

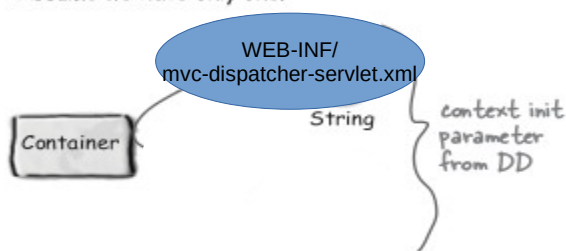
- 1 Container reads the Deployment Descriptor for this app, including the `<listener>` and `<context-param>` elements.



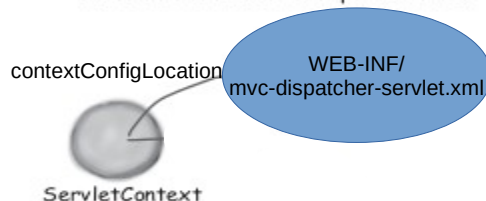
- 2 Container creates a new `ServletContext` for this application, that all parts of the app will share.



- 3 Container creates a name/value pair of Strings for each context init parameter. Assume we have only one.



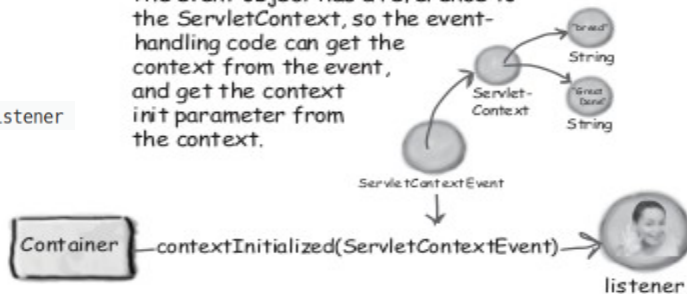
- 4 Container gives the `ServletContext` references to the name/value parameters.



- 5 Container creates a new instance of the `org.springframework.web.context.ContextLoaderListener`



- 6 Container calls the listener's `contextInitialized()` method, passing in a new `ServletContextEvent`. The event object has a reference to the `ServletContext`, so the event-handling code can get the context from the event, and get the context init parameter from the context.



```

<web-app>
  <context-param>
    <param-name>contextConfigLocation</param-name>
    <param-value>/WEB-INF/mvc-dispatcher-servlet.xml</param-value>
  </context-param>

  <listener>
    <listener-class>
      org.springframework.web.context.ContextLoaderListener
    </listener-class>
  </listener>

  <servlet>
    <servlet-name>comingsoon</servlet-name>
    <servlet-class>mysite.server.ComingSoonServlet</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>comingsoon</servlet-name>
    <url-pattern>/*</url-pattern>
  </servlet-mapping>

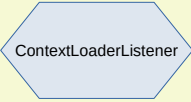
  <servlet>
    <servlet-name>redteam</servlet-name>
    <servlet-class>mysite.server.TeamServlet</servlet-class>
    <init-param>
      <param-name>teamColor</param-name>
      <param-value>red</param-value>
    </init-param>
  </servlet>
  <servlet-mapping>
    <servlet-name>redteam</servlet-name>
    <url-pattern>/red/*</url-pattern>
  </servlet-mapping>

  <filter>
    <filter-name>logSpecial</filter-name>
    <filter-class>mysite.server.LogFilterImpl</filter-class>
    <init-param>
      <param-name>logType</param-name>
      <param-value>special</param-value>
    </init-param>
  </filter>

  <filter-mapping>
    <filter-name>logSpecial</filter-name>
    <servlet-name>comingsoon</servlet-name>
    <!-- <url-pattern>*.special</url-pattern> -->
  </filter-mapping>
</web-app>
  
```

Container

Listeners



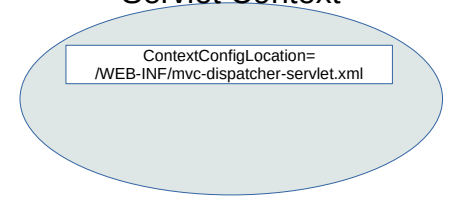
Servlets

Filters

Sessions

Sessions	

Servlet Context



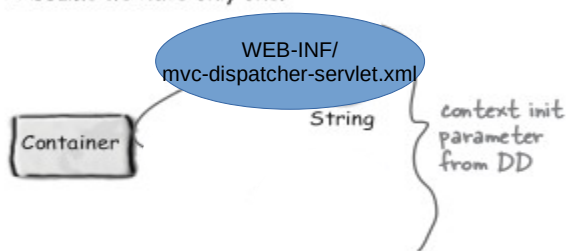
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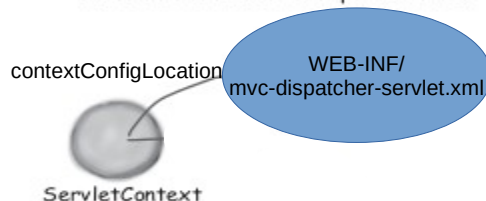
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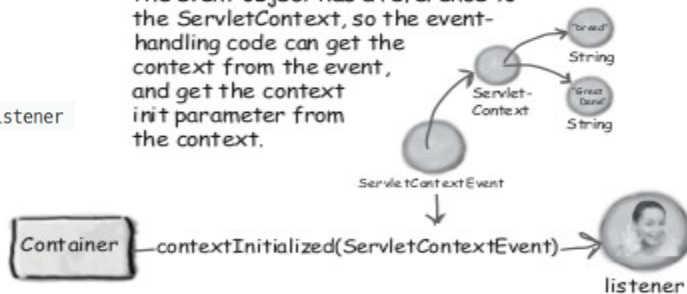
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  <context-param>
    <param-name>contextConfigLocation</param-name>
    <param-value>/WEB-INF/mvc-dispatcher-servlet.xml</param-value>
  </context-param>

  <listener>
    <listener-class>
      org.springframework.web.context.ContextLoaderListener
    </listener-class>
  </listener>

  <servlet>
    <servlet-name>comingsoon</servlet-name>
    <servlet-class>mysite.server.ComingSoonServlet</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>comingsoon</servlet-name>
    <url-pattern>/*</url-pattern>
  </servlet-mapping>

  <servlet>
    <servlet-name>redteam</servlet-name>
    <servlet-class>mysite.server.TeamServlet</servlet-class>
    <init-param>
      <param-name>teamColor</param-name>
      <param-value>red</param-value>
    </init-param>
  </servlet>
  <servlet-mapping>
    <servlet-name>redteam</servlet-name>
    <url-pattern>/red/*</url-pattern>
  </servlet-mapping>

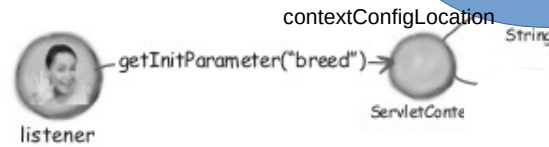
  <filter>
    <filter-name>logSpecial</filter-name>
    <filter-class>mysite.server.LogFilterImpl</filter-class>
    <init-param>
      <param-name>logType</param-name>
      <param-value>special</param-value>
    </init-param>
  </filter>

  <filter-mapping>
    <filter-name>logSpecial</filter-name>
    <servlet-name>comingsoon</servlet-name>
    <!-- <url-pattern>*.special</url-pattern> -->
  </filter-mapping>
</web-app>
```

- 7 Listener asks ServletContextEvent for a reference to the ServletContext.

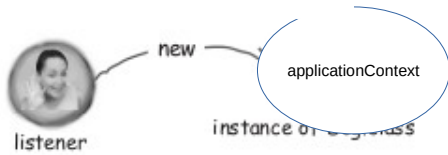


- 8 Listener asks ServletContext for the context init parameter



WEB-INF/
mvc-dispatcher-servlet.xml

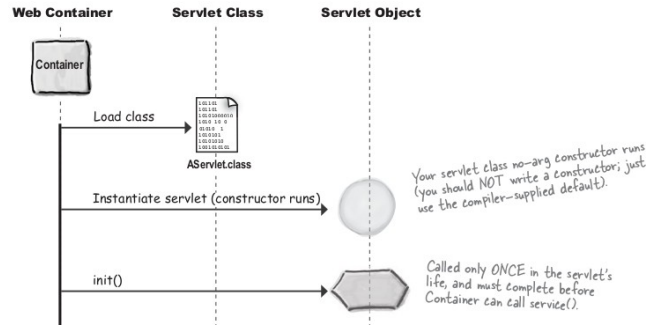
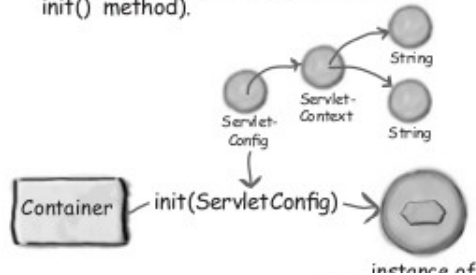
- 9 Listener uses the init parameter to construct a new



- 10 Listener sets the ServletContext.



- 11 Container makes a new Servlet (i.e., makes a new ServletConfig with init parameters, gives the ServletConfig a reference to the ServletContext, then calls the Servlet's init() method).



```

<web-app>
  <context-param>
    <param-name>contextConfigLocation</param-name>
    <param-value>/WEB-INF/mvc-dispatcher-servlet.xml</param-value>
  </context-param>
  <listener>
    <listener-class>
      org.springframework.web.context.ContextLoaderListener
    </listener-class>
  </listener>
  <servlet>
    <servlet-name>comingsoon</servlet-name>
    <servlet-class>mysite.server.ComingSoonServlet</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>comingsoon</servlet-name>
    <url-pattern>/*</url-pattern>
  </servlet-mapping>
  <servlet>
    <servlet-name>redteam</servlet-name>
    <servlet-class>mysite.server.TeamServlet</servlet-class>
    <init-param>
      <param-name>teamColor</param-name>
      <param-value>red</param-value>
    </init-param>
  </servlet>
  <servlet-mapping>
    <servlet-name>redteam</servlet-name>
    <url-pattern>/red/*</url-pattern>
  </servlet-mapping>
  <filter>
    <filter-name>logSpecial</filter-name>
    <filter-class>mysite.server.LogFilterImpl</filter-class>
    <init-param>
      <param-name>logType</param-name>
      <param-value>special</param-value>
    </init-param>
  </filter>
  <filter-mapping>
    <filter-name>logSpecial</filter-name>
    <servlet-name>comingsoon</servlet-name>
    <!-- <url-pattern>*.special</url-pattern> -->
  </filter-mapping>
</web-app>
  
```


Container

Listeners

ContextLoaderListener

Servlets

redTeam:

commingsoon

Filters

logSpecial

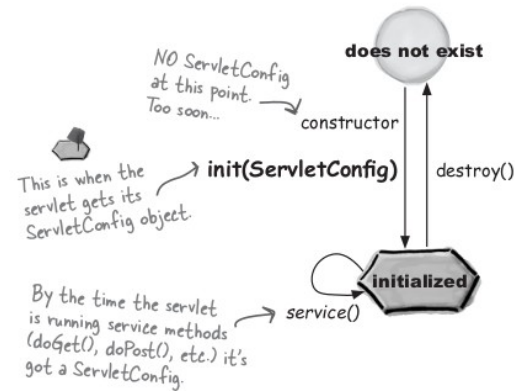
Sessions

Sessions	

Servlet Context

ContextConfigLocation=
/WEB-INF/mvc-dispatcher-servlet.xml

applicationContext



GET

User clicks a link to a new page.



User



Browser

Browser sends an HTTP GET to the server, asking the server to GET the page.

The Request line.
The HTTP Method.
The path to the resource on the web server.
In a GET request, parameters (if there are any) are appended to the first part of the request URL, starting with a "?". Parameters are separated with an ampersand "&".
The protocol version that the web browser is requesting.

GET /select/selectBeerTaste.jsp?color=dark&taste=malty HTTP/1.1

The Request headers.

Host: www.wickedlysmart.com
User-Agent: Mozilla/5.0 (Macintosh; U; PPC Mac OS X Mach-O; en-US; rv:1.4) Gecko/20030624 Netscape/7.1
Accept: text/xml,application/xml,application/xhtml+xml,text/html;q=0.9,text/plain;q=0.8,video/x-mng,image/png,image/jpeg,image/gif;q=0.2,*/*;q=0.1
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 300
Connection: keep-alive

Servlets

redTeam:

commingsoon

Filters

logSpecial

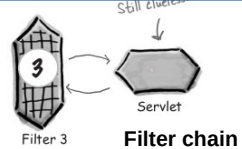
web server machine

web server app

web Container app

Java code

Still slower



HTTP request

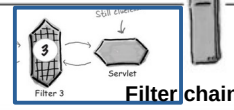
①



Client



container



Container

Listeners

ContextLoaderListener

Servlets

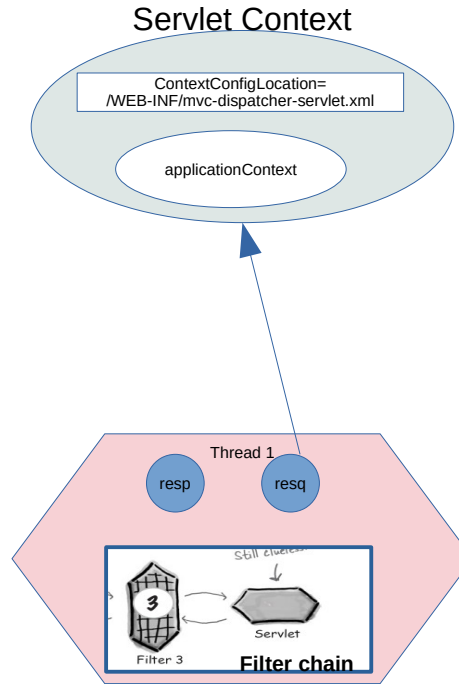
redTeam:

commingsoon

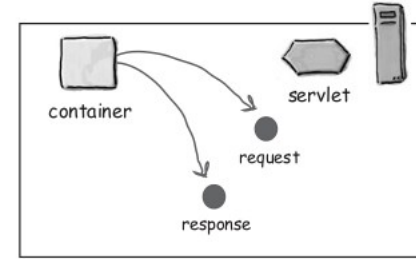
Filters

logSpecial

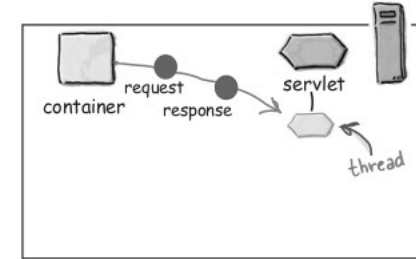
Sessions



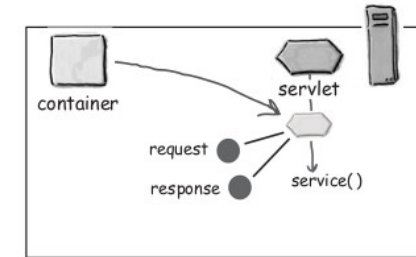
②



③



④



Container

Listeners

ContextLoaderListener

Servlets

redTeam:

commingsoon

Filters

logSpecial

Sessions

0AAB6C8E415

Servlet Context

ContextConfigLocation=
/WEB-INF/mvc-dispatcher-servlet.xml

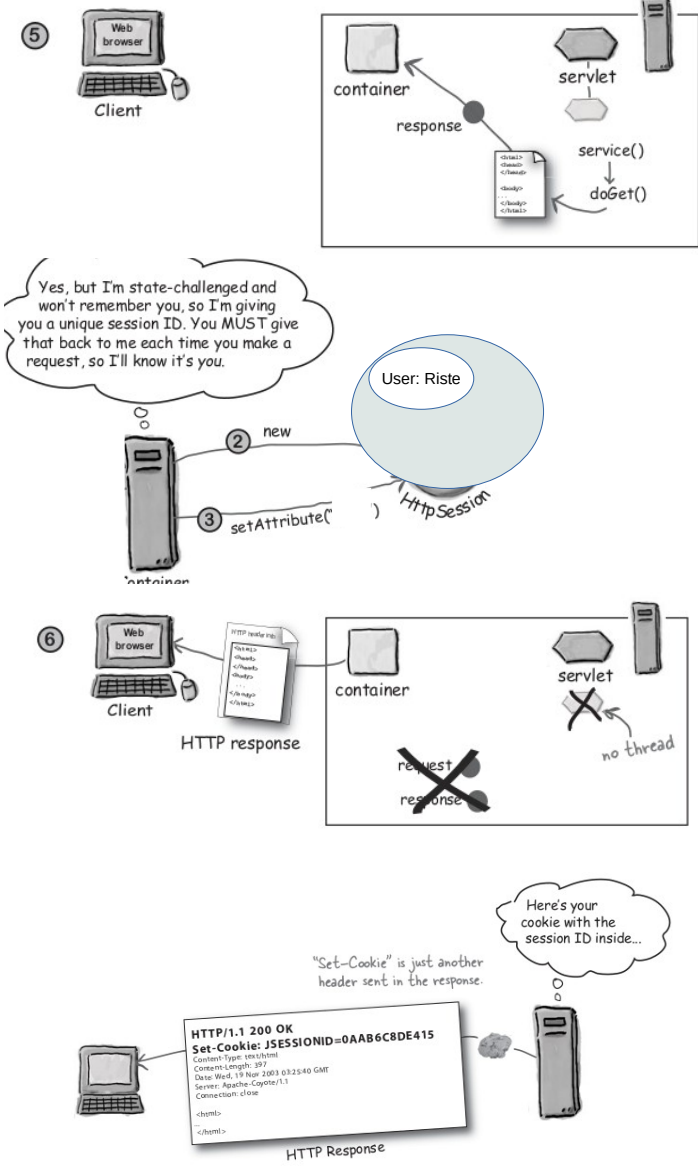
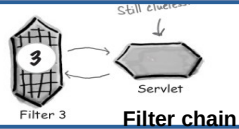
applicationContext

User: Riste

Thread 1

resp

resq



Container

Listeners

ContextLoaderListener

Servlets

redTeam:

commingsoon

Filters

logSpecial

Sessions

0AAB6C8E415

Servlet Context

ContextConfigLocation=
/WEB-INF/mvc-dispatcher-servlet.xml

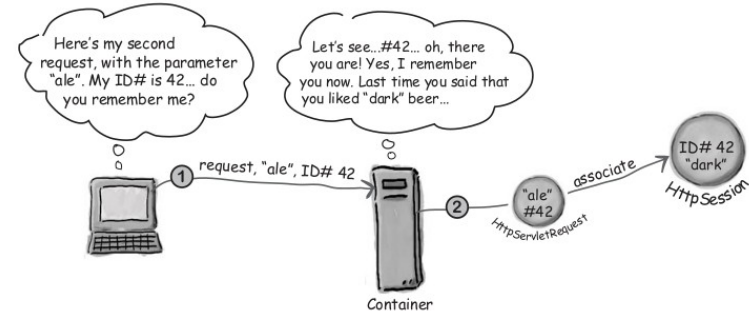
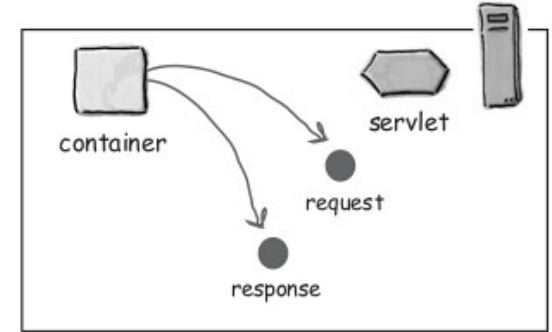
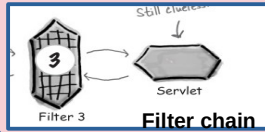
applicationContext

User: Riste

Thread 12

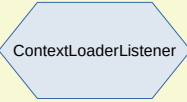
resp

resq

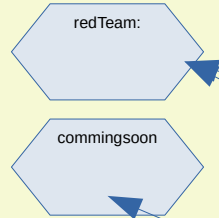


Container

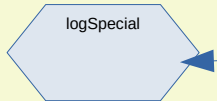
Listeners



Servlets



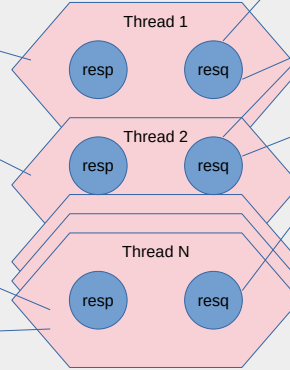
Filters



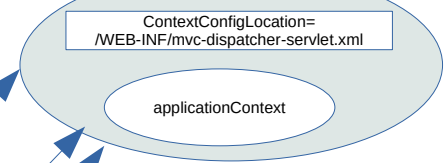
Sessions

aafc-23ds-43aa3	
ffa2-23ds-43aa3	
0084-23ds-87568	

Concurrent Requests



Servlet Context



Sessions

