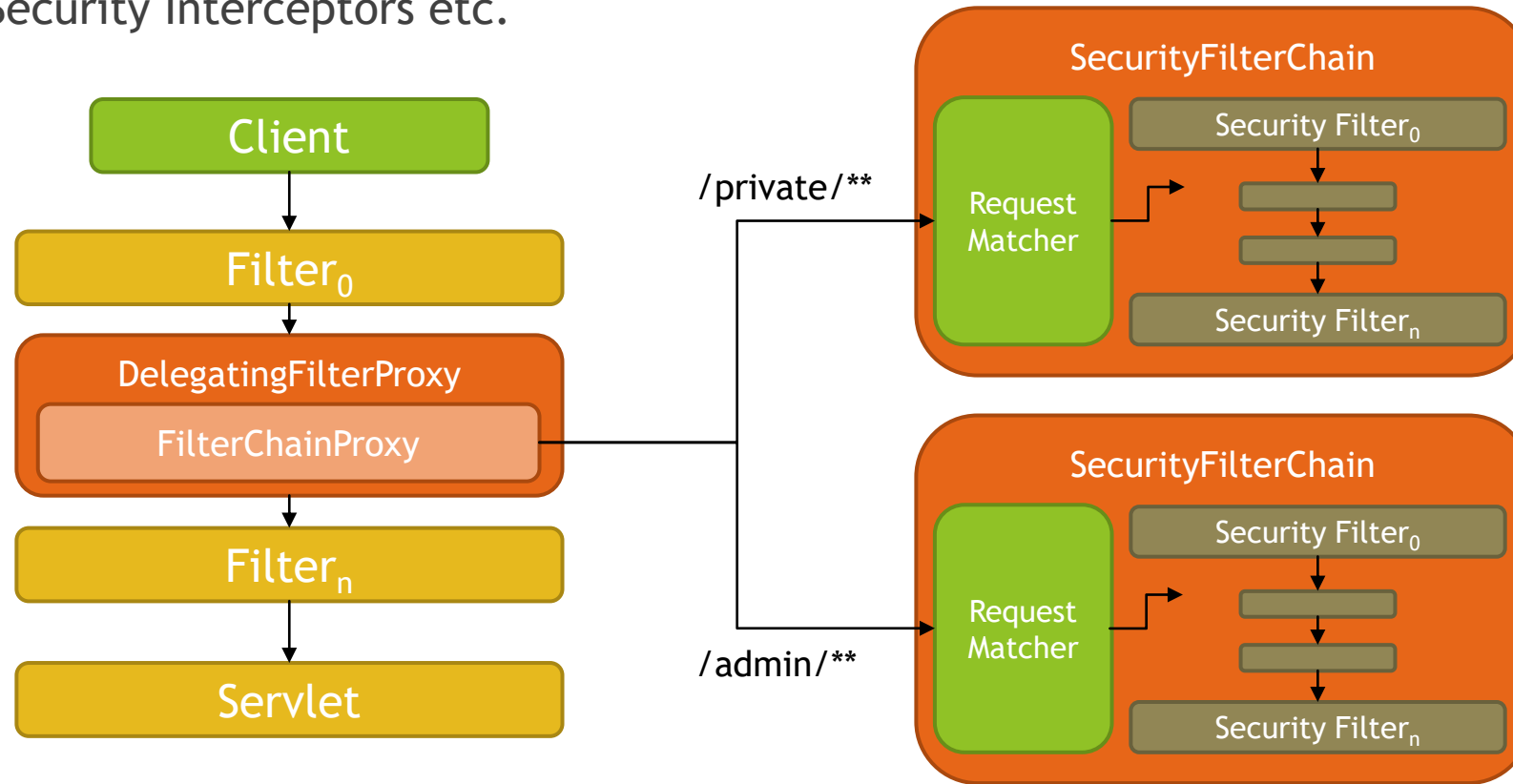


Spring Professional Exam Tutorial v5.0

Question 04

Question 04 - What is the security filter chain?

Security Filter Chain is a collection of Spring Managed Filters that are responsible for authentication and authorization. Usually they include functionalities like Username & Password Authentication, Logout Management, Session Management, Security Interceptors etc.



Question 04 - What is the security filter chain?

`SecurityFilterChain` is an interface located in package `org.springframework.security.web` of `spring-web` module.

This interface specifies a contract for behavior that associates request URL to list of security filters.

Spring provides one implementation of this interface called `DefaultSecurityFilterChain` which uses request matchers to check if list of security filters should be applied to specified url.

Some of the request matchers that can be used include `AntPathRequestMatcher`, `MvcRequestMatcher`, `RequestHeaderRequestMatcher`, `MediaTypeRequestMatcher` etc.

Security Filters are implementation of Servlet Filter and are usually managed by Spring Context.

Question 04 - What is the security filter chain?

`FilterChainProxy` holds list of `SecurityFilterChains` and upon request searches for the first `SecurityFilterChain` that matches request.

Upon request being matched, `SecurityFilterChain` is picked up and list of Filters is being fetched from `SecurityFilterChain`.

After that `FilterChainProxy` executes Filters from `SecurityFilterChain`.

`FilterChainProxy` is a registered bean in Spring Context and takes default name specified inside `AbstractSecurityWebApplicationInitializer#DEFAULT_FILTER_NAME` which is `springSecurityFilterChain`.

`FilterChainProxy` is fetched from the context based on name within `DelegatingFilterProxy`.

Question 04 - What is the security filter chain?

Spring usually includes following Filters within Security Filter Chains:

- ▶ WebAsyncManagerIntegrationFilter
- ▶ SecurityContextPersistenceFilter
- ▶ HeaderWriterFilter
- ▶ CsrfFilter
- ▶ LogoutFilter
- ▶ UsernamePasswordAuthenticationFilter
- ▶ RequestCacheAwareFilter
- ▶ SecurityContextHolderAwareRequestFilter
- ▶ AnonymousAuthenticationFilter
- ▶ SessionManagementFilter
- ▶ ExceptionTranslationFilter
- ▶ FilterSecurityInterceptor

Question 04 - What is the security filter chain?

Spring provides API to customize list of used Security Filters, by extending `WebSecurityConfigurerAdapter` and overriding `configure` method.

```
@Configuration
@EnableWebSecurity
public class WebSecurityConfig extends WebSecurityConfigurerAdapter {

    @Override
    public void configure(WebSecurity web) throws Exception {
        ...
    }

    @Override
    protected void configure(HttpSecurity http) {
        ...
    }

    @Override
    protected void configure(AuthenticationManagerBuilder auth) {
        ...
    }
}
```

