

# **Common-Controls Quickstart**

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# 1 Quickstart

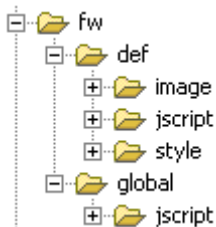
This document describes the basic steps for using the Common-Controls. The Common-Controls support application developers in generating dynamic HTML user interfaces. In doing so, a strict separation is maintained between the presentation layer and the business logic.

## 1.1 *Setting up the projekt*

For using the Common-Controls, the following JAR-files must be incorporated in the lib-directory of the project:

- common-controls-1.x.x.jar
- commons-beanutils.jar
- commons-collections.jar
- commons-dbcj.jar
- commons-digester.jar
- commons-fileupload.jar
- commons-lang.jar
- commons-logging.jar
- commons-pool.jar
- commons-resources.jar
- commons-validator.jar
- ecs-1.4.2.jar
- jakarta-oro.jar
- jakarta-regexp-1.2.jar
- jakarta-struts-1.1.jar
- log4j-1.2.7.jar

Furthermore, for depicting the user interface, some Images and StyleSheets are required, which are supplied with the Common-Controls. For this purpose, the fw-directory is copied in the web-directory of your own project.



Furthermore, the following tlds should be incorporated in the project:

- cc-base.tld
- cc-controls.tld
- cc-forms.tld
- cc-menu.tld
- cc-security.tld
- cc-svg.tld
- cc-template.tld
- cc-utility.tld

In the following chapter, it is being assumed that the tld's are saved in the subdirectory [/WEB-INF/tlds/](#). If another directory is selected, the following path specifications must be suitably amended.

## 1.2 Declaration of the TagLibrary

In order to use the Common-Control Tags on a JSP page, the corresponding Tag Library must be declared at the start of the page. This is done in the following form:

```
<%@ taglib uri="/WEB-INF/tlds/cc-controls.tld" prefix="ctrl" %>
```

Subsequently, the Common-Controls can be referenced with the prefix `<ctrl:tagname />`. The prefix can be freely selected. Example:

```
<%@ taglib uri="/WEB-INF/tlds/cc-controls.tld" prefix="ctrl" %>
<%@ taglib uri="/WEB-INF/tlds/cc-utility.tld" prefix="util" %>

<html>
<head>
  <!-- Framework includes --%>
  <util:jsp directive="includes"/>
</head>

<body leftmargin="0" topmargin="0" onload="init();">

<ctrl:tree
  id="prod1"
  name="products"
  action="sample201/producttreeBrowse"
  root="true"
  linesAtRoot="true"
  labelProperty="name"
  imageProperty="type"
  expandMode="multiple"
  groupselect="true"
  checkboxes="true"/>

<!-- Framework cleanup processing --%>
<util:jsp directive="endofpage"/>

</body>
</html>
```

Depending on which functionalities are used, additional Tag Libraries may have to be specified. Which Tags are available in which TagLibrary, is described in the documentation of the Common Controls TagLibrary.

```
<%@ taglib uri="/WEB-INF/tlds/cc-base.tld"           prefix="base" %>
<%@ taglib uri="/WEB-INF/tlds/cc-controls.tld"      prefix="ctrl" %>
<%@ taglib uri="/WEB-INF/tlds/cc-forms.tld"        prefix="forms" %>
<%@ taglib uri="/WEB-INF/tlds/cc-menu.tld"         prefix="menu" %>
<%@ taglib uri="/WEB-INF/tlds/cc-security.tld"     prefix="sec" %>
<%@ taglib uri="/WEB-INF/tlds/cc-svg.tld"         prefix="svg" %>
<%@ taglib uri="/WEB-INF/tlds/cc-template.tld"     prefix="template" %>
<%@ taglib uri="/WEB-INF/tlds/cc-utility.tld"     prefix="util" %>
```

## 1.3 Incorporation of the Tag libraries in the Deployment Descriptor

For incorporating the Tag libraries in the WEB-INF/web.xml file, the following paragraph must be copied:

```
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-base.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-base.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-controls.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-controls.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-forms.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-forms.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-menu.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-menu.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-security.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-security.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-svg.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-svg.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-template.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-template.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-utility.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-utility.tld</taglib-location>
</taglib>
```

## 1.4 Registration of the Resource-Servlet (optional)

The Resource-Servlet offers caching functionality and makes it possible to access resources (Gif's, SVG-graphics), which are registered in the ResourceManager. When an HTML page is refreshed, performance advantages can be exploited by using the cache.

The Resource-Servlet is registered as follows in the Web.xml (Deployment-Descriptor).

```
<servlet>
  <servlet-name>res</servlet-name>
  <display-name>Resource Servlet</display-name>
  <description>Provides access to cached Ressources</description>
  <servlet-class>com.cc.framework.resource.ResourceServlet</servlet-class>
</servlet>

<servlet-mapping>
  <servlet-name>res</servlet-name>
  <url-pattern>*.res</url-pattern>
</servlet-mapping>
```

## 1.5 Deriving an ActionServlet and Registration of the Painterfactory

The Common-Controls provide the programmer with a basic idea for designing the user interface, which can be extended according to your own requirements.<sup>1</sup>

The design of the application is determined by means of the so-called Painterfactories. Here, a Painter is responsible for generating an interface design. By using different Painters, different layouts can be used in parallel. The registration of the Painterfactory can e.g. be carried out application-wide in the init()-method of the Frontcontroller-Servlet.

```
import javax.servlet.ServletException
import org.apache.struts.action.ActionServlet;

import com.cc.framework.ui.painter.PainterFactory
import com.cc.framework.ui.painter.def.DefPainterFactory;
import com.cc.framework.ui.painter.html.HtmlPainterFactory;

public class MyFrontController extends ActionServlet {

    public void init() throws ServletException {

        super.init();

        // Register all Painter Factories with the preferred GUI-Design
        // In this case we use the Default-Design.
        PainterFactory.registerApplicationPainter (
            getServletContext (), DefPainterFactory.instance());
        PainterFactory.registerApplicationPainter (
            getServletContext (), HtmlPainterFactory.instance());
    }
}
```

The ActionServlet must then also be registered in the web.xml-file.

This completes the basic steps for using the Common-Controls. The handling of the individual control elements is described in the corresponding individual documents (Guided Tours).

---

<sup>1</sup> Additional ones will be delivered with the next versions of Common-Controls or you can develop them yourself.

## 1.6 Structure of the JSP-Page

When building the JSP-Page, the Tags specified in the figure below must be incorporated at the beginning and at the end. The Framework thus has the facility to carry out its own initializations.

With the first Tag, all the necessary HTML-include directives for the presentation framework are inserted. The StyleSheets und JavaScript files required by the Painters are included.

The effect of the directive "endofpage" is that all the necessary tidying up work is carried out at the end of the JSP-page. This includes e.g. the emptying of the error collection.

To use hover effects for buttons, the JavaScript handler `init()` must be specified in the HTML Body Element.

```
<%@ taglib uri="/WEB-INF/tlds/cc-utility.tld" prefix="util" %>

<html>
<head>
    <!-- Framework includes --%>
    <util:jsp directive="includes"/>
</head>

<body leftmargin="0" topmargin="0" onload="init();">

<!-- Content -->

<!-- Framework cleanup processing --%>
<util:jsp directive="endofpage"/>

</body>
</html>
```

## 1.7 Examples

Code examples are contained in the Demo Application, which is available for downloading on our homepage. There, you will also find configuration examples for the control elements, which demonstrate the various usage possibilities.



## 2 Appendix: Example web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE web-app PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN"
"http://java.sun.com/dtd/web-app_2_3.dtd">

<web-app id="WebApp">
  <display-name>ccsamples</display-name>
  <description>Sample Application Common-Controls</description>

  <servlet>
    <servlet-name>action</servlet-name>
    <servlet-class>com.cc.sampleapp.servlet.FrontController</servlet-class>

    <!--Struts default modul -->
    <init-param>
      <param-name>config</param-name>
      <param-value>WEB-INF/config/struts-config.xml</param-value>
    </init-param>
    <load-on-startup>1</load-on-startup>
  </servlet>

  <servlet>
    <servlet-name>res</servlet-name>
    <display-name>Ressourcen Servlet</display-name>
    <description>Verwaltung von Ressourcen</description>
    <servlet-class>com.cc.framework.resource.ResourceServlet</servlet-class>
  </servlet>

  <servlet-mapping>
    <servlet-name>action</servlet-name>
    <url-pattern>*.do</url-pattern>
  </servlet-mapping>

  <servlet-mapping>
    <servlet-name>res</servlet-name>
    <url-pattern>*.res</url-pattern>
  </servlet-mapping>

  <session-config>
    <session-timeout>10</session-timeout>
  </session-config>

  <welcome-file-list>
    <welcome-file>index.html</welcome-file>
  </welcome-file-list>

  <!-- Common Controls TagLibs-->
  <taglib>
    <taglib-uri>/WEB-INF/tlds/cc-base.tld</taglib-uri>
    <taglib-location>/WEB-INF/tlds/cc-base.tld</taglib-location>
  </taglib>
  <taglib>
    <taglib-uri>/WEB-INF/tlds/cc-controls.tld</taglib-uri>
    <taglib-location>/WEB-INF/tlds/cc-controls.tld</taglib-location>
  </taglib>
  <taglib>
    <taglib-uri>/WEB-INF/tlds/cc-forms.tld</taglib-uri>
    <taglib-location>/WEB-INF/tlds/cc-forms.tld</taglib-location>
  </taglib>
  <taglib>
    <taglib-uri>/WEB-INF/tlds/cc-menu.tld</taglib-uri>
    <taglib-location>/WEB-INF/tlds/cc-menu.tld</taglib-location>
  </taglib>
</web-app>
```

```
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-security.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-security.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-svg.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-svg.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-template.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-template.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/cc-utility.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/cc-utility.tld</taglib-location>
</taglib>

<!-- Struts TagLibs-->
<taglib>
  <taglib-uri>/WEB-INF/tlds/struts-bean.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/struts-bean.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/struts-html.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/struts-html.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/struts-logic.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/struts-logic.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/struts-nested.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/struts-nested.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/struts-template.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/struts-template.tld</taglib-location>
</taglib>
<taglib>
  <taglib-uri>/WEB-INF/tlds/struts-tiles.tld</taglib-uri>
  <taglib-location>/WEB-INF/tlds/struts-tiles.tld</taglib-location>
</taglib>
</web-app>
```

### **3 Support**

We would be happy to be of service if you have any questions or problems. Please use our Service Form on our homepage for your queries. We shall endeavor to answer your queries as quickly as possible

## **4 Index of Abbreviations**

**C**

**CC**

Common-Controls