ATG WEB COMMERCE

Service Center

Version 10.2

UI Programming Guide

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ATG Service Center UI Programming Guide

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1 Introduction

Welcome to the Service Center UI Programming Guide. This document provides information on the administration and customization of the Service Center UI.

Audience

This manual is intended for administrators, programmers and page developers who are responsible for the customization and modification of the default Service Center UI. It assumes that you have a working knowledge of programming techniques, as well as Java, XML and XSD.

Documentation Conventions

The following conventions are used in this manual:

- Installation Directory

  `<ATG10dir>`—the directory where you installed ATG 10.2. For example, the default location for UNIX installations is `/ATG/ATG10.2`.

- Menu Navigation

  The " > " (greater than) symbol indicates menu choices. For example, "File > Save" means you should select the Save option on the File menu.

Related Documents

Document	Description
ATG Commerce Service Center Installation and Programming Guide	Describes how to configure and administer the Commerce Service Center application.

Document	Description
ATG Ticketing User Guide	Describes the ticketing components and configuration for Service Center.

The following manuals provide additional reference information:

Document	Description
ATG Content Administration Programming Guide	Describes how to set up and customize ATG Content Administration and its browser-based user interface, the Business Control Center Home page. Also describes how to deploy content to a production Web site. Intended for system administrators, developers, and page developers.
ATG Page Developer's Guide	Describes how to customize and work with Nucleus components and JSP pages.
ATG Platform Programming Guide	Presents a detailed description of Nucleus programming concepts for developers and other advanced users. Includes examples and reference information about developing applications

Framework Modules

The following modules exist for the Service Center UI:

```
<ATG10dir>/Service/Framework/Agent
<ATG10dir>/Service/Agent
<ATG10dir>/DCS-CSR/DCS-CSR

<ATG10dir>/Service-UI/Framework/Agent
<ATG10dir>/Service-UI/Agent
<ATG10dir>/DCS-CSR-UI/DCS-CSR-UI
```

2 Service Center User Interface Architecture

ATG applications use Service Center to display a graphical interface that enables agents to provide customer support. The following section provides an overview of the Service Center UI structures and architecture.

Service Center Overview

Service Center is a UI console that agents use when working with customers. The functionality of the console is determined by the applications that are installed in your environment. The following applications use, work or are displayed within Service Center:

- Oracle ATG Web Commerce Service Center – allows agents to assist customers with purchases from a Commerce environment. Information is presented on both customers and orders, as well as catalogs, price lists and promotions. For additional information, refer to the *ATG Commerce Service Center Installation and Programming Guide*
- ATG Ticketing – allows agents to create, work with, and track work that is performed for Commerce Service Center. Allows supervisors to monitor and manage escalations, as well as to assign work. For additional information, refer to the *ATG Ticketing User Guide*
- Oracle ATG Web Commerce Search – allows agents to search for information in Commerce Service Center. Search allows administrators to create projects that index, track and search for specific data. While this application does not provide a specific UI, it integrates with Service Center's core code to provide customization of search criteria. For additional information, refer to the *ATG Search Installation and Configuration Guide*

User Interface Modules and Files

The files for the Service Center UI are stored within application UI modules:

- `DCS-CSR-UI` – Oracle ATG Web Commerce Service Center
- `Service-UI` – The Service-UI module contains the `Service-UI.Framework.Agent` module, which contains the UI for the Service Center

These modules contain the JSPs, JavaScript, CSS, images, navigational configuration files, as well as framework definition XML files.

The framework definition XML files, which exist in various configuration layers, are combined into a single XML file. For information on data binding and `xml-combine`, refer to the *ATG Platform Programming Guide*. The combined XML file is *unmarshalled* into `atg.svc.framework.repository.beans.FrameworkObject` servlet beans. Detailed information on framework data and how to customize the XML files can be found in the *Service Center User Interface Data Model* (page 9) section.

The navigational configuration files define the global context area, which provides the header navigation seen on the top of the Service Center screen. Refer to the *Working with the Global Context Area* (page 45) section for further information.

User Interface Objects

The Service Center UI is defined by specifying the following components:

- Framework – The master container for navigation, layout and look-and-feel
- Skin – Defines the look-and-feel
- Tab – Provides the top-level navigation
- Cell – A basic layout component
- Panel Stack – Defines an ordered content container
- Panel – A basic content component

The framework object is the container for everything in the UI and contains skin objects for defining look-and-feel as well as layout templates and tab objects for top-level navigation. Each tab object defines the layout cell objects that are required, for example, two cells arranged as vertical columns. Tab objects also define panel stack objects that should be displayed with the navigational item assigned to specific cell objects, for example left-column panels and right-column panels. The panel stack objects contain panel objects, which are the most basic content unit.

Note: Tab objects do not implement a physical tab UI element.

The Service Framework data model also uses the following object types that can be referenced by other framework objects:

- Content – Provides static content definition such as CSS, JavaScript, and HTML
- Template – Provides the JSP layout definition

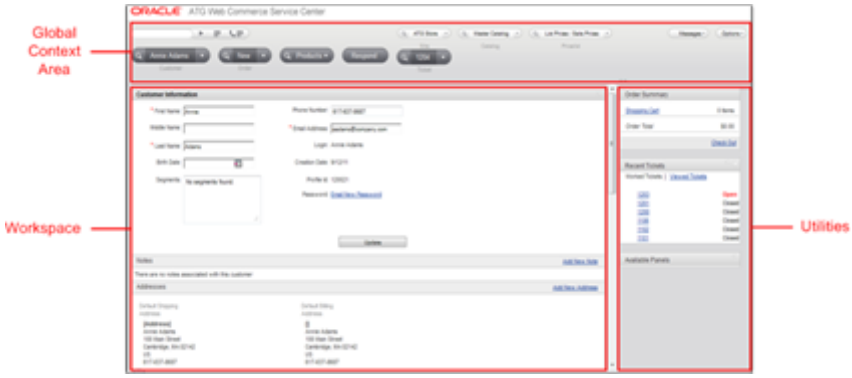
The framework objects can be classified into three tiers:

- Definition Objects – Defines the initial or default state for the framework. Definition objects are defined with an XML schema. Refer to the Framework Definition Objects (page 14) section
- Configuration Objects – Defines the state of the framework for a particular user. Refer to the Framework Configuration Objects (page 25) section
- Instance Objects – Holds the live or transient state of the framework for a browser window. Refer to the Framework Instance Objects (page 28) section

User Interface Sections

The Service Center UI is partitioned by a movable divider into three separate sections:

- The global context area – A tab object that defines navigational items that organize application features. Refer to the *Working with the Global Context Area* (page 45) section for further information
- The workspace area – This area is defined by a cell object that contains panel stacks and panel objects that hold all of the rendered content.
- The utilities area – This section is also identified by a cell and contains utilities panel stacks and panels that provide additional functionality or navigation, depending on the application context



Customizing Service Center

You can customize the UI for Service Center in a number of ways, including modifying UI components, changing form and UI functions, and developing new pages. To that end, this document is divided into two parts:

- Part I, "Programming Service Center" (page 7) is designed for those who build and develop applications for Service Center and the applications that use Service Center
- Part II, "Developing Pages in Service Center" (page 39) is a reference for those who create front-end UIs for agents

Part I. Programming Service Center

The following section provides information to users who perform programming tasks such as building and deploying dynamic, personalized applications for the Web. This section also discusses how to assemble applications out of component beans (based on standard ATG classes or custom Java classes) and link them together through configuration files.

Service Center developers create servlets that extend Web applications using a component-based methodology. Additionally, they create JSPs, which are an extension of the Java Servlet interface, and extend the standard JSP library using either JSTL or DSP tags.

Using the framework components, schemas and XML configuration files, developers can modify the default Service Center functionality.

This section contains the following:

3 Service Center User Interface Data Model

The framework data for Service Center is contained in XML files that are located in various configuration layers. When an ATG server instance is started, the XML instance files associated with the modules or applications installed in your environment are combined into a single XML file. Using XML data binding, the combined XML file is converted into `atg.svc.framework.repository.beans.FrameworkObject` servlet bean instances.

The `/Service/Framework/lib/classes/atg/xsds/FrameworkDataSpecification.xsd` file defines the framework data structure. It is also used to validate and parse XML instance files. The rules that are used to combine the XML instance files are defined in the `FrameworkDataSpecification.xsd.combinerCustomizer.xml` file. Using these matching rules, the combiner reviews the XML files, locates matches and then combines the matched elements. Refer to Appendix A, *The XML Combiner Script* (page 119) for the framework definition object's combiner customizer rules.

For detailed information on data binding through `xml-combine`, refer to the *ATG Platform Programming Guide*.

Schema Elements

The `FrameworkDataSpecification.xsd` XML schema, which defines the data structures within the UI, contains the following objects:

- `framework-template` – Root element for all framework objects
- `framework-object` – Base class that contains attributes that are shared by all framework objects
- `framework-definition` – Defines the initial state of the object
- `skin-definition` – Defines the look and feel of the application
- `tab-definition` – Defines navigation, page structure and panel stacks
- `cell-definition` – Represents the basic layout within a page
- `panel-stack-definition` – Contains an ordered collection of panel identifiers
- `panel-definition` – Defines a rectangular region of the page with content
- `content-definition` – A supporting object that allows you to link static content to framework objects

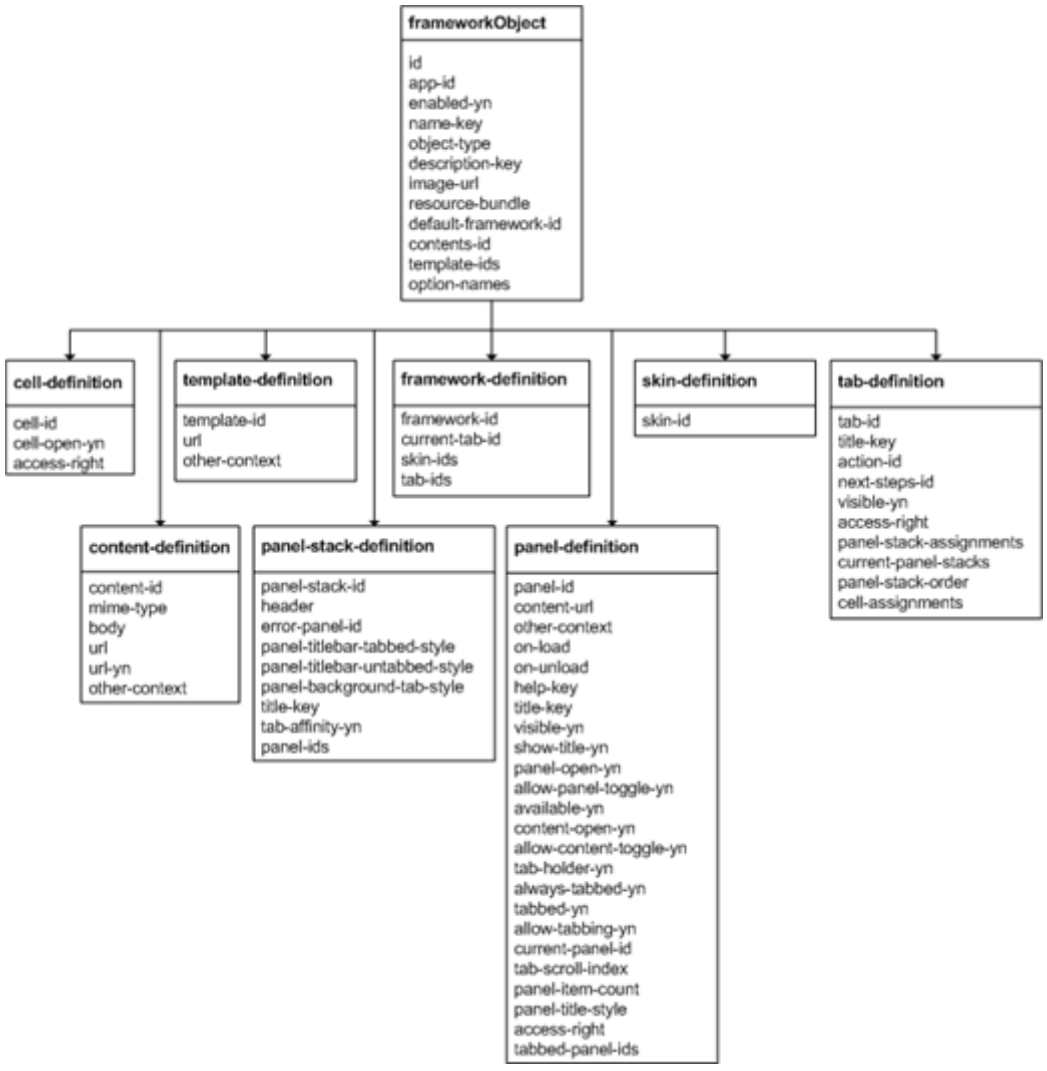
- `template-definition` – A supporting object that defines templates for objects

For detailed information on each of these objects, refer to the Framework Definition Objects (page 14) section.

Previous versions of Service Center stored framework data in a repository. Framework objects and data are now stored in XML files. Because of this, the `map` and `id` entry data types are reformatted using an XML adapter:

- `map-entry` – Contains keys and value properties that are used for the map objects. The `HashMapAdapter` is used to convert lists of `map-entry` objects from and into `Map` objects
- `id-entry` – Contains an ID and priority properties that are used for the `List`*`String`* ID objects. The `IdEntryListAdapter` is used to convert lists of `id-entry` objects from and into a `List`*`String`*. The `priority` property is used to hold the priority value of the `id-entry` objects. Based on this priority, the `id-entry` objects are sorted in ascending order

The following diagram shows all of the framework-objects:



Framework Schema Diagram

Initializing Framework Data

When an ATG server instance is started, the framework data that is stored in XML files is *unmarshalled* for conversion. The unmarshalling process first combines the XML framework object definitions using the `xml-combine` XML attribute. For detailed information on `xml-combine` and data binding, refer to the *ATG Platform Programming Guide*.

Once the XML files are combined, the data is then unmarshalled. The unmarshalled data is available as a `framework-template`, which is the root element for all framework objects and is used to access all framework and other related elements.

When the data is unmarshalled, the `ObjectFactory` class creates various instances of framework objects. The following components are used to catalog framework object servlet bean instances in a map, and provide a finder method to obtain framework definition objects:

- The `FrameworkHomeDefinitionXMLHome` objects such as `atg.svc.framework.xml.CellDefinitionXMLHome` or `ContentDefintionXMLHome` contain methods that find framework objects based on application requirements. These are known as *finder methods.* In the following example, framework object servlet bean instances are cataloged into a `cacheMap` property. The key value pairs are created and initialized based upon the application's requirements. The finder methods then access the data from the `cacheMap` property:

  ```
  public class FrameworkDefinitionXMLHome extends
  _FrameworkDefinitionHome_BeanImpl
  implements FrameworkObjectInitializer {
  protected Map mCacheMap = new HashMap();
  ```

- `ServiceFrameworkXMLHomes` holds references to the `FrameworkHomeDefinitionXMLHome` objects home definition. The `FrameworkDefinitionHome.properties` file contains the `FrameworkDefintionXMLHome` instance. For example:

  ```
  $class=atg.svc.framework.repository.beans.ServiceFrameworkXMLHomes
  $scope=global
  panelStackDefinitionHome=/atg/svc/framework/xml/PanelStackDefinitionHome
  panelDefinitionHome=/atg/svc/framework/xml/PanelDefinitionHome
  frameworkDefinitionHome=/atg/svc/framework/xml/FrameworkDefinitionHome
  contentDefinitionHome=/atg/svc/framework/xml/ContentDefinitionHome
  tabDefinitionHome=/atg/svc/framework/xml/TabDefinitionHome
  cellDefinitionHome=/atg/svc/framework/xml/CellDefinitionHome
  skinDefinitionHome=/atg/svc/framework/xml/SkinDefinitionHome
  templateDefinitionHome=/atg/svc/framework/xml/TemplateDefinitionHome
  frameworkXMLManager=/atg/svc/framework/xml/FrameworkXMLManager
  ```

- The `FrameworkXMLManager` contains code that handles framework objects, sets up `cacheMap` initializers, sets up the JAXB context paths, initializes and adds base map keys for framework objects

Data Combining

The `FrameworkDataSpecification.xsd.combinerCustomizer.xml` file sets up rules to combine XML files.

The framework definition tags, such as `framework-definition` or `template-definition`, are matched using the `id` sub-tag. The `map-entry` tag is matched using the `key` sub-tag.

Refer to the Appendix A, *The XML Combiner Script* (page 119) for details on the rules used for data combining.

Framework Objects

The Service Center UI is defined using the following objects. The data structure is defined by the `FrameworkDataSpecification.xsd` XML schema, with data files stored in corresponding XML files.

The `FrameworkObject` base class contains attributes that are shared by all framework objects via an inheritance relationship. The `FrameworkObject` shared attributes can be organized into four groups:

- *Indexing attributes* for queries and database housekeeping:
  - `app-id`
  - `id`
  - `object-type`
- *Naming attributes* for strings and images:
  - `description-key`
  - `image-ul`
  - `name-key`
  - `resource-bundle`
- *State attributes* for flags and other state data:
  - `default`
  - `enabled-yn`
- *Object attributes* for integration to other objects in the system:
  - `content-id`
  - `option-names`
  - `template-id`

The attributes of the `FrameworkObject` are:

Attribute	Type	Description
`id`	string	Provides a unique ID.
`app-id`	string	Identifier that partitions objects by application. The following value can be used: `workspace`=Service Center
`enabled-yn`	boolean	The enabled flag provides a quick way to turn the object on or off in the UI without removing it. Value is `true` or `false`.
`name-key`	string	Resource bundle key for providing an object name in administration tools.

Attribute	Type	Description
`object-type`	string	Object sub-class name for `item-descriptor` inheritance.
`description-key`	string	Resource bundle key for providing an object description in administration tools.
`image-url`	string	Path to object image graphic in administration tools. The `image-url` allows a graphic to represent the object.
`resource-bundle`	string	Resource bundle identifier for object resources. The resource bundle identifier allows any resource bundle on the class path to be used for object string resources, if not using the default resource bundle.
`default-framework-ids`	string	Second object that contains default values for the current object. The default attribute defines a second object that contains default values. This supports functionality to restore defaults.
`content-ids`	contains `map-entry` elements	Identifies static content for the object, including JavaScript, CSS or HTML, by a user-friendly local key.
`template-ids`	contains `map-entry` elements	Identifies JSP page layout templates for the object mapped to a user-friendly local key.
`option-name`	contains `map-entry` elements	Lists segmented option names for the object mapped to a user-friendly local key.

The following extension methods are shared by all framework objects:

Returns	Method	Description
Map	`get-contents`	Returns a map of all `content-definition` objects assigned to the framework object keyed to the logical content identifier.
Map	`get-templates`	Returns a map of all `template-definition` objects assigned to the framework object keyed to the logical template identifier.
Map	`get-framework-objects`	Utility method that returns a map of framework objects by item type. Arguments: `int pItemType`

Framework Definition Objects

Framework definition objects define the initial state of the object.

FrameworkDefinition

The `framework-definition` object is a container object for navigation, layout, and look-and-feel for the entire UI. The `framework-definition` object contains skins and tabs. Skins contain configurable look-and-feel and template definitions for the UI layout. Tabs define the top-level navigation for the application.

The attributes of the `framework-definition` object, in addition to the attributes inherited from the `FrameworkObject` base class, are:

Attribute	Description
`framework-id`	Logical identifier that other objects use to refer to this object. This is exposed to other objects and to the code, and is the primary external way to refer to the object.
`current-tab-id`	The logical identifier for the currently selected tab.
`skin-id`	Ordered list of the look-and-feel skins used by the framework that is mapped to a user-friendly local key.
`tab-id`	Defines the order of the application tabs.

The following are extension methods of the `framework-definition` object:

Returns	Method	Description
List	`getSkin`	Returns a list of all `skin-definition` objects assigned to the `framework-definition`.
List	`getTab`	Returns a list of all `tab-definition` objects assigned to the `framework-definition`.
List	`getFrameworkDefinition`	Utility method that returns a list of framework definitions by `item-type`. Arguments: `int pItemType`

The following is an example of a `framework-definition` from the `serviceFramework.xml` file:

```
<framework-definition>
  <id>WsAgentFramework</id>
  <app-id>workspace</app-id>
```

```
  <enabled-yn>true</enabled-yn>
  <object-type>FrameworkDefinition</object-type>
…
</framework-definition>
```

The `framework-definition` also identifies the skin IDs used within the framework. For example, the skins used in this framework definition object are the `htmlSkin` and the `originalSkin`. The `priority` sets the skin priority in the layout:

```
<skin-ids>
  <id-entry>
    <id>htmlSkin</id>
    <priority>100</priority>
  </id-entry>
  <id-entry>
    <id>originalSkin</id>
    <priority>200</priority>
  </id-entry>
</skin-ids>
```

The `framework-definition` identifies the tab IDs used within the framework. The `priority` property sets the tab priority, for example:

```
<tab-ids>
  <id-entry>
    <id>browseTab</id>
    <priority>100</priority>
  </id-entry>
  <id-entry>
    <id>searchTab</id>
    <priority>200</priority>
  </id-entry>
<tab-ids>
```

SkinDefinition

The `skin-definition` object contains and provides a way to package the look-and-feel definitions available to the application.

The `skin-definition` object, in addition to the attributes inherited from the `FrameworkObject` base class, contains the following attribute:

Attribute	Description
`skin-id`	Logical identifier that other objects use to refer to this object, which is exposed to other objects and to the code. This is the primary external way to refer to the object.

The extension method of the `SkinDefinitionHome` interface is:

Returns	Method	Description
SkinDefinition	findByUserSegment AndSkinId	Returns the SkinDefinition with the specified identifier based on the segment of the current user. If the current user does not have a segment or no object is found for the current segment, a default object is returned based on skin identifier only. The appId indicates the framework application in which to look for the object. Arguments: String appId, String skinId

The following is an example of a simple tab skin-definition:

```
<skin-definition>
  <id>MySimpleTabsSkin</id>
  <app-id>workspace</app-id>
  <enabled-yn>true</enabled-yn>
  <name-key>mySimpleTabsSkin.name</name-key>
  <object-type>SkinDefinition</object-type>
  <description-key>mySimpleTabsSkin.description</description-key>
  <image-url>../../image/icons/my_skin_tabs.gif</image-url>
  <content-ids>
    <map-entry>
      <key>style</key>
      <value>MySkinSimpleTabsCSS</value>
    </map-entry>
    <map-entry>
      <key>javaScript</key>
      <value>MySkinSimpleTabsJS</value>
    </map-entry>
  </content-ids>
  <template-ids>
    <map-entry>
      <key>errorTemplate</key>
      <value>errorPanel</value>
    </map-entry>
    <map-entry>
      <key>panelTemplate</key>
      <value>simpleTabsPanel</value>
    </map-entry>
    <map-entry>
      <key>layoutTemplate</key>
      <value>simpleTabsLayout</value>
    </map-entry>
  </template-ids>
  <option-names>
    <map-entry>
      <key>myOption1</key>
      <value>SkinSimpleTabsShowLogo</value>
    </map-entry>
  </option-names>
  <skin-id>mySimpleTabsSkin</skin-id>
</skin-definition>
```

TabDefinition

The `tab-definition` object has multiple functions, which are related to the overall purpose of dividing the application into large functional areas:

- Define top-level navigation between functional areas
- Specify page structure using layout cells and templates
- Define panel stacks containing related content groupings

The attributes of the `tab-definition` object, in addition to the attributes inherited from the `FrameworkObject` base class, are described below:

Attribute	Description
`tab-id`	Logical identifier that other objects use to refer to this object, which is exposed to other objects and to the code. This is the primary external way to refer to the object.
`title-key`	Resource bundle key for the tab label.
`action-id`	The application-interpreted action URL or JavaScript function that is executed when the user selects an object on the tab.
`next-steps-id`	The identifier of the default next steps menu that is displayed with the tab.
`visible-yn`	The `visibleYn` flag determines whether an enabled tab is rendered or hidden.
`access-right`	The access right that defines the security user role required to view the tab.
`panel-stack-assignments`	A map that assigns `panel-stack-ids` strings to `cell-id` strings. The panel stack assignments indicate the cells where each panel stack is displayed. Contains the reverse mapping of the `cell-assignments` map.
`current-panel-stacks`	The listing of the identifiers of the panel stacks currently being displayed on the tab. The `panel-stack-assignments` attribute indicates which cell the panel stack populates within the page layout.
`panel-stack-order`	The list of all panel stacks for the tab in rendering order. This supports panel stacks that must be rendered in a specific order.
`cell-assignments`	Indicates the initial panel stack that is displayed in each cell. Contains the reverse mapping of the `panel-stack-assignments` map.

The extension method of the `TabDefinitionHome` interface is:

Returns	Method	Description
TabDefinition	findByUserSegmentAndTabId	Returns the TabDefinition with the specified identifier based on the segment of the current user. If the current user does not have a segment or no object is found for the current segment, a default object is returned based on tab identifier only. The appId indicates the framework application in which to look for the object. Arguments: String appId, String tabId

The following is an example of a tab-definition that defines a document tab layout:

```
<tab-definition>
  <id>MyDocumentTabDefinition</id>
  <app-id>workspace</app-id>
  <enabled-yn>true</enabled-yn>
  <name-key>myDocumentTab.name</name-key>
  <object-type>TabDefinition</object-type>
  <description-key>myDocumentTab.description</description-key>
  <image-url>/image/myDocumentTabdefault.gif</image-url>
  <tab-id>myDocumentTab</tab-id>
  <title-key>myDocumentTab.label</title-key>
  <action-id>/main.jsp?t=documentTab</action-id>
  <visible-yn>false</visible-yn>
  <access-right></access-right>
  <panel-stack-assignments>
    <map-entry>
      <key>documentPanels</key>
      <value>centerColumn</value>
    </map-entry>
  </panel-stack-assignments>
  <cell-assignments>
    <map-entry>
      <key>centerColumn</key>
      <value>documentPanels</value>
    </map-entry>
  </cell-assignments>
</tab-definition>
```

CellDefinition

The cell-definition object represents the basic layout unit within the page structure. The cell-definition can refer to a DOM element or to another identifier on the page that contains a panel stack.

The attributes of the cell-definition object, in addition to the attributes inherited from the FrameworkObject base class, are:

Attribute	Description
cell-id	Logical identifier that other objects use to refer to this object that is exposed to other objects and to the code. This is the primary external way to refer to the object.
cell-open-yn	The cell-open-yn flag determines whether a cell is toggled open or closed. Used in Service Center only.
access-right	The access right that defines the security user role required to view the cell.

The extension method of the CellDefinitionHome interface is:

Returns	Method	Description
CellDefinition	findByUserSegment AndCellId	Returns the CellDefinition with the specified identifier based on the segment of the current user. If the current user does not have a segment or no object is found for the current segment, a default object is returned based on cell identifier only. The appId indicates the framework application in which to look for the object. Arguments: String appId, String cellId

The following is an example of the a cell-definition:

```
<cell-definition>
  <id>WsContentCellDefinition</id>
  <app-id>workspace</app-id>
  <enabled-yn>true</enabled-yn>
  <object-type>CellDefinition</object-type>
  <cell-id>contentColumn</cell-id>
  <cell-open-yn>true</cell-open-yn>
  <access-right>contentColumn</access-right>
</cell-definition>
```

PanelStackDefinition

The panel-stack-definition object contains an ordered collection of panel identifiers. The panel-stack-definition object is assigned to a cell that corresponds to a DOM element on the page. The cell defines the position of the panel-stack-definition object on the page.

The attributes of the panel-stack-definition object, in addition to the attributes inherited from the FrameworkObject base class, are described below:

Attribute	Description
panel-stack-id	Logical identifier that other objects use to refer to this object and is exposed to other objects and code. This is the primary external way to refer to the object.
title-key	Resource bundle key for the label that is associated with the panel stack.
tab-affinity-yn	This flag indicates if the panel stack is associated with a particular tab (true) or if it can be rendered under any tab, as in the case of user preferences (false). If the flag is true and this was the last panel-stack viewed under a tab, when the user navigates back to that tab, the panel stack will be rendered.
panel-id	The ordered collection of panel identifiers.

The extension method of the Panel-stack-definition object is:

Returns	Method	Description
List	getPanels	Returns a list of all panel-definition objects assigned to the panel-stack-definition.

The extension method of the PanelStackDefinitionHome interface is:

Returns	Method	Description
PanelStackDefinition	findByUserSegment AndPanelStackId	Returns the PanelStackDefinition with the specified identifier based on the segment of the current user. If the current user does not have a segment or no object is found for the current segment, a default object is returned based on panel stack identifier only. The appId indicates the framework application in which to look for the object. Arguments: String appId, String panelStackId

The following is an example of a panel-stack-definition:

```
<panel-stack-definition>
  <id>MyHelpPanelStack</id>
  <app-id>workspace</app-id>
  <enabled-yn>true</enabled-yn>
  <name-key>helpPanels.name</name-key>
  <object-type>PanelStackDefinition</object-type>
  <description-key>helpPanels.description</description-key>
  <image-url>/image/default.gif</image-url>
```

```
  <panel-stack-id>helpPanels</panel-stack-id>
  <header>contentHeader</header>
  <error-panel-id>errorPanel</error-panel-id>
  <title-key>helpPanels.label</title-key>
  <tab-affinity-yn>true</tab-affinity-yn>
  <panel-ids>
    <id-entry>
      <id>MyErrorPanel</id>
      <priority>100</priority>
    </id-entry>
  </panel-ids>
</panel-stack-definition>
```

PanelDefinition

The `panel-definition` object is the basic content unit for the application. The `panel-definition` defines a rectangular region of the page with related content referenced by an included JSP content template.

The attributes of the `panel-definition` object, in addition to the attributes inherited from the `FrameworkObject` base class, are:

Attribute	Description
`panel-id`	Logical identifier that other objects use to refer to this object, which is exposed to other objects and to the code. It is the primary external way to refer to the object.
`content-url`	Use the `template-ids` mapping on the `FrameworkObject` to assign arbitrary JSP pages to framework objects. Identifies the contents of the panel.
`other-context`	Contains a static context link or a context/URL link.
`onload`	Contains the optional name of a JavaScript function to evaluate when the panel is loaded by the framework.
`onunload`	Contains the optional name of a JavaScript function to evaluate when the panel is unloaded by the framework.
`help-key`	Provides a string for inline help accessible via a help icon located on the panel title bar.
`title-key`	Resource bundle key for the label that is associated with the panel.
`visible-yn`	Determines whether an enabled tab is rendered or hidden.
`show-title-yn`	Indicates whether the panel has a visible title bar or only a content area with no title bar.
`panel-open-yn`	Indicates whether the entire panel is currently closed or minimized with a placeholder displayed in the available panels.
`allow-panel-toggle-yn`	Indicates whether the entire panel, including title bar, can be closed or minimized and represented by a placeholder in the available panels.

Attribute	Description
allow-content-toggle-yn	Indicates whether the panel contents can be closed or minimized, leaving only the panel title bar visible.
tab-holder-yn	Determines whether the panel can hold other panels in a tabbed format.
always-tabbed-yn	Indicates whether the panel is forced to be tabbed in a row of panel tabs on a tab-holder panel with no ability to be removed from the tabbed position.
tabbed-yn	Indicates whether the panel is currently a tabbed in a row of panel tabs on a tab-holder panel.
allow-tabbing-yn	Indicates whether the panel is allowed to be tabbed in a row of panel tabs on a tab-holder panel.
current-panel-id	Holds the identifier of the currently visible panel based on the selected tab for tab-holder panels.
panel-item-count	Provides a way for the panel label to contain a number representing the number of items displayed in the panel. For example, a panel that displays 17 search results in its content area is able to display My Search Results (17) in the title bar.
access-right	The access right that defines the security user role required to view the panel.
tabbed-panel-ids	Lists the identifiers of the other panels that are tabbed with the current tab-holder panel. The tabs are rendered in the order that the corresponding panels identifiers occur in the list.

The extension method of the PanelDefinitionHome interface is:

Returns	Method	Description
PanelDefinition	findByUserSegment AndPanelId	Returns the PanelDefinition with the specified identifier based on the segment of the current user. If the current user does not have a segment or no object is found for the current segment, a default object is returned based on panel identifier only. The appId indicates the framework application in which to look for the object. Arguments: String appId, String panelId

The following is an example of a PanelDefinition:

```
<panel-definition>
  <id>WsCustomerCreateNewPanel</id>
  <app-id>workspace</app-id>
```

```
  <enabled-yn>true</enabled-yn>
  <object-type>PanelDefinition</object-type>
  <template-ids>
    <map-entry>
      <key>panelTemplate</key>
      <value>panelTemplate</value>
    </map-entry>
  </template-ids>
  <panel-id>customerCreatePanel</panel-id>
  <content-url>/panels/customer/info.jsp</content-url>
  <other-context>agent</other-context>
  <help-key>panel.customerInformationPanel.help</help-key>
  <title-key>panel.customerInformationPanel.label</title-key>
  <visible-yn>true</visible-yn>
  <show-title-yn>true</show-title-yn>
  <panel-open-yn>true</panel-open-yn>
  <allow-panel-toggle-yn>false</allow-panel-toggle-yn>
  <available-yn>false</available-yn>
  <content-open-yn>true</content-open-yn>
  <allow-content-toggle-yn>false</allow-content-toggle-yn>
  <tab-holder-yn>false</tab-holder-yn>
  <always-tabbed-yn>false</always-tabbed-yn>
  <tabbed-yn>false</tabbed-yn>
  <allow-tabbing-yn>false</allow-tabbing-yn>
  <allow-slots-yn>false</allow-slots-yn>
  <tab-scroll-index>0</tab-scroll-index>
  <panel-item-count>0</panel-item-count>
  <access-right>CustomerInformationPanel</access-right>
</panel-definition>
```

Framework Supporting Object Definitions

A few supporting object definition types can be referenced by any other framework object. Content objects define static content such as CSS, JavaScript, or HTML. Template objects define JSP layout templates.

ContentDefinition

The `content-definition` object provides an extensible way to link static content, such as CSS, HTML or JavaScript to framework objects. The MIME type of the content is specified with the `content-definition` object. Any framework object can define content definitions mapped by key. The following is an example of how to import CSS contents into a JSP page:

```
<c:out value="${mySkin.contents.css.body}"/>
```

The attributes of the `content-definition` object, in addition to the attributes inherited from the `FrameworkObject` base class, are:

Attribute	Description
body	The text context that is defined as an alternative to referencing the content by a URL.
content-id	Logical identifier that other objects use to refer to this object. This identifier is exposed to other objects and to the code. and is the primary external way to refer to the object.
mime-type	The type of content being defined. For example, content with a MIME type of text/css would place CSS contents in the body. Content with a MIME type of text/javascript would place JavaScript in the body. Other common content types in a Web application might be text/html or text/xml.
other-context	The Web context for rendering content from other Web applications.
url	A URL that references the static content.
url-yn	Indicates whether the content is referenced externally by a URL. If the URL flag is false, the body of the static content is contained internally in the body attribute of the content definition.

The extension method of the ContentDefinitionHome interface is:

Returns	Method	Description
ContentDefinition	findByUserSegment AndContentId	Returns the ContentDefinition with the specified identifier based on the segment of the current user. If the current user does not have a segment or no object is found for the current segment, a default object is returned based on content identifier only. The appId indicates the framework application in which to look for the object. Arguments: String appId, String contentId

TemplateDefinition

The template-definition object defines templates for objects in the framework. Templates are JSP pages that define the page structure for a framework object. Any framework object has the ability to define its own layout templates mapped by key. The following is an example of how to import a skin layout template:

```
<dspel:include page="${mySkin.templates.layoutTemplate.url}"/>
```

The attributes of the template-definition object, in addition to the attributes inherited from the FrameworkObject base class, are:

Attribute	Description
other-context	The Web context for rendering content from other Web applications.
template-id	Logical identifier that other objects use to refer to this object, which is exposed to other objects and to the code. It is the primary external way to refer to the object.
url	A URL that references the JSP template.

The extension method of the TemplateDefinitionHome interface is:

Returns	Method	Description
TemplateDefinition	findByUserSegment AndTemplateId	Returns the TemplateDefinition with the specified identifier based on the segment of the current user. If the current user does not have a segment or no object is found for the current segment, a default object is returned based on template identifier only. The appId indicates the framework application in which to look for the object. Arguments: String appId, String templateId

The following is a template-definition:

```
<template-definition>
  <id>SimpleLinksEveryonePanelTemplate</id>
  <app-id>workspace</app-id>
  <enabled-yn>true</enabled-yn>
  <object-type>TemplateDefinition</object-type>
  <template-id>simpleLinksPanel</template-id>
  <url>/skins/templates/simpleLinksPanelTemplate.jsp</url>
</template-definition>
```

Framework Configuration Objects

In addition to the framework definition objects, which define default appearance and behavior, the configuration objects store the current state of the framework objects for a particular user when the user logout. The profile ID of the user is associated with the configuration. These configuration objects, which are defined in the /Service/Framework/config/atg/svc/ui/framework /serviceFrameworkRepository.xml file, are associated with the profile ID of the user.

Configuration Object Inherited Attributes

The `ConfigurationObject` base class contains attributes that are shared by all framework configuration objects via an inheritance relationship. The `ConfigurationObject` shared attributes are:

Attribute	Description
`config-type`	Object sub-class name for item-descriptor inheritance.
`enabled-yn`	The enabled flag turns the object on or off in the UI via the object configuration. Value is true or false.
`id`	Repository identifier.
`user-id`	Repository ID of the user to whom the configuration belongs.

FrameworkConfig

The `FrameworkConfig` object manages user configuration for the `FrameworkDefinition` object. The attributes of the `FrameworkConfig` object, in addition to the attributes inherited from the `ConfigurationObject` base class, are:

Attribute	Description
`config-type`	`FrameworkConfig`
`current-tab-id`	The identifier of the currently selected tab for the current user.
`framework-id`	Logical identifier for the corresponding `FrameworkDefinition`.
`tab-ids`	List of tabs visible for the current user.

ContentConfig

The `ContentConfig` object manages user configuration for the `ContentDefinition` object and has the same attributes as the `ContentDefinition` object.

TemplateConfig

The `TemplateConfig` object manages user configuration for the `TemplateDefinition` object and has the same attributes as the `TemplateDefinition` object.

SkinConfig

The `SkinConfig` object is a placeholder configuration object for the `SkinDefinition` object with no significant attributes.

TabConfig

The TabConfig object manages user configuration for the TabDefinition object. The attributes of the TabConfig object, in addition to the attributes inherited from the ConfigurationObject base class, are:

Attribute	Description
config-type	TabConfig
tab-id	Logical identifier for the corresponding TabDefinition.
visible-yn	The flag indicates whether the tab is visible for the current user.

CellConfig

The CellConfig object manages user configuration for the CellDefinition object. The attributes of the CellConfig object, in addition to the attributes inherited from the ConfigurationObject base class, are:

Attribute	Description
config-type	CellConfig
cell-id	Logical identifier for the corresponding CellDefinition.
cell-open-yn	The flag indicates whether the cell is open or closed for the current user.

PanelStackConfig

The PanelStackConfig object manages user configuration for the PanelStackDefinition object. The attributes of the PanelStackConfig object, in addition to the attributes inherited from the ConfigurationObject base class, are:

Attribute	Description
config-type	PanelStackConfig
panel-ids	List of panels defined for the current user.
panel-stack-id	Logical identifier for the corresponding PanelStackDefinition.

PanelConfig

The PanelConfig object manages user configuration for the PanelDefinition object. The attributes of the PanelConfig object, in addition to the attributes inherited from the ConfigurationObject base class, are:

Attribute	Description
config-type	PanelConfig
available-yn	The available flag indicates whether the panel is displayed in the available panels for the current user.
content-open-yn	Indicates whether the panel content area is open or closed for the current user.
current-panel-id	Holds the identifier of the initially visible panel tab for the current user. Applies to tab-holder panels.
panel-id	Logical identifier for the corresponding PanelDefinition.
panel-open-yn	The panel open flag indicates whether the entire panel is open or closed, including the title bar, for the current user.
tabbed-panel-ids	Lists the identifiers of the other panels that are tabbed with the current tab-holder panel for the current user. Applies to tab-holder panels.
tabbed-yn	The tabbed flag indicates whether the panel is initially tabbed on a tab-holder panel for the current user. If set to false, the panel is not tabbed within the panel.
tab-scroll-index	Supports the scrollable tabs feature configuration for horizontal tab scrolling.
visible-yn	Indicates whether the panel is visible for the current user.

Framework Instance Objects

The framework definition and configuration objects both manage persistent aspects of the Service Center framework. Framework instance objects manage the transient aspects of the Service Center framework by holding the current in-memory state of a given framework object in a running Web application within a browser.

Below is a summary of the instance objects, which are defined in the /Service/Framework/config/atg/svc/ui/framework/serviceFrameworkRepository.xml file.

Instance Object Inherited Attributes

The InstanceObject base class contains attributes that are shared by all framework instance objects via an inheritance relationship. The InstanceObject shared attributes are:

Attribute	Description
enabled-yn	The enabled flag turns the object on or off in the UI for the duration of the user's browser session. Value is true or false.
instance-type	Object sub-class name for item-descriptor inheritance.

ContentInstance

The `ContentInstance` object manages transient state for the `ContentDefinition` object and has attributes similar to the `ContentDefinition` object.

TemplateInstance

The `TemplateInstance` object manages transient state for the `TemplateDefinition` object and has attributes similar to the `TemplateDefinition` object.

FrameworkInstance

The `FrameworkInstance` object manages transient state for the `FrameworkDefinition` object. The attributes of the `FrameworkInstance` object, in addition to the attributes inherited from the `InstanceObject` base class, are:

Attribute	Description
`instance-type`	`FrameworkInstance`
`current-tab-id`	The identifier of the currently selected tab in the browser.
`framework-id`	Logical identifier for the corresponding `FrameworkDefinition`.
`previous-tab-id`	The identifier of the last selected tab in the browser.
`tab-ids`	List of tabs currently visible in the browser.

SkinInstance

The `SkinInstance` object is a placeholder configuration object for the `SkinDefinition` object with no attributes currently defined.

TabInstance

The `TabInstance` object manages transient state for the `TabDefinition` object. The attributes of the `TabInstance` object, in addition to the attributes inherited from the `InstanceObject` base class, are:

Attribute	Description
`instance-type`	`TabInstance`
`cell-assignments`	Map indicating the panel stacks that are currently assigned to each layout cell in the browser.

Attribute	Description
current-panel-stacks	Map indicating the cell to which each panel stack is currently assigned in the browser.
next-steps-id	Identifier indicating the current next steps menu for the tab in the browser.
tab-id	Logical identifier for the corresponding TabDefinition.
visible-yn	Indicates whether the tab is visible in the browser.

CellInstance

The CellInstance object manages transient state for the CellDefinition object. The attributes of the CellInstance object, in addition to the attributes inherited from the InstanceObject base class, are:

Attribute	Description
instance-type	CellInstance
cell-id	Logical identifier for the corresponding CellDefinition.
cell-open-yn	Indicates whether the cell is open or closed in the browser. Tracks the open-closed state of the columns.
current-panel-stack-id	Identifier that indicates the current panel stack displayed in the cell in the browser.

PanelStackInstance

The PanelStackInstance object manages transient state for the PanelStackDefinition object. The attributes of the PanelStackInstance object, in addition to the attributes inherited from the InstanceObject base class, are:

Attribute	Description
instance-type	PanelStackInstance
panel-stack-id	Logical identifier for the corresponding PanelStackDefinition.
panel-target-elements	List of panel target elements in the panel stack, each representing a single instance of a panel within the UI.
target-map	Maps a lists of panel target elements keyed by the logical panel identifier. Each key in the map contains a list of all of the instances of a particular panel target in the UI.

PanelInstance

The PanelInstance object manages transient state for the PanelDefinition object. The attributes of the PanelInstance object, which are in addition to the attributes inherited from the InstanceObject base class, are:

Attribute	Description
instance-type	PanelInstance
available-yn	Indicates whether the panel is listed in the available panels in the browser.
content-open-yn	Indicates whether the panel content area is open or closed in the browser.
current-panel-id	Holds the identifier of the currently visible panel tab in the browser. Applies to tab-holder panels.
panel-id	Logical identifier for the corresponding PanelDefinition.
panel-open-yn	Indicates whether the entire panel is open or closed, including the title bar, in the browser.
tabbed-panel-ids	Lists the identifiers of the other panels that are tabbed with the current tab-holder panel in the browser. Applies to tab-holder panels.
tabbed-yn	Indicates whether the panel is currently tabbed on a tab-holder panel in the browser.
tab-scroll-index	Supports the transient scrollable tabs feature for horizontal tab scrolling.
visible-yn	Indicates whether the panel is visible in the browser.

PanelTarget

The PanelTarget object manages transient state for a single instance of a panel in the UI. By providing an auto-generated unique identifier for each panel instance, the PanelTarget object allows multiple instances of the same PanelDefinition to exist simultaneously on the page.

The attributes of the PanelInstance object, in addition to the attributes inherited from the InstanceObject base class, are:

Attribute	Description
instance-type	PanelTargetElement
panel-id	Logical identifier for the corresponding PanelDefinition for the instance.
target-element-id	Auto-generated unique identifier for the panel instance.

Modifying Framework Definitions

You can modify the framework definition elements that are outlined in the Framework Objects (page 12) section. Modifications should be made to the `serviceFramework.xml` file located in your customization directory. Your modifications will be appended to the default `serviceFramework.xml` file. For detailed information on `xml-combine`, or data binding, refer to the *ATG Page Developer's Guide*.

Adding a Definition

The following is an example of a new content definition named `myexistingTabAction`:

```
<content-definition>
  <id>myexistingTabAction</id>
  <app-id>workspace</app-id>
  <enabled-yn>true</enabled-yn>
  <object-type>ContentDefinition</object-type>
  <content-id>myexistingTabAction</content-id>
  <mime-type>text/javascript</mime-type>
  <body>atgChangeTab(atg.svc.framework.changeTab("DefaultTab"),
        null, null, null);</body>
  <url-yn>true</url-yn>
</content-definition>
```

Modifying a Definition

The following example shows a modification to an existing `myexistingTabAction` element that changes the `enabled-yn` element from `true` to `false`. The `myexistingTabAction` element is matched on the `content-definition` and `id` tags:

```
<content-definition>
  <id>myexistingTabAction</id>
  <enabled-yn>false</enabled-yn>
</content-definition>
```

Deleting a Definition

The following is an example of how to delete a definition named `myexistingTabAction`. Modifications should be made to the `serviceFramework.xml` file located in your customization directory:

```
<content-definition xml-combine="remove">
  <id>myexistingTabAction</id>
</content-definition>
```

4 Service Center Framework API

Service Center provides an API that accesses various features of the UI framework. The following information is discussed in this section:

- `atgChangeTab` – Provides code that allows you to change the tab in the framework while setting arguments for `atgSubmitAction`
- `atgSubmitAction` – Provides code that submits information from a form
- `frameworkUrl` – Provides code that identifies forwarding and redirecting URLs

Changing Tabs

The `atgChangeTab` performs the necessary client and server side actions to change the current tab in the framework using the following attributes that set arguments for `atgSubmitAction`.

- `newTab`
- `nextSteps`
- `panelStack`
- `panels`
- `extraParams`

The following functions are available in `atg.svc.framework`.

Attribute	Description
`changeTab`	Change to the specified tab on the client-side only. Must be called in conjunction with a server-side call to `atgSubmitAction` that specifies the ID of a valid tab defined in the UI framework. Arguments: `tabId` – ID of the tab to make the current tab

Attribute	Description
`toggleSidebar`	Changes and restores the state of the sidebar from the default expanded view showing all of the helpful panels to a minimized view showing a vertical bar. Arguments: none
`selectTabbedPanel`	Selects the specified panel in a row of tabbed panels as the current panel. Arguments: `panelId` – ID of the panel to make the current panel `nextStepsId` – ID of the next steps `nextStepsPanelId` – optional ID of the next steps panel
`togglePanel`	Removes or restores the specified side panel. Removed panels are taken out of the display and moved to a link in the Available Panels panel. Clicking the link in Available Panels restores the panel to its original position. Arguments: `panelId` – ID of the panel to toggle
`togglePanelsToTabs`	Moves a panel to or from a row of tabbed panels. Arguments: `panelId` – ID of panel to move to tabs `panelStackId` – ID of panel stack that contains the panel to move to tabs
`togglePanelContent`	Shows and hides the content area of a panel. The title bar of the panel remains in place. Arguments: `panelId` – ID of the panel to toggle
`startCall`	Initiates a new agent session with a customer without ending the existing session.
`endCall`	Terminates the existing agent session with the customer.
`endAndStartCall`	Initiates a new agent session with a customer and terminates the existing session.

Framework parameters are submitted to the server using the `atgSubmitAction` function or with form handlers using a `successURL` formatted by the `frameworkUrl` tag library.

Submitting Actions

The `atgSubmitAction` is used to submit a form. The JavaScript function `atgSubmitAction` has the following signature, which accepts a single object argument:

```
atgSubmitAction = function(params) {};
```

The `params` argument is a JavaScript object that may contain any combination of the following properties that are used to configure the framework request. Some properties are converted to request or query parameters and submitted to the server. Others are assigned to the submitted form. Most of the properties are either optional or have defaults, so they do not have to be specified with each request.

Property	Description
`url`	Optional target URL for submitting framework requests. Overrides the default framework URL.
`mimeType`	Optional. Sets the `mime-type` of the request.
`handleAs`	Optional. Sets the expected response format for proper handling.
`form`	Reference to the DOM form to submit the framework request. The form can be a DSP form linked to a form handler. Either `form` or `formId` is required.
`formId`	Looks up the form to submit with the framework request. Either `form` or `formId` is required.
`formInputValues`	Requires the form specified in the `form` property. Maps form element names to values. Each value is bound to the corresponding form element for submission as such: For each `name` in `formInputValues`, set `form[name].value = forminputValues[name]`
`tab`	Navigates to the specified tab by ID. Submits the request parameter `t`.
`nextSteps`	String name of the next steps to render in the next steps panel. Submits the request parameter `ns`.
`panelStack`	Navigates to the specified panel stack under the current tab. Renders all of the currently-enabled member panels of the panel stack in the cell for which the panel stack is assigned under the tab definition. Submits the request parameter `ps`.
`panels`	Array of panel identifiers to refresh. The panel will remain in its current place but the contents will be re-rendered. Submits the request parameter `p`. For example: `["panel1", "panel2"]`
`selectTabbedPanels`	Array of panel identifiers to set to the selected state. Applies to panels that are in a row of tabbed panels. Submits the request parameter `selectTabbedPanelIds`.
`paramsMapName`	Optional. Fully qualified Nucleus path of the form-handler bean map property that will receive the `extraParams`. Allows JavaScript data to be passed to a form handler.

Property	Description
formHandler	Optional. Fully qualified Nucleus path of a form handler with a property named parameterMap. **Note:** The form handler must have a property named parameterMap. If the form handler does not have a property with this name, use the paramsMapName property.
extraParams	Optional. Map of parameters to map to key-value pairs on the default FrameworkBaseFormHandler parameterMap property or another property specified in paramsMapName. The values are assigned into a comma-delimited list as such: For each key in extraParams, append key = extraParams[key] to list. The comma-delimited list is assigned to the form handler parameter map property: key1=value1, key2=value2, etc. Allows JavaScript data to be passed to a form handler map.
listParams	Optional. Map of keys to arrays of values. Requires the form specified in the form property and the form handler specified in the formHandler property. The values contained in each array are submitted to the same array-based form handler property. For example, {param1: [a,b,c],param2: [x,y,z]}.
mapParams	Optional. Map of keys to other maps. Requires the form specified in the form property and the form handler specified in the formHandler property. The outer keys map to the corresponding property names on formHandler. The inner keys are appended to a comma-delimited list of key-value pairs. For example, {property1: {key1: value1, key2: value2}}.
queryParams	Optional. Map of parameters that are added without modification to the request URL as query parameters.
sync	Flag indicating whether to submit the request synchronously or asynchronously. If the request is synchronous, the atgSubmitFunction will wait until a response is received from the server (or a timeout occurs) before continuing execution. The default value is false for asynchronous requests.
showLoadingCurtain	Flag indicating whether to display a loading curtain and progress indicator during requests. The default value is true to show the loading curtain and progress indicator.

Forwarding and Redirecting URLs

The frameworkUrl tag constructs a forwarding and redirection URL with framework parameters. The URL can be assigned to a form handler sucessURL property, allowing the form handler to navigate to different locations in the Service Center application based on the results of processing the form.

The following example navigates to the global panels and the shopping cart panel stacks. If these panel stacks are already displayed, they will be refreshed. This example also contains the custom parameter contentHeader, which will be added to the query parameters as contentHeader=true. The result is stored in the successURL page variable, which can be assigned to a form handler property.

```
<svc-ui:frameworkUrl var="successURL" panelStacks="globalPanels,
```

```
cmcShoppingCartPS" contentHeader="true"/>
```

The following attributes can be assigned to the tag. Custom dynamic attributes are also allowed and will be included to the redirection URL as query parameters.

Attribute	Description
`context`	Optional. Context of the framework request URL for forwarding or redirecting. Requires that `url` is specified.
`dynamicIncludes`	Sets the delimiters for setting dynamic includes.
`Context`	Sets the values for the Context.
`panels`	Delimited list of panel identifiers for the panels to refresh. The panels will remain in their current place but the contents will be re-rendered. Includes the request parameter p. The default delimiter is a comma. The default delimiter can be overridden with the `splitChar` attribute.
`panelStacks`	Delimited list of panel stack identifiers for the panel stacks to navigate to under the current panel. Renders the currently-enabled member panels of the panel stack in the cell for which the panel stack is assigned under the tab definition. Includes the request parameter ps. The default delimiter is a comma. The default delimiter can be overridden with the `splitChar` attribute.
`selectTabbedPanels`	Delimited list of panel identifiers for the tabbed panels to set to the selected state. Applies only to panels that are in a row of tabbed panels. The default delimiter is a comma. The default delimiter can be overridden with the `splitChar` attribute.
`splitchar`	Sets the delimiter to the specified set of characters overriding the default comma delimiter.
`tab`	Navigates to the specified tab by ID. Includes the request parameter.
`url`	Optional. Target URL for forwarding or redirecting the framework request. Overrides the default framework URL.
`var`	Page variable name to be assigned the framework URL.

Part II. Developing Pages in Service Center

The instructions in this section are intended for users who make changes to the user interface of Service Center. This section provides information on components that are specific to Service Center and should be used in tandem with general page development information, such as working with tags, forms and servlets, which can be found in the *ATG Page Developer's Guide*.

This section contains the following:

5 Service Center UI Components

This section discusses UI components that are specific to Service Center. General page development information, such as working with tags, forms and servlets, can be found in the *ATG Page Developer's Guide*.

Working with JavaServer Pages

ATG applications provide an open, server-side environment for building and deploying dynamic, personalized applications based on JavaBeans and JSP pages. Web application developers assemble applications out of component servlet beans by linking them together through configuration files. For detailed information on creating JavaBean components and JSPs, refer to the *ATG Platform Programming Guide*.

When a browser instance requests a JSP, all necessary documents are identified and located and then compiled into Java code. The code is then converted into an HTML page and displayed. HTML can incorporate dynamic elements that allow the page to be customized for each instance using JSP, which can pass information to JavaBeans, servlets and other Java components. JSP-based applications can perform a number of capabilities, including displaying property values or forms, invoke servlet beans or components and extract data stored in XML.

For detailed information on creating JSPs, refer to the *ATG Page Developer's Guide*.

Tag Libraries

As a Web page designer, you build the front-end interface for the application out of JSPs that use the DSP tag library. The DSP tag libraries used by Service Center are listed in Appendix B, *Tag Libraries* (page 121).

For additional information on working with tag libraries, refer to the *ATG Page Developer's Guide*.

Servlet Beans

Servlet beans are Java-based Web components that are managed by a container and generate dynamic content from Java objects. They also transform data in XML documents. Detailed information on working with servlet beans and integrating XML with servlet beans can be found in the *ATG Page Developer's Guide*.

Customization Best Practices

The following are best practices to use when customizing your environment.

Extending Configuration Files

It is best to use configuration layering to create extended configuration files that reside within your own application module, and point these files to the extended configuration files, JavaScript or CSS files contained in your custom application. Adding a new field to the end of the default fields is best done by modifying the appropriate extended properties file. New fields will be displayed after the default fields. This prevents your customizations from being overwritten if Commerce Service Center is updated, as the configuration properties are located in your Web application.

By creating an extended configuration component you can append content to the page without changing the default configurations. The extended component contains the same functionality as, and is defined directly after, the default components.

Adding JavaScript and CSS Files

When you add new JavaScript or CSS files to your customization directory, you should point the `AgentUIConfiguration` component to it using the `applicationScriptFiles` property. When you add your JavaScript or CSS files to the `applicationScriptFiles` property, they are aggregated and loaded at the same time to the application server. This avoids multiple communications with the application server:

1. Add JavaScript files to the `applicationScriptFiles` property of the `Service-UI/Framework/Agent/config/atg/svc/agent/ui/AgentUIConfiguration.properties` file.

   The following example adds `myScript1.js` and `myScript2.js` to `myServiceCenter`. To add to the list, ensure that you use the += syntax:

   ```
   applicationScriptFiles+=
   /myServiceCenter/myScripts/myScript1.js,
   /myServiceCenter/myScripts/myScript2.js
   ```

2. If `dojoDebug` is turned on, as discussed in Dojo Debugging Mode (page 43), you must add your custom scripts to the `debugScriptFiles` list:

   ```
   debugScriptFiles+=
   /myServiceCenter/myScripts/myScript1.js,
   /myServiceCenter/myScripts/myScript2.js
   ```

3. To add a new CSS file, add it to `/atg/svc/agent/ui/AgentUIConfiguration` using the `applicationStyleSheets` property:

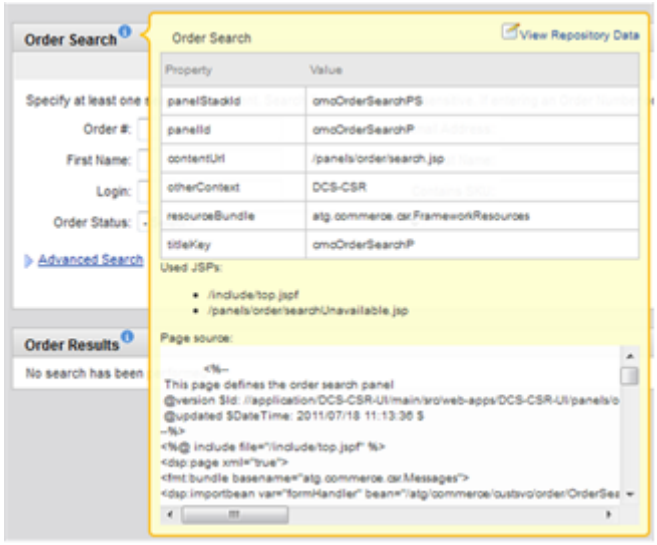
   ```
   applicationStyleSheets+=
   /myServiceCenter/myStyles/myStyles.css
   ```

Using Service Center Debugging Modes

When customizing Service Center, you may find it helpful to activate the following debugging modes.

Service Center Debugging Mode

Service Center debugging mode provides information on all of the components that comprise the panel. When the cursor is placed over the icon, debug information displays for the panel, as shown below:



The pop-up window presents a table of the data IDs that drive the display of the panel, as well as the JSP that renders the panel content and the Web application that contains the JSP. The table also displays the resource bundle and the key that are used to display the panel content.

Below the table is a list of the JSP sources, as well as a list of the included JSP files. This page is cross-linked to the Dynamo Server Admin, which queries for the panel data, allowing real-time modification.

To turn on debug mode, set the `useDebugPanelStackMode` property of the `/atg/svc/agent/ui/AgentUIConfiguration` to `true`.

Dojo Debugging Mode

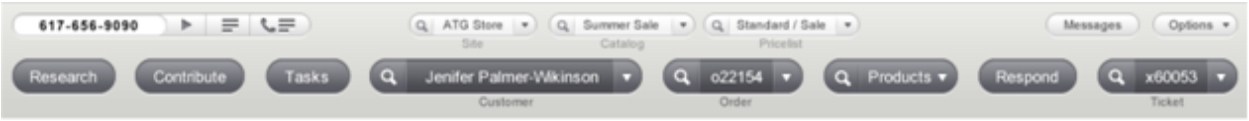
Dojo debugging enables console logging in Firefox Firebug. To set Dojo debugging, set the `dojoDebug` property of the `/atg/svc/agent/ui/AgentUIConfiguration` to `true`.

6 Working with the Global Context Area

The global context area is a UI located at the top of the page in Service Center. This JSP-based UI is produced using a series of configuration files that define the contents of each navigational item. The following section describes the components that make the global context area, as well as steps to modify the UI.

Global Context Area Architecture

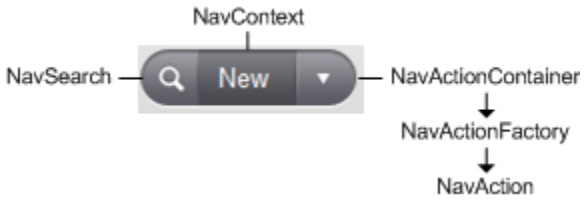
The global context area allows users to see and access a variety of information quickly. The items that are displayed on the global context area depend on the modules and applications that have been installed in your environment.



The global context area is comprised of three separate navigation containers, the `PrimaryNavContainer`, the `SecondaryNavContainer` and the `OptionsNavContainer`. Each navigation container is a component of type `NavContainer`, which defines the navigational item components of type `NavItem` that will be displayed in the UI. The following individual navigation classes make up the entire global context area architecture:

- `NavItem` – A `NavItem` component encapsulates the components that make up a single navigational element within the UI. A `NavItem` is comprised of `NavSearch`, `NavContent` and `NavAction` elements
- `NavSearch` – A `NavSearch` component provides the display and control elements that are displayed and executed when a user clicks the search option on the `NavItem`
- `NavContent` – This component provides the display and control elements that are displayed and executed when a use clicks on the context area of the `NavItem`
- `NavAction` – A `NavAction` defines the display and control elements for a single action. `NavActions` can be referenced by a `NavActionFactory` using static component references or, in some cases can be dynamically generated by a `NavActionFactory`. Dynamic `NavActions` are those that can change in availability, appearance or execution, depending on the current state of the agent's environment
- `NavActionContainer` – This component defines one or more `NavActions` available to the `NavItem`

- `NavActionFactory` – A `NavActionFactory` component provides one or more `NavActions`. These components are referenced by the `NavActionContainer` to provide the available `NavActions`



Anatomy of a NavItem

Each `NavItem` has a property file that contains commonly used attributes and sub-components, which can be found in:

ATG Product	Location
Commerce Service Center	`/DCS-CSR-UI/src/config/atg/svc/agent/ui/`
Service Center Framework	`/Service-UI/framework/Agent/j2ee-apps/Agent.ear/ServiceFramework.war/`

The `NavAction` component contains properties for a resource bundle and a label, as well as a JavaScript function call. These properties can be modified to customize the `NavAction`. The labels for the components are all localized in a resource bundle, which is typically `FrameworkResources`. **Note:** There are separate bundles for the Service Center Framework and Commerce Service Center

NavContainers

`NavContainers` contain multiple `NavItems`, which are divided into search, context and action subcomponents. There are three default `NavContainers`:

- `PrimaryNavContainer` – Holds information such as Customer, Order, Product and Ticket and is rendered on the bottom row of the global context area
- `SecondaryNavContainer` – H olds information such as Store, Site, Catalog and Pricelists and is rendered on the top row of the global context area
- `OptionsNavContainer` – This contains Log Out, Preferences and About information and is rendered to the right of the `SecondaryNavContainer`

`NavContainers` set the following:

Name	Type	Description
id	string	IDs are optional. If you use an ID, it must be unique to the IDs that are specified by other navigational components within the global context area. The ID is included when rendering the NavContainer component within the DOM to enable custom CSS files to target the styling of the NavContainer without having to modify the JSP file directly.
environmentTools	path	References and identifies the EnvironmentTools component.
navItems	path	References all of the contained navItem components.

NavItems

A NavItem provides three optional subcomponents, as well as properties for controlling rendering priority within the container, secured access and display of the item. The subcomponents are the search, context and action container components.

Applications that use the global context area add their NavItems to the NavContainer's NavItems list within their own config layer using the += syntax.

NavItems contain the following configuration:

Name	Type	Description
id	string	IDs are optional. If you use an ID, it must be unique to the IDs that are specified by other navigational components within the global context area. The ID is included when rendering the NavItem component within the DOM to enable custom CSS files to target the styling of the NavItem without having to modify the JSP file directly.
available	Boolean	Determines if the NavItem is available. If false, the NavItem will not be displayed in the UI
sortPriority	integer	Determines the position of the NavItem relative to other NavItems defined by the NavContainer. The NavContainer sorts the NavItems by this property in ascending order. Lower sort order numbers are rendered first.
accessRight	string	Defines the access right required to use the NavItem. If the agent does not have this right, the NavItem will not be included within the UI.
labelResourceKey	string	The resource key that identifies the label that appears under the NavItem in the UI.
resourceBundleName	string	Identifies the name of the resource bundle used to look up all resourced values.

Name	Type	Description
navSearch	path	References the search subcomponent.
navContext	path	References the context subcomponent.
navActionContainer	path	References the navActionContainer subcomponent.

NavSearch

The NavSearch component defines the navigational elements for the search button that exists on the navigation item, allowing the user to activate the search function. When a user clicks on the Search button, a JavaScript code snippet is executed, performing the specific search action.

The NavSearch component has the following configuration:

Name	Type	Description
id	string	IDs are optional. If you use an ID, it must be unique to the IDs that are specified by other navigational components within the global context area. The ID is included when rendering the NavSearch component within the DOM to enable custom CSS files to target the styling of the NavSearch without having to modify the JSP file directly.
toolTipResourceKey	string	The resource key used to identify the tooltip text that appears when hovering over the search element of the NavItem in the UI.
resourceBundleName	string	Identifies the name of the resource bundle used to look up all resourced values.
javaScriptFunctionCall	path	Defines the string that is rendered as the JavaScript function for the search icons.

NavContext

This component represents the context area on a NavItem. It provides a descriptive label for the NavItem that is relative to the current context. The base version of the NavContext component defines layout properties such as width limits, display strings and the JavaScript code snippet to execute.

The NavContext can be a static label or a dynamic value or a customized combination of the two. Customized label strings are generated using subclasses of NavContext.

The NavContext component contains the following configuration:

Name	Type	Description
id	string	IDs are optional. However, when used, they must be unique to the IDs that are specified by other navigational components within the global context area. The ID is included when rendering the NavContext component within the DOM to enable custom CSS files to target the styling of the NavContext without having to modify the JSP file directly.
labelResourceKey	string	The resource key used to identify the text that appears as the context element of the NavItem in the UI. **Note:** Because NavContext displays contextual information, it is common for this text value to be dynamic in nature, depending on the current state of the agent's environment. As such, it is common for the getLabel() API to be overridden to provide a dynamic value.
toolTipResourceKey	string	The resource key used to identify the tooltip text that appears when hovering over the context element of the NavItem in the UI.
minWidth	integer	Identifies the minimum width allowed. Defined in pixels.
maxWidth	integer	Identifies the maximum width allowed. Defined in pixels.
javaScriptFunctionCall	string	Defines the string that is rendered as the JavaScript function for the context label. This function is executed when the user clicks the context label.
resourceBundleName	string	Identifies the name of the resource bundle used to look up all resourced values.

NavActionContainers

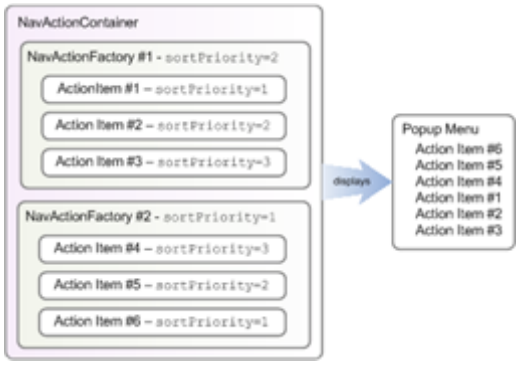
This component represents the action menu within a NavItem. The action menu contains a collection of links to display within a pop-up window. The NavActionContainer references the NavActionFactory components that provide the navigational display and control elements for the NavActions.

The NavContainer, which uses the NavActionFactory sortPriorty property to identify the priority of the grouped NavActions defined within the NavActionFactory, has the following configuration:

Name	Type	Description
`id`	string	IDs are optional. However, when used, they must be unique to the IDs that are specified by other navigational components within the global context area. The ID is included when rendering the `NavActionContainer` component within the DOM to enable custom CSS files to target the styling of the `NavActionContainer` without having to modify the JSP file directly.
`resourceBundleName`	string	Identifies the name of the resource bundle used to look up all resourced values.
`labelResourceKey`	string	Identifies the resource key for the text that appears for the `NavActionContainer`. This property, which is used only when a `NavActionContainer` contains a single `NavAction`, will display the text that appears for the action in the `NavAction`'s menu.
`toolTipResourceKey`	string	Identifies the resource key for the tooltip text that appears for the `NavAction`'s menu.
`navActionFactories`	path	Reference to an array of `NavActionFactory` components.

NavActionFactory

The `NavActionFactory` component enables you to group and sort `NavActions` that are displayed in the action menu of the `NavItem`. A `NavActionContainer` can reference multiple `NavActionFactories` and uses their `sortPriority` property to set their sort order. In turn, `NavActions` that are referenced by a `NavActionFactory` are grouped together within the `NavAction` menu and can be sorted using the `NavAction` `sortPriority` property.



The `NavActionFactory` contains the following configurations:

Name	Type	Description
sortPriority	integer	Identifies the sort order relative to other NavActionFactories referenced by the NavActionContainer. The NavActionContainer sorts the NavActionFactories by this value before producing the list of NavActions provided by those factories.
available	Boolean	Determines if the NavActionFactory is available for use. If false, the NavActionFactory will not be included by the NavActionContainer.
accessRight	string	Defines the access right required to use the actions generated by this factory. If the agent does not have this right, the actions will not be included in the UI.
navActions	path	References an array of NavActions provided by this factory.

NavAction

The NavAction component represents an individual option in an action menu. These components also contain information on rendering priority and the properties that control the display. The navAction configures the text label that is displayed in the menu, as well as the JavaScript snippet that executes when the menu option is selected.

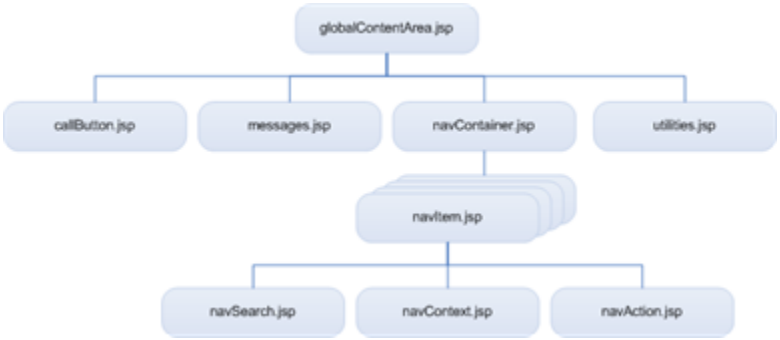
NavActions contain the following configurations:

Name	Type	Description
id	string	IDs are optional. However, when used, they must be unique to the IDs that are specified by other navigational components within the global context area. The ID is included when rendering the NavAction component within the DOM to enable custom CSS files to target the styling of the NavAction without having to modify the JSP file directly.
sortPriority	integer	Identifies the sort order relative to other NavActions provided by the NavActionFactory. The NavActionFactory sorts the NavActions by this value before producing the list of NavActions it provides.
available	Boolean	Determines if the NavAction is available. If false, the NavAction will not be included by the NavActionFactory.
accessRight	string	Defines the access rights required to use this action. If the agent does not have this right, the action will be filtered out by the NavActionFactory and will not be included within the UI.
resourceBundleName	string	Identifies the name of the resource bundle used to look up all resourced values.

Name	Type	Description
`enabled`	Boolean	Determines whether the action is enabled or disabled in the UI. Disabled actions are grayed out. **Note:** This value is useful in cases where an action becomes unavailable at certain times based on the agent's working environment. As such, it is more common to extend the `isEnabled()` API to get the desired behavior than it is to statically provide the value through the properties file.
`labelResourceKey`	string	The resource key used to identify the text that appears for the action in the `NavItem`'s action menu.
`javaScriptFunctionCall`	string	Calls the JavaScript to execute.

Rendering the Global Context Area

The global context area is rendered using the `/Service-UI/framework/Agent/j2ee-apps/Agent/ServiceFramework/templates/globalContentArea.jsp` file. The file renders the global context area layout, including the call and messages buttons and placeholders for the `NavContainer` components. This directory also contains the `callButtons.jsp` and `messages.jsp` files that render the call buttons and the messages widgets respectively. The generic rendering pages are stored in the `/Service-UI/framework/Agent/j2ee-apps/Agent/ServiceFramework/include/navigation` folder. The following diagram shows the relationships between the JSP files:



Navigation items are rendered using a hierarchy of navigational objects and JSPs files. At the top level is the `NavContainer.jps`, which is typically called from `globalContentArea.jsp`. The `NavContainer` object to be rendered is imported and passed along to the `navContainer.jsp` file.

Rendering NavContainers

To render a `NavContainer`, the JSP references a `NavContainer` object that contains all of the `NavItem` components to display. The JSP iterates over each `NavItem`, rendering the `NavSearch`, `NavContext`, and `NavAction` subcomponents using `navSearch.jsp`, `navContext.jsp` and `navActions.jsp` respectively.

The navContainer.jsp iterates over the collection of NavItems passing each NavItem component to the navItem.jsp file to render them individually.

Rendering NavSearch

The NavSearch component is rendered by the navSearch.jsp file to provide a link to a search page. The navSearch.jsp page renders a tab containing the navSearch ID, as well as the icon and tooltip. For example:

```
<dspel:getvalueof var="navSearch" param="navSearch"/>

<%-- Embed the JavaScript function call and tooltip into the search component --%>
<a href="#" onclick="<c:out value="${navSearch.javaScriptFunctionCall}"/>"
            class="gcn_btn_search" title="<c:out
            value="${navSearch.toolTipText}"/>"><span><c:out
            value="${navSearch.toolTipText}"/></span></a>
```

Rendering NavContext

The NavContext component is rendered by navContext.jsp to provide the context display information and the context navigation link. The navContext.jsp file also renders a tag with the NavContext ID. For example:

```
<dspel:getvalueof var="navContext" param="navContext"/>

<%-- Embed the context label and tooltip into the context component --%>
<a href="#" onclick="<c:out value="${navContext.javaScriptFunctionCall}"/>"
            class="gcn_btn_context"
            title="<c:out value="${navContext.toolTipText}"/>"><c:out
            value="${navContext.label}"/></a>
```

Rendering NavActions

The navActionContainer.jsp and the navActionItems.jsp files render the NavActions. NavActions are rendered in three different ways, depending on the number of actions provided by the NavActionContainer, and if the NavActionContainer has provided a label value.

- Action pop-up menu with menu label – This rendering provides a label on the action menu, as well as a pop-up menu with the available actions. There are two configurations that are rendered this way by default, the Commerce Service Center Products NavItem and the Options menu in the OptionsNavContainer
- Action pop-up menu with no menu label – This rendering provides a pop-up menu with the available actions and no label that has been identified in the NavContainer. This rendering includes multiple actions that have no NavActionContainerLabel, such as the Customer NavItem, or a single NavActions with no NavActionContainerLabel
- No Action pop-up menu with an action label – This rendering does not provide a pop-up menu for the actions, rendering instead only a single action link. This single action provides the JavaScript function that is executed when the action label is clicked. The rendered label and tooltip text is defined by the NavActionConatinerLabel and NavActionConatinertoolTip properties. The configuration provides only a single NavAction with a NavActionContainerLabel, such as the Respond NavItem

Creating a New NavAction

When creating new menu items in the global context area, create your files in your custom application directory and extend the existing configuration files. To create a new `NavAction`:

1. Create the `NavAction` that you want to add to the menu.
2. Extend the `NavActionFactory` file to include your new `NavAction` within the list.
3. Ensure that your resource bundle file contains the necessary references to your new action.

Example: Creating a Options Policy Menu Item

The following example demonstrates how to add a Corporate Policy action as the final menu selection in the Options menu. This custom action navigates the agent to the corporate policy panel stack.

1. Create an `OptionsPolicyNavAction`. The following example creates an `OptionsPolicyNavAction`, in the `/atg/svc/agent/ui/`directory of your custom application. Because there are already five menu items that are identified with sort priorities of 100 to 500, setting the `sortPriority` of this new `NavAction` to 600 will identify it as the sixth menu item, or the last menu option in the list. This example also implements a JavaScript function call to the `policy.jsp` file:

   ```
   $class=atg.svc.agent.ui.NavAction
   $scope=window
   id=optionsPolicyNavAction
   sortPriority=600
   #controls if this action is available. If not, it will not be included in
   #the UI.
   available=true
   #use this property to assign a specific security access right to this
   #action. If the agent doesn't have this right, it will not be included in
   #the UI.
   #accessRight=
   environmentTools=/atg/svc/agent/environment/EnvironmentTools
   resourceBundleName=mycompany.myapp.ui.Resources
   labelResourceKey=navitem.options.action.policy.label
   javaScriptFunctionCallTemplate=atg.commerce.csr.openPanelStackWithTab
   ('myPolicyPanelStack','commerceTab')
   ```

2. Modify the `OptionsNavActionFactory` file to include your new `NavAction` within the list. The following `OptionsNavActionFactory` example shows that an `OptionsPolicyNavAction` has been added to the list of actions available. Add the following properties file to the configuration layer to append the new action to the `/atg/svc/agent/ui/OptionsNavActionFactory`:

   ```
   actions+=\
   /atg/svc/agent/ui/OptionsPolicyNavAction
   ```

3. Ensure that your resource bundle file contains the necessary references to your new action. The following example resource file, which we defined in Step 1 as `mycompany.myapp.ui.Resources`, defines the label resources used by the new `NavAction`:

   ```
   # options
   navitem.options.item.label=Options
   navitem.options.action.label=Options
   ```

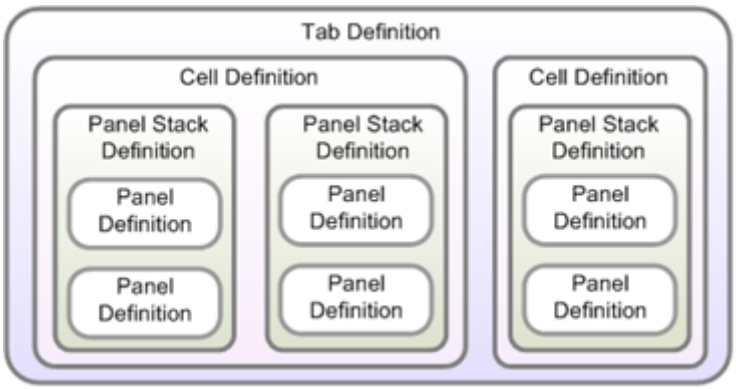
```
navitem.options.action.tooltip=Log Out, Preferences and Documentation
navitem.options.action.logout.label=Log Out
navitem.options.action.logoutagent.label=Log Out: {0}
navitem.options.action.preferences.label=Preferences
navitem.options.action.documentation.label=Documentation
navitem.options.action.about.label=About
navitem.options.action.shortcuts.label=Shortcuts
navitem.options.action.policy.label=Corporate Policies
```

This adds the Corporate Policies menu label to the Options menu. When the agent selects this menu option, the `myPolicyPanelStack` will be displayed.

7 Working with Pages

Pages within the UI are defined with the following definitions:

- Tab definitions - Divide the application into functional areas by defining the top level navigation. They also specify page structures using cell and template definitions and define the panels and panel stack definitions that comprise the page
- Cell definitions - Define the basic layout of the page, including the position of panel stacks
- Panel stack definitions - Contains a collection of panels that will be displayed within the page
- Panel definitions - Defines a rectangular region of the page with related content referenced by an include JSP content template



When you create a new page, you create a tab definition that contains the other definition objects, thus defining page structure and layout. For detailed information on the definition object, refer to the Framework Objects (page 12) section.

Creating a New Tab Definition

To changes the layout of an existing page or create a new page that is accessed by a navigational item from the global context area, you need to create or modify a tab definition.

Note: Customizations should occur in your custom directory as outlined in Customization Best Practices (page 42).

To create a new tab definition:

1. Create an `/atg/svc/framework/serviceFramework.xml` file in your new custom module and add the `ContentDefinition` item for the new tab action. This defines the JavaScript action that will be attached to the `TabDefinition` item for the new tab and then executed.

2. To create a new navigational item within the tab, modify the `NavContainer` and other `NavItem` components as outlined in Creating a New NavAction (page 54) section.

3. Append your new tab definition information to the default tab definition.

4. Create the panel stack definition that will be used by your new tab definition.

5. Create the JSP files and resources that you identified in your definitions.

   Note: You must ensure that the access rights for the tab and the panels are correct.

Example: Creating a New Page

The following example creates a new page by creating a *myNewTab* tab definition and then rendering a new panel stack called *MyNewPS*, which then renders three additional panels: `myNewPanel1`, `myNewPanel2`, and `myNewPanel3`.

In the following example, these properties will be changed for the new tab definition:

- The `appId` property must be set to *workspace* for the tab to be loaded in the Service Center UI
- The `tabId` property must correspond to the tab ID referenced in the `ContentDefinition` item defined for the tab action
- The `titleKey` property references a resource defined in a resource bundle in the Commerce Service Center class path
- The `accessRight` may remain the default *GlobalPanel* right or a specific right. If using a specific right, the right must be defined and assigned to Service Center users. **Note:** The access right must be defined or the page will not be rendered
- The `panelStackAssignments` property uses pre-existing column names defined in the Service Framework Repository. This positions the panel stacks in the left column using `contentColumn`, the right column using `sidebarColumn` or top area using `globalCell`. **Note:** Changing the top area in the `globalCell` is not supported
- The `currentPanelStacks` property determines which panel stacks to show initially or by default
- The `panelStackOrder` property determines the sequence in which the panel stacks are rendered in case there is cross-referencing JavaScript between panel stacks that creates dependencies in the rendering order
- The `contentIds` property points to the `ContentDefinition` item defined above so that the requested JavaScript action is executed when the tab is selected

To create a new page:

1. Create an `/atg/svc/framework/serviceFramework.xml` file in your new custom module and add the `ContentDefinition` item for the new tab action. This defines the JavaScript action that will be attached to the `TabDefinition` item for the new tab (via the `contentIds` map, see below) and then executed. For example:

```
<content-definition>
<id>WsMyNewTabAction</id>
```

```
<app-id>workspace</app-id>
<enabled-yn>true</enabled-yn>
<object-type>ContentDefinition</object-type>
<content-id>myNewTabAction</content-id>
<mime-type>text/javascript</mime-type>
<body>atgChangeTab(atg.service.framework.changeTab('myNewTab'),
null,null,null);</body>
<url-yn>true</url-yn>
</content-definition>
```

2. To create a new navigational item, modify the `NavContainer` and other `NavItem` components as outlined in Creating a New NavAction (page 54) section.

3. Append your new tab definition information to the existing tab definition. This example creates a tab definition named `WsMyNewTabDefinition`. The tab definition identifies the `my.company.ui.Resources` file that defines the `myNewTab.resource` key, which would be created in your custom application:

```
<tab-definition>
<id>WsMyNewTabDefinition</id>
<app-id>workspace</app-id>
<enabled-yn>true</enabled-yn>
<object-type>TabDefinition</object-type>
<resource-bundle>my.company.ui.Resources</resource-bundle>
<content-ids>
<map-entry>
<key>actionJavaScript</key>
<value>myTabAction</value>
</map-entry>
</content-ids>
<template-ids>
<map-entry>
<key>contentHeader</key>
<value>contentHeaderTemplate</value>
</map-entry>
</template-ids>
<tab-id>myNewTab</tab-id>
<title-key>myNewTab.resource</title-key>
<visible-yn>true</visible-yn>
<access-right>GlobalPanel</access-right>
<panel-stack-assignments>
<map-entry>
<key>preferencesPanel</key>
<value>contentColumn</value>
</map-entry>
<map-entry>
<key>helpfulPanels</key>
<value>sidebarColumn</value>
</map-entry>
<map-entry>
<key>MyNewPS</key>
<value>contentColumn</value>
</map-entry>
<map-entry>
<key>globalPanels</key>
```

```
<value>globalCell</value>
</map-entry>
<map-entry>
<key>cmcHelpfulPanels</key>
<value>sidebarColumn</value>
</map-entry>
</panel-stack-assignments>
<current-panel-stacks>
<map-entry>
<key>MyNewPS</key>
<value>contentColumn</value>
</map-entry>
<map-entry>
<key>cmcHelpfulPanels</key>
<value>sidebarColumn</value>
</map-entry>
<map-entry>
<key>globalPanels</key>
<value>globalCell</value>
</map-entry>
</current-panel-stacks>
<panel-stack-order>
<id-entry>
<id>globalPanels</id>
<priority>0</priority>
</id-entry>
<id-entry>
<id>cmcHelpfulPanels</id>
<priority>1</priority>
</id-entry>
<id-entry>
<id>helpfulPanels</id>
<priority>2</priority>
</id-entry>
<id-entry>
<id>MyNewPS</id>
<priority>3</priority>
</id-entry>
<id-entry>
<id>preferencePanels</id>
<priority>4</priority>
</id-entry>
</panel-stack-order>
</tab-definition>
```

4. Create a `MyNewPS` panel stack definition that will be used by the new WsMyNewTabDefinition tab definition. The panel stack definition identifies the `my.company.ui.MyUserResource` file that defines the `MyNewPS` key, which would be created in your custom application:

```
<panel-stack-definition>
<id>MyNewPS</id>
<app-id>workspace</app-id>
<enabled-yn>true</enabled-yn>
<object-type>PanelStackDefinition</object-type>
```

```
  <resource-bundle>my.company.ui.MyUserResource</resource-bundle>
  <panel-stack-id>MyNewPS</panel-stack-id>
  <header>contentHeader</header>
  <error-panel-id>errorPanel</error-panel-id>
  <title-key>MyNewPS</title-key>
  <tab-affinity-yn>true</tab-affinity-yn>
  <panel-ids>
  <id-entry>
  <id>errorPanel</id>
  <priority>0</priority>
  </id-entry>
  <id-entry>
  <id>myNewPanel1</id>
  <priority>1</priority>
  </id-entry>
  <id-entry>
  <id>myNewPanel2</id>
  <priority>2</priority>
  </id-entry>
  <id-entry>
  <id>myNewPanel3</id>
  <priority>3</priority>
  </id-entry>
  </panel-ids>
  </panel-stack-definition>
```

Modifying a Tab Action

You can modify the action that a tab performs by modifying the `ContentDefinition` for the action. Once you have modified the item, you must define the JavaScript that will run when the tab is clicked.

Note: Refer to Customization Best Practices (page 42) before modifying definition files.

For example, you can modify the existing tab's `ContentDefinition` to point to your new tab definitions. In this example, the existing tab action is:

```
<content-definition>
  <id>existingTabAction</id>
  <app-id>workspace</app-id>
  <enabled-yn>true</enabled-yn>
  <object-type>ContentDefinition</object-type>
  <content-id>existingTabAction</content-id>
  <mime-type>text/javascript</mime-type>
  <body>atgChangeTab(atg.svc.framework.changeTab('DefaultTab"),
      null, null, null);</body>
  <url-yn>true</url-yn>
</content-definition>
```

Create or modify the `/atg/svc/framework/serviceFramework.xml` file in your new custom module and add the `ContentDefinition` items for the tab action. Note that you must include the ID so that the object definition can be found during the combiner process. When writing the definition, you override only the

attributes that you want to modify. To change the `atgChangeTab` attribute to point to your `myNewTab`, you would create the following:

```
<content-definition>
  <id>existingTabAction</id>
  <body>atgChangeTab(atg.svc.framework.changeTab('myNewTab'), null, null,
      null):</body>
</content-defintion>
```

Deleting a Tab Definition

The following is an example of how to delete a tab definition named `myexistingTabAction`. To delete a definition from your UI, use the `xml-combine="remove"` command to the `serviceFramework.xml` file located in your custom directory.

Note: Refer to Customization Best Practices (page 42) before modifying definition files.

The following example appends the removal of the definition to the default configuration:

```
<content-definition xml-combine="remove">
  <id>myexistingTabAction</id>
</content-definition>
```

Adding a New Panel Definition

Add new panels to the `/atg/svc/framework/serviceFramework.xml` file in your custom application.

1. Create the panel JSP file.
2. Create the `/atg/svc/framework/serviceFramework.xml` file.
3. Add a panel stack definition that contains the new panel.
4. Add a panel definition for each new panel.
5. Add the panels to the existing panel stack by updating the `panelIds` property. Similarly, the panels may be added to a new panel stack.

Note: The JSPs for new panels should be housed in a custom application. If the JSPs are housed in a custom Web application, the `otherContext` property of the `PanelDefinition` should be set to the value of the context root of the containing Web application. Refer to the Customization Best Practices (page 42) section.

Example: Adding Three New Panels

Continuing with the example of adding three panels to the Customer Management page, the following properties will be changed for the panel definition. Please note that:

- The `appId` property must be set to *`workspace`* for the panel to be loaded in Service Center
- The `accessRight` may remain the default *`GlobalPanel`* right or a specific right. If using a specific right, the right must be defined and assigned to Service Center users. **Note:** The access right must be defined or the tab will not be rendered

The following provides an example of code that adds three new panels, `myNewPanel1`, `myNewPanel2` and `myNewPanel3`, to the `WsCustomerPanelStack` panel stack definition:

1. Create the `mypanel1.jsp`, `mypanel2.jsp` and `mypanel3.jsp` files that will be called by the panel definitions. Create these files in the `/panels/order/` directory of your custom application.
2. Create the `/atg/svc/framework/serviceFramework.xml` file in your custom application directory.
3. To this file, add a panel stack definition that contains the three new panels and their priorities. This appends your new panels to the existing information that creates the Customer Panel Stack. For example:

```
<panel-stack-definition>
<id>WsCustomerPanelStack</id>
<panel-ids>
<id-entry>
<id>myNewPanel1</id>
<priority>4</priority>
</id-entry>
<id-entry>
<id>myNewPanel2</id>
<priority>5</priority>
</id-entry>
<id-entry>
<id>myNewPanel3</id>
<priority>6</priority>
</id-entry>
</panel-ids>
</panel-stack-definition>
```

4. Add a panel definition for each of the new panels. The following example displays the code for one of the three panels:

```
<panel-definition>
<id>myNewPanel1</id>
<app-id>workspace</app-id>
<enabled-yn>true</enabled-yn>
<object-type>PanelDefinition</object-type>
<resource-bundle>atg.commerce.csr.FrameworkResources</resource-bundle>
<template-ids>
<map-entry>
<key>panelTemplate</key>
<value>panelTemplate</value>
</map-entry>
</template-ids>
<panel-id>myNewPanel1</panel-id>
<content-url>/panels/order/mypanel1.jsp</content-url>
<other-context>MyWebApplication</other-context>
<title-key>myNewPanel1</title-key>
<visible-yn>true</visible-yn>
<show-title-yn>true</show-title-yn>
```

```
<panel-open-yn>true</panel-open-yn>
<allow-panel-toggle-yn>false</allow-panel-toggle-yn>
<available-yn>false</available-yn>
<content-open-yn>true</content-open-yn>
<allow-content-toggle-yn>true</allow-content-toggle-yn>
<tab-holder-yn>true</tab-holder-yn>
<always-tabbed-yn>false</always-tabbed-yn>
<tabbed-yn>false</tabbed-yn>
<allow-tabbing-yn>true</allow-tabbing-yn>
<allow-slots-yn>false</allow-slots-yn>
<tab-scroll-index>0</tab-scroll-index>
<panel-item-count>0</panel-item-count>
<access-right>NewPanel2</access-right>
</panel-definition>
```

5. Repeat Step 3 for `myNewPanel2` and `myNewPanel3`.

6. The new panels can be added to any existing panel stack by updating the `panelIds` property. Similarly, the panels may be added to a new panel stack.

   Note: The JSPs for the new panels should be housed in your custom application, so the `otherContext` property of the `PanelDefinition` should be set to the value of the context root of the containing Web application.

Customer Management Panel Configuration

You can customize the Customer Management Panel to display panels based upon your requirements by adding or removing JSP files that display or manage customer specific data. Because the configuration is based on components, you can perform module-specific customizations. For example, the `DCS-CSR-UI` module extends the Customer Management Panel with Commerce Service Center-specific sections, such as Credit Cards, Credits and Promotions. For additional information on Oracle ATG Web Commerce customer management modifications, refer to the *ATG Commerce Programming Guide*.

To update the Customer Management Panel, modify the `/atg/svc/agent/customer/CustomerPanelConfig.properties` file to identify the panels to display as well as the context where the panel is displayed. The following example displays the Commerce Service Center extensions, the credit card, credits and promotions panels, and adds three new custom panels named `myCustomerPanel1.jsp`, `myCustomerPanel2.jsp` and `myCustomerPanel3.jsp`:

```
$class=atg.svc.agent.customer.CustomerPanelConfig
subSections+=\
          /panels/customer/creditCards.jsp,\
          /panels/customer/credits.jsp,\
          /panels/customer/promotions.jsp,\
          /panels/customer/myCustomerPanel1.jsp,\
          /panels/customer/myCustomerPanel2.jsp,\
          /panels/customer/myCustomerPanel3.jsp

contextRoots+=\
          /DCS-CSR,\
          /DCS-CSR,\
          /DCS-CSR,\
          /DCS-CSR,\
          /DCS-CSR,\
```

Troubleshooting Pages

When the application has started but your new tab, panel stack or panel is not visible, check the following common causes:

1. Verify that the `enableYn` property is set to `true` (the default value).
2. If you are using an access right other than `GlobalPanels`, verify that your access right has been created in the appropriate repository. If unsure, set the `accessRight` to `GlobalPanels`, which is an access right with no restrictions. The `GlobalPanels` access right can be used for both tabs and panels.
3. If a panel stack is not displaying, verify that the `panelStackId` for the panel stack is added to the `panelStackAssignments`, `currentPanelStacks` and `panelStackOrder` properties of the `TabDefinition` item as described above.
4. If a panel is not displaying, verify that the `panelId` for the panel is added to the `panelIds` property in the `PanelStackDefinition` item as described above.
5. If the top panel in the panel stack is not displaying, verify that the `tabHolderYn` property is set to `true`.
6. If a panel other than the top panel is not displaying, verify that the `tabHolderYn` property is `false`.
7. If tabbed panels are not displaying, verify the following:
   - The first panel is configured with `tabHolderYn=true`. The `currentPanelId` should be set to the same value as the `panelId`. The `tabbedPanelIds` should be set to the list of `panelId`'s of panels in the row of tabs excluding the first panel
   - The panels after the first panel should be configured with `tabHolderYn=false` and `currentPanelId` and `tabbedPanelIds` set to null
   - All the tabbed panels should be configured to `alwaysTabbedYn=true`, `tabbedYn=true` and `allowTabbingYn=true`

8 Working with Forms

Service Center obtains information by having users and agents complete forms. These forms are often required to handle user information that come from a number of different formats. They also may require validation, additional actions or the data acquired must be stored in specific repositories or databases. This section identifies modifiable forms that are specific to Service Center, as well as information on creating new forms.

For information on working with forms, and detailed information on associating HTML form tags with Nucleus components, refer to the *ATG Page Developer's Guide*. For information on creating forms for your application, refer to the *ATG Platform Programming Guide*.

Modifying Existing Forms

Forms are customized using configuration layering. This extends the functionality of default forms within Service Center by modifying the fields within the form. By extending configuration files, you can add or remove fields or modify the behavior of fields. For example, you can identify required fields within a specific form by mapping to your own JSP snippets that contain your customized layout. Once you have created your own customized JSP snippets, you can modify the appropriate configuration property for that form to render your customizations.

Using default or extended fragments, you can modify the default forms, and/or append your customizations. If JSP snippets are not specified, the standard forms are rendered.

The following forms can be modified:

Page	Form/Page Area
Customer Information	Create New Customer
Customer Information	Edit/View Customer
Customer Search	Customer Search or the Select Customer pop-up in the shopping cart
Gift Lists	Details, Search, Search Results and View Details
Order Search	Order Search
Order View	Display values

Page	Form/Page Area
Product Catalog	Product Search

Forms are customized by modifying the associated configuration properties files that define the JSP fragments that replace and/or append the field.

`Note:` Refer to the Customization Best Practices (page 42) section before modifying files.

The JSP fragment is integrated within your page layout to display the new or modified field. Service Center uses a default JSP fragment that contains all of the standard fields displayed on a page, and an optional extended JSP fragment used for creating additional fields.

The default page fragment component is mapped to the default JSP snippet in Service Center but may be redirected with a configuration property to your own JSP page. The page contains a `dsp:include` tag that reads the associated configuration file and then includes the page defined by the page fragment component. For example, to change the default fragment to your own code, you would change the page fragment's `servletContext` and `URL` properties to point to your page.

The extended page fragment component allows you to append content to the page without changing the default page fragment. The extended page fragment component contains the same functionality as, and is defined directly after, the default page fragment component. By default, the extended properties files do not contain a reference to a JSP file. You can define a JSP for the extended fragment to incorporate form properties that are specific to your environment.

The default and extended page fragment components are instances of `atg.web.PageFragment`, which are used to define the location of the JSP file. The configuration files that define the page fragment components contain the following properties to identify the JSP:

- `servletContext` - Specifies the context root of the JSP fragment that will be incorporated into the page
- `URL` - Specifies the URL of the JSP fragment to be incorporated into the page

Both the default and extended property files are instances of `PageFragment`, allowing a `servletContext` and `URL` to be specified for the JSP snippet. As such, the `servletContext` and `URL` property descriptions can be applied for both fragment types.

For general information on working with forms, refer to the *Forms* section of the *ATG Page Developer's Guide*.

Working with Page Fragments

When working with page fragments, you should work within your customization directory and use configuration layering to ensure that your customizations are not overwritten. Refer to the Customization Best Practices (page 42) section.

1. Create a JSP fragment file that provides the new field information.
2. Add the path of the newly created JSP file to the appropriate extended properties file. Specify the `URL` and `ServletContext` for the appended file.
3. Save the extended properties file.
4. Create a new fragment and place it in the location specified by the `URL` property of the extended properties file. Optionally, you can edit an existing JSP fragment that has been specified in the extended properties file to include the new field information.

Note: The JSP fragments are dynamically included and the file will be compiled and executed before being embedded into the form. As such, import any necessary components into your page to ensure successful compiling.

Overriding the Default Page Fragment

You can make customizations to existing form fields such as adding a new field within or above the default field layout. Refer to the Customization Best Practices (page 42) section before modifying files.

1. Make a copy the appropriate default fragment.
2. Make your customizations to the copy of the default fragment. Specify the `URL` and `ServletContext` for the Web application file. Save your changes.
3. Update the appropriate version of the `/localconfig` configuration file to point to the new copy of the default fragment.

Modifiable Form Configuration Files

The configuration property files for the modifiable forms are located below. Note that there are two properties files, one for the default configuration and one for the extended configuration. By default, the extended properties file does not contain a reference to a JSP file. You can define a JSP for the extended fragment to incorporate form properties.

View Customer Form

The form that enables an agent to view customer profile information.

Default	`/Service-UI/Framework/Agent/config/atg/svc/agent/ui/fragments/customer/CustomerViewDefault.properties`
Extended	`/Service-UI/Framework/Agent/config/atg/svc/agent/ui/fragments/customer/CustomerViewExtended.properties`
URL	`/include/customer/ProfileViewUIFragment.jsp`
Servlet Context	`agent`

Create New Customer Form

The form that enables an agent to create a new customer profile.

Default	`/Service-UI/Framework/Agent/config/atg/svc/agent/ui/fragments/customer/CustomerNewDefault.properties`
Extended	`/Service-UI/Framework/Agent/config/atg/svc/agent/ui/fragments/customer/CustomerNewExtended.properties`

URL	`/include/customer/ProfileNewUIFragment.jsp`
Servlet Context	`agent`

Edit Customer Form

The form that enables an agent to edit a customer profile.

Default	`/Service-UI/Framework/Agent/config/atg/svc/agent/ui/fragments/customer/CustomerEditDefault.properties`
Extended	`/Service-UI/Framework/Agent/config/atg/svc/agent/ui/fragments/customer/CustomerEditExtended.properties`
URL	`/include/customer/ProfileEditUIFragment.jsp`
Servlet Context	`agent`

Search Customer Form

The form that enables an agent to search for a customer profile. This also includes the Customer Select pop-up screen in the Shopping Cart.

Default	`/Service-UI/Framework/Agent/config/atg/svc/agent/ui/fragments/customer/CustomerSearchDefault.properties`
Extended	`/Service-UI/Framework/Agent/config/atg/svc/agent/ui/fragments/customer/CustomerSearchExtended.properties`
URL	`/include/customer/ProfileSearchUIFragment.jsp`
Servlet Context	`agent`

Create Gift Lists Form

The form that enables an agent to create a gift list.

Default	`/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/gift/GiftlistCreateDefault.properties`
Extended	`/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/gift/GiftlistCreateExtended.properties`
URL	`/include/gift/giftlist/giftlistCreateUIFragment.jsp`

Servlet Context	DCS-CSR

Gift Lists Purchase Details Form

The form that enables an agent to see the purchase details of a gift list.

Default	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/gift/GiftlistDetailsPurchaseDefault.properties
Extended	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/gift/GiftlistDetailsPurchaseExtended.properties
URL	/include/gift/giftlist/giftlistDetailsPurchaseUIFragment.jsp
Servlet Context	DCS-CSR

View Gift Lists Details Form

The form that enables an agent to see the purchase details of a gift list.

Default	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/gift/GiftlistDetailsViewDefault.properties
Extended	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/gift/GiftlistViewDetailsExtended.properties
URL	/include/gift/giftlist/giftlistDetailsViewUIFragment.jsp
Servlet Context	DCS-CSR

Search Gift Lists Form

The form that enables an agent to search for a gift list.

Default	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/gift/GiftlistSearchDefault.properties
Extended	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/gift/GiftlistSearchExtended.properties
URL	/include/gift/search/giftlistSearchUIFragment.jsp
Servlet Context	DCS-CSR

Search Results Gift Lists Form

The form that enables an agent to see the results of a search for a gift list.

Default	`/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/gift/GiftlistSearchResultsDefault.properties`
Extended	`/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/gift/GiftlistSearchResultsExtended.properties`
URL	`/include/gift/search/giftlistSearchResultsUIFragment.jsp`
Servlet Context	`DCS-CSR`

Product Search Form

The form that enables an agent to search for a product.

Default	`/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/catalog/ProductSearchDefault.properties`
Extended	`/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/catalog/ProductSearchExtended.properties`
URL	`/include/catalog/productSearchUIFragment.jsp`
Servlet Context	`DCS-CSR`

Order Search Form

The form that enables an agent to search for an order.

Default	`/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/order/OrderSearchDefault.properties`
Extended	`/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/order/OrderSearchExtended.properties`
URL	`/include/order/orderSearchUIFragment.jsp`
Servlet Context	`DCS-CSR`

Order View Form

This form allows an agent to view an order.

Default	`/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/order/OrderViewDefault.properties`
Extended	`/DCS-CSR-UI/config/atg/commerce/custsvc/ui/fragments/order/OrderViewExtended.properties`
URL	`/include/order/orderViewUIFragment.jsp`
Servlet Context	`DCS-CSR`

Creating New Forms

When you create new forms, you must also create the appropriate files, including the form handler and JSP files. The following example shows how to create an electronic shipping group in Commerce Service Center by:

- Creating a form that creates a new electronic shipping group
- Defining and identifying the form's components
- Identifying the resource bundles
- Defining the submit button calls
- Configuring form validation

For general information on creating forms, form handlers and working with JSP files, refer to the *ATG Page Developer's Guide* and the *ATG Platform Programming Guide*. For detailed information on all Service Center form handlers, refer to the *ATG API Reference for Commerce Service Center* :

1. Create a new JSP file in your customization directory. Define the components of the form. For example:

```
<%@ include file="/include/top.jspf" %>
<dsp:page xml="true">
<dsp:importbean bean="/atg/commerce/custsvc/order/
CreateElectronicShippingGroupFormHandler"/>
<dsp:importbean bean="/atg/dynamo/droplet/Switch"/>
<dsp:importbean var="addElectronicShippingGroup"
bean="/atg/commerce/custsvc/ui/fragments/order/
AddElectronicShippingGroup"/>
<dsp:importbean var="electronicShippingGroupConfig"
bean="/atg/commerce/custsvc/ui/
ElectronicShippingGroupConfiguration"/>
<c:set var="formId" value="mycsrAddElectronicAddress"/>
```

2. Define the URLs that are called on success and error conditions. For example:

```
<svc-ui:frameworkUrl var="successURL"
panelStacks="cmcShippingAddressPS"/>
<svc-ui:frameworkUrl var="errorURL" panelStacks="cmcShippingAddressPS"/>
```

3. Define the form and the elements used by the form. For example:

```
<dsp:setLayeredBundle basename="atg.commerce.csr.order.WebAppResources"/>
<dsp:form id="${formId}" formid="${formId}">
<dsp:input type="hidden" priority="-10" value=""
bean="CreateElectronicShippingGroupFormHandler.
newElectronicShippingGroup"/>
<dsp:input type="hidden" value="${errorURL }" name="errorURL"
bean="CreateElectronicShippingGroupFormHandler.
newElectronicShippingGroupErrorURL"/>
<dsp:input type="hidden" value="${successURL }" name="successURL"
bean="CreateElectronicShippingGroupFormHandler.
newElectronicShippingGroupSuccessURL"/>
<ul class="atg_dataForm atg_commerce_csr_addressForm"
id="atg_commerce_csr_neworder_newShippingAddress">
<li class="atg_commerce_csr_address">
<span class="atg_commerce_csr_fieldTitle">
<label class="atg_messaging_requiredIndicator">
<span class="requiredStar">*</span>
<fmt:message key="newAddress.email" />
</label>
</span>
<dsp:input id="${formId}_emailAddress" type="text"
bean="/atg/commerce/custsvc/order/
CreateElectronicShippingGroupFormHandler.
electronicShippingGroup.emailAddress" size="25" maxlength="50">
<dsp:tagAttribute name="dojoType"
value="atg.widget.form.ValidationTextBox" />
<dsp:tagAttribute name="trim" value="true" />
<dsp:tagAttribute name="required" value="true" />
</dsp:input>
</li>
```

4. Provide the submit button call. For example,

```
<li class="atg_svc_formActions">
<div class="atg_commerce_csr_panelFooter">
<input type="button" name="myaddAddressButton"
id="myaddAddressButton"
class="atg_commerce_csr_activeButton"
onclick="custom.commerce.csr.order.shipping.addElectronicAddress();
return false;"
value="<fmt:message key="newOrderSingleShipping.addShippingAddress.
button.addAddress"/>
form="${formId}"
dojoType="atg.widget.validation.SubmitButton"
/>
</div>
</li>
....
</ul>
</dsp:form>
```

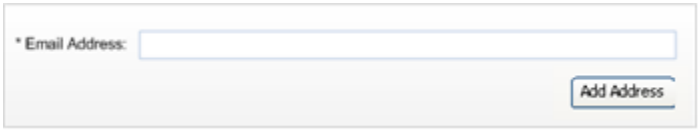
5. If you are using JSP validation, provide the validation function. When the form or page is loaded, the validation routine tracks user input and validates each input field. If the validation is successful, the submit button is enabled:

```
<script type="text/javascript">
var ${formId}Validate = function () {
var disable = false;
<c:if test="${!empty isDisableSubmit}">disable =
${isDisableSubmit}();</c:if>
<c:if test="${!empty validateIf}">if (${validateIf}) {</c:if>
if (!dijit.byId("${formId}_emailAddress").isValid()) disable =
true;
<c:if test="${!empty validateIf}">}</c:if>
dojo.byId("${formId}").myaddAddressButton.disabled = disable;
};
_container_.onLoadDeferred.addCallback(function () {
${formId}Validate();
atg.service.form.watchInputs("${formId}", ${formId}Validate);
atg.keyboard.registerFormDefaultEnterKey("${formId}",
"addAddressButton", "buttonClick");
});
_container_.onUnloadDeferred.addCallback(function () {
atg.service.form.unWatchInputs('${formId}');
atg.keyboard.unRegisterFormDefaultEnterKey("${formId}");
});
</script>
</dsp:page>
```

6. Once you have created the form, create a customized JavaScript file to identify the submit action for your new form. For example:

```
custom.commerce.csr.order.shipping.addElectronicAddress = function (){
atgSubmitAction({form:dojo.byId("mycsrAddElectronicAddress")});
};
```

This example creates a form similar to this:



Creating a Pop-up Page

A pop-up page presents a form within a new window. Pop-up pages are invoked from a parent, or caller page, which defines the pop-up page and calls the JSP that displays the page.

To create a pop-up page, you must perform the following:

1. Create the parent or caller page, as outlined in Creating the Caller Page (page 76).
2. Create the JSP file that creates and displays the page, as outlined in Creating the JSP file (page 77).
3. Create the JavaScript file that performs the actions that occur when the submit button is selected. This is outlined in Creating the JavaScript (page 80) section.

Creating the Caller Page

In the following example, the caller page defines the pop-up window using Dojo, and then calls the `editElectronic.jsp` file to display the pop-up page.

1. Create a caller page that defines the pop-up window. For example:

```
<script type="text/javascript">
if (!dijit.byId("mycsrEditAddressFloatingPane")) {
new dojox.Dialog({ id: "mycsrEditAddressFloatingPane",
cacheContent: "false",
executeScripts: "true",
scriptHasHooks: "true",
duration: 100,
"class": "atg_commerce_csr_popup"});
}
</script>
```

2. Define the pop-up window URL with the window parameters. For example:

```
<c:url var="editAddressURL" context="/MY-DCS-CSR}"
value="editElectronic.jsp">
<c:param name="nickname" value="${addressKey}"/>
<c:param name="${stateHolder.windowIdParameterName}"
value="${windowId}"/>
</c:url>
```

   Pass in the `windowId` and any other parameters that are required by the new pop up page.

3. Define the link that loads the pop-up page. For example:

```
<li class="atg_commerce_csr_editAddress">
<span class="atg_svc_shipAddressControls">
<a class="atg_tableIcon atg_propertyEdit" style="min-width:100px"
title="<fmt:message key="common.address.edit.mouseover"/>" href="#"
onclick="atg.commerce.csr.common.showPopupWithReturn({
popupPaneId: 'mycsrEditAddressFloatingPane',
title: '<fmt:message key="common.edit"/>',
url: '${editAddressURL}',
onClose: function( args ) {
if ( args.result == 'ok' ) {
atgSubmitAction({
panelStack :[ 'cmcShippingAddressPS','globalPanels'],
form : document.getElementById('transformForm')
});
}
}});return false;">
<fmt:message key="common.edit"/>
</a>
</span>
</li>
```

   The `onClose` function defines the actions that should occur when the pop-up window is closed. When the pop-up window is closed automatically, the pop-up page passes back the `args.result` value as `ok`, refreshing the shipping address panel stack and global panel stacks.

4. Save the parent page.

Creating the JSP file

The following example creates the `editElectronic.jsp` that was created in the above example.

Note: When writing your JSP file, ensure that all tags are closed appropriately. The following example may be missing end tags due to formatting.

The pop-up page is served on both the success and error conditions. If the success condition is met, the pop-up page is closed automatically and the caller page determines the appropriate actions to take once the pop-up page is closed.

1. Create the `editElectronic.jsp` page. For example:

```
<%-- This page is used to edit the electronic shipping group.
param - nickname
This parameter is used to initialize shipping group from the
ShippingGroupMapContainer.
param - success
This parameter is used to close the popup panel and refresh the parent
page. This parameter is added to the request on edit form submission.
--%>
<%@ include file="/include/top.jspf"%>
<dsp:page xml="true">
<dsp:importbean var="updateShippingGroupFormHandler"
bean="/atg/commerce/custsvc/order/
UpdateElectronicShippingGroupFormHandler"/>
<dsp:importbean var="sgConfig"
bean="/atg/commerce/custsvc/ui/
ElectronicShippingGroupConfiguration"/>
<dsp:importbean bean="/atg/dynamo/droplet/Switch"/>
<dsp:importbean bean="/atg/dynamo/droplet/ErrorMessageForEach"/>
<dsp:importbean var="electronicAddressForm"
bean="/atg/commerce/custsvc/ui/fragments/order/
ElectronicAddressForm"/>
<dsp:getvalueof var="nickname" param="nickname"/>
<dsp:getvalueof var="success" param="success"/>
```

2. Identify the success and error URLs for the form. For example:

```
<%-- forms success and error url --%>
<c:url var="successErrorURL"
context="/${sgConfig.editPageFragment.servletContext}"
value="${sgConfig.editPageFragment.URL}">
<c:param name="nickname" value="${nickname}"/>
<c:param name="${stateHolder.windowIdParameterName}"
value="${windowId}"/>
<c:param name="success" value="true"/>
</c:url>
```

3. Define the layered resource bundles used. For example:

```
<%-- Uses layered resource bundle --%>
```

```
<dsp:layeredBundle basename="atg.commerce.csr.order.WebAppResources">
<div id="atg_commerce_csr_editShippingAddress"
class="atg_commerce_csr_popupPanel
atg_commerce_csr_addressFormPopup">
<dsp:layeredBundle basename="${sgConfig.resourceBundle}">
<fmt:message var="editPageFragmentTitle"
key="${sgConfig.editPageFragmentTitleKey}"/>
</dsp:layeredBundle>
<h2>
<c:out value="${editPageFragmentTitle}"/>
</h2>
<div class="atg_commerce_csr_popupPanelCloseButton"></div>
```

4. Within the `<div class>`, define what happens whether or not there is an error to display. For example:

```
<div>
<%--When there is an error, display the error on the page. --%>
<dsp:droplet name="Switch">
<dsp:param bean=
"UpdateElectronicShippingGroupFormHandler.formError"
name="value"/>
<dsp:oparam name="true">
 <br/><br/>
<span class="atg_commerce_csr_common_content_alert">
<fmt:message key="common.error.header"/></span>
<br>
<span class="atg_commerce_csr_common_content_alert">
<UL>
<dsp:droplet name="ErrorMessageForEach">
<dsp:param bean=
"UpdateElectronicShippingGroupFormHandler.formExceptions"
name="exceptions"/>
<dsp:oparam name="output">
<LI>
<dsp:valueof param="message"/>
</dsp:oparam>
</dsp:droplet>
</UL>
</span>
</dsp:oparam>
<dsp:oparam name="false">
<c:if test="${success}">
<%--When there is no error on the page submission, close the
popup page and refresh the parent page. The parent page
only will refresh if the result parameter value is ok.
--%>
<script type="text/javascript">
hidePopupWithResults
('atg_commerce_csr_editShippingAddress',{result : 'ok'});
</script>
</c:if>
</dsp:oparam>
</dsp:droplet>
</div>
```

5. Identify the form components to use. For example:

```
<c:set var="formId" value="mycsrEditShippingAddressForm"/>
<dsp:form id="${formId}"
formid="${formId}">
<dsp:input type="hidden" priority="-10" value=""
bean="UpdateElectronicShippingGroupFormHandler.
updateShippingGroup"/>
<dsp:input type="hidden" value="${successErrorURL }"
bean="UpdateElectronicShippingGroupFormHandler.
updateShippingGroupErrorURL"/>
<dsp:input type="hidden" value="${successErrorURL }"
bean="UpdateElectronicShippingGroupFormHandler.
updateShippingGroupSuccessURL"/>
<dsp:input type="hidden"
bean="UpdateElectronicShippingGroupFormHandler.
shippingGroupByNickname"
value="${fn:escapeXml(nickname) }" priority="5"/>
<c:if test="${empty updateShippingGroupFormHandler.shippingGroup }">
<dsp:setvalue bean="UpdateElectronicShippingGroupFormHandler.
shippingGroupByNickname"
value="${fn:escapeXml(nickname) }"/>
</c:if>
<ul class="atg_dataForm atg_commerce_csr_addressForm">
<li class="atg_commerce_csr_address">
<span class="atg_commerce_csr_fieldTitle">
<label class="atg_messaging_requiredIndicator">
<span class="requiredStar">*</span>
<fmt:message key="newAddress.email" />
</label>
</span>
<dsp:input id="${formId}_emailAddress" type="text"
bean="/atg/commerce/custsvc/order/
CreateElectronicShippingGroupFormHandler.workingShippingGroup.
emailAddress" size="25" maxlength="50">
<dsp:tagAttribute name="dojoType"
value="atg.widget.form.ValidationTextBox" />
<dsp:tagAttribute name="trim" value="true" />
<dsp:tagAttribute name="required" value="true" />
</dsp:input>
</li>
</ul>
<div class="atg_commerce_csr_panelFooter">
<input type="button"
name="${formId}SaveButton"
value="<fmt:message key='common.save' />"
onclick="custom.commerce.csr.order.shipping.editShippingAddress
('${successErrorURL}');return false;"
dojoType="atg.widget.validation.SubmitButton"/>
<%-- When the user clicks on the cancel button, hide the popup panel.
--%>
<input type="button"
value="<fmt:message key='common.cancel'/>"
onclick="hidePopupWithResults
```

```
( 'atg_commerce_csr_editShippingAddress', {result :
'cancel'});return false;"/>
</div>
</dsp:form>
<%-- end of editShippingAddressForm --%>
```

6. If you are using JSP validation, provide the validation function. When the form or page is loaded, the validation routine tracks user input and validates each input field. If the validation is successful, the submit button is enabled:

```
<%--) The following code is for JS validation--%>
<script type="text/javascript">
var ${formId}Validate = function () {
var disable = false;
<c:if test="${!empty isDisableSubmit}">disable =
${isDisableSubmit}();</c:if>
<c:if test="${!empty validateIf}">if (${validateIf}) {</c:if>
if (!dijit.byId("${formId}_emailAddress").isValid())
disable = true;
<c:if test="${!empty validateIf}">}</c:if>
dojo.byId("${formId}").addAddressButton.disabled = disable;
};
_container_.onLoadDeferred.addCallback(function () {
${formId}Validate();
atg.service.form.watchInputs("${formId}", ${formId}Validate);
atg.keyboard.registerFormDefaultEnterKey("${formId}",
"addAddressButton", "buttonClick");
});
_container_.onUnloadDeferred.addCallback(function () {
atg.service.form.unWatchInputs('${formId}');
atg.keyboard.unRegisterFormDefaultEnterKey("${formId}");
});
</script>
```

7. Save the `editElectronic.jsp` file.

Creating the JavaScript

Once you have created the `editElectronic.jsp` file, add the following JS call to a new custom JS file:

```
custom.commerce.csr.order.shipping.editShippingAddress = function(pURL){
  atg.commerce.csr.common.submitPopup(pURL,
      dojo.byId("mycsrEditShippingAddressForm"),
      dijit.byId("mycsrEditAddressFloatingPane"));
};
```

This function submits a pop up page form.

9 Working With Grids and Tables

Tables and grids are similar in that they provide structured layouts for data. Tables, which are created in HTML, display standard data that is defined using configuration files. Grids extend standard tables by allowing paging and by using Dojo components.

Using configuration layering, you can identify the location and file names of JSP snippets to be included inside the default pages. If these JSP snippets are not specified, the default grid pages are displayed. However, you can choose to specify these JSP snippets, and extend the grid components, by providing additional rendering information and grid data that is integrated into the existing grids.

Grids or tables can be modified to add columns, reorder or remove columns, change column widths or sorting, as well as to change hover information.

The components of a grid that can be modified are:

- Changing grid layouts
- Column width
- Number of rows displayed per page
- Number of rows displayed at a time per user scrolls
- Number of columns to display
- Adding or modifying hover information

The components of a table that can be modified are:

- Number of columns to display
- Changing table layouts

Note: All grid and table components are located in the application UI modules, for example `Service-UI` or `DCS-CSR-UI`.

Modifiable Grids and Tables

The following grids and tables can be modified in Service Center.

Customer Information Page

The following grids and tables can be modified on the Customer Information page:

Grid/Table	Location
Order History	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/tables/order/OrderHistoryGrid.properties
Scheduled Orders	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/tables/order/ScheduledOrdersGrid.properties
Ticket History	/Service-UI/Framework/Agent/config/atg/svc/agent/ui/tables/ticket/CustomerTicketGrid.properties
Customer Search Results	/Service-UI/Framework/Agent/config/atg/svc/agent/ui/CustomerProfileSearchUIConfiguration.properties

Order View Page

The following grids and tables can be modified on the Order View page:

Grid/Table	Location
Exchange History	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/tables/order/ExchangeHistoryGrid.properties
Related Tickets	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/tables/ticket/RelatedTicketGrid.properties
Order Search	/DCS-CSR-UI/config/atg/commerce/custsvc/order/OrderSearchUIConfiguration.properties
Order Search Results	/DCS-CSR-UI/config/atg/commerce/custsvc/order/OrderSearchResultsTable.properties
Approvals	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/tables/approvals/ApprovalsGrid.properties
Purchased Items	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/tables/order/PurchasedItemsGrid.properties

Scheduled Order Page

The following grids and tables can be modified on the Scheduled Order page:

Grid/Table	Location
Submitted Orders	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/tables/order/SubmittedOrdersGrid.properties

Grid/Table	Location
Related Tickets	/DCS-CSR-UI/config/atg/commerce/custsvc/ui/tables/ticket/RelatedTicketGrid.properties

Gift/Wish List

The following grids and tables can be modified on the Gift/Wish List panel of the Customer Profile:

Grid/Table	Location
Edit Gift Lists Search Results	/DCS-CSR-UI/src/config/atg/commerce/custsvc/ui/tables/gift/giftlist/GiftlistEditResultsTable.properties
View Gift Lists Purchased Items	/DCS-CSR-UI/main/src/config/atg/commerce/custsvc/ui/tables/gift/giftlist/GiftlistPurchaseResultsTable.properties
View Gift Lists Search Results	/DCS-CSR-UI/main/src/config/atg/commerce/custsvc/ui/tables/gift/giftlist/GiftlistViewResultsTable.properties
Display Gift Lists	/DCS-CSR-UI/main/src/config/atg/commerce/custsvc/ui/tables/gift/customer/GiftlistGrid.properties
Search Gift Lists	/DCS-CSR-UI/main/src/config/atg/commerce/custsvc/ui/tables/gift/search/GiftlistGrid.properties
Edit Wish List Search Results	/DCS-CSR-UI/main/src/config/atg/commerce/custsvc/ui/tables/gift/wishlist/WishlistEditResultsTable.properties
View Wish List Search Results	/DCS-CSR-UI/main/src/config/atg/commerce/custsvc/ui/tables/gift/wishlist/WishlistViewResultsTable.properties

Promotions

The following grids and tables can be modified on the Available Promotions panel of the Order View page:

Grid/Table	Location
Browse Available Promotions	/DCS-CSR-UI/main/src/config/atg/commerce/custsvc/ui/tables/promotion/AvailablePromotionsGrid.properties
Promotions Search	/DCS-CSR-UI/main/src/config/atg/commerce/custsvc/ui/tables/promotion/PromotionSearchGrid.properties

Extending Table Configurations

Use configuration layering to extend the default table configuration. Refer to the Customization Best Practices (page 42) section before modifying configuration files.

The `TableConfiguration` class is located in ATG Service Agent classes. The columns are defined in a list. The properties for `TableConfiguration` are:

Property	Description
`columns`	List containing all columns in display order.
`formHandlerPath`	The Nucleus path to the form hander that renders the results.
`imageClosed`	The file name of the image to render when the table item detail is not visible or is closed.
`imageOpen`	The file name of the image to render when the table item detail is visible or is open.
`imagePath`	The URL path to the images.
`tablePage`	The page fragment containing the table implementation.
`tablePath`	The Nucleus path to the grid configuration component.
`rowsPerPage`	The number of items to fetch per server request, usually extracted from the results form handler.
`defaultSortField`	The default sort column. This field should point to the configured values in the particular column configuration to be sorted. The `ViewLink.sortField` must match what is defined in indexing output file for the index being searched.
`defaultSortDirection`	The default sort direction, either *`ascending`* or *`descending`*. This field should point to the configured values in the particular column configuration to be sorted.

The following is an example of the `/DCS-CSR-UI/atg/commerce/custsvc/order/OrderSearchUIConfiguration.properties` file that uses the `TableConfiguration` class:

```
$class=atg.svc.agent.ui.tables.TableConfiguration
$scope=global

columns=\
         /atg/commerce/custsvc/ui/tables/order/search/Toggle,\
         /atg/commerce/custsvc/ui/tables/order/search/ViewLink,\
         /atg/commerce/custsvc/ui/tables/order/search/LastName,\
         /atg/commerce/custsvc/ui/tables/order/search/FirstName,\
         /atg/commerce/custsvc/ui/tables/order/search/Total,\
         /atg/commerce/custsvc/ui/tables/order/search/ItemsReturned,\
         /atg/commerce/custsvc/ui/tables/order/search/DateSubmitted,\
```

```
        /atg/commerce/custsvc/ui/tables/order/search/Originator,\
        /atg/commerce/custsvc/ui/tables/order/search/State,\
        /atg/commerce/custsvc/ui/tables/order/search/WorkOn

imageClosed=icon_find.gif
imageOpen=icon_find.gif
imagePath=/images/icons/

rowsPerPage=10

defaultSortField^=/atg/commerce/custsvc/ui/tables/order/search/ViewLink.sortField
defaultSortDirection^=/atg/commerce/custsvc/ui/tables/order/search
    /ViewLink.defaultSort

tablePath=/atg/commerce/custsvc/ui/tables/order/search/OrderSearchResultsTable
tablePage=/atg/commerce/custsvc/ui/tables/order/search/OrderSearchTablePage
```

Extending Grid Configuration

The `GridConfiguration` object is located in ATG Service Agent classes and extends the `TableConfiguration` class by allowing for additional customization using Dojo. The columns are defined in order in an array of `ColumnConfiguration` components. Refer to the Customization Best Practices (page 42) section before modifying configuration files.

The properties for `GridConfiguration` are:

Property	Description
`columns`	The array of `ColumnConfiguration` components that specify the columns for the grid in display order.
`dataModelPage`	The page fragment component that contains the data model (for example, JSON). Include the full Nucleus path to the component.
`detailFormId`	The DOM ID of the form node to submit to retrieve an item detail.
`formHandlerPath`	The Nucleus path to the form handler that renders the results.
`gridHeight`	The value assigned to the height CSS style for the table to determine its visible height.
`gridInstanceId`	The JavaScript variable name that should be unique for each instance of the table in the application.
`gridPage`	The page fragment containing the grid implementation.
`gridPath`	The Nucleus path to the grid configuration component.
`gridWidgetId`	The Dojo ID of the table widget that should be unique for each instance of the grid in the application.

Property	Description
imageClosed	The file name of image to render when the grid item detail is not visible or closed.
imageOpen	The file name of image to render when the grid item detail is visible or open.
imagePath	The URL path to the images.
itemDetailPage	The page fragment component containing the item details (currently implemented as a hover pop-up).
pageBaseOffset	The base of the paging: 0 for 0-based paging, 1 for 1-based paging, etc.
pageIndexElementName	The element name of the page index form input.
progressNodeId	The optional ID for a DOM node to render status messages, such as 'search in progress...' or 'No results found.' etc.
rowsPerPage	The size of the result to send back from the form handler in each page.
searchFormId	The DOM ID of the form node to submit to retrieve orders.
selectLink	An anchor tag template with pattern replacement for selecting the item in the application.
viewLink	An anchor tag template with pattern replacement for viewing the item in the application.

The following is an example of the /atg/svc/agent/ui/tables/tables/ticket/CustomerTicketGrid.properties file, which uses the GridConfiguration class:

```
$class=atg.svc.agent.ui.tables.GridConfiguration

columns=\
       /atg/svc/agent/ui/tables/ticket/ViewLink,\
       /atg/svc/agent/ui/tables/ticket/Description,\
       /atg/svc/agent/ui/tables/ticket/CreatedDate,\
       /atg/svc/agent/ui/tables/ticket/Age,\
       /atg/svc/agent/ui/tables/ticket/Status,\
       /atg/svc/agent/ui/tables/ticket/Id,\
       /atg/svc/agent/ui/tables/ticket/SelectLink

rowsPerPage=10

gridHeight=450px
gridInstanceId=atg.svc.agent.ticket.historyGridInstance
gridPath=/atg/svc/agent/ui/tables/ticket/CustomerTicketGrid
gridWidgetId=atg_svc_agent_ticket_historyTable
progressNodeId=atg_svc_agent_ticket_historyGridStatus
searchFormId=ticketHistoryListForm

dataModelPage=/atg/svc/agent/ui/tables/ticket/TicketDataPage
gridPage=/atg/svc/agent/ui/tables/ticket/TicketGridPage
```

Each of the columns is configured using a property file, which identifies column properties. For example, the `ViewLink.properties` file that is referenced in the `CustomerTicketGrid` file:

```
$class=atg.svc.agent.ui.tables.ColumnConfiguration

defaultSort=ascending
field=viewLink
sortField=id
width=6em
resourceBundle=atg.svc.agent.ui.UserMessages
resourceKey=view-ticket
isVisible=true

dataRendererPage=/atg/svc/agent/ui/tables/ticket/ColumnRendererPage
```

These configuration files allow you to make specific changes to individual columns within the grid.

Working With Column Layout

The `ColumnConfiguration` object is located in `atg.svc.agent.ui.tables`, and manages column configuration for an instance of a UI grid.

Dojo Grid Column Configuration

The properties for `ColumnConfiguration` within Dojo are:

Property	Description
`cellRendererPage`	The page fragment component that can contain a client-side JavaScript function to render the cell contents. Includes the full Nucleus path to the component.
`dataRendererPage`	The page fragment component that returns server-side data in JSON that inserts a cell. Includes the full Nucleus path to the component.
`defaultSort`	Is set to either ascending or descending sorting or left blank for no sorting.
`field`	The field name identifier for the data to render in the column from the data model. UI-only columns without a backing data representation should leave the field parameter undefined.
`sortField`	The name of the data model field on which to sort, which is different than `field`. If this property is undefined and sorting is enabled using `defaultSort`, the data is sorted on the `field` property. If this property is defined and sorting is enabled using `defaultSort`, the data is sorted on the `sortField` property. This property allows a column to contain rendering and markup that does not interfere with the sorting of the field. For example, the `ViewLink` column can have a link to view an item where the column is not sorted on the link markup, but on a separate corresponding data value.

Property	Description
isVisible	Whether to display the column in the UI or only to send back the data for the column. This is useful for JavaScript widgets that store invisible column data for other columns. For example, an onClick function in the ID field can use an invisible DBState field to identify what to do when an order is opened.
resourceBundle	The resource bundle that contains the column display name.
resourceKey	The key that references the column display name in the resource bundle.
width	The extent of the column using the Dojo-grid syntax (e.g. '5em' or 'auto').
styles	The column CSS styles. **Note:** Styles are not modifiable for tables.

The following is an example of the /atg/commerce/custsvc/ui/tables/order/ViewLink.properties column configuration:

```
$class=atg.svc.agent.ui.tables.ColumnConfiguration

defaultSort=ascending
field=viewLink
sortField=id
width=4em
resourceBundle=atg.commerce.csr.Messages
resourceKey=view-order
isVisible=true

dataRendererPage=/atg/commerce/custsvc/ui/tables/order/ColumnRendererPage
```

HTML Table Column Configuration

The properties for ColumnConfiguration using an HTML table are:

Property	Description
dataRendererPage	The page fragment component that returns server-side data in JSON that inserts a cell. Includes the full Nucleus path to the component
field	The field name identifier for the data to render in the column from the data model. UI-only columns without a backing data representation should leave the field parameter undefined.
isVisible	Whether to display the column in the UI or only to send back the data for the column. This is useful for JavaScript widgets that store invisible column data for other columns. For example, an onClick function in the ID field can use an invisible DBState field to identify what to do when an order is opened.
resourceBundle	The resource bundle that contains the column display name
resourceKey	The key that references the column display name in the resource bundle

Property	Description
`width`	The extent of the column using the Dojo-grid syntax (e.g. '5em' or 'auto')

The following is an example of the `/atg/commerce/custsvc/ui/tables/ticket/LastName.properties` column configuration:

```
$class=atg.svc.agent.ui.tables.ColumnConfiguration

field=lastName
width=10%
resourceBundle=atg.svc.agent.WebAppResources
resourceKey=relatedTickets.lastName
isVisible=true

dataRendererPage=/atg/commerce/custsvc/ui/tables/ticket/ColumnRendererPage
```

Customizing Column Attributes

The steps for customizing column title, sorting and width are similar in that they update properties in the column configuration component. **Note:** Do not use quotes when setting values in this map.

When customizing column attributes, use configuration layering as described in the Customization Best Practices (page 42) section. To begin customization, override the column configuration by performing the following:

1. Create a new application module for customizations. Include this module when starting your Web application. Refer to the *ATG Installation and Configuration Guide* for information on creating new application modules with your Web application.

2. Locate the properties file that defines the appropriate column configuration.

3. Inside the customization module, create a properties file at the corresponding path that contains no properties.

Working with a Column Title

1. Create or edit a resource bundle for customized strings in your customization module.

2. In the properties file for the column, update the `resourceBundle` and `resourceKey` properties to point to the corresponding resource bundle and key that contain the customized string. This overrides the default values for these properties. For example:

   ```
   defaultSort=ascending
   field=viewLink
   sortField=id
   width=4em
   resourceBundle=atg.commerce.csr.newMessages
   resourceKey=new-view-order
   isVisible=true
   ```

Modifying Column Sorting

1. In the appropriate properties file for the column, set the `defaultSort` property to either *`ascending`* or *`descending`*. Removing the property or setting the property to an empty string will remove sorting. For example:

   ```
   defaultSort=ascending
   field=viewLink
   sortField=id
   width=4em
   resourceBundle=atg.commerce.csr.newMessages
   resourceKey=new-view-order
   isVisible=true
   ```

2. To configure a Dojo-grid column to sort on a field other than the data field that is rendered in the column, set the `sortField` to any field in the data model.

   For example, your column might display a data field containing an HTML link or JavaScript, such as `viewLink`, which is not appropriate for sorting. By setting the `sortField` property to `ID`, the column can still be sorted by the corresponding ID property.

3. Configure an HTML-grid column by configuring the appropriate UI configuration file, such as the `CustomerProfileSearchUIConfiguration.properties` or the `OrderSearchUIConfiguration.properties` file.

Modifying Column Widths

Each grid contains a list of columns to display within the grid. These columns are configured using a property file. You must modify these properties file to modify the column width.

1. In the properties file for the column, update the `width` property to the desired CSS width specification, for example. *`4em`*. For example:

   ```
   defaultSort=ascending
   field=viewLink
   sortField=id
   width=4em
   resourceBundle=atg.commerce.csr.newMessages
   resourceKey=new-view-order
   isVisible=true
   dataRendererPage=/atg/svc/agent/ui/tables/ticket/ColumnRendererPage
   ```

2. To set the column width to fill the remaining space on the screen, set the width to *`auto`*.

Configuring the PageFragment Component

The table and column configuration components use the `PageFragment` component in the Web UI to reference JSP pages located in the `/atg/web/PageFragment` directory.

- `URL` – the URL of the page to include

- `servletContext` – the context root of the application that contains the page

The following is an example of the `/atg/commerce/custsvc/ui/tables/order/ColumnRendererPage`:

```
$class=atg.web.PageFragment

URL=/include/order/columnRenderer.jsp
servletContext=DCS-CSR
```

Creating Column Content

The data renderer page displays the content to render within the column.

Dojo-Grid Column Content

By default, the data renderer page is called for each column when the grid items are iterated. The following parameters are passed to the data renderer page:

Parameter	Description
`field`	The string identifier of the column to render as defined in the `ColumnConfiguration` object.
`colIndex`	The zero-based index of the column.
[*bean*]	The object(s) containing the data for the grid item. They will vary depending on the data being rendered. For an order, the item is a single `orderItemMap` bean.

The following is an example from the `/include/order/columnRenderer.jsp` file:

```
<dsp: getvalueof var="field" param="field"/>
<dsp: getvalueof var="colIndex" param="colIndex"/>
<dsp: getvalueof var="orderItemMap" param="orderItemMap"/>

<c: choose>
<c: when test="${field == 'id'}">
  "id": "${orderItemMap.id}",
</c: when>

<c: when test="${field == 'viewLink'}">
  <fmt: bundle basename="atg.commerce.csr.Messages">
    "viewLink": "<a href=\"#\" class=\"blueU\" title=\"
    <fmt: message key="view-order"/>\"
    onclick=\"atg.commerce.csr.order.viewExistingOrder(\'${orderItemMap.id}\',\
    '${orderItemMap.state}\');return false;\">${orderItemMap.id}</a>"
  </fmt: bundle>
```

```
</c: when>

...
```

HTML Table Column Content

The data renderer page displays the content to render within the column. By default, the data renderer page is called for each column heading and data cell. The following parameters are passed to the data renderer page:

Parameter	Description
`field`	The string identifier of the column to render as defined in the `ColumnConfiguration` object
`customerItemMap`	The current customer item being rendered
`resourceBundle`	The resource bundle that defines the resource keys
`resourceKey`	The key that maps to the resource string
`isPopup`	Identifies if the search table is a pop up. For example, the customer search from the Shopping Cart page is a pop up table
`isHeading`	Identifies if a heading should be rendered

Rendering Column Content

The data renderer page displays the content to render within the column. By default, this page is called for each column when the grid items are iterated. The following parameters are passed to the data renderer page each time it is included:

- `field` - The string identifier of the column to render as defined in the `ColumnConfiguration` object
- `colIndex` - The zero-based index of the column
- [*bean*] - The object(s) containing the data for the grid item. This varies depending on the data being rendered. For example, for an order, the item is a single `orderItemMap` bean

Before customizing the data renderer page, perform the following steps:

1. Refer to the Customization Best Practices (page 42) section.
2. Create a new application module for customizations. Include this module when starting JBoss. Refer to the *ATG Platform Programming Guide* for information on creating new application modules and the *ATG Installation and Configuration Guide* for information on starting JBoss.
3. Locate the properties file that defines the column configuration.
4. Inside the customization module, create an empty properties file at the corresponding path.

To configure the data render page with page fragments:

1. Create a new JSP file in the module that will render the customized data.

2. In this module, create a new `PageFragment` properties file under `/config/atg/commerce/custsvc/ui/tables`. For example, create a `NewColumnRendererPage.properties` file.

3. In the properties file for the page fragment, set the `URL` and `servletContext` to reference the JSP page created in the customization module. For example:

```
# @version $Id: //application/DCS-CSR/atg/commerce/custsvc/ui/tables/
order/NewColumnRendererPage.properties
$class=atg.web.PageFragment
URL=/include/order/newColumnRenderer.jsp
servletContext=DCS-CSR
```

4. In the properties file for the column or grid, update the `dataRendererPage` property to point to the `PageFragment` properties file. For example:

```
dataRendererPage=NewColumnRendererPage
```

Example: Customizing Column Content

This example replaces the Origin column in the default application with a Last Modified column in the Order History grid.

1. In the resource bundle at */mycompany/*`resources/Resources.property`, add a new key for the column title.

```
lastModifiedDate=Last Modified
```

   To avoid a recompile of the JAR, add both the new resource bundle and the new key into your `<ATG10dir>/locallib` directory. You must restart your server once you have created the key.

2. In the sample application, create a grid properties file at `/atg/commerce/custsvc/ui/tables/order/OrderHistoryGrid.properties` to override the default file. Override the columns property with the new columns; however, ensure that the invisible columns are included so that the order links work correctly:

```
invisible data columns: DBState
columns=\
/atg/commerce/custsvc/ui/tables/order/Toggle,\
/atg/commerce/custsvc/ui/tables/order/ViewLink,\
/atg/commerce/custsvc/ui/tables/order/Total,\
/atg/commerce/custsvc/ui/tables/order/ItemCount,\
/atg/commerce/custsvc/ui/tables/order/ItemSummary,\
/atg/commerce/custsvc/ui/tables/order/SubmittedDate,\
/atg/commerce/custsvc/ui/tables/order/LastModified,\
/atg/commerce/custsvc/ui/tables/order/State,\
/atg/commerce/custsvc/ui/tables/order/SelectLink,\
/atg/commerce/custsvc/ui/tables/order/DBState
```

3. In the sample application, create the properties file for the column at `/atg/commerce/custsvc/ui/tables/order/LastModified.properties` that contains the configuration for the new column:

```
$class=atg.svc.agent.ui.tables.ColumnConfiguration
field=lastModified
width=5em
resourceBundle=mycompany.resources.Resources
resourceKey=lastModifiedDate
defaultSort=descending
```

```
isVisible=true
dataRendererPage=/atg/commerce/custsvc/ui/tables/order/
LastModifiedRendererPage
```

4. In the sample application, create the properties file for the content page at `/atg/commerce/custsvc/ui/tables/order/LastModifiedRendererPage.properties`:

```
$class=atg.web.PageFragment
URL=/panels/order/lastModifiedRenderer.jsp
servletContext=/Sample-DCS-CSR-App
```

5. In the sample application, create a JSP page at the location referred to by the page configuration. The JSP renders the last modified date property from the order:

```
<%@ include file="/include/top.jspf"%>
<dsp: page>
<fmt: bundle basename="acme.resources.Resources">
<dsp: getvalueof var="field" param="field"/>
<dsp: getvalueof var="colIndex" param="colIndex"/>
<dsp: getvalueof var="orderItemMap" param="orderItemMap"/>
<c: choose>
<c: when test="${field == 'lastModified'}">
"lastModified": "${orderItemMap.lastModifiedDate}"
</c: when>
<c: otherwise>
</c: otherwise>
</c: choose>
</fmt: bundle>
</dsp: page>
```

6. Test and verify that the last modified date column is rendered in the grid.

   Note: Default date formats can be modified using the `webAppResources.properties` file in the `/WEB-INF` directory.

Example: Creating Calculated Content

The following provides an example that returns calculated content.

1. Follow the steps for creating customized content, as outlined in the Creating Column Content (page 91) section.

2. Create a JSP page that returns a calculation of one or more data items. For example:

```
<%@ include file="/include/top.jspf"%>
<dsp: page>
<fmt: bundle basename="acme.resources.Resources">
<dsp: getvalueof var="field" param="field"/>
<dsp: getvalueof var="colIndex" param="colIndex"/>
<dsp: getvalueof var="orderItemMap" param="orderItemMap"/>
<c: choose>
<c: when test="${field == 'totalNoTax'}">
<dsp: tomap var="priceInfo" value="${orderItemMap.priceInfo}"/>
<c: set var="totalValue"><dsp: valueof converter="currency"
value="${priceInfo.amount+priceInfo.shipping}"/></c: set>
```

```
"totalNoTax": "${totalValue}",
</c: when>
...
```

3. Test and verify that the calculation is rendered in the grid.

Modifying Columns

The following steps provide information on how to add, delete or reorder columns. When working with columns, ensure that you are performing the steps outline in the Customization Best Practices (page 42) section.

Adding a Column

1. Follow the steps above to customize column content to create the new column. However, instead of opening an existing column configuration file, create a new properties file for the column.
2. Set the column properties as outlined above.
3. Open the properties file for the grid under `/atg/commerce/custsvc/ui/tables` and insert the column using the full Nucleus path to the column configuration component in the desired location of the `columns` list.

Removing a Column

1. Open the properties file for the grid under `/atg/commerce/custsvc/ui/tables`.
2. Delete the column identifier from the `columns` list.

Reordering Columns

1. Open the properties file for the grid under `/atg/commerce/custsvc/ui/tables`.
2. Reorder the column identifiers within the `columns` list.

Example: Adding a New Column to the Order Search Results

1. Create a new column as outlined above in the Adding a Column (page 95) section.
2. Add your new column to the `order-output-config.xml` file. Adding the `store-as-meta-index` parameter allows your search engine to store the data within this column in a sort-enabled format. For example, to add a Last Modified column, you would create the following:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE item PUBLIC "-//Art Technology Group, Inc.//DTD Repository
Ouput Specifier 1.0//EN" "http: //www.atg.com/dtds/search/indexing-
dependency-schema.dtd">
<item item-descriptor-name="order">
```

```
<meta-properties>
<property name="lastModifiedDate" type="date" store-as-meta-
index="false" />
</meta-properties>
</item>
```

3. Invoke the `/dyn/admin/nucleus/atg/commerce/search/OrderOutputConfig/bulkload` method.

4. Create a property file for the new column in the `/atg/commerce/custsvc/ui/tables/order/search` directory. Using the `LastModifiedDate` example, you would create an `/atg/commerce/custsvc/ui/tables/order/search/` file. For example:

   ```
   $class=atg.svc.agent.ui.tables.ColumnConfiguration
   field=lastModified
   sortField=lastModifiedDate
   width=5em
   resourceBundle=acme.resources.Resources
   resourceKey=lastModifiedDate
   defaultSort=descending
   isVisible=true
   dataRendererPage=/atg/commerce/custsvc/ui/tables/order/search/
   LastModifiedRendererPage
   ```

5. Create a new `dataRendererPage` property file in the location indicated in the new column property file you just created. This file will identify the URL page to use, as well as the context application.

   Using the previous example, you would create a `/atg/commerce/custsvc/ui/tables/order/search/LastModifiedRendererPage.properties` file that contained the following:

   ```
   $class=atg.web.PageFragment
   URL=/panels/order/search/lastModifiedRenderer.jsp
   servletContext=/Sample-DCS-CSR-App
   ```

6. Create the new JSP file at the location identified above in the URL parameter.

   When you create the JSP file use the `isHeading` parameter to determine whether to render a heading or a data row. If rendering a heading you can display the heading title or information can be passed into the `orderSearchResultSortHeading.jsp` file, which allows users to sort on this column. **Note:** The `sortField` used must be the same as what is used in the XML file because this parameter is passed to the search engine. For example:

   ```
   <%--
   Last modified date renderer example for order search table
   @version $Id: //application/DCS-CSR/main/sample-app/src/web-apps/Sample-
   DCS-CSR-App/panels/order/search/lastModifiedRenderer.jsp $
   @updated $DateTime: 2009/04/01 11: 29: 04 $
   --%>
   <%@ include file="/include/top.jspf"%>
   <dsp: page>
   <fmt: bundle basename="acme.resources.Resources">
   <dsp: getvalueof var="field" param="field"/>
   <dsp: getvalueof var="sortField" param="sortField" />
   <dsp: getvalueof var="orderItemMap" param="orderItemMap"/>
   <dsp: getvalueof var="isHeading" param="isHeading" />
   <dsp: getvalueof var="resourceBundle" param="resourceBundle" />
   ```

```
<dsp: getvalueof var="resourceKey" param="resourceKey" />
<c: if test="${empty isHeading}">
<c: set var="isHeading" value="false" />
</c: if>
<c: choose>
<c: when test="${field == 'lastModified' and isHeading=='false'}">
<c: out value="${orderItemMap.lastModifiedDate}" />
</c: when>
<c: when test="${field == 'lastModified' and isHeading=='true'}">
<dsp: include src="/panels/order/orderSearchResultSortHeading.jsp"
otherContext="${CSRConfigurator.contextRoot}">
<dsp: param name="resourceBundle" value="${resourceBundle}"/>
<dsp: param name="resourceKey" value="${resourceKey}"/>
<dsp: param name="fieldName" value="${sortField}"/></dsp: include>
</c: when>
<c: otherwise>
</c: otherwise>
</c: choose>
</fmt: bundle>
</dsp: page>
```

7. Create the new table column configuration and add the new column information by creating a `/atg/commerce/custsvc/order/OrderSearchUIConfiguration.properties` file. The following example extends the default values by identifying the number of results per page, as well as enabling search on the new column:

```
$class=atg.svc.agent.ui.tables.TableConfiguration
$scope=global
columns=\
/atg/commerce/custsvc/ui/tables/order/search/Toggle,\
/atg/commerce/custsvc/ui/tables/order/search/ViewLink,\
/atg/commerce/custsvc/ui/tables/order/search/LastName,\
/atg/commerce/custsvc/ui/tables/order/search/FirstName,\
/atg/commerce/custsvc/ui/tables/order/search/Total,\
/atg/commerce/custsvc/ui/tables/order/search/ItemsReturned,\
/atg/commerce/custsvc/ui/tables/order/search/DateSubmitted,\
/atg/commerce/custsvc/ui/tables/order/search/LastModified,\
/atg/commerce/custsvc/ui/tables/order/search/Originator,\
/atg/commerce/custsvc/ui/tables/order/search/State,\
/atg/commerce/custsvc/ui/tables/order/search/WorkOn
rowsPerPage=3
defaultSortField^=/atg/commerce/custsvc/ui/tables/order/search/
LastModified.sortField
defaultSortDirection^=/atg/commerce/custsvc/ui/tables/order/search/
LastModified.defaultSort
```

Changing the Item Detail (Hover) Page

The following provides information on changing the page that is displayed for the order detail, which is configured as a hover object.

1. Create a JSP page to render the order item detail in a new application module. If necessary, use the existing item detail page located at `/panels/order/orderDetail.jsp` as a template for the new file.

2. Open the properties file for the grid and find the `itemDetailPage` property. This component contains the URL to the item detail page.

3. Create a new properties file for the item detail page component under `/atg/commerce/custsvc/ui/tables`. Override the `servletContext` and `URL` properties to point to the new file.

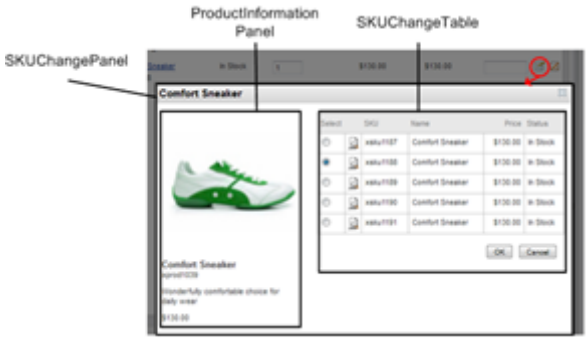
10 Rendering Pages with Nucleus Components

Some portions of the Service Center UI use a technique that makes the rendering of pages, or portions of pages, configurable through Nucleus components. This feature allows you to customize page content without unpacking the Web application, modifying its JSP, and then repackaging the modified application. Customization in this context means the addition or replacement of JSP.

Examples of customizations with Nucleus components include the Products View panel, which is accessed in `/panels/catalog/productView.jsp`. The Product View panel contains the `ProductInformation` panel, the `ProductSku` panel and the `CrossSellItems` panels.

Another example of customization includes the `SkuProductPopup`, which is accessed using the `SkuChangePopup`. When the `SkuChangePopup` is activated, the `SkuChangePanel` and `SkuChangeTable`, as well as the `ProductInformation` panel, are displayed.

You can change the SKU of `CommerceItem` objects in an order. The `CSRCartModifierFormHandler` contains the handle method `handleChangeSKUs()` that uses the `changeSKUsSuccessURL` and `changeSKUsErrorURL` properties, as well as the pre/post handler methods.



Customization Options

You can use personalization to control who has access to specific content. When customizing your pages, you work with personalization assets such as rules, targeters and segments. If you are working in a multisite environment, personalization assets can be used between multiple sites. For example, ATG Personalization uses a Rules tab that displays and manages multiple Site Override Rules and Site Filters. Site filters can be applied to Content Groups and targeters, allowing site-filtered searches. ATG Personalization with Segments, Targeters and Content Groups is defined per site. Scenarios are aware on which site the scenario event has occurred.

For detailed information on personalization and using ATG Personalization, refer to the *ATG Personalization Programming Guide*.

There are two general options for customizing page content.

- Simple Customization – This customization requires the configuration of an alternate URL in a component property. Depending upon requirements, this customization may be all that is required for most customization needs

- Targeting Customization – Targeting customization is useful when one of a number of JSPs could be rendered in a particular situation. In this situation, the decision of which JSP to render depends on complex rules, rules that are expected to change often, or in instances where it is necessary to modify these rules without restarting the application.

  Targeting Customizations require writing targeting XML rules that contain information such as request attributes, product and/or order information, the current customer and the current agent, or other information relevant to the functional area in question. Targeting rules normally target repository items; however, in this case targeting rules target Nucleus components that identify which JSPs to render

Simple Customization

Simple customization involves writing custom JSPs and configuring Nucleus components to refer to that JSP. For example, to replace the area of the Product View panel that displays product SKUs and allows agents to enter quantities for each SKU, you would modify the `/atg/commerce/custsvc/ui/renderers/ProductSkuRenderer` component that are located in the `DCS-CSR-UI` directory.

Because renderer components are globally scoped, you can temporarily change the page though the Dynamo Server Admin. All renderer components exist in the Nucleus configuration path at `/atg/commerce/custsvc/ui/renderers/`. For example, the SKU rendering component may be located at:

```
http://localhost:8080/dyn/admin/nucleus/atg/commerce/custsvc/ui/
renderers/ProductSkuRenderer/
```

Changing the `url` property of this component to point to the new JSP temporarily implements the customization. This example points to a `newProductSkus.jsp` file:

```
# The JSP that renders the product view SKU browser area
url=/renderers/order/newProductSkus.jsp
```

To make this configuration persistent, you must use a configuration file.

For detailed information on working with Nucleus components, refer to the *Managing Nucleus Components Appendix* in the *ATG Page Developer's Guide*.

Renderer Components

All components live in the `DCS-CSR-UI` directory under the Nucleus path `/atg/commerce/custsvc/ui/renderers/`. There are four components for each renderer:

- *BaseName*`Renderer`
- *BaseName*`PageData`
- *BaseName*`SourceMap`
- *BaseName*`Targeter`

The *BaseName*`Renderer` identifies the renderer and the renderer information that is used by the targeter, the data and the source map. The renderer contains the properties that are necessary to identify the JSP in particular Web application. The `RenderInfo` class creates the render information:

```
package atg.commerce.csr.rendering;
public class RenderInfo
{
// Some ID string
public String getId() {}
// URL to JSP
public String getUrl() {}
// WebApp name which contains the JSP referenced
// in the Url, or null for current web-app
public String getWebAppName() {}
// Values for use in constructing rules
public Map getRuleOptions() {}
// Options for use in customizing page rendering
public Map getPageOptions() {}
```

```
}
```

The renderer uses properties files to represent both the default and a custom product rendering page. For example, the default product renderer might be defined in the `DefaultProductRenderer.properties` file:

```
$class=atg.commerce.csr.rendering.RenderInfo
id=default
url=/renderers/product/generic.jsp
```

And the custom product renderer may be defined the `CustomProductRenderer.properties` file:

```
$class=atg.commerce.csr.rendering.RenderInfo
id=default
url=/renderers/product/custom.jsp
webAppName=Custom App 2.0
```

The *BaseName*`PageData` component is used by the page as a place to store parameters to the targeting rule. For example, to use the product item that you are viewing in the rule that you are going to execute to determine which page fragment to use for the product, you would store the product item in the `PageData` component. The `PageData` component is a map whose keys can be referenced in the rule as `pageData.`*`key-name`* where *key_name* is a key in the map.

The *BaseName*`SourceMap` holds the container component of the associated targeter. For example, the source map for a targeter may contain the following:

```
$class=atg.targeting.TargetingSourceMap
sourceMap=\
  RuleData=/atg/commerce/custsvc/ui/renderers/ProductViewRendererRuleData
```

The *BaseName*`Targeter` component is configured to target the `RenderInfo` configurations, using the `ProductREnderer.rules`. For example the `ProductViewProductRendererTargeter.properties` file might contain the following:

```
$class=atg.targeting.RuleBasedCollectionTargeter
collectionComponents=\
DefaultProductRenderer,\
CustomProductRenderer
# The RuleSet configured above
ruleSetService=ProductViewProductRendererRuleSet
```

Pages that use renderers reference them using the path and the base name, for example:

```
<csr: renderer name="/atg/commerce/custsvc/renderers/BaseName">
<csr: renderer name="/atg/commerce/custsvc/renderers/ProductInformation">
```

There are optional `RenderInfo` properties, which include:

- `pageOptions` (Map) - A placeholder for settings used by the page

- `ruleOptions` (Map) - A container for use in targeting rules

There is also a subclass `RenderInfo` for additional custom properties. A `contextRoot` property is available in the `atg.commerce.csr.rendering.RenderInfo` class, allowing you to identify a Web application within Commerce Service Center. The Web application is executed when a user's Web browser references a URL that contains the Web module's context root.

Because the context root controls the location of all files mentioned in the `BasenameRenderer.properties` file, whenever you modify a context root, you must ensure that any page that is referenced by the component is also available in that context root.

For example, if you were to modify a renderer component such as `/atg/commerce/custsvc/ui/` to identify the `contextRoot` property of:

```
contextRoot=/web-app
url=/web-app/test.html
```

You must ensure that all other pages referenced by this renderer can access the context root. This replaces the contents of the product information panel with whatever would be rendered by visiting `http://machine:port/web-app/test.html`.

Targeting Customization

To customize the UI using the JSP targeting rules, one or more renderer component configuration must be added to in the Dynamo component path. Each renderer component represents one variation, or one JSP, of the UI to display.

The following example describes the creation of a custom renderer for the SKU display and input area of the Product View panel. The following `/atg/commerce/custsvc/ui/renderers` components are involved in this example customization:

- `ProductSkuRenderer`: The default renderer for the product SKU area
- `ProductSkuPageData`: A component that will contain data from the enclosing page, such as product or customer information
- `ProductSkuSourceMap`: The main component container used by the targeting rules. This component refers to the `PageData` component above
- `ProductSkuTargeter`: The targeter configuration. This component refers to the `SourceMap` component above, and one or more Renderer components
- To create a targeting customization:
- Create a new renderer component to represent the custom JSP. The basic properties of each renderer component should be made in the `/nucleus/component/path/CustomRenderer.properties` file:

  ```
  # The base class for renderer components.
  ```

```
$class=atg.commerce.csr.rendering.RenderInfo
# An ID that uniquely identifies this renderer component in the
# domain in which it is used. All renderers currently shipped by
# ATG use the value "default" as their ID.
id=custom
# The custom JSP that performs the actual content rendering
url=/file/system/path/customSkuDisplay.jsp
```

- Create a default `RuleSetService` configuration. This component identifies the rules file and contains settings for when that file is loaded. In the `/nucleus/component/path/RuleSetService.properties` file, add the following:

  ```
  $class=atg.targeting.RuleSetService
  # Path to rules file
  rulesFilePath=/file/system/path/sku.rules
  # Settings that control when/if rules files are loaded:
  updatesEnabled=true
  rulesFileCheckSeconds=0
  ```

  The values used for `updatesEnabled` and `rulesFileCheckSeconds` above are useful when testing targeting rules because they cause the rule file to be reloaded for every request.

  Note: If the default `RuleSetService` has been configured to always reload targeting rules, it is easier to experiment with rules by changing the file and causing the page to be redisplayed.

- Create the rules file for the `RuleSetService` configured in Step 2. In the `/file/system/path/sku.rules` file, add the following:

  ```
  <ruleset>
  <accepts>
  <rule op="and">
  <rule op="eq">
  <!-- pageData is obtained from the SourceMap component -->
  <valueof bean="pageData.product.id">
  <valueof constant="prod10001">
  </rule>
  <rule op=eq>
  <!-- target (display) the custom JSP -->
  <valueof target="id">
  <valueof constant="custom">
  </rule>
  </rule>
  </accepts>
  </ruleset>
  ```

  In the example, the `sku.rules` file will target the custom renderer only when the product being displayed has a value of "prod10001". Only the first targeted component is displayed because the `TargetingFirstDroplet` is used, so while multiple targets may match, only the first matching component's JSP will be rendered.

- Update the existing `ProductSkuTargeter` configuration to refer to the new Renderer component created in Step 1, and to the `RuleSetService` configured in Step 2.

- You may need to restart the server for the settings to take effect.

For in-depth information on working with targeters, refer to the *ATG Personalization Programming Guide*.

Creating a ProductSkuRenderer

To create a `ProductSkuRenderer`, modify the `DCS-CSR-UI/config/atg/commerce/custsvc/ui/renderers/ProductSkuRenderer` component path. The render components that should be extended are `atg.commerce.csr.rendering.RenderInfo` with `atg.commerce.csr.rendering.SkuRenderInfo`.

Create new properties that describe how to render each table column. Property names can be actual SKU property names or symbolic names such as `price` and `status`. Symbolic properties, or property names that do not represent actual properties of the SKU, specify a JSP in the renderer property.

The `ProductSkuRenderer` uses the standard `pageOptions` property to specify form handler, URL properties and other information. The `pageOptions` properties include:

```
pageOptions=\
  actionRenderer=/renderers/order/sku/skuBrowserAction.jsp,\
  giftlistActionRenderer=/renderers/gift/skuGiftlistBrowserAction.jsp,\
  formHandler=/atg/commerce/custsvc/order/CartModifierFormHandler,\
  successPanelStacks=cmcCatalogPS,\
  errorPanelStacks=cmcCatalogPS,\
  successUrlProperty=addItemToOrderSuccessURL,\
  errorUrlProperty=addItemToOrderErrorURL
```

The `properties` variable includes:

```
properties=viewItem,id,displayName,price,status,quantity
```

By default, the `ProductSkuRenderer` page uses `skuItem.`*`propertyName`* to display the SKU property.

The property renderer specifies optional JSP files that are used to render named cells:

```
renderer=\
  viewItem=/renderers/order/sku/viewItem.jsp,\
  price=/renderers/order/sku/skuPrice.jsp,\
  status=/renderers/order/sku/inventoryStatus.jsp,\
  quantity=/renderers/order/sku/quantityInput.jsp,\
  id=/renderers/order/sku/sku.jsp,\
  displayName=/renderers/order/sku/name.jsp
```

Each fragment renders its column header and column cell

```
<c: choose>
  <c: when test="${area == 'cell'}">
    render cell content
  </c: when>
  <c: when test="${area == 'header'}">
    render column header content
  </c: when>
</c: choose>
```

Available Renderers

All renderers listed contain the four component files, the `*Renderer`, `*PageData`, `*SourceMap` and `*Targeter` properties files.

The following renderers are available in the `DCS-CSR-UI` module in the `/atg/commerce/custsvc/ui/renderers` directory.

Renderer	Rendering JSP	Description

`CrossSellItems`	`/renderers/order/crossSellItems.jsp`
	
	`conetxtRoot=/DCS-CSR`
		A renderer for product information cross-sells, a section of a page that by default displays a product image, ID, description and price range.

`CustomerSearch`	`/panels/customer/customerSearch.jsp`
	
	`contextRoot=/agent`
		A renderer for the Customer Search page.

`CustomerSearchResults`	`/panels/customer/customerSearchResults.jsp`
	
	`contextRoot=/agent`
		A renderer for the Customer Search Results page.

`CustomerSelectionPopup`	`/renderers/customer/customerSelection.jsp`
	
	`contextRoot=/DCS-CSR`
		A renderer for the Customer Selection pop-up page.

`ItemDescription`	`/renderers/order/itemDescription.jsp`
	
	`contextRoot=/DCS-CSR`
		A renderer for the description of a product in an order. It is used in the existing order view and the order confirmation panel.

`ProductInformation`	`/renderers/order/productInformation.jsp`
	
	`contextRoot=/DCS-CSR`
		A renderer for product information that displays on the Product Quick View panel, the SKU Change panel and the Read-Only Product view.

`ProductQuickViewPopup`	`/renderers/order/productQuickView.jsp`
	
	`contextRoot=/DCS-CSR`
		A renderer for the Product Quick View pop-up page.

`ProductReadOnlyPopup`	`/renderers/order/productReadOnly.jsp`
	
	`contextRoot=/DCS-CSR`
		A renderer for the product view page, specifically the read-only product information pop-up.

`ProductSku`	`/renderers/order/productSkus.jsp`
	
	`contextRoot=/DCS-CSR`
		A default renderer for SKU items in the SKU browser.

Renderer	Rendering JSP	Description
ProductSkuReadOnly	/renderers/order/productSkus.jsp contextRoot=/DCS-CSR	A renderer for read-only SKU items.
ProductViewPanel	/renderers/order/productView.jsp contextRoot=/DCS-CSR	A default renderer for the product view page.
QuickViewSkuTable	/renderers/order/productSkus.jsp contextRoot=/DCS-CSR	A default renderer for SKU items in the SKU browser that displays an array of SKU properties to be displayed in the SKU table.
ReturnShippingAddress	/panels/order/returns/returnShippingAddress.jsp contextRoot=/DCS-CSR	A default renderer for the returns line item page shipping address.
ReturnsLineItem	/panels/order/returns/returnItemsLineItem.jsp contextRoot=/DCS-CSR	A default renderer for a line item on the Returns Item page.
ShippingAddressTable	/renderers/order/shippingViewPanel.jsp contextRoot=/DCS-CSR	A default renderer that displays the shipping information contained on the Order View page.
SkuChangePanel	/include/order/product/skuChangePanel.jsp contextRoot=/DCS-CSR	A renderer used on the shopping cart when a line item has been edited to change the SKU.
SkuChangeTable	/renderers/order/sku/skuChangeAction.jsp /renderers/order/productSkus.jsp contextRoot=/DCS-CSR	A default renderer for displaying the SKU changes in the SKUChangePanel.

Customizing the Order Summary Panel

The Order Summary panel, which is available to the agent when using the Commerce page, displays order status information. It also presents links based on the state of the order and where the agent is in the order process. The Order Summary display is triggered when the agent performs a specific action or navigates to a specific page.

Note: Page navigation changes take precedence over action changes.

The following actions trigger an update of the Order Summary display:

- Select an order, which also changes the active order in the global context area
- Add a product to the shopping cart
- Cancel an exchange from within the exchange process
- Cancel a refund from within the refund process

The following processes trigger an update of the Order Summary display:

- Modification of an order on the Shopping Cart, Shipping Address, Shipping Method, Billing, Review Order and Confirmation pages
- Scheduling a new or updating an existing schedule using the Schedule page
- A Return using Return Items, Return Type or the Return Confirmation pages
- Exchanges

To customize the Order Summary panel, override the Nucleus configuration files located in the `config/atg/commerce/custsvc/ordersummary` directory. Then copy and modify the JSP files in `DCS-CSR-UI.war/panels/ordersummary`.

Adding a New Order Summary Step

1. If the new step fits into one of the pre-existing paths, such as modify order or returns, add a new properties file to the configuration. If necessary, create a new JSP file. Pre-existing paths are indicated by the use of a task-based name, such as `exchange`, `modify`, `return`, `template`, `complete` and `submitted`.

   The properties files have the following entries:

   - `page=` indicates the JSP file to display when the agent is in the step. If necessary, add a new JSP file and add it to the `page` entry
   - `content=` indicates the Web application that contains your JSP files. If you do not indicate the Web application, then the application server will try to find your new JSP in the DCS-CSR-UI Web application. Placing your JSP in the DCS-CSR-UI Web application for testing is appropriate, but JSPs should be moved into your own Web application for production. Additionally, this will prevent your JSPs from being overwritten during any subsequent patch upgrades
   - `visibleWhenInSteps=` is a comma separated list of the steps where the JSP should be displayed. The panel stack's ID is used to identify the step. Use this for paths where steps appear immediately after the step on which the agent is working. Leave the list blank if the step should always remain visible
   - `completeWhenInSteps=` is a comma separated list of the steps where the step should be in the `complete` state. Completion is indicated when the step shifts from showing edit links to display the text "complete". These steps are performed after the step in which the agent is working. Leave the list empty if the step is always complete

2. Edit the properties files of the other steps in the path to provide information on the new step. For example, add the ID of the new step to the `visibleWhenInSteps=` list of the steps `before` this new step in the path when the agent is in the new step.

3. Ensure that one of the panels in the new panel stack calls the JavaScript function `atg.progress.update('someIdStringHere')`, passing the ID of the panel stack. This lets the progress bar know it needs to update itself, and indicates where the agent is in the process.

4. To add the JSP into your Web applications, modify the Nucleus configuration properties files to identify which Web-app contains the JSP file. For example:

   ```
   path=/panels/ordersummary/specialOffers.jsp
   context=/my-web-app
   ```

Editing an Existing Order Summary Step

1. Copy an existing JSP file and rename the file.

2. Modify the JSP. For example, to modify the template `billing` step so that it is visually different than the modifiable order `billing` step, copy the existing `billing` JSP file and make the changes as needed.

11 Modifying Keyboard Shortcuts

You may modify the keyboard shortcuts that are used throughout the Service Center UI by modifying the appropriate JavaScript files.

Modifying Shortcuts

Keyboard shortcuts are located in the following files:

- `Service-UI/Framework/Agent/ServiceFramework/script /keyboardShortcutsService.js`
- `Service-UI/Framework/Agent/ServiceFramework/script/ Agent/script/keyboardTopicsService.js`
- `DCS-CSR-UI/script/keyboardShortcutsCSC.js`
- `DCS-CSR-UI/script/keyboardTopicsCSC.js`

The `keyboardShortcuts` files are used to map keyboard shortcuts to published topics. The `keyboardTopics` files are used to execute these topics and perform the specific functions.

The following is an example of a keyboard shortcut definition for the shortcut key ALT+6:

```
atg.keyboard.registerShortcut(
 "ALT+6", {
  shortcut: "ALT + 6",
  name: getResource("keyboard.service.customersTab.name"),
  description: getResource("keyboard.service.customersTab.description"),
  area: getResource("keyboard.area.workspace"),
  topic: "CustomersTab",
  notify: true
 });
```

Where:

- `shortcut` is the shortcut key that is shown in the help window
- `name` is the localized display name, shown in the help window
- `description` is the localized description, shown in the help window

- `area` is the localized functional area, shown in the help window
- `topic` is the name of the topic that is fired when this shortcut is pressed
- `action` is the optional JavaScript function that is called when the shortcut is pressed (used when a topic is not available)
- `notify` is an attribute that determines whether the small pop-up window in the bottom right of the screen is shown for the particular topic

Defining Global Keyboard Shortcuts

There are attributes that may be defined on a global basis for keyboard navigation. The `keyboardNavigation.js` file is the main keyboard navigation file. In it, you can set the following variables:

```
var _showNotificationWindow = true;
var _highlightAndFadePanels = true;
var _highlightAndFadeNodes = true;
```

Where:

- `showNotificationWindow` determines whether the small notification window that pops up in the bottom right part of the screen is shown when a shortcut is pressed. Each shortcut has an attribute called `notify` that specifies the use of the notification window on a shortcut-by-shortcut basis. However, the use of the notification window may be disabled if the `showNotificationWindow` is set to `false`
- `highlightAndFadePanels` provides a visual highlight as users jump from one panel to the next using the panel shortcuts. When this attribute is set to `false`, the panel highlighting will not occur
- `highlightAndFadePanels` provides a visual highlight as users tab throughout the Service Center. When this attribute is set to `false`, the screen elements will not be highlighted

12 Configuring Messaging

This section provides an overview of configuring the messaging UI in Service Center.

Rendering Messages in the Message Bar

This section describes the requirements needed to display messages in the message bar that is used by both the server-side code and client-side code.

Server-Side Configuration

Before configuring messages, ensure that the exception collector servlet has been activated in the application by inserting it in the servlet pipeline and adding the following lines to the `web.xml` file:

```
<context-param>
  <param-name>exception-collecting-enabled</param-name>
  <param-value>true</param-value>
</context-param>
```

The exception collector servlet creates messages from `DropletException` and `ServletException` objects that occur in the request.

Adding Messages from a Form Handler

There are two methods you can use to add messages to the messaging UI from a form handler:

- Add a servlet bean exception with a message to the form handler by invoking the `addFormException()` method on the form handler. The message property on the added exception will be displayed by the UI
- Create a user message bean (`atg.web.messaging.UserMessage`) directly and add it to the messaging slot using the `MessageTools` `addMessage()` method

The messaging UI will also display unhandled exceptions from the form handlers and server-side business logic.

Message Properties

Messages have the following properties:

- `type` – can be *`error`*, *`confirmation`*, *`warning`* or *`information`*
- `summary` – contains the message title
- `details`– contains an array of exception or other messages

When one or more exceptions occur during either form handler exceptions or an unhandled servlet exception, a single message is created with `type = "error"`. Each exception is added as a detail within the message. Exceptions that occur during a request are grouped inside a single container message. When no exceptions occur during the request, and a success summary is specified via the request parameters, the messaging UI creates a confirmation message.

Specifying a Message Summary

Success and failure summaries are specified using the `atg.successMessage` and `atg.failureMessage` parameters. For example, to specify message summaries with a form you could add the following:

```
<input name="atg.successMessage" type="hidden" value="Updated info
  for John Doe."/>
<input name="atg.failureMessage" type="hidden" value="There was a
  problem updating John Doe's info."/>
```

If no failure summary is specified in the request, the messaging UI adds the default summary that is specified in the message bar:

```
<div dojoType="messaging:MessageBar" errorMessage="There were
  errors with the request."/>
```

By default, no message is displayed for successful requests.

Adding Messages from JavaScript

Add messages from JavaScript code by using the message bar `addMessage` function:

```
dojo.widget.byId('messageBar').addMessage({type:"warning", summary:"An
error has occurred."});
```

To add a message that contains bulleted details, write your JavaScript similar to the following:

```
dojo.widget.byId('messageBar').addMessage({type:"error", summary:"An
error has occurred.", details:[{description: "First detail"},
{description: "Second detail"}]});
```

Implementing Client-Side Validation

Note: Tag converters should be used for server-side validation., as they use the mechanism for form handler exceptions described above.

Implementing Client-Side Validation with DSP Tags

Applying client-side validation to `dsp:input` and `dsp:select` tags enable the following behaviors based on the state of the validation in the input or select element:

- Allows an inline indicator graphic to show or hide
- Allows a client-side validation message to be added to the message bar when invalid contents are present (optional)
- Causes the Dojo `SubmitButton` widget(s) (if present) to enable or disable

To enable client-side validation with a `dsp:input` or `dsp:select` tag, use the `dsp:tagAttribute` tag:

```
<dsp:input id="dateOfBirth" type="text" value="01/01/1980"
    size="30" converter="date" date="M/dd/yyyy"
    bean="/atg/web/messaging/test/UserInfoFormHandler.dateOfBirth">
<dsp:tagAttribute name="dojoType" value="DateTextbox"/>
<dsp:tagAttribute name="lang" value="en-us"/>
<dsp:tagAttribute name="required" value="true"/>
<dsp:tagAttribute name="trim" value="true"/>
<dsp:tagAttribute name="invalidMessage" value="The date of birth is
    invalid."/>
<dsp:tagAttribute name="missingMessage" value="The date of birth is
    required."/>
<dsp:tagAttribute name="inlineIndicator" value="dateOfBirthAlert"/>
</dsp:input>
```

The `dojoType` attribute specifies the type of client-side widget to use for the input element.

Note: The `dsp:input` or equivalent tag must have an ID property defined for the `SubmitButton` auto-enabling feature to work properly.

For detailed information on DSP tags, refer to the *ATG Page Developer's Guide*.

Available Client-Side Validation Widgets

The following client-side validation widgets are available from Dojo:

- `ValidationTextbox` – Provides basic validation functionality, such as required values
- `IntegerTextbox` – Tests for signed or unsigned integer input and ranges
- `RealNumberTextbox` – Tests for real number input and ranges
- `CurrencyTextbox` – Tests if input denotes a monetary value or range
- `IpAddressTextbox` – Tests for a valid IP address

- `UrlTextbox` – Tests for a valid URL
- `EmailTextbox` – Tests for a valid email address
- `EmailListTextbox` – Tests for a list of valid email addresses
- `DateTextbox` – Tests for a valid date in specified locale
- `TimeTextbox` – Tests for a valid time
- `UsStateTextbox` – Tests for a United States state abbreviation
- `UsZipTextbox` – Tests if input is a US zip code: validates zip-5 and zip-5 plus 4
- `UsSocialSecurityNumberTextbox` – Tests for a United States Social Security number
- `UsPhoneNumberTextbox` – Tests for a United States 10-digit telephone number, extension is optional
- `RegexpTextbox` – Tests input based on conformity to a specified regular expression

Refer to the Dojo documentation for details on implementing specific widgets.

The following validation widgets are available:

- `SimpleComboBox` – forces a selection in a drop-down box (use `dsp:select` with `SimpleComboBox`)
- `TextArea` – performs range validation on the length of the `textarea` contents (use `dsp:input` instead of `dsp:textarea` with `TextArea`, since `dsp:textarea` does not accept Dojo widgets)

Preventing the Form from Submitting

The `SubmitButton` widget prevents a form from being submit while there is invalid content in any of the contained Dojo validation widgets:

```
<dsp:input id="updateUserInfo" type="Submit" value="Submit"
 bean="/atg/web/messaging/test/UserInfoFormHandler.updateUserInfo">
  <dsp:tagAttribute name="dojoType" value="validation:SubmitButton"/>
</dsp:input>
```

When present in a form, the `SubmitButton` widget will automatically enable and disable to prevent form submission while there are invalid contents in any of the Dojo validation widgets contained in the form. One or more `SubmitButton` widgets may be used in the same form. If the `SubmitButton` must be placed outside of the form that it validates, use the form attribute of the `SubmitButton` to specify the form to validate.

Conditional Validation

Validation may be made conditional based on the state of another element, such as a radio button.

1. Create a function to test the state of the radio button. The following example tests a Commerce Service Center radio button:

   ```
   atg.commerce.csr.rule0 = function () { return
   document.getElementsByName('addressType')[0].checked; };
   ```

2. Reference the function from the `validateIf` attribute on the widget:

```
<dsp:tagAttribute name="validateIf"
value="atg.commerce.csr.rule0.apply()"/>
```

Validation rules of the widget will be applied conditionally only when the referenced function returns true.

Conditional Requirements

A validation widget may be conditionally required based on the evaluation of an expression. As with conditional validation, perform the following steps:

1. Create a function to test the condition.
2. Reference the function from the `requiredIf` attribute on the widget. The following example tests a Commerce Service Center condition:

```
<dsp:tagAttribute name="requiredIf"
value="atg.commerce.csr.rule0.apply()"/>
```

This creates a widget that will perform required checks only when the condition applies, but will always perform validation checks when the widget contains data.

Custom Validation Conditions

Custom validation conditions may be applied to any validation widget through the `validIf` and `missingIf` attributes. The `validIf` attribute applies a custom validation condition to the widget:

```
<dsp:tagAttribute name="validIf" value="this.getValue() != 'blank'"/>
```

In the above example, the widget will be considered valid only when the expression in the `validIf` attribute evaluates to `true`.

The `missingIf` attribute applies a custom condition to determine whether the widget is missing a required value.

Additional Field Validation

You can use field validation to capture specific information. For example, to add an additional required field to the billing addresses to capture an e-mail address, add code similar to the following on your billing page:

```
<span class="atg_messaging_requiredIndicator"
  id="emailValidatorAlert">     </span>
 <dsp:input type="text" name="emailAddress"
  bean="BillingFormHandler.emailAddress" required="<%=true%>"
  size="25" maxlength="25">
    <dsp:tagAttribute name="dojoType" value="EmailTextbox" />
    <dsp:tagAttribute name="required" value="true" />
    <dsp:tagAttribute name="missingMessage" value="${emailMissing
      }" />
    <dsp:tagAttribute name="invalidMessage"
      value="${emailInvalid}"/>
    <dsp:tagAttribute name="inlineIndicator"
```

```
    value="emailValidatorAlert" />
</dsp:input>
```

Additionally, you must have a form handler equivalent to `BillingFormHandler` in the example that accepts the e-mail address as one of its inputs.

Appendix A. The XML Combiner Script

The `xmlCombinerCustomizer` script sets up the rules that combine the XML definition files. For information on this script, refer to the Data Combining (page 11) section.

The following is an example of the `xmlCombinerCustomizer` file:

```
<?xml version="1.0"?>

<!DOCTYPE combiner-customizers
  PUBLIC "-//Art Technology Group, Inc.//DTD XML Combiner Customizer//EN"
  'http://www.atg.com/dtds/xmlcombiner/xmlCombinerCustomizer_1.1.dtd'>

<combiner-customizers>
  <combiner-customizer>
    <tag-name>content-definition</tag-name>
    <match-subtag>id</match-subtag>
  </combiner-customizer>

  <combiner-customizer>
    <tag-name>id-entry</tag-name>
    <match-subtag>id</match-subtag>
  </combiner-customizer>

  <combiner-customizer>
    <tag-name>map-entry</tag-name>
    <match-subtag>key</match-subtag>
  </combiner-customizer>

  <combiner-customizer>
    <tag-name>template-definition</tag-name>
    <match-subtag>id</match-subtag>
  </combiner-customizer>
  <combiner-customizer>

    <tag-name>framework-definition</tag-name>
    <match-subtag>id</match-subtag>
  </combiner-customizer>

  <combiner-customizer>
    <tag-name>skin-definition</tag-name>
    <match-subtag>id</match-subtag>
  </combiner-customizer>

  <combiner-customizer>
    <tag-name>tab-definition</tag-name>
    <match-subtag>id</match-subtag>
  </combiner-customizer>
```

```
  <combiner-customizer>
    <tag-name>cell-definition</tag-name>
    <match-subtag>id</match-subtag>
  </combiner-customizer>

  <combiner-customizer>
    <tag-name>panel-stack-definition</tag-name>
    <match-subtag>id</match-subtag>
  </combiner-customizer>

  <combiner-customizer>
    <tag-name>panel-definition</tag-name>
    <match-subtag>id</match-subtag>
  </combiner-customizer>

  <combiner-customizer>
    <tag-name>id</tag-name>
    <match-text>
    <ignoring-outer-whitespace/>
    </match-text>
  </combiner-customizer>

  <combiner-customizer>
    <tag-name>key</tag-name>
    <match-text>
    <ignoring-outer-whitespace/>
    </match-text>
  </combiner-customizer>
</combiner-customizers>
```

Appendix B. Tag Libraries

The following tag libraries, which are used in Service Center, provide specialized markup tags that render content dynamically by linking Nucleus components directly to JSPs. ATG applications support both the standard Java Server Pages Standard Tag Library (JSTL) and the DSP tag library and provides tag converter classes that allow you to define the conversion of form data.

For detailed information on working with tag libraries, refer to the *ATG Page Developer's Guide*. For information on developing tag libraries and customized tag converters, refer to the *ATG Platform Programming Guide*.

ATG Service Common UI Tag Library

The ATG Service Common UI tag library, in the `atg.svc.taglib` package, located in the `/service/common-ui/src/taglibs` directory contains the following tags:

Tag	Description
`addAdHocFavQuery`	Sets the Ad Hoc Query Favorites view.

`getChildFocusTopics`	Returns a list of child focus objects from a focus topic.
	
	Attributes:
	`id`
	`var`
	`rootTopicId`
	`results`
	`focusChildren`

`getChildTopics`	Gets a collection of child topics under a topic.
	
	Attributes:
	`id`
	`var`
	`topicId`
	`labelInclude`
	`labelExclude`
	`countFilter`

Tag	Description

`getLocale`	Gets the locale associated with a language code string.
	
	Attributes:
	`id`
	`var`
	`languageCode`

`getLocaleFromSearchLanguage`	Gets the locale associated with the search language.
	
	Attributes:
	`id`
	`var`
	`searchLanguage`

`getOrganizationPath`	Gets a collection of parent organizations for an organization.
	
	Attributes:
	`id`
	`var`
	`organizationItem`
	`labelInclude`

`getRankedSolutions`	Returns a list of hot solutions based upon the selected topics and solution classes.
	
	Attributes:
	`var`
	`length`
	`topics`
	`solutionClasses`
	`rankCategory`

`getSearchLanguage`	Gets the search language that is associated with the language of a code string.
	
	Attributes:
	`id`
	`var`
	`languageCode`

`getTopic`	Gets the collection of child topics under a topic.
	
	Attributes:
	`id`
	`var`
	`primaryKey`

Tag	Description

`getTopicPath`	Gets the collection of child topics under a topic.
	
	Attributes:
	`id`
	`var`
	`topicId`
	`labelInclude`
	`fromSystemRoot`

`highlightFields`	Retrieves the fields to be highlighted.
	
	Attributes:
	`id`
	`var`
	`highlightInfo`

`logicalPartitions`	Returns a list of logical partitions. Attributes: `var`
`PDFHighlight`	Highlights PDFs. Attributes: `highlightInfo`

`PDFUrl`	Generates the PDF URL with the highlighting file appended.
	
	Attributes:
	`id`
	`var`
	`pdfUrl`
	`highlightFileUrl`
	`highlightInfo`

`property.isPropertyVisible`	Checks to see if the property is visible to the user.
	
	Attributes:
	`id`
	`var`
	`propertyName`

`retrieveDocumentFromES`	Retrieves document or highlighting offsets from ES.
	
	Attributes:
	`id`
	`var`
	`response`
	`searchService`
	`mode`

Tag	Description
search.queryTermSpelling	Generates a “Did you mean” string for the search and query text provided by the user. Attributes: markupAfter markupBefore scope searchText terms textSeparator varMarkup var varUnknownTerms varUnsearchableTerms varAlternateTermsUsed varHasSuggestions
serialize	Serializes and encodes objects. Attributes: object
solution.renderProperty	Renders a property based upon the property value. Attributes: propertyName propertyValue
solution.renderStatement	Renders a statement based upon the statement text value. Attributes: id var text
solutionHighlight	Highlights solution statements. Attributes: fields fieldId highlightInfo fieldText gotoLocation highlightColor

ATG Service Framework Bean Tag Library

The ATG Service Framework bean tag library, atg.svc.framework.taglib.beans.

common, is used for finder methods and home definitions. This tag library is located in the /service/framework/src/taglibs directory.

Tag	Description
cellDefinitionFindByAppId	Finds all cells by application. Attributes: id var appId
cellDefinitionFindByCellId	Finds cell definitions by application and logical IDs. Gets all skins by application and enabled status. Attributes: id var appId cellId
cellDefinitionFindByPrimaryKey	Finds cell definitions by repository ID. Attributes: id var cellDefinitionId
cellDefinitionFindBySiteId	Gets cell definitions by application and site ID. Attributes: id var siteId
cellDefinitionFindBySiteIdAndCellId	Finds cell definitions by application, site and logical partition IDs. Attributes: id var appId siteId cellId
cellDefinitionFindByUserSiteIdAndCellId	Finds content definitions by user site and cell IDs. Attributes: id var appId cellId

Tag	Description

`contentDefinitionFindByAppId`	Gets all content definitions by application.
	
	Attributes:
	`id`
	`var`
	`appId`

`contentDefinitionFindByContentId`	Find content definitions by application and logical IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`contentId`

`contentDefinitionFindByPrimaryKey`	Finds content definitions by repository ID.
	
	Attributes:
	`id`
	`var`
	`contentId`

`contentDefinitionFindBySiteId`	Find all content definitions by application and site IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`siteId`

`contentDefinitionFindBySiteIdAnd ContentId`	Finds content definitions by application, site and logical partition IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`siteId`
	`contentId`

`contentDefinitionFindByUserSiteIdAnd ContentId`	Finds content definitions by user site and content IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`contentId`

Tag	Description

`frameworkDefinitionFindByFrameworkId`	Gets framework definitions by application and logical IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`frameworkId`

`frameworkDefinitionFindByPrimaryKey`	Gets the `FrameworkDefinition` by repository ID.
	
	Attributes:
	`id`
	`var`
	`frameworkDefinitionId`

`frameworkDefinitionFindBySiteId`	Gets all framework definitions by application and site IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`siteId`

`frameworkDefinitionFindBySiteIdAnd FrameworkId`	Finds framework definitions by application, site and logical IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`siteId`
	`frameworkId`

`frameworkDefinitionGetSkins`	Gets the skins associated with the framework definition.
	
	Attributes:
	`id`
	`var`
	`frameworkDefinitionId`

`frameworkDefinitionGetTabs`	Gets the tabs associated with the framework definition.
	
	Attributes:
	`id`
	`var`
	`frameworkDefinitionId`

Tag	Description

`frameworkDefintionFindByAppId`	Gets the framework definition by its application identifier.
	
	Attributes:
	`id`
	`var`
	`appId`

`frameworkObjectFindByPrimaryKey`	Finds a `FrameworkObject` by its repository ID.
	
	Attributes:
	`id`
	`var`
	`frameworkObjectId`

`frameworkObjectGetContents`	Retrieves content information.
	
	Attributes:
	`id`
	`var`
	`frameworkObjectId`

`frameworkObjectGetTemplates`	Retrieves template information.
	
	Attributes:
	`id`
	`var`
	`frameworkObjectId`

`getCellDefinitionHome`	Gets the home for the `cellDefinition` servlet bean.
	
	Attributes:
	`id`
	`var`

`getContentDefinitionHome`	Gets the home for the `contentDefinition` servlet bean.
	
	Attributes:
	`id`
	`var`

`getFrameworkDefinitionHome`	Gets the home for the `FrameworkDefinition` servlet bean.
	
	Attributes:
	`id`
	`var`

Tag	Description

`getFrameworkObjectHome`	Gets the home for the `FrameworkObject` servlet bean.
	
	Attributes:
	`id`
	`var`

`getPanelDefinitionHome`	Gets the home for the `panelDefinition` servlet bean.
	
	Attributes:
	`id`
	`var`

`getPanelStackDefinitionHome`	Gets the home for the `panelStackDefinition` servlet bean.
	
	Attributes:
	`id`
	`var`

`getSkinDefinitionHome`	Gets the home for the `SkinDefinition` servlet bean.
	
	Attributes:
	`id`
	`var`

`getTabDefinitionHome`	Gets the home for the `TabDefinition` servlet bean.
	
	Attributes:
	`id`
	`var`

`getTemplateDefinitionHome`	Gets the home for the `TemplateDefinition` servlet bean.
	
	Attributes:
	`id`
	`var`

`panelDefinitionFindByPanelId`	Finds panel definitions by application and logical IDs. Gets all skins by application and enabled status.
	
	Attributes:
	`id`
	`var`
	`appId`
	`panelId`

Tag	Description

`panelDefinitionFindByPrimaryKey`	Finds skin definitions by repository ID.
	
	Attributes:
	`id`
	`var`
	`panelDefinitionId`

`panelDefinitionFindBySiteId`	Gets panel definitions by application and site ID.
	
	Attributes:
	`id`
	`var`
	`siteId`

`panelDefinitionFindBySiteIdAnd PanelId`	Finds panel definitions by application, site and logical partition IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`siteId`
	`panelId`

`panelkDefinitionFindByAppId`	Finds all panels by application.
	
	Attributes:
	`id`
	`var`
	`appId`

`panelStackDefinitionFindByAppId`	Finds all panel stacks by application.
	
	Attributes:
	`id`
	`var`
	`appId`

`panelStackDefinitionFindByAppId NoSiteId`	Gets all panel stacks by application and not set `siteId`.
	
	Attributes:
	`id`
	`var`
	`appId`

Tag	Description
panelStackDefinitionFindByPanelStackId	Finds panel stack definitions by application and logical IDs. Gets all skins by application and enabled status. Attributes: id var appId panelStackId
panelStackDefinitionFindByPrimaryKey	Finds skin definitions by repository ID. Attributes: id var panelStackDefinitionId
panelStackDefinitionFindBySiteId	Gets panel stack definitions by application and site ID. Attributes: id var siteId
panelStackDefinitionFindBySiteIdAnd PanelStackId	Finds panel stack definitions by application, site and logical partition IDs. Attributes: id var appId siteId panelStackId
panelStackDefinitionGetPanels	Finds panel definitions associated with the panel stack repository ID. Attributes: id var panelStackDefinitionId
skinDefinitionFindByAppId	Finds all skins by application. Attributes: id var appId

Tag	Description

`skinDefinitionFindByAppIdAndEnabled`	Gets all skins by application and enabled status.
	
	Attributes:
	`id`
	`var`
	`appId`
	`enabledYn`

`skinDefinitionFindByPrimaryKey`	Finds skin definitions by repository ID.
	
	Attributes:
	`id`
	`var`
	`skinDefinitionId`

`skinDefinitionFindBySiteId`	Gets skin definitions by application and site ID.
	
	Attributes:
	`id`
	`var`
	`siteId`

`skinDefinitionFindBySiteIdAndSkinId`	Finds skin definitions by application, site and logical partition IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`siteId`
	`skinId`

`skinDefinitionFindBySkinId`	Finds skin definitions by application and logical IDs. Gets all skins by application and enabled status.
	
	Attributes:
	`id`
	`var`
	`appId`
	`skinId`

`skinDefinitionFindByUserSiteIdAnd PanelId`	Finds panel stack definitions by user site and skin IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`panelId`

Tag	Description

`skinDefinitionFindByUserSiteIdAnd PanelStackId`	Finds panel stack definitions by user site and skin IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`panelStackId`

`skinDefinitionFindByUserSiteIdAnd SkinId`	Finds content definitions by user site and skin IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`skinId`

`tabDefinitionFindByAppId`	Finds all tabs by application.
	
	Attributes:
	`id`
	`var`
	`appId`

`tabDefinitionFindByPrimaryKey`	Finds tab definitions by repository ID.
	
	Attributes:
	`id`
	`var`
	`tabDefinitionId`

`tabDefinitionFindBySiteId`	Gets tab definitions by application and site ID.
	
	Attributes:
	`id`
	`var`
	`siteId`

`tabDefinitionFindBySiteIdAndTabId`	Finds tab definitions by application, site and logical partition IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`siteId`
	`tabId`

Tag	Description

`tabDefinitionFindByTabId`	Finds tab definitions by application and logical IDs. Gets all skins by application and enabled status.
	
	Attributes:
	`id`
	`var`
	`appId`
	`tabId`

`tabDefinitionFindByUserSiteIdAnd TabId`	Finds content definitions by user site and tab IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`tabId`

`templateDefinitionFindByAppId`	Gets all template definitions by application.
	
	Attributes:
	`id`
	`var`
	`appId`

`templateDefinitionFindByPrimaryKey`	Finds template definitions by repository ID.
	
	Attributes:
	`id`
	`var`
	`templateId`

`templateDefinitionFindBySiteId`	Find all content definitions by application and site IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`siteId`

`templateDefinitionFindBySiteIdAnd TemplateId`	Finds template definitions by application, site and logical partition IDs.
	
	Attributes:
	`id`
	`var`
	`appId`
	`siteId`
	`templateId`

Tag	Description
templateDefinitionFindByTemplateId	Finds a template definition by application and logical IDs. Attributes: id var appId templateId
templateDefinitionFindByUserSiteId AndTemplateId	Finds template definitions by user site and content IDs. Attributes: id var appId templateId

The following tags are available in the /Service/framework/UI/taglibs/svc-ui/lib/ directory:

Tag	Description
frameworkPopupUrl.tag	Constructs the pop-up URL with framework parameters.
frameworkUrl.tag	Constructs a forwarding and redirection URL with framework parameters.

ATG Service Framework UI Tag Library

The ATG Service Framework UI tag library atg.svc.taglib package, located in the /service/framework/UI/src/taglibs directory, contains the following tags:

Tag	Description
body	Creates a scrollable body for a tree table item. Attributes: childItems items noItemsUrl scope varItem varNode varStatus

Tag	Description
checkBox	A sub-tag that defines the tree table checkbox components. Attributes: onCheck
column	A sub-tag that defines the tree table column components. Attributes: defaultSortDirection isSortable key onCheck onSort percentWidth sortField sortIgnoreCase sortExpression style styleDown styleHover styleSorted title
controlBar	Creates a paging-enabled control bar for an expanding table. Attributes: controlBarId scope showAlways style treeTableBean treeTableId varHighIndex varNode varOffset varTotal width
deleteButton	Creates a delete button. Attributes: disabledImage image link linkPosition onDelete deleteOperation style styleDisabled styleDown styleHover title

Tag	Description
executeOperation	Initiates an operation on a tree table. Attributes: operationName treeTableId
expandButton	A sub-tag that assigns a button to expand an item. Attributes: closedTitle closedUrl emptyUrl onExpand openTitle openUrl style styleDown styleHover
field	A sub-tag that defines the tree table field components. Attributes: columnKey isChecked noWrap onCheck overflow percentWidth position style iclass colspan title wordWrap
filterOption	Creates a filter option within a filter selection drop down. Attributes: filterValue
filterSelect	Creates a filter selection drop down element. Attributes: filterField filterOperation filterTestExpression noFilteringValue onFilter style varFilter

Tag	Description

`getDecimalFormatSymbols`	Gets the `DecimalFormatSymbols` for the locale or the current user's locale.
	
	Attributes:
	`id`
	`var`
	`locale`

`getEncodedJavascriptString`	Gets an encoded truncation for special characters.
	
	Attributes:
	`var`
	`originalString`

`getOptionAsArray`	Gets an option by name and returns the value as an array.
	
	Attributes:
	`id`
	`var`
	`optionName`
	`segmentName`
	`useVersionedRepository`

`getOptionAsBoolean`	Gets an option by name and returns the value as Boolean.
	
	Attributes:
	`id`
	`var`
	`optionName`
	`segmentName`
	`useVersionedRepository`

`getOptionAsInteger`	Gets an option by name and returns the value as an integer.
	
	Attributes:
	`id`
	`var`
	`optionName`
	`segmentName`
	`useVersionedRepository`

`getOptionAsString`	Gets an option by name and returns the value as a string.
	
	Attributes:
	`id`
	`var`
	`optionName`
	`segmentName`
	`useVersionedRepository`

Tag	Description
head	Creates a header for a tree table column. Attributes: showAlways style
httpCacheHeader	Sets the HTTP cache control headers.
initialSort	Defines the sort for a tree table. Attributes: defaultSortDirection sortIgnoreCase sortEpxression sortField
insertBody	Inserts a body object for the tree table implementation. Attributes: childItems isExpanding isNavigating itemKey itemName items varItem visibleLevels
insertControlBar	Inserts an empty tree table control bar on the page. Attributes: controlBarId treeTableId
insertTreeTable	Inserts an empty tree table on the page, with the global attributes already defined. Attributes: actionId columns hasHeader hasPaging height initialUrl overflow pageSize position skipRestore statSavingMethod treeTableBean treeTableId width

Tag	Description
`itemStyle`	Defines a style for items within the tree table with the ability to have alternating row styles. Attributes: `styleName`

`itemTemplate`	Defines a template for items that are contained in the body of the tree table.
	
	Attributes:
	`isExpanded`
	`key`
	`noWrap`
	`onDelete`
	`onSelect`
	`overflow`
	`position`
	`style`
	`styleHover`
	`styleSelected`

`moveButton`	Creates a move button.
	
	Attributes:
	`disabledImage`
	`image`
	`link`
	`linkPosition`
	`onMove`
	`moveOperation`
	`style`
	`styleDisabled`
	`styleDown`
	`styleHover`
	`title`

`navigateButton`	Creates a navigate button.
	
	Attributes:
	`disabledImage`
	`image`
	`key`
	`link`
	`linkPosition`
	`onNavigate`
	`style`
	`styleDisabled`
	`styleDown`
	`styleHover`
	`title`

Tag	Description
operationParameter	Defines a tree table operation parameter in page elements. Attributes: elementId elementProperty name value
pagingButton	Creates a paging button within a paging component. Attributes: disabledImage image link linkPosition onPage pagingOperation style styleDisabled styleDown styleHover title
refreshButton	Creates a refresh button. Attributes: disabledImage image link linkPosition onRefresh pagingOperation style styleDisabled styleDown styleHover title
restoreState	Restores window-based state from the state holder to the attribute. Attributes: key scope var
saveState	Saves the window-based state in the state holder. Attributes: key value

Tag	Description
serviceMethod	Invokes methods on repository services, with arguments passed in using child tags. Attributes: bean method scope var
serviceMethodArgument	Passes an argument to a service method tag. Attributes: value
sortOption	Creates a sort option within a sort selection drop down. Attributes: defaultSortDirection isInitiallySorted sortExpression sortField sortIgnoreCase
sortSelect	Creates a sort selection drop down. Attributes: onSort style

Commerce Service Center Tag Library

The following tag files are located in the /DCS-CSR-UI/j2ee-apps/DCS-CSR-UI/WEB-INF/tags/ directory. To use these tags, you must copy these tags into your customization library. For detailed information on working with tag files, refer to the *ATG Page Developer's Guide*:

Tag	Description
displayCreditCardType.tag	Displays the credit card name and renders the last four digits of the credit card number.
getCurrencyCode.tag	Retrieves a currency code that is used by the order. If no currency code is set, the default currency code is used.
getProduct.tag	Obtains the product repository item from the order if the commerceItemId has been set. If not, it runs a ProductLookup using the ProductId.

Tag	Description
`inventoryStatus.tag`	Provides a string description of the inventory status.
`priceRange.tag`	Sets the `highPrice` and `lowPrice` of the price range.
`renderer.tag`	Adds renderer, targeter and rule data components to renderers.
`siteIcon.tag`	Displays the `siteIcon` for a specified `siteId`. Used only in environments with multiple sites.
`skuPrice.tag`	Returns the appropriate SKU price based upon the agent's currency code and price lists.
`skuPriceDisplay.tag`	Displays the appropriate SKU price from the current price and sales price lists.