Perceptive Experience Content Apps

Installation and Setup Guide

Version: Foundation EP2

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Hyland

About Perceptive Experience

Perceptive Experience allows you to view and manage your structured and unstructured content with the use of Apps on any device.

With the flexibility of Perceptive Experience, you can take content residing in Perceptive Content and further manage or view it from a desktop browser or mobile device.

Prepare to install Perceptive Experience

These instructions assume that you are installing Perceptive Experience for the first time or that you have no earlier versions of Perceptive Experience running on your computer.

The following steps outline the high-level procedures that you need to perform to install and configure Perceptive Experience, and the information you need to verify before installation.

Installation overview

During the installation of Perceptive Experience, you perform the following procedures.

1. Install prerequisite applications. To work with Perceptive Content related Apps you must have Integration Server and Apache Tomcat installed.
2. Install Hyland Preferences Service. To store and manage client preferences, you must install this service. For more information, refer to the Hyland Preferences Service Installation Guide.

   Note:
   If you do not install or use Hyland Preference Service in this installation, you must set the **`requirePreferencesService`** setting in the **config.json** configuration file to **FALSE**.

3. Download and copy files to the web server directory.
4. Enable SSL.
5. Disable HTTP pipelining
6. Optional. Configure SSO
7. Enable `Expires` header in the web application server.

Download and place files

To download and place files in the web application server directory, complete the following steps.

Prerequisite Stop the web application server service.

1. Go to the **Customer Portal**.
2. Click **Downloads**, and search for all downloadable items for this product.
3. Download the application *ZIP* file to a temporary directory on your computer.
4. Create a subdirectory in the *webapps* directory of the web application server. You may name the subdirectory with any name.

Note: The default location for the *webapps* directory is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps*

5. Extract the files to the subdirectory you created in the previous steps.

Next Restart the web application server service.

Configure Integration Server location

Content Apps running in Hyland Mobile shell requires configuring the full path to Integration Server. To configure the path to Integration Server, complete the following steps.

1. Stop the web application server.
2. Navigate to the root folder on the installation directory for Content Apps.
3. Open the **config.json** file in a text editor. The default location for the configuration file is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps\<subdirectory>*.
4. Modify the serverUrl parameter to specify the full URL to Integration Server.

   Example

   ```
   "lesrdl-content-integrationserver": {
       "serverUrl": "https://<hostname>:<port>/integrationserver/",
       "heartbeatIntervalInSeconds": 60
   },
   ```

5. Save the **config.json** file and close the text editor.

Set up SSL

You must configure use of SSL when using Perceptive Experience with Perceptive Integration Sever version 7.1.5 or higher. To configure use of SSL you must do so on your web application server.

SSL configuration cannot be completed within Perceptive Experience. For more information refer to your specific web server help documentation.

Disable HTTP pipelining

You should disable HTTP pipelining for the Apache Tomcat web server used to access Perceptive Experience Apps. If pipelining is used by a browser accessing the Experience environment, users may encounter errors when loading packages in your environment. To disable HTTP pipelining, complete the following steps.

1. Navigate to the Tomcat *server.xml* file.

   The default location for the system configuration file is *[drive:]\Program Files\Apache Software Foundation\ [Tomcat Installation]\conf*
2. Add either the `maxKeepAliveRequests` or `restrictedUserAgents` attributes within the `Connector` section of the Tomcat *server.xml* file

Attribute	Valid value
`maxKeepAliveRequests`	`1`
`restrictedUserAgents`	A comma separated list of regular expressions identifying HTTP clients that should not use `HTTP/1.1 or HTTP/1.0 Keep Alive`even if client support is specified.

Configure Perceptive Experience for single sign-on

Single sign-on (SSO) allows users to access the system by authenticating with an external identity provider. Currently Perceptive Experienceis the only Perceptive product that supports Integration Server's SSO configuration. To enable single sign-on for Perceptive Experience, complete the following steps.

Prerequisite You must configure the Integration Server for single sign-on. For Integration Server configuration instructions see the *Perceptive Integration Server Installation and Setup Guide*.

1. Stop the web application server.
2. Navigate to the root folder on the installation directory for **Perceptive Experience**.
3. Protect the *sso* folder found at *rootpath/packages/framework-core/sso*.
4. Open the *config.json* file in a text editor.

   The default location for the Perceptive Experience configuration file is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps\<subdirectory>*.
5. Add the clientSession parameter to specify the server connection. The valid entry for sso is `framework-core:SsoClientSession`.

   Example

   ```
   "framework-core": {
      "clientSession": "framework-core:SsoClientSession",
      "loggingMethod": "Console"
   },
   ```

   Note: When adding parameters to the config.json file, add a comma between each parameter.
6. Restart the application server.

X.509 SSO Certificate Support

Perceptive Experience Apps utilizing Perceptive Integration Server support LDAP authentication with X.509 client certificates.

Using Perceptive Experience Apps in a browser supports the use of multiple client certificates. Perceptive Experience for Windows Desktop supports the import of a single X.509 client certificate.

Configure Perceptive Experience for OpenID Connect authentication

OpenID Connect (OIDC) allows users to access the system by authenticating with an external identity provider. To enable OpenID Connect for Perceptive Experience, complete the following steps.

Prerequisite

You must configure the Integration Server for OpenID Connect and create a new OpenID Connect profile for each instance of Perceptive Experience that authenticates with OIDC. For Integration Server configuration instructions see the *Perceptive Integration Server Installation and Setup Guide*.

You must configure the Integration Server profile with the following redirect uris:

```
sso.openid.profile.<loginProfile>.post.login.redirect.uri=

https://<experience-server>:<port>/<path-to-
experience>/#oidc/callback

sso.openid.profile.<loginProfile>.error.redirect.uri=

https://<experience-server>:<port>/<path-to-
experience>/#oidc/callback?error={error}
```

1. Stop the web application servers hosting **Perceptive Experience** and **Integration Server**.
2. Navigate to the root folder on the installation directory for **Perceptive Experience**.
3. Open the *config.json* file in a text editor.

   The default location for the Perceptive Experience configuration file is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps\<subdirectory>*.
4. Add the clientSession parameter to specify the server connection. The valid entry for OIDC is `lesrdl-content-integrationserver:OidcClientSession`.
5. Optional. Add the logoutRedirect parameter to specify the logout URL to redirect users to after logging out of **Perceptive Experience**.
6. Add the openIdProfile parameter to specify the profile name defined when configuring the integrationserver.ini.

   Example

```
"framework-core": {

    "clientSession": "lesrdl-content-
integrationserver:OidcClientSession",

    "loggingMethod": "Console"

},

"lesrdl-content-integrationserver": {

    "openIdProfile": "default"
```

```
}
```

Note: When adding parameters to the config.json file, add a comma between each parameter.

7. Restart the web application servers.

Deploy Hyland Mobile

Hyland Mobile requires a Content Apps bundle, configured for mobile use, and hosted on a web server accessible by user's mobile devices. You can host the Mobile bundle inside an existing instance of Content Apps, however, we recommend that you deploy the bundle to its own folder on the web server to avoid conflicting configuration files.

Download and extract Hyland Mobile files

To download the installation files, contact the Hyland Software Technical Support group. For a list of Technical Support contact numbers, go to hyland.com/pswtscontact. To store and extract Hyland mobile files for installation, complete the following steps.

1. Store the application mobile ZIP file to a temporary directory on your computer.
2. Create a subdirectory in the *webapps* directory of the web application server. You can give the subdirectory any name.

   The default location for the webapps directory is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps*\.
3. Extract the files to the subdirectory you just created.

   The extracted files contain a config.json file, a zipped Content Apps bundle and other files required for Hyland Mobile. Hyland Mobile downloads the zipped Content Apps bundle and hosts the contents locally on the mobile device. Do not make changes directly to this zip file.
4. In a text editor, open the config.json file and make the necessary application configurations. When adding the serverURL parameter to specify the full URL to Integration Server, you must include the fully qualified server location and host name.

   Note:
   Ensure your config.json configuration file is in a valid JSON format. The application will fail to load if the format is invalid.

   For more information on configuring the application, refer to the config.json section of this document.

   Example

```
...
"lesrdl-content-integrationserver": {
    "serverUrl": "https://serveraddress:port/integrationserver/",
    "heartbeatIntervalInSeconds": 60
```

```
},
```

For more information on configuring the application, refer to the config.json section of this document.

5. Restart the web application server service.
6. When prompted in the Hyland Mobile app, enter the address of the application endpoint you just created.

Configure Integration Server for Hyland Mobile

Hyland Mobile handles hosting of Content Apps on end user's mobile devices. All requests made to Integration Server from Content Apps are cross-domain and require you to setup cross-origin resource sharing (CORS) on the Integration Server instance that Content Apps for Hyland Mobile is using. To enable Perceptive Content Apps running in the Hyland Mobile shell to communicate with Integration Server and the CORS filter within Integration Server, complete the following steps.

1. Stop the web application servers hosting **Perceptive Experience** and **Integration Server**.
2. Navigate to the installation directory for **Integration Server**.
3. In the *WEB-INF* folder of your Integration Server deployment, open the **web.xml** configuration file in a text editor.
4. To enable CORS filter withing Integration Server, locate the CorsFilter code, and delete the starting comment tag `<!--` and ending comment tag `-->` so the code is no longer commented out.
5. Save the **web.xml** file.
6. In the *WEB-INF* folder of your Integration Server deployment, open the **integrationserver.ini** configuration file in a text editor.
7. To configure Hyland Mobile for Android, locate the [General] section and change the value of session.cookie.samesite.policy to `None`.
8. Save the **integrationserver.ini** file.
9. Restart the web application servers.

Configure Hyland Mobile for OpenID Connect authentication

OpenID Connect (OIDC) allows users to access the system by authenticating with an external identity provider. To enable OpenID Connect for Hyland Mobile, complete the following steps.

Prerequisite

You must configure the Integration Server and Perceptive Content Server for OpenID Connect and create a new OpenID Connect profile for each instance of Content Apps for Hyland Mobile that authenticates with OIDC. For Integration Server configuration instructions see the *Perceptive Integration Server Installation and Setup Guide*.

Note:

The profile you use must also be included in the Bearer Token Login Profiles section of the integrationserver.ini and inserver.ini.

1. Stop the web application servers hosting **Perceptive Experience** and **Integration Server**.

2. Navigate to the root folder on the installation directory for **Perceptive Experience** you created for **Hyland Mobile**.
3. Open the *config.json* configuration file in a text editor and go to the les-rdk-framework-mobile-context section.

   The default location for the Perceptive Experience configuration file is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps\<subdirectory>*.
4. Add the openIdProfile parameter to specify the name of the profile you configured to support OIDC in the **integrationserver.ini** configuration file.
5. Add the following idpClientSession parameters to connect to Hyland IDP.

Parameter	Value
issuer	Specifies the full URL to the Hyland IDP instance.
clientID	Specifies the clientId, defined when configuring IDP, that allows redirecting to hylandmobile://.
openIDProfile	Specifies the name of the profile you configured to support OIDC in the integration.ini. configuration file.
scopes	

   - Add the issuer parameter to specify the full URL to the Hyland IDP instance.
   - Add the clientId to specify the clientId, defined when configuring IDP, that allows redirecting to hylandmobile://.

   Example

```
...
"les-rdk-framework-mobile-context": {
    "openIdProfile": "default",
    "idpClientSession": {
        "issuer": "https://hyland-idp.mydomain.net/IdentityProvider",
        "clientId": "content-apps",
    }
}
...
```

6. Go to the framework-core section and set clientSession to les-rdk-framework-mobile-

context:IdpClientSession to use Content Apps.

Example

```
...
"framework-core": {
     "clientSession": "les-rdk-framework-mobile-
context:IdpClientSession"
},
"les-rdk-framework-mobile-context": {
     "idpClientSession": {
"issuer": "https://hyland-idp-
v3.csfservices.onbase.net/identityprovider",
          "clientId": "a63a6018-3386-4892-a931-8e2e97e4e014",
          "openIdProfile": "default",
          "scopes": [ "openid", "profile", "profile.onbase" ]
     }
},
```

7. Save the *config.json* file and close the text editor.
8. Restart the web application servers.

Configure Hyland Mobile for application links

Hyland Mobile supports using links to open Content Apps within the Hyland mobile shell. To support this, each installation must have its own unique application identifier so that the Hyland mobile shell loads the correct instance of Content Apps. To change the application identifier, complete the following steps.

1. Open the **mobileconfig.json** configuration file in a text editor. The default location for the configuration file is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps*\.
2. Update the appID parameter to the appropriate identifier.

   Example

   Change `"appID": "perceptive"` to `"appID": "newId"`.

3. If this application is already deployed, complete the steps in the *Apply configuration changes to Hyland Mobile clients* topic.

Configure Hyland Mobile for email-action

To configure the email-action on the mobile shell, complete the following steps.

1. Navigate to the root folder on the installation directory for **Perceptive Experience** you created for **Hyland Mobile**.

2. Open the **config.json** configuration file in a text editor and go to the lesrdl-content-actions-output section.

   The default location for the Perceptive Experience configuration file is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps\<subdirectory>*.

3. Under email-action, add the mobileWebServerUrl parameter to specify the location of the web application server.

   Example

   ```
   ...
   "lesrdl-content-actions-output": {
       "email-action": {
           "mobileWebServerUrl": "https://locationHost:8443/pathname",
           "document": {
   ...
   ```

4. Save the **config.json** file and close the text editor.

Apply configuration changes to Hyland Mobile clients

Hyland Mobile requires that the version number in mobileconfig.json be incremented for clients to be notified of updates to the Content Apps configuration. You can update this value to any string value for the changes to be re-read by the client.

1. Open the **mobileconfig.json** file in a text editor. The default location for the configuration file is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps\<subdirectory>*.
2. Update the version parameter to increase the last number in the version number. This step is required for mobile clients to determine when either package updates or configuration updates have been made.

   Example

   Update

   ```
   "version": "3.2.3+0",
   ```

   to

   ```
    "version": "3.2.3+1",
   ```

3. Save the **mobileconfig.json** file and close the text editor.
4. Re-open the Hyland Mobile client and view the update from the app selection page.

About using cache headers with Perceptive Experience

To ensure that the web application displayed in a web browser is current, configure the web application server to send an `Expires` header.

Web browsers cache data fetched from the web application server on the initial web page load. On subsequent page loads, the server determines if the browser has the most current content saved in the cache. If the content is current, the server returns a 304 response, and the browser continues to use the cached content. If data on the server has changed since the last request, the content in the browser's cache is considered stale. The server then returns new content and the browser updates the cache with the new content.

Some browsers do not make a call to the server to check for new data unless the cached version is considered expired. These browsers only consider data expired if there is an indicator in the web server response, such as an `Expires` header.

To avoid displaying old content when a new version of an application is deployed, the web server should send an `Expires` header in the response. Browsers that rely on an `Expires` header make a call to the server after the specified expiration time and retrieve any updates to an application file.

Enable Expires header

You must use an `Expires` header to ensure the application runs correctly and invalid content is not displayed to users. To configure Apache Tomcat to use an `Expires` header, complete the following steps.

1. Navigate to the Apache Tomcat *conf* directory. The default location is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\conf*
2. Open the **web.xml** file with a text editor and add the following code to the file.

   Example

```
<web-app>
   <filter>
      <filter-name>ExpiresFilter</filter-name>
      <filter-class>org.apache.catalina.filters.ExpiresFilter</filter-
      class>
      <init-param>
         <param-name>ExpiresDefault</param-name>
         <param-value>now plus 0 minutes</param-value>
      </init-param>
   </filter>
   <filter-mapping>
      <filter-name>ExpiresFilter</filter-name>
```

```
    <url-pattern>/*</url-pattern>
    <dispatcher>REQUEST</dispatcher>
</filter-mapping>
...
```

Result In the example above, content expires immediately, so all browsers will always ask if the cached copies of files need updating. You can modify the `param-value` content to suppress the check for a set amount of time after the web browser saves the data, but the browser will not display updates to the application until the amount of time defined by `param-value` has passed. During the time that the check for new content is suppressed, it is possible that an application will stop functioning properly.

Start Perceptive Experience

To start Perceptive Experience, complete the following steps.

Prerequisite Ensure that you have the latest Internet browser installed.

1. Open your browser and enter the **Perceptive Experience** URL. The URL format is *http://<server name>:<port number>/<subdirectory>*, where <*server name*> and <*port number*> are placeholders for the name of the computer and the port number where you installed **Perceptive Experience**. The subdirectory is the location within the web application server where you installed **Perceptive Experience**.

   Note: The default port number for the Apache Tomcat web application server is 8080.

2. Enter your `user name` and `password`.
3. Select **Connect**.

View package version information

To view the packages and dependencies installed, complete the following steps.

1. Select **Profile**.
2. Select **Settings**.
3. Select **About**.

   Under **Packages and Dependencies,** the name and version number of packages and dependencies are listed.

Choose a logging level

To set the logging level for the current user, complete the following steps.

1. Select **Profile**.
2. Select **Settings**.
3. Under **Global** select one of the following logging levels.
   - To set the maximum logging level, select **All Messages**.

- To set the default logging level, select **Warnings and Errors**.
- To set the minimum logging level, select **Errors Only**.

About using Apache Tomcat compression settings

You can implement Apache Tomcat web server compression options to save bandwidth as files are delivered to the browser. Saving bandwidth during file transmission can decrease the initial load time of the framework and packages.

There are several settings you can modify within the Tomcat *server.xml* file to implement file compression. The default location for the *server.xml* file is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\conf*.

For more information, refer to the Tomcat help documentation on the Apache website.

Action toolbar configuration

The Action toolbar is a shared toolbar that contains functionality for all actions in Perceptive Experience. You can customize this toolbar by configuring the *priority*, *groupId* and *isVisible* settings in the platform-specific, phone or desktop, section of each action in the json.config file.

Note:
You can easily update the json.config file by using a text editor, such as Notepad++. This file, by default, is located at *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps*<*subdirectory*>. For more information, see the **config.json properties** section of this document.

priority allows you to indicate the location of an action or group of actions on the toolbar. A group's *priority* determines the location of where that group is on the toolbar. If an action has a *groupId*, the action's priority determines the order in which actions display within its group. If an action is not in a group, the action's priority determines the order in which it displays relative to other groups and other actions that are not in groups.

groupId allows you to combine actions within a set group. This setting is optional. There are three existing action groups.

- *output-actions-group*: You can configure the *priority* of this group in the *lesrdl-content-actions-output* section. The default is `1100`.
- *page-actions-group*: You can configure the *priority* of this group in the *les-rdk-fpa-indocumentviewer* section. The default is `400`.
- *additional-actions-group*: You can configure the *priority* of this group in the *lesrdl-content-actions-workflow* section. The default is `1200`.

You can also create additional groups and add actions to them by setting the *groupId*.

isVisible allows you to configure the visibility of actions on the toolbar. If you set *isVisible* to `true`, the system displays the action on the toolbar. If you set it to `false`, the system does not display the action. The default is `true`.

Create a toolbar group

Complete the following steps to create additional Action toolbar groups.

1. Go to the default location for the system configuration file, *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps\<subdirectory>*.
2. Open the *config.json* file using a text editor.
3. If necessary, add the `les-rdk-fpa-action-manager` section to the file.
4. In the `les-rdk-fpa-action-manager` section, add the `customActionGroups` section.
5. In the `customActionGroups`, add the following properties.
   - *id*: The ID that is referenced in an individual action's groupId.
   - *name*: The name that displays in the action menu on mobile devices.
   - *desktop/phone priority*: Determines the order in which actions displays on the toolbar.

   Example

```
{
 "les-rdk-fpa-action-manager": {
  "customActionGroups": [
   {
    "id": "my-custom-action-group",
    "name": "My Custom Actions",
    "desktop": {
     "priority": 1400
    },
    "phone": {
     "priority": 1000
    }
   },
   {
    "id": "another-custom-actions-group",
    "name": "More Custom Actions",
    "desktop": {
     "priority": 200
    },
```

```
      "phone": {
       "priority": 200
      }
     }
    ]
   },
   "les-rdk-fpa-indocumentviewer": {
    "add-page-action": {
     "desktop": {
      "priority": 1,
      "groupId": "my-custom-action-group"
     }
    }
   }
  }
```

6. Save the file.

config.json properties

The following list provides information about the properties defined in the *config.json* file. The *config.json* file contains runtime parameters that can be defined by an administrator.

Note:
Ensure your config.json configuration file is in a valid JSON format. The application will fail to load if the format is invalid.

The default location for the system configuration file is *[drive:]\Program Files\Apache Software Foundation\[Tomcat Installation]\webapps\<subdirectory>*.

general-settings

helpPage

Specifies the help landing page for the active module. This page information is appended to the `helpUrl` to form a complete context sensitive URL address.

helpUrl

Specifies the URL for online help. Valid values include any URL.

pathDelimiter

Specifies the character used to separate values in the path that displays the folder location.

framework-brand

productName

Specifies the abbreviated name of the product.

productFullName

Specifies the full name of the product.

loginLogo

Specifies the path to the logo that is displayed when logging into the desktop client.

loginLogoMobile

Specifies the path to the logo that is displayed when logging into the mobile client.

headerLogo

Specifies the path to the logo that is displayed in the application header.

headerBreadcrumbColor

Specifies the hexadecimal color for the application breadcrumbs.

headerBackgroundColor

Specifies the hexadecimal color for the application header background.

headerForegroundColor

Specifies the hexadecimal color for the application header foreground.

headerTitleColor

Specifies the hexadecimal color for the application header title.

Example:

```
"framework-brand": {
    "en": {
        "productName": "perceptive",
        "productFullName": "Perceptive Experience Content Apps 2.4.0",
        "loginLogo": "./resources/images/perceptive_login_258.png",
        "loginLogoMobile": "./resources/images/perceptive_login_
258.png",
        "headerLogo": "./resources/images/perceptive_header_96.png",
        "headerBreadcrumbColor": "#000000",
        "headerBackgroundColor": "#ffffff",
        "headerForegroundColor": "#000000",
        "headerTitleColor": "#118dcd"
    }
}
```

framework-core

cookieSameSitePolicy

Specifies the SameSite policy for cookies.

Valid values are *Unset*, *None*, *Lax* and *Strict*. If you do not define a value, *Unset* is used. If you define any value besides *Unset*, the *Secure* attribute is also set on the cookie.

For example, `"cookieSameSitePolicy":"Unset"`

sessionTimeoutInSeconds

Specifies the duration of time, in seconds, that a session can remain inactive before the system logs the current user out of the application.

Valid values are any integer. If set to 0 or -1, the system disables automatic logout.

loggingMethod

Specifies the way users can review log contents.

Valid entries include the following values.

- `externalwindow` - Use this property for web-based applications to display the log in a new browser tab or window.
- `console` - Use this property for web-based applications to display the log in the browser console.

loggingLevel

Specifies the messages that displays to the user in the application log.

Valid entries include the following values.

- VERBOSE
- INFO
- WARNING
- ERROR
- CRITICAL

logoutRedirect

Specifies the URL for the IDP end session page. For example, *https://<idpserver>/IdentityProvider/connect/endsession*.

framework-runtime

preloadModules

These entries are required system settings. Do not modify entries in the `preloadModules` section of the *config.json* file.

modules

Specifies the modules currently loaded into the application that users can access from the launcher.

inactiveModules

Specifies any Apps that should not be available to users from the Experience Home page. If you do not want the icon for an App that is provided by default at installation to appear on the Home page, move the full name of the desired package from the `modules` section to this section.

framework-shell

defaultHomeRoute

Specifies the default home route for URL navigation. If unset, the value is `home`.

disableSslWarning

By default, this property is not defined. Add this property and populate it with a `true` value to disable the warning that displays when the application uses a non-secure connection. Setting this property to `true` transmits unencrypted user names and passwords.

routeTimeout

Specifies the time in milliseconds to wait before determining navigation has failed. If unset, the value is `5000`.

lesrdl-content-actions-output

The properties you can define in the lesrdl-content-actions-output section of the config.json file are listed below.

output-actions-group

The default for *priority* is `1100`.

email-action

This action allows the user to email a link to a Perceptive Content document, task or workflow item.

The default for *priority* is `400`.

The default for *groupId* is `output-actions-group`.

The default for *isVisible* is `true` for desktop and `false` for mobile.

mobileWebServerUrl

Specifies the URL to the web application server and configures the email-action for mobile.

> **Note:**
> You can configure the following email link settings for each content type, document, task, workflow and folder.

to

Specifies the email address of the recipient.

cc

Specifies a carbon copy of an email when the user wants to include someone other than the direct recipient.

bcc

Specifies a blind carbon copy of an email when the user does not want the other recipients to see who else is included in the email.

subject

Specifies a subject of an email where the user can add a short description of the main content.

preBody

Specifies the section where the user can add any content before a document or a workflow item link.

postBody

Specifies the section on complimentary closure, such as “Thanks & regards”.

export-grid-action

This action allows the user to export the currently selected grid items.

The default for *priority* is `500`.

The default for *groupId* is `output-actions-group`.

The default for *isVisible* is `true`.

export-native-action

This action allows the user to convert a document to its native file format.

The default for *priority* is `100`.

The default for *groupId* is `output-actions-group`.

The default for *isVisible* is `true`.

export-pdf-action

This action allows the user to convert a document to PDF.

The default for *priority* is `200`.

The default for *groupId* is `output-actions-group`.

The default for *isVisible* is `true`.

print-document-action

This action allows the user to print a document.

The default for *priority* is `300`.

The default for *groupId* is `output-actions-group`.

The default for *isVisible* is `true`.

preferenceWindow

Specifies the printing preferences. Displays a window for taking print preferences from the user. The default value is `true`.

Note: Other print configuration options are overlooked if preferenceWindow value is `true`.

pdfConversion

Converts all the pages into a single PDF file and displays it in your web browser. The default value is `false`.

enableAnnotations

Specifies if the annotations are printed. Valid values include `true` or `false`.

hideAnnotationTypes

Hides the annotations where the user has “hide” privilege. Expected values are `all` or `false`. When `hideannotationtypes = all`, annotations where the user has “hide” privilege are hidden. Setting any other value defaults to `false` and displays all annotation types.

coverPage

Specifies if the cover page of a document is to be printed. The default value is `false`.

pageSize

Specifies the paper size printed. The default value is `letter`.

width

Specifies the width of the image rendition in pixels.

height

Specifies the height of the image rendition in pixels.

send-to-sharebase-action

This action allows the user to upload a document to ShareBase and then share that document with other users.

The default for *priority* is `450`.

The default for *groupId* is `output-actions-group`.

The default for *isVisible* is `false`.

Example

```
...
"les-content-actions-output": {
    "output-actions-group": {
        "desktop": {
            "priority": 1100,
        "phone": {
            "priority": 1100,
        }
    },
    "email-action": {
        "mobileWebServerURL": "https://locationHost:8443/pathname",
        "desktop": {
            "priority": 400,
            "groupId": "output-actions-group",
            "isVisible": true
        },
        "phone": {
            "priority": 400,
            "groupId": "output-actions-group",
            "isVisible": false
        },
        "document": {
            "cc": "cc_recipient@domain.com",
            "to": "to_recipient@domain.com",
            "subject": "Perceptive Content Document",
            "bcc": "bcc_recipient@domain.com",
            "postBody": "\nRegards,",
            "preBody": "\n\nBelow are links to the documents:\n\n"
```

```
        },
        "task": {
            "cc": "cc_recipient@domain.com",
            "to": "to_recipient@domain.com",
            "subject": "Perceptive Content Document",
            "bcc": "bcc_recipient@domain.com",
            "postBody": "\nRegards,",
            "preBody": "\n\nBelow are links to the documents:\n\n"
        },
        "workflow": {
            "cc": "cc_recipient@domain.com",
            "to": "to_recipient@domain.com",
            "subject": "Perceptive Content Workflow Item",
            "bcc": "bcc_recipient@domain.com",
            "postBody": "\nRegards,",
            "preBody": "\n\nBelow are links to the workflow items:\n\n"
        },
        "folder": {
            "cc": "cc_recipient@domain.com",
            "subject": "Perceptive Content Folder Content",
            "to": "to_recipient@domain.com",
            "preBody": "\n\nBelow are links to the folder
contents:\n\n",
            "bcc": "bcc_recipient@domain.com",
            "postBody": "\nRegards,"
        }
    },
    "export-grid-action": {
        "desktop": {
            "priority": 500,
```

```
            "groupId": "output-actions-group",
            "isVisible": true
        }
    },
    "export-native-action": {
        "desktop": {
            "priority": 100,
            "groupId": "output-actions-group",
            "isVisible": true
        },
        "phone": {
            "priority": 100,
            "groupId": "output-actions-group",
            "isVisible": true
        }
    },
    "export-pdf-action": {
        "desktop": {
            "priority": 200,
            "groupId": "output-actions-group",
            "isVisible": true
        },
        "phone": {
            "priority": 200,
            "groupId": "output-actions-group",
            "isVisible": true
        }
    },
    "print-document-action": {
```

```
        "desktop": {
            "priority": 300,
            "groupId": "output-actions-group",
            "isVisible": true
        },
        "phone": {
            "priority": 300,
            "groupId": "output-actions-group",
            "isVisible": true
        },
        "preferenceWindow": true,
        "enableAnnotations": true,
        "pageSize": "letter",
        "width": "720",
        "height": "1080",
        "hideAnnotationTypes": "",
        "coverPage": true,
        "pdfConversion": false
        }
    },
    "send-to-sharebase-action": {
        "desktop": {
            "priority": 450,
             "groupId": "output-actions-group",
             "isVisible": false
        }
    }
}
...
```

les-rdk-fpa-action-version-control

version-control-action

This action allows the user to add a document to version control.

The default for *priority* is `200` for desktop and `600` for mobile.

The default for *groupId* is `additional-actions-group`.

The default for *isVisible* is `true`.

Example

```
...
"les-rdk-fpa-action-version-control": {
    "version-control-action": {
        "desktop": {
            "priority": 200,
            "groupId": "additional-actions-group",
            "isVisible": true
        },
        "phone": {
            "priority": 600,
            "groupId": "additional-actions-group",
            "isVisible": true
        }
    }
}
...
```

les-rdk-fpa-indocumentviewer

page-actions-group

The default for *priority* is `400`.

add-page-action

Allows the user to add pages to an existing document.

The default for *priority* is `400` for desktop and `600` for mobile.

The default for *isVisible* is `true`.

create-annotation-action

Allows the user to add an annotation to an existing image.

The default for *priority* is `300` for desktop and `500` for mobile.

The default for *isVisible* is `true`.

delete-page-action

Allows the user to delete pages in an existing document.

The default for *priority* is `900`.

The default for *groupId* is `page-actions-group` for phone.

The default for *isVisible* is `true`.

download-page-action

Allows the user to download a page in its original format from the viewer.

The default for *priority* is `800`.

The default for *groupId* is `page-actions-group` for phone.

The default for *isVisible* is `true`.

removeFormsPane

Optional. Removes the Forms pane from the viewer. The default value is `false`. Note, if you set the value to `true`, the system will not display form on form-centric documents.

removePropertiesPane

Optional. Removes the Properties pane from the viewer. The default value is `false`.

removeRelatedDocumentsPane

Optional. Removes the Related Documents pane from the viewer. The default value is `false`.

removeRelatedTasksPane

Optional. Removes the Related Task pane from the viewer. The default value is `false`.

removeThumbnailsPane

Optional. Removes the Thumbnails pane from the viewer. The default value is `false`.

zoom-best-fit-action

Allows the user to find the optimal fit of a page in a document.

The default for *priority* is `200`.

The default for *groupId* is `page-actions-group` for phone.

The default for *isVisible* is `true`.

zoom-fit-to-height-action

Allows the user to adjust the page to the height of the pane.

The default for *priority* is `300`.

The default for *groupId* is `page-actions-group` for phone.

The default for *isVisible* is `true`.

zoom-fit-to-width-action

Allows the user to adjust the page to the width of the pane.

The default for *priority* is `400`.

The default for *groupId* is `page-actions-group` for phone.

The default for *isVisible* is `true`.

zoom-one-hundred-action

Allows the user to immediately reset the document size its original size of 100%.

The default for *priority* is `500`.

The default for *groupId* is `page-actions-group` for phone.

The default for *isVisible* is `true`.

rotate-clockwise-action

Allows the user to rotate the page 90 degrees to the right.

The default for *priority* is `700` for desktop and `300` for mobile.

The default for *groupId* is `page-actions-group`.

The default for *isVisible* is `true`.

rotate-counter-clockwise-action

Allows the user to rotate the page 90 degrees to the left.

The default for *priority* is `600` for desktop and `200` for mobile.

The default for *groupId* is `page-actions-group`.

The default for *isVisible* is `true`.

Example

```
...
"les-rdk-fpa-indocumentviewer": {
    "page-actions-group": {
        "desktop": {
            "priority": 400
        },
        "phone": {
            "priority": 400
        }
    },
    "add-page-action": {
        "desktop": {
            "priority": 400,
            "groupId": ""
            "isVisible": true
        },
        "phone": {
            "priority": 600,
            "groupId": "",
            "isVisible": true
        }
    },
    "create-annotation-action": {
        "desktop": {
            "priority": 300,
            "groupId": "",
            "isVisible": true
        },
```

```
    "phone": {
        "priority": 500,
        "groupId": "",
        "isVisible": true
    }
},
"delete-page-action": {
    "desktop": {
        "priority": 900,
        "isVisible": true
    },
    "phone": {
        "priority": 900,
        "groupId": "page-actions-group",
        "isVisible": true
    }
},
"download-page-action": {
    "desktop": {
        "priority": 800,
        "isVisible": true
    },
    "phone": {
        "priority": 800,
        "groupId": "page-actions-group",
        "isVisible": true
    }
},
"zoom-best-fit-action": {
```

```
    "desktop": {
        "priority": 200,
        "isVisible": true
    },
    "phone": {
        "priority": 200,
        "groupId": "page-actions-group",
        "isVisible": true
    }
},
"zoom-fit-to-height-action": {
    "desktop": {
        "priority": 300,
        "isVisible": true
    },
    "phone": {
        "priority": 300,
        "groupId": "page-actions-group",
        "isVisible": true
    }
},
"zoom-fit-to-width-action": {
    "desktop": {
        "priority": 400,
        "isVisible": true
    },
    "phone": {
        "priority": 400,
        "groupId": "page-actions-group",
```

```
        "isVisible": true
    }
},
"zoom-one-hundred-action": {
    "desktop": {
        "priority": 500,
        "isVisible": true
    },
    "phone": {
        "priority": 500,
        "groupId": "page-actions-group",
        "isVisible": true
    }
},
"rotate-clockwise-action": {
   "desktop": {
        "priority": 700,
        "groupId": "page-actions-group",
        "isVisible": true
    },
    "phone": {
        "priority": 300,
        "groupId": "page-actions-group",
        "isVisible": true
    }
},
"rotate-counter-clockwise-action": {
    "desktop": {
        "priority": 600,
```

```
            "groupId": "page-actions-group",
            "isVisible": true
        },
        "phone": {
            "priority": 200,
            "groupId": "page-actions-group",
            "isVisible": true
        }
    }
}
...
```

les-rdk-fpa-inpageviewer

The properties you can define in the les-rdk-fpa-inpageviewer section of the *config.json* file are listed below. These properties are not defined by default but can be set when an app utilizes the les-rdk-fpa-inpageviewer package.

maxWidth

Specifies the width of the image rendition in pixels.

maxHeight

Specifies the height of the image in pixels.

Note: The values of `maxHeight` and/or `maxWidth` can only be positive integers.

noRenditionFileTypes

Helps bypass rendition calls for certain file types. You may not use rendition calls for some browser-supported file types as they can utilize the browser capabilities.

Note: Browsers such as Microsoft Internet Explorer, Microsoft Edge, and Safari natively support the rendering of TIFFs. Use the latest version of file-image-service when using the latest version of Perceptive Content.

In the example mentioned below, rendition call is bypassed for JPEG and JPG files.

```
"noRenditionFileTypes" : ["JPEG", "Jpg"]
```

Note: Values of this property are not case-sensitive.

pageCacheSize

Specifies the cache size that the viewer holds.

The default value of `pageCacheSize` is `"50"`. If `pageCacheSize` is set lower than the default value, the viewer renders the specified value. For example, `"les-rdk-fpa-indocumentviewer" : {"pageCacheSize" : 25}`.

If `"pageCacheSize"` is set higher than the default value, the viewer overlooks the value and considers the default value of `50`.

If `"pageCacheSize"` is set higher than the default value, the viewer overlooks the value and considers the default value of `50`.

lesrdl-content-actions-workflow

additional-actions-group

The default for *priority* is `1200`.

add-to-workflow-action

Allows the user to add an item to workflow.

The default for *priority* is `300`.

The default for *groupId* is `additional-actions-group`.

The default for *isVisible* is `true`.

open-in-workflow-action

Allows the user to open an item in the workflow environment.

The default for *priority* is `400`.

The default for *groupId* is `additional-actions-group`.

The default for *isVisible* is `true`.

remove-from-workflow-action

Allows the user to remove an item from workflow.

The default for *priority* is `500`.

The default for *groupId* is `additional-actions-group`.

The default for *isVisible* is `true`.

route-back-action

Allows the user to send a queue item back to the previous queue.

The default for *priority* is `1400` for desktop and `800` for mobile.

The default for *groupId* is `additional-actions-group`.

The default for *isVisible* is `true`.

route-forward-action

Allows the user to send a queue item to the next queue in the workflow process flow.

The default for *priority* is `1500` for desktop and `900` for mobile.

The default for *groupId* is `additional-actions-group`.

The default for *isVisible* is `true`.

workflow-hold-action

Allows the user to place a queue item on hold for a duration that you specify.

The default for *priority* is `1300` for desktop and `700` for mobile.

The default for *groupId* is `additional-actions-group`.

The default for *isVisible* is `true`.

Example

```
...
"lesrdl-content-actions-workflow": {
    "additional-actions-group": {
        "desktop": {
            "priority": 1200
        },
        "phone": {
            "priority": 1200
        }
    },
    "add-to-workflow-action": {
        "desktop": {
            "priority": 300,
            "groupId": "additional-actions-group",
            "isVisible": true
        },
        "phone": {
            "priority": 300,
            "groupId": "additional-actions-group",
            "isVisible": true
        }
    },
    "open-in-workflow-action": {
        "desktop": {
            "priority": 400,
            "groupId": "additional-actions-group",
            "isVisible": true
        },
```

```
    "phone": {
        "priority": 400,
        "groupId": "additional-actions-group",
        "isVisible": true
    }
},
"remove-from-workflow-action": {
    "desktop": {
        "priority": 500,
        "groupId": "additional-actions-group",
        "isVisible": true
    },
    "phone": {
        "priority": 500,
        "groupId": "additional-actions-group",
        "isVisible": true
    }
},
"route-back-action": {
    "desktop": {
        "priority": 1400,
        "groupId": "",
        "isVisible": true
    },
    "phone": {
        "priority": 800,
        "groupId": "",
        "isVisible": true
    }
```

```
        },
        "route-forward-action": {
            "desktop": {
                "priority": 1500,
                "groupId": "",
                "isVisible": true
            },
            "phone": {
                "priority": 900,
                "groupId": "",
                "isVisible": true
            }
        },
        "workflow-hold-action": {
            "desktop": {
                "priority": 1300,
                "groupId": "",
                "isVisible": true
            },
            "phone": {
                "priority": 700,
                "groupId": "",
                "isVisible": true
            }
        }
    }
    ...
```

lesrdl-content-contenttree

openInNewTab

Specifies whether content opened from the folder viewer opens in a new browser tab.

The default value for *priority* is 100.

The default value for *isVisible* is true.

edit-page-label-action

This action allows the user to edit the label on a page.

The default for *priority* is `100`.

The default for *groupId* is blank.

The default for *isVisible* is `true`.

Example

```
...
"lesrdl-content-contenttree": {
    "openInNewTab": false,
    "edit-page-label-action": {
        "desktop": {
            "priority": 100,
             "groupId": "",
             "isVisible": true
        }
    }
}
...
```

lesrdl-content-folders-core

move-content-action

This action allows the user to move a document to a drawer or folder.

The default for *priority* is `200`.

The default for *groupId* is `additional-actions-group`.

The default for *isVisible* is `true`.

delete-content-action

This action allows the user to delete a document or a folder.

The default for *priority* is `250`.

The default for *groupId* is `additional-actions-group`.

The default for *isVisible* is `true`.

Example

```
...
"lesrdl-content-folders-core": {
    "move-content-action": {
        "desktop": {
            "priority": 200,
            "groupId": "additional-actions-group",
            "isVisible": true
        },
        "phone": {
            "priority": 200,
            "groupId": "additional-actions-group",
            "isVisible": true
        }
    },
    "delete-content-action": {
        "desktop": {
            "priority": 250,
            "groupId": "additional-actions-group",
            "isVisible": true
        },
        "phone": {
            "priority": 250,
            "groupId": "additional-actions-group",
            "isVisible": true
        }
    }
}
...
```

lesrdl-content-forms

The property you can define in the psw-content-forms section of the *config.json* file is listed below.

loadByDefault

Specifies whether the first form in the list displays by default when viewing the Forms pane. The default setting is false.

lesrdl-content-integrationserver

clientSession

By default, this property is not defined. Specifies the current server connection that the application is using.

Valid values for `clientSession` include `framework-core:SsoClientSession`, `lesrdl-content-integrationserver:ClientSession` and `lesrdl-content-integrationserver:OidcClientSession`.

openIdProfile

Specifies the name of the profile you configured to support OIDC in the integrationserver.ini configuration file.

serverUrl

Specifies the URL to Integration Server, which should be a relative path.

heartbeatIntervalInSeconds

Specifies how often, in seconds, the application verifies its connection to ImageNow Server.

lesrdl-content-properties

displaySettings:

These optional settings are divided into subsections that correspond to the App presenting the Properties pane such as Documents, Folders, Tasks or Workflow. Modify settings in the appropriate subsection.

This version of Perceptive Experience Content Apps implements the Properties pane display settings as defined in the config.json file regardless of the current user's privileges. User privileges are enforced when a document is saved.

Property values

Valid values for all properties include `enabled`, `disabled` and `hidden`.

- enabled- Input is visible on the user interface and can be modified by the user
- disabled- The input is visible on the user interface but cannot be modified by the user.
- hidden - The input is not visible on the user interface.

name

Specifies the display of the Name field in the Document Properties and Folders Properties panes.

The default value is `disabled`.

location

Specifies the display of the Drawer or Path field in the Document Properties and Folders Properties panes.

The default value is `disabled`.

keys

Specifies the display of the Field1 through Field5 fields in the Document Properties pane.

The default value is `disabled`.

type

Specifies the display of the Type field in the Document Properties and Folders Properties panes.

The default value is `disabled`.

customProperties

Specifies the display of the Custom Properties pane in the user interface.

The default value is `disabled`.

notes

Specifies the display of the Notes pane in the user interface.

The default value is `disabled`.

pageProperties

Specifies display of the Page Properties pane in the user interface.

pageProperties is always disabled unless the value is set to hidden

lesrdl-content-retention-holds

retention-holds-action

This action allows the user to apply a retention hold to a document that is currently under a retention policy.

The default for *priority* is `100`.

The default for *groupId* is `additional-actions-group`.

The default for *isVisible* is `true`.

Example

```
...
"lesrdl-content-retention-holds": {
    "retention-holds-action": {
        "desktop": {
            "priority": 100,
            "groupId": "additional-actions-group",
            "isVisible": true
        },
        "phone": {
            "priority": 100,
            "groupId": "additional-actions-group",
            "isVisible": true
        }
    }
}
...
```

lesrdl-content-search-controls

vsl-extended-operators-enabled

Specifies whether Perceptive Content adds the “contains” and “ends with” operators in the quick search options.

The default value is `false`.

Note: When set to true, Perceptive Content includes the additional search operators.

contentCapture

The properties you can define in the contentCapture section of the config.json file are listed below.

postSaveScriptName

Specifies the post-save iScript file.

sourceProfileToScannerPageSizeMapping

Specifies the Perceptive Content source profile page size available for mapping.

profileNameToSource

Specifies mapping between a capture profile name and capture source identifier.

groupSeparation

Specifies group separation options.

- **eachScan** - A new group is created on each capture or scan.
- **eachPage** - A new group is create for capture file or image scanned.
- **blankPage** - A new group is create for each blank image scanned. Source profile filters and blank page detection must be enabled in the source profile in order for blank pages to be detected.

groupKeyGenerator

Specifies the key values as a string when a new group is created. The field names available are the same as those specified in docKeys for updateGroupDocumentContext, except for properties. Use property: and then the property id for generating keys for properties. There are two special keywords that can be used when generating the key value, uniqueId and groupNumber. uniqueId() is a function that generates a 23 character identifier, groupNumber is the one-based index of the group for which the key will be generated.

Example

```
...
"contentCapture": {
    "postSaveScriptName": "post-save-actions.js",
    "toolkitDownLoadLocation":
"http://127.0,0,1:8090/cloud/PerceptiveWebCapture.zip",
    "sourceProfileToScannerPageSizeMapping": [
        "letter:/letter/i",
        "legal:/legal/i",
        "a4:/a4/i",
        "a5:/a5/i",
        "a6:/a6/i ",
        "b5:/b5/i",
        "b6:/b6/i",
        "executive:/executive/i",
        "us check:/check/i",
        "custom:/custom/i",
        "business card:/card/i",
        "scanner maximum:/maximum/i"
    }
    "profileNameToSource": {
        "/scan/i:/lesrdl-framework-capturesource-scanner/",
        "/file/i:/lesrdl-framework-capturesource-file"
    },
    "groupSeparation": {
        "eachScan": false,
        "eachPage": false,
        "blankPage": true
    },
    "groupKeyGenerator": {
```

```
        "documentName": "'group_' + _.padStart(groupNumber,2,'0') + '-'
+ new Date(Date.now()).toLocaleTimeString()",

        "field2": "uniqueId()",

        "property: 321Z1BD_00007FC3G000001" : "'property' + _.padStart
(groupNumber,2,'0')"

        }

    }

}
```