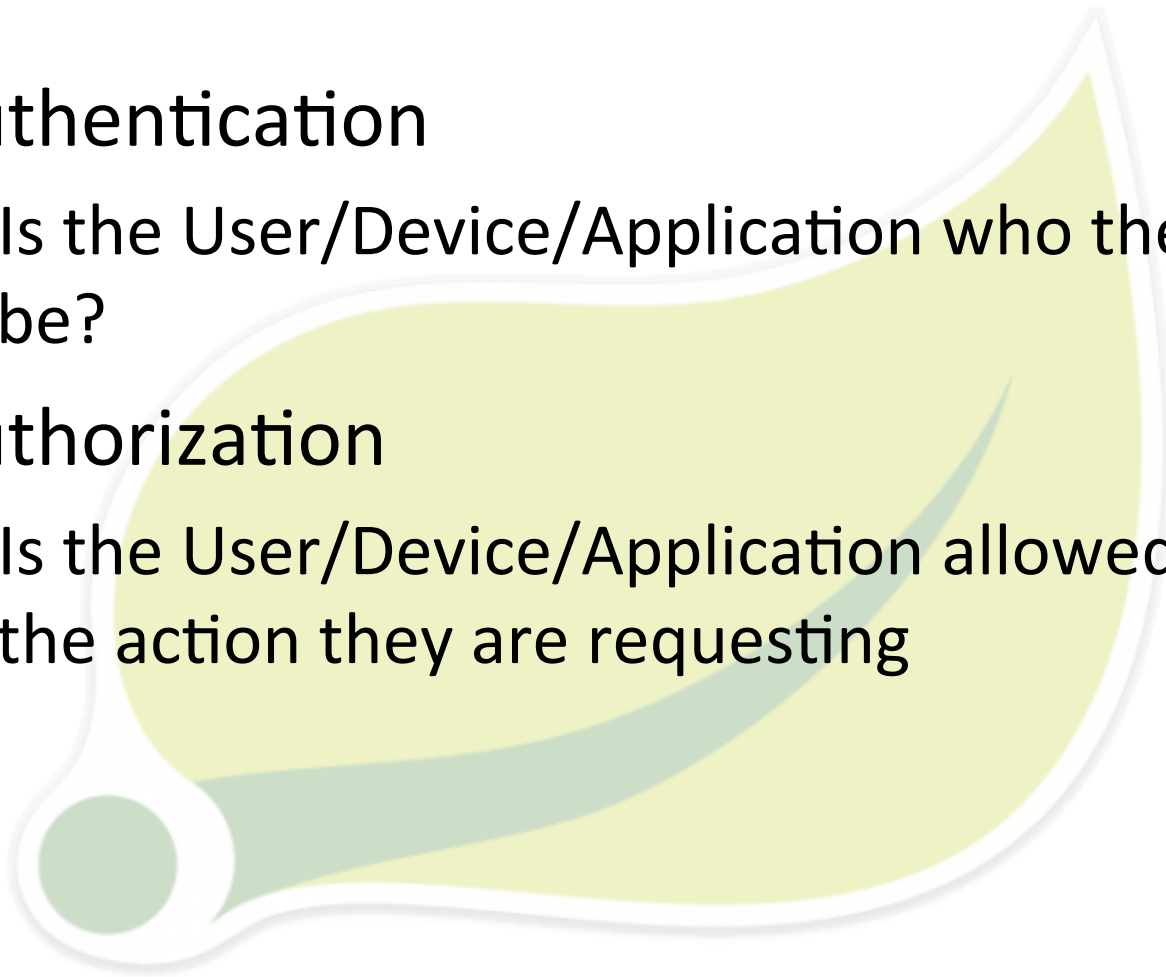
- What is Spring Security
  - How Spring Security Works
  - Enabling and Configuring Security
  - Working with User Details
  - Form Authentication
  - Security in the UI Layer
  - Debugging tips
- 

# Important Questions

- How is your application secured?
  - How do you keep up with security concerns?
  - How hard is it to extend your security model?
  - How do you integrate your security model with all aspects of your application?
- 

# Important Concepts

- Authentication
  - Is the User/Device/Application who they claim to be?
- Authorization
  - Is the User/Device/Application allowed to perform the action they are requesting



# Important Concepts

- Principle
    - Interface from java.security
    - Represents a logged in User
    - Spring Security Authentication is a Principle
- <http://docs.spring.io/autorepo/docs/spring-security/4.0.3.RELEASE/apidocs/org/springframework/security/core/Authentication.html>

# Important Concepts

- Authority
  - Contains the concept of a ROLE
    - Used for access control decisions

<http://docs.spring.io/spring-security/site/docs/current/apidocs/>

# Important Concept

- UserDetails

- Contains relevant details about the Principal

<https://docs.spring.io/spring-security/site/docs/3.2.6.RELEASE/apidocs/org/springframework/security/core/userdetails/User.html>

# Important Concept

- UserDetailsService
  - Implemented to provide a means of getting UserDetails references

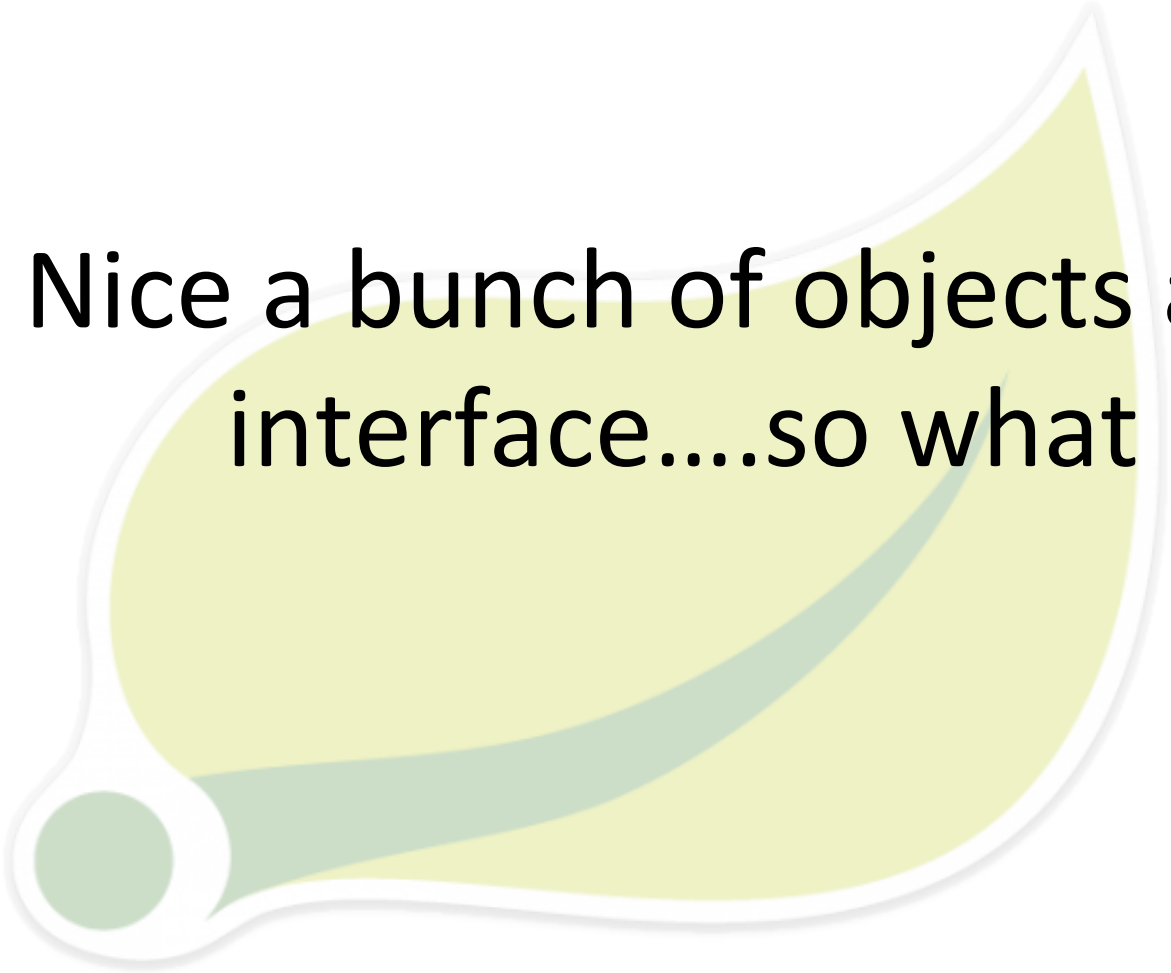
<http://docs.spring.io/autorepo/docs/spring-security/3.2.2.RELEASE/apidocs/org/springframework/security/core/userdetails/UserDetailsService.html>



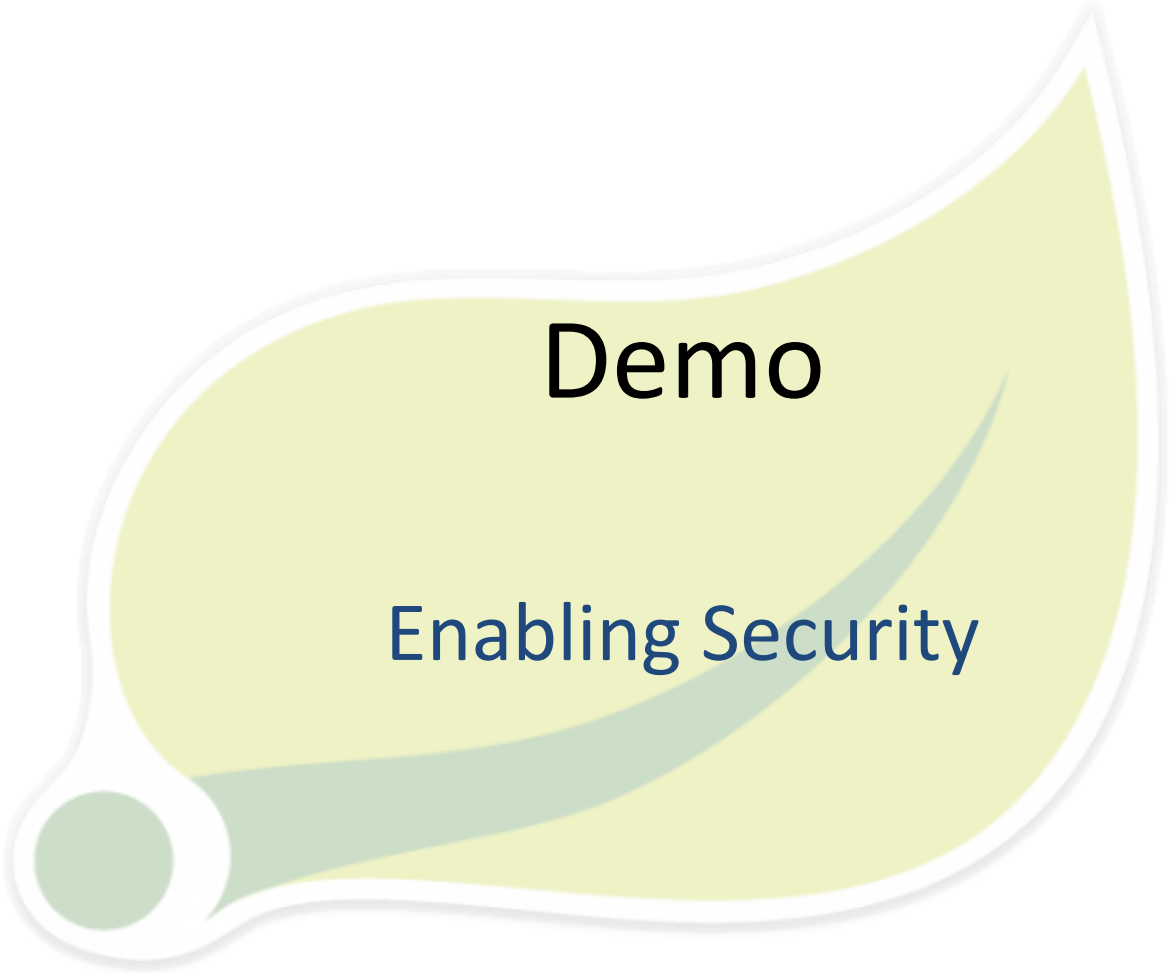
# Important Concepts

- SecurityContextHolder
  - Provides a series of method to access the Security Context (which contains the UserDetails)

<http://docs.spring.io/spring-security/site/docs/4.0.0.RELEASE/apidocs/org/springframework/security/core/context/SecurityContextHolder.html>



Nice a bunch of objects and  
interface....so what

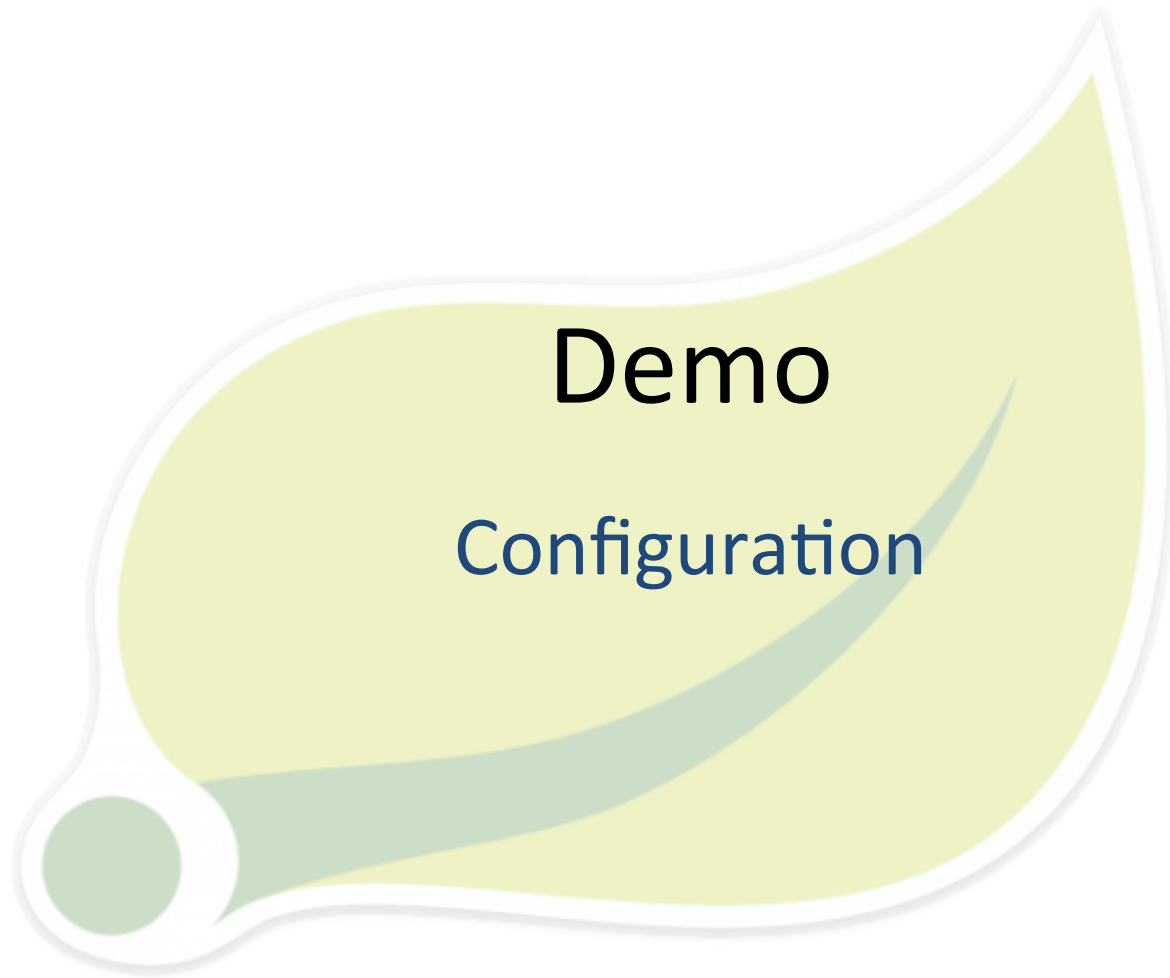


Demo

Enabling Security

# Exploring Configuration

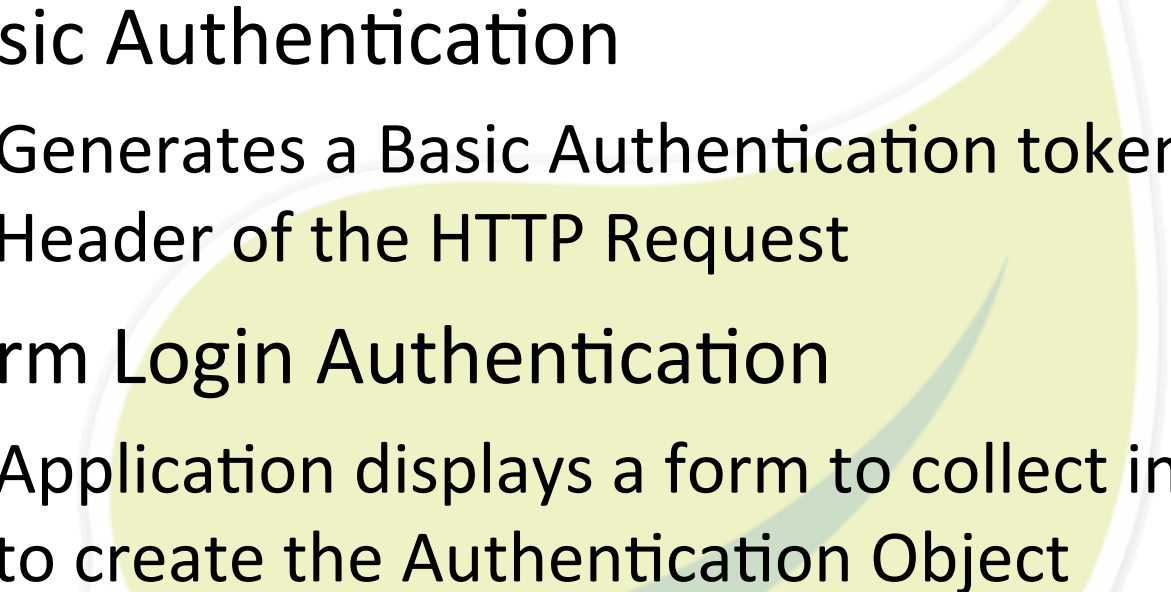
- Other things we can enable in the configuration
  - Specify patterns that might not require security
  - Channel Security
  - Cross Site Request Forgery (CSRF)
  - Remember Me Functionality
  - Log Out

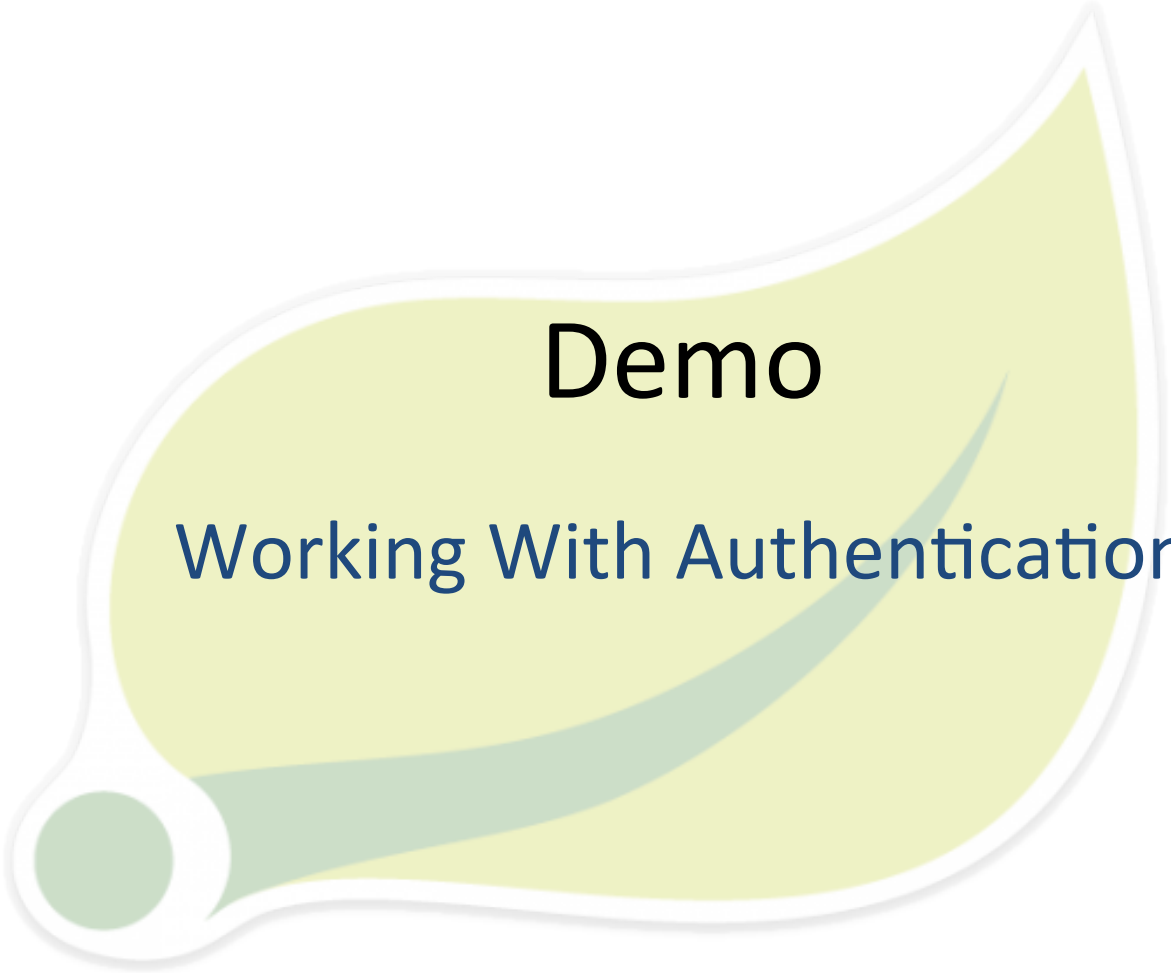


Demo

Configuration

# Different Types Of Authentication

- Basic Authentication
    - Generates a Basic Authentication token in the Header of the HTTP Request
  - Form Login Authentication
    - Application displays a form to collect information to create the Authentication Object
- 

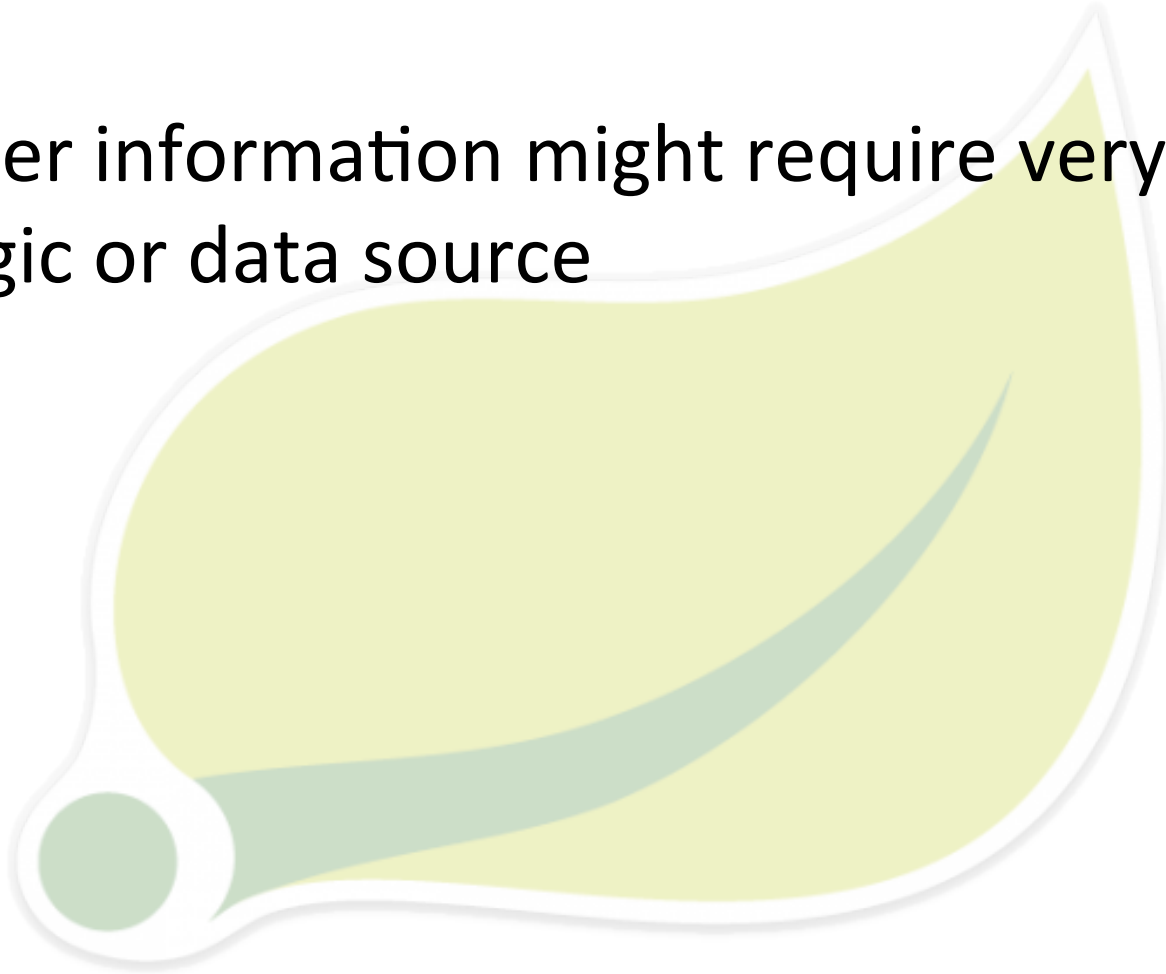


**Demo**

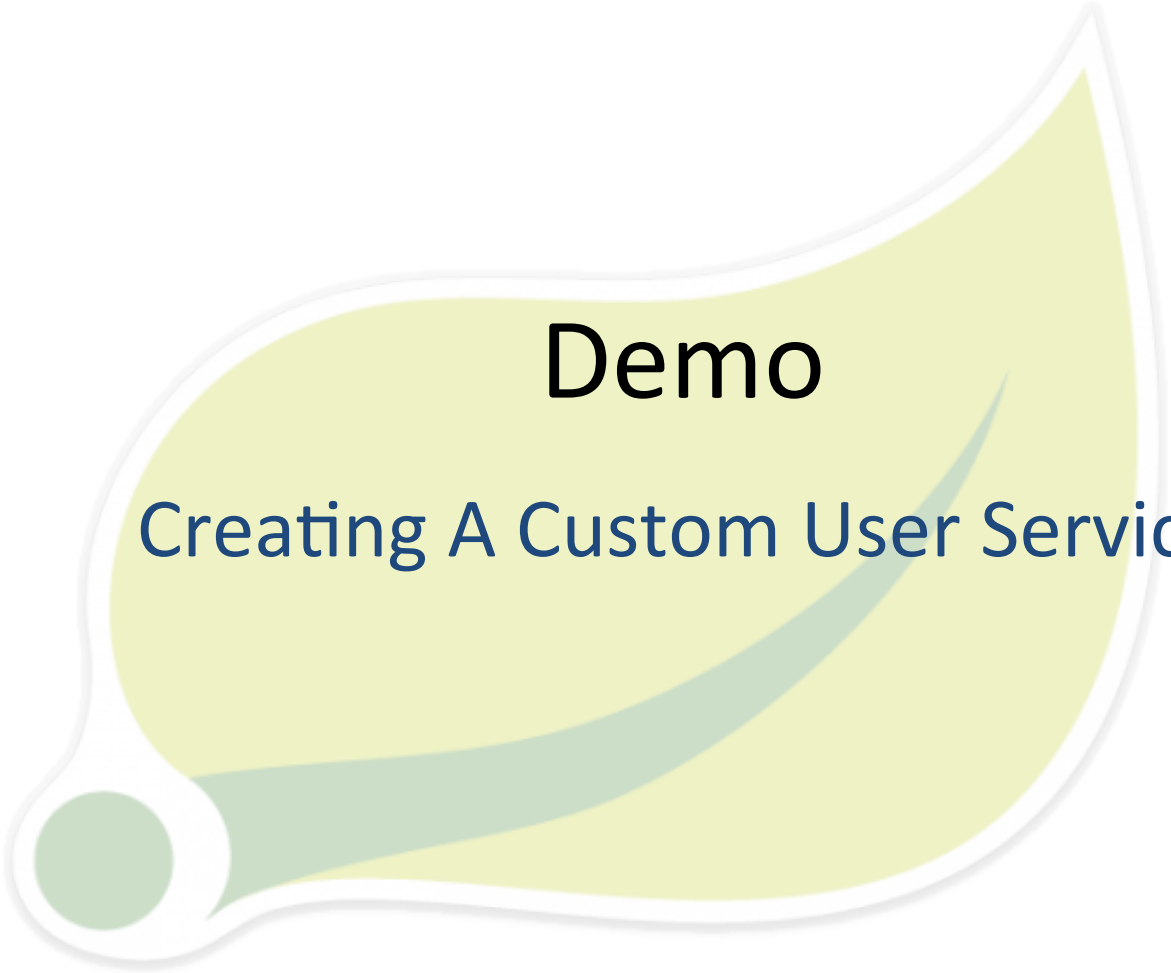
Working With Authentication

# Custom User Services

- User information might require very custom logic or data source





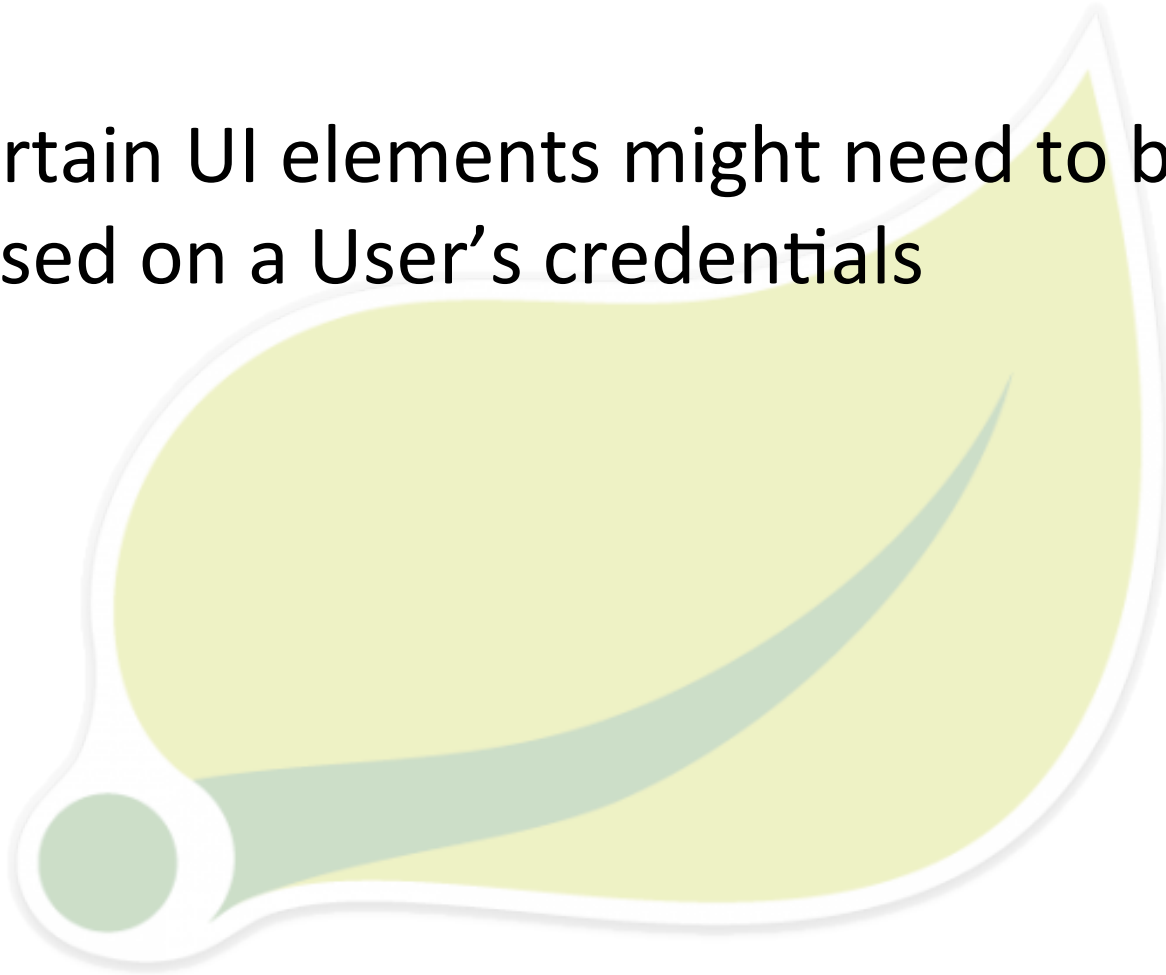


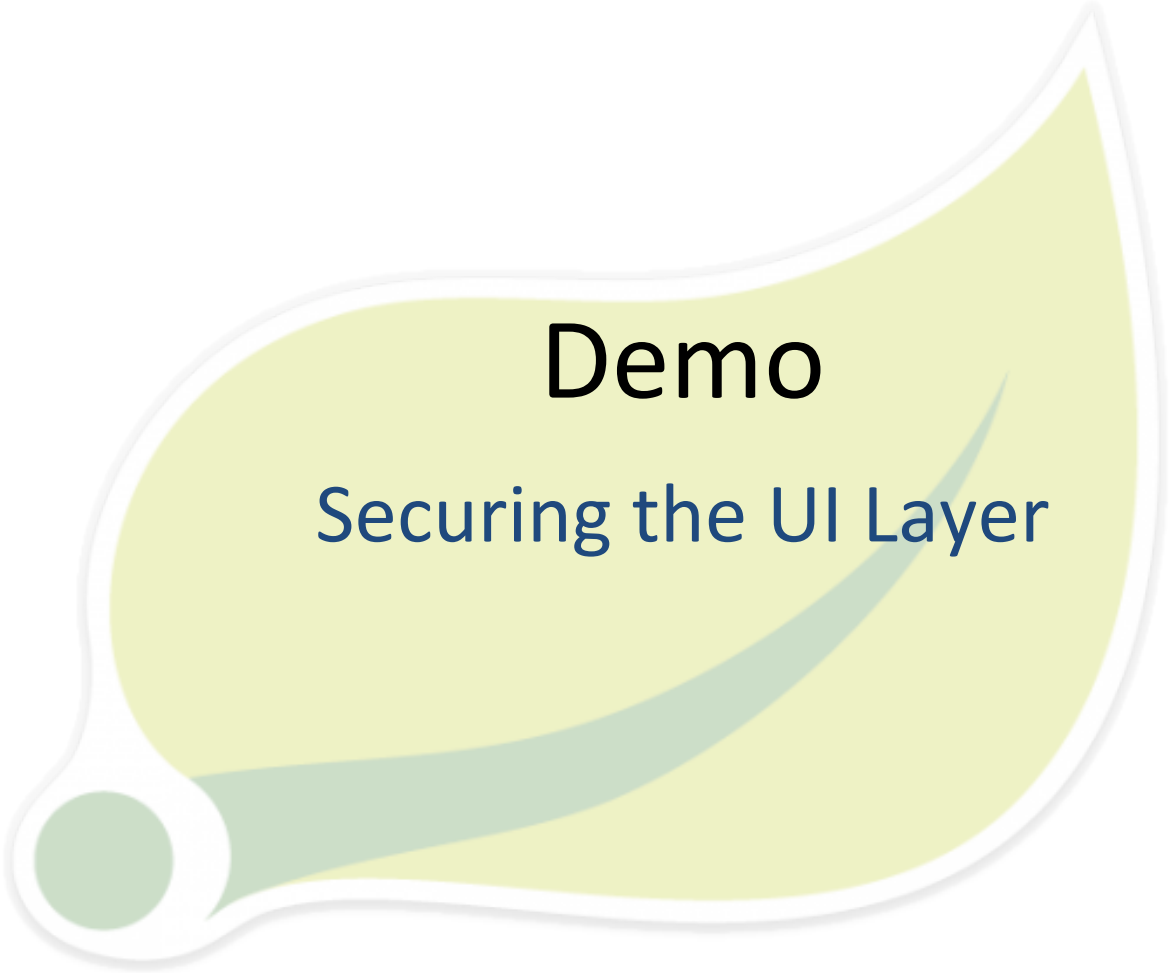
# Demo

Creating A Custom User Service

# Working With The UI Layer

- Certain UI elements might need to be hidden based on a User's credentials





**Demo**

Securing the UI Layer

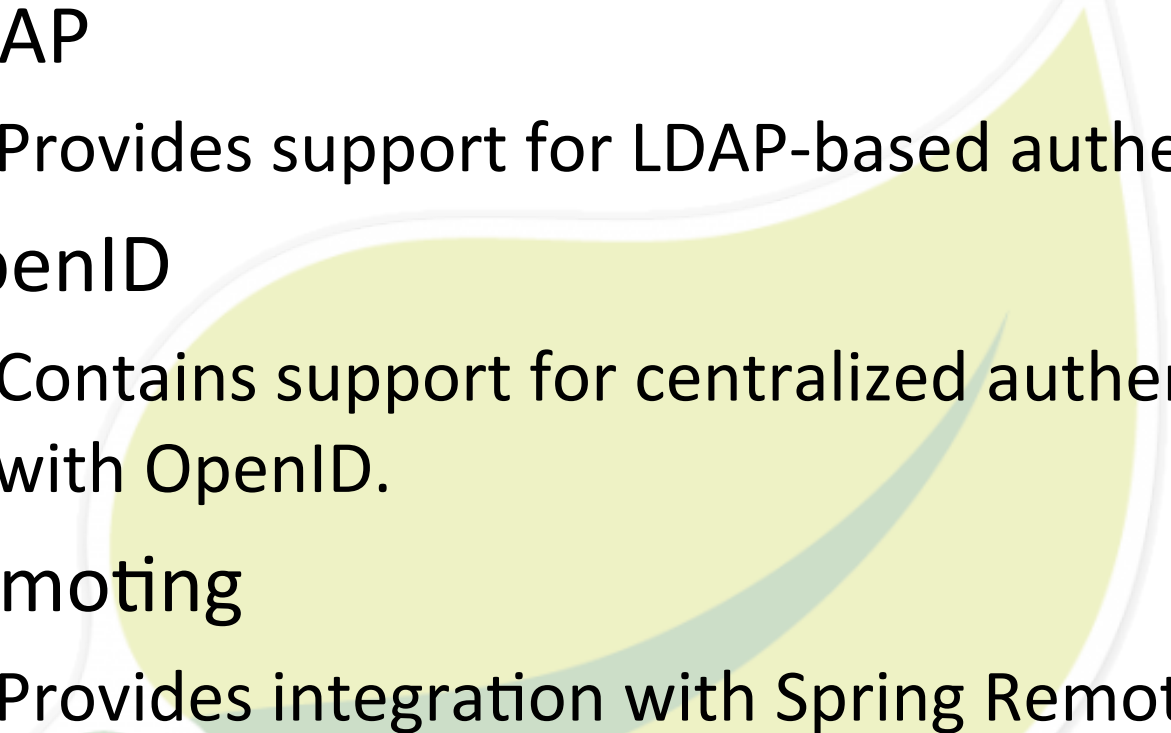
# Spring Security Modules

- ACL
  - Provides support for domain object security through access control lists (ACLs).
- Aspects
  - A small module providing support for AspectJ-based aspects instead of standard Spring AOP when using Spring Security annotations.
- CAS Client
  - Support for single sign-on authentication using Jasig's Central Authentication Service (CAS).

# Spring Security Modules

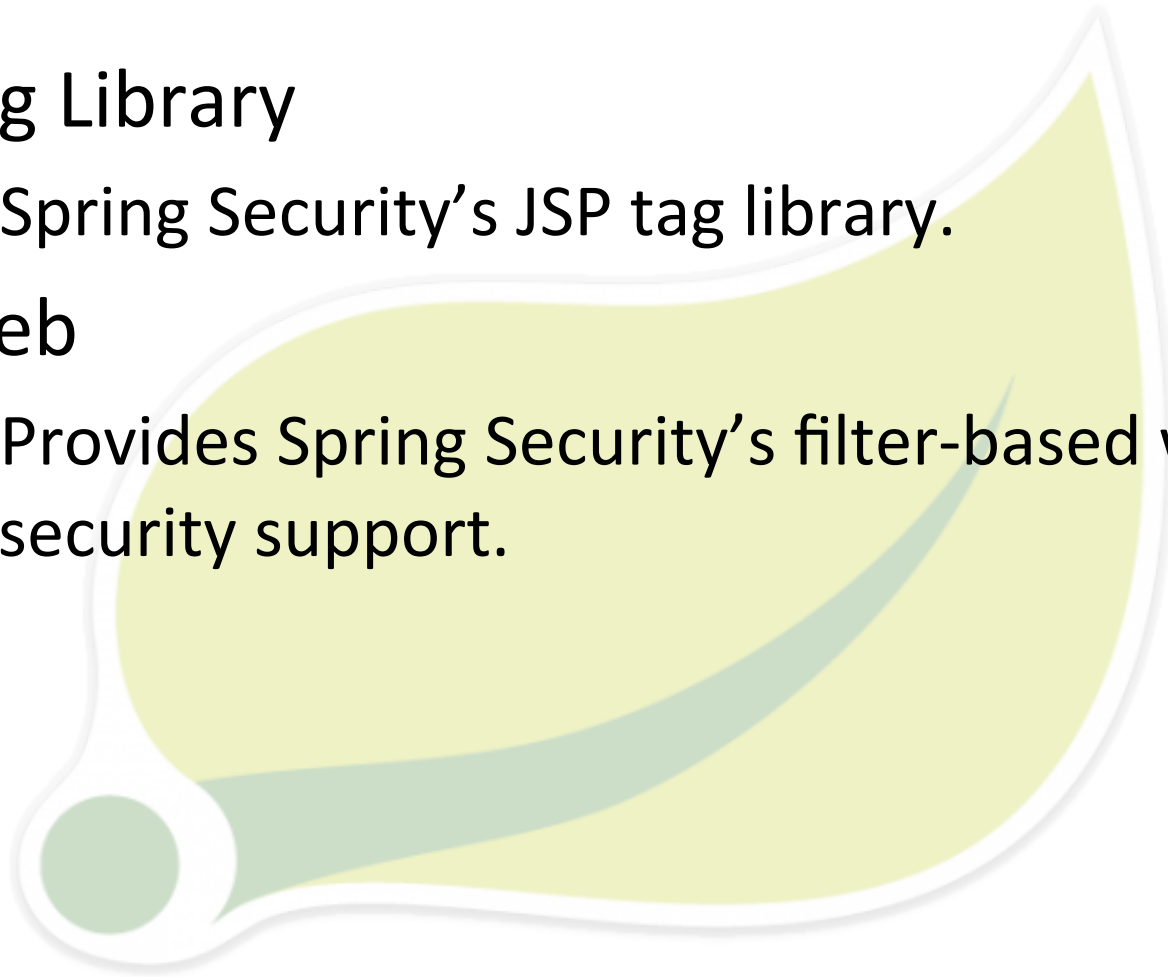
- Configuration
  - Contains support for configuring Spring Security with XML and Java. (Java configuration support introduced in Spring Security 3.2.)
- Core
  - Provides the essential Spring Security library.
- Cryptography
  - Provides support for encryption and password encoding.

# Spring Security Modules

- LDAP
    - Provides support for LDAP-based authentication.
  - OpenID
    - Contains support for centralized authentication with OpenID.
  - Remoting
    - Provides integration with Spring Remoting.
- 

# Spring Security Modules

- Tag Library
  - Spring Security's JSP tag library.
- Web
  - Provides Spring Security's filter-based web security support.



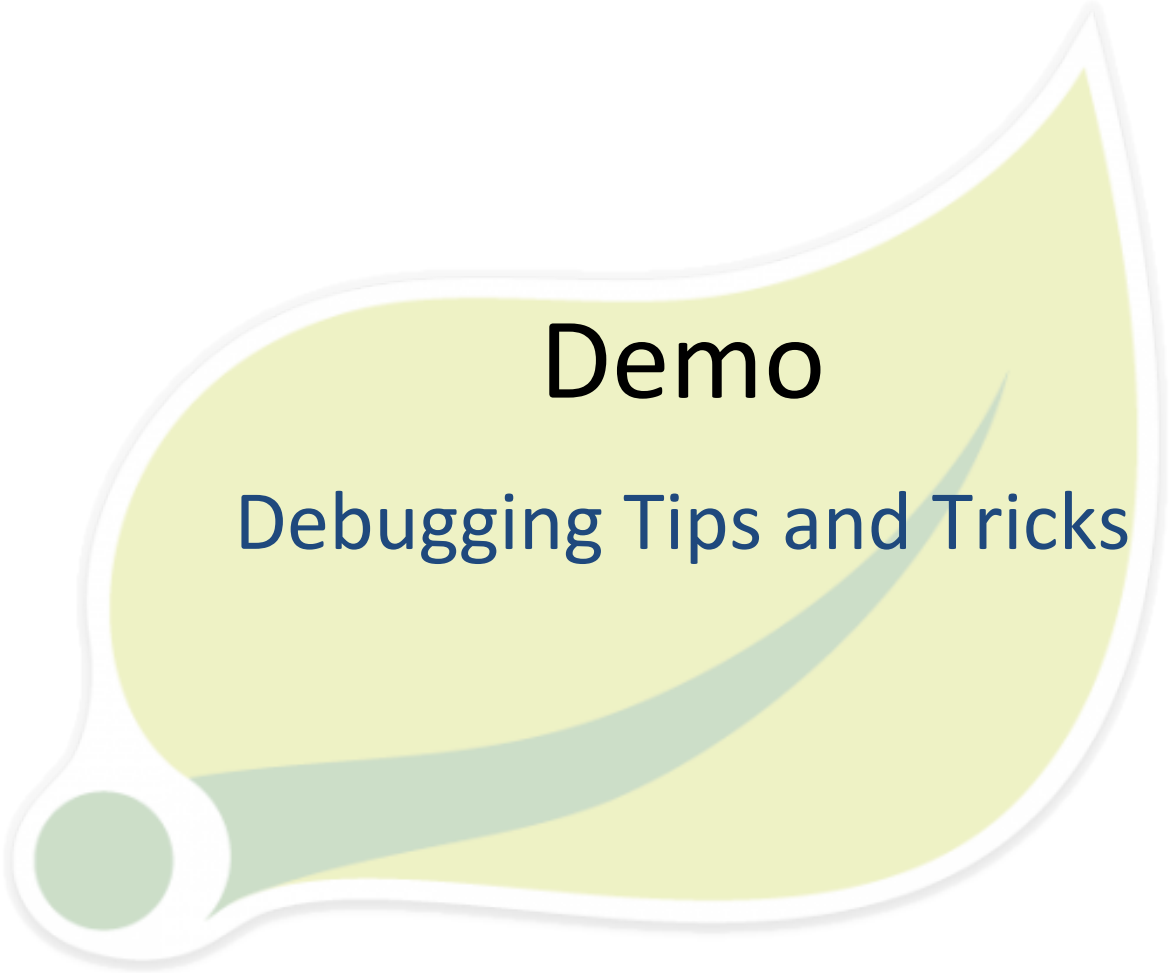
# Spring Security Related Projects

- Spring Security OAuth
  - support for using Spring Security with OAuth (1a) and OAuth2 using standard Spring and Spring Security programming models and configuration idioms
- Spring LDAP
  - Java library for simplifying LDAP operations, based on the pattern of Spring's JdbcTemplate



# Spring Security Related Projects

- Spring Security Kerberos
  - With the Spring Security Kerberos Extension, your users are authenticated against your web application just by opening the URL
- Spring Security SAML
  - Seamless combination of SAML 2.0 and authentication and federation mechanisms in a single application. Wide support (ADFS, Okta, Shibboleth, OpenAM, Efecte EIM or Ping Federate)





**Demo**

Debugging Tips and Tricks

# Get Your Spring On!

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8:00 AM to 4:00 PM

 **Pivotal Labs Toronto**  
1 Toronto St, 11th Floor, Toronto, ON, M5C2V6, ON ([edit map](#))

 **Price: CAD15.00** /per person  
[Refund policy](#)

Hi Everyone,

With Juergen in town we are going to use this as an opportunity to hold an event, similar to our annual Spring conference, but a bit smaller in scale.

The agenda will be finalized as we get closer. Payment will be


**Your RSVP: Yes**

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Tools

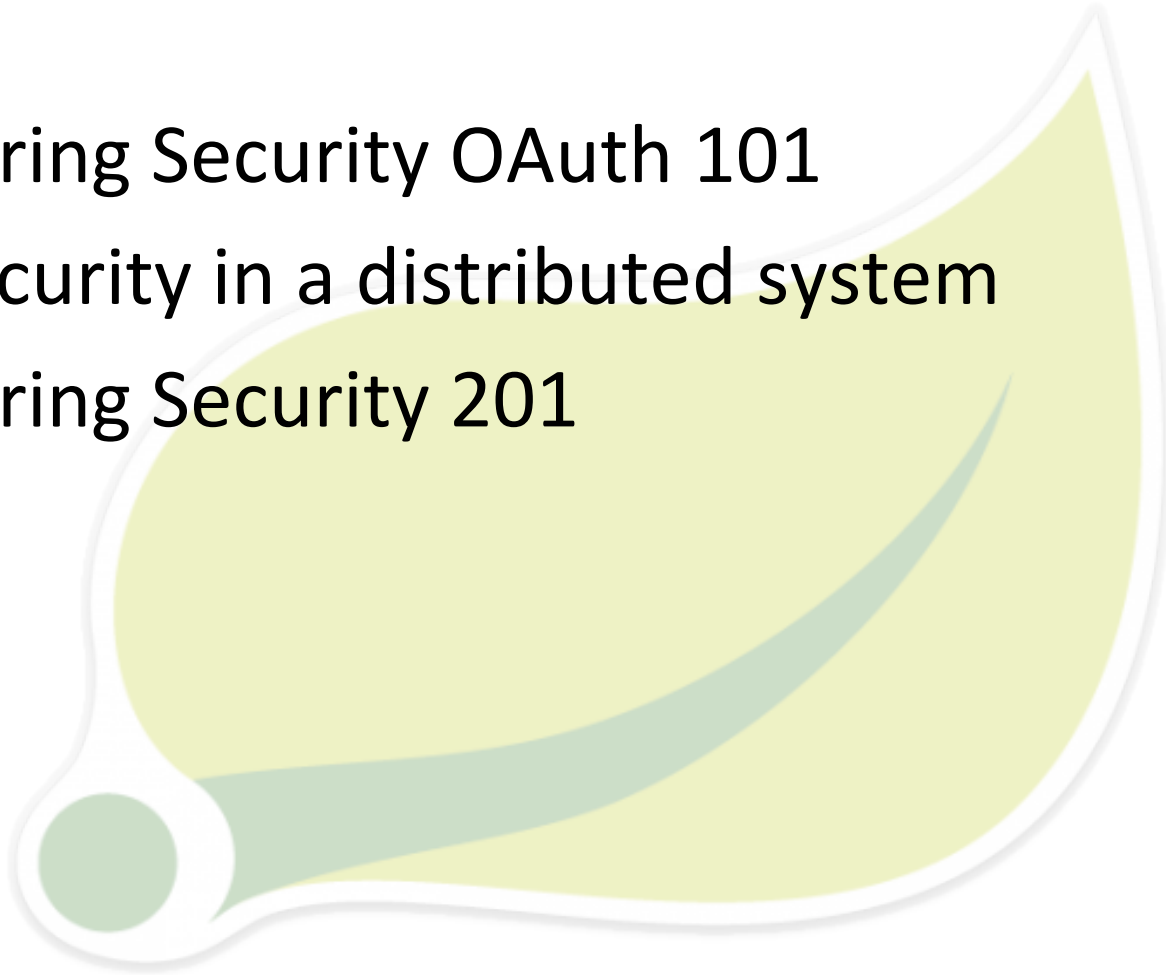
**9 going**



**Luke Shannon**  
Organizer,  
Event Host  
I am an IT professional in Toronto, ONT, Canada specializing in Java based, open source... [more](#)  
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# Future Talks

- Spring Security OAuth 101
- Security in a distributed system
- Spring Security 201





Questions?